

# A Survey on Income, Monthly Brokerage of Diamond and Rate of Brokerage of Diamond Brokers.

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## Abstract:

Surat is the second largest city in the Gujarat province in India and is known to be the center of more diamond-making activity than anywhere else in the world. In fact, 90% of all diamond cutting and polishing on the planet is done in Surat. Another industry that contributes to the economy of Surat is the production of artificial fabrics; 40% of the total in India is manufactured in the city. The Global trade in diamonds and gemstones has for decades provided vast profits for the companies which mine, process and market these precious stones. Surat and Ahmedabad city in particular has contributed a great deal in development of diamond industry in Gujarat. This Survey proposes to investigate “A Survey on Income, Monthly Brokerage of Diamond and Rate of Brokerage of Diamond Brokers”. This study gives details concerning diamond broker’s average monthly income, monthly brokerage, average rate of brokerage from this profession. This study covers the factors related to average monthly income, average monthly brokerage of diamond and average rate of brokerage of diamond broker at Surat city.

**Key Words:** Income, Brokerage, Rate of brokerage, Diamond broker.

## 1. Introduction:

Surat, the entrepreneurial city. At the beginning of the 18th century, India was a world center of the diamond trade, with the help of the Portuguese; colonial masters of diamond mines in Brazil and the Indian port city of Goa. The Surat chapter of diamond history began in 1900 when two enterprising brothers from the Patidar community, Gandabhai Kuberdas Mavjivanwala and Shri Rangeeldas Kuberdas Mavjivanwala, began cutting and polishing diamonds in the Vadi Faliya area of Surat upon their return from South Africa. It took the small tribe more than 50 years to take steps to become a large-scale industry. The Second World War further contributed to the development of Surat. Govind Dholakia, founder and president of SRK Exports, explains. “Before 1940, the diamond cutting and polishing business was in Yangon, Myanmar (known as Rangoon, Burma). The Japanese invasion of Myanmar brought diamond artisans back to their hometown, Surat-Navsari, Gujarat, India. ” According to Dholakia, merchants who shipped rough diamonds to Rangoon moved to Surat. The Zari industry was already flourishing under the leadership of the Patel community. His entrepreneurial instincts resulted in his involvement in the cutting and polishing of diamonds. This Survey proposes to investigate “A Survey on Income, Monthly Brokerage of Diamond and Rate of Brokerage of Diamond Brokers”. This study gives details concerning diamond broker’s average monthly income, monthly brokerage, average rate of brokerage from this profession.

Surat is the second largest city in the Gujarat province in India and is known to be the center of more diamond-making activity than anywhere else in the world. In fact, 90% of all diamond cutting and polishing on the planet is done in Surat. Another industry that contributes to the economy of Surat is the production of artificial fabrics; 40% of the total in India is manufactured in the city. Between 2001 and 2008, Surat had annual gross domestic product increases of 11.5%, the most of any Indian city. The city itself has multiplied exponentially in recent years, making it the fourth fastest growing city in the world according to the City Mayors Foundation think tank. From a population of 2.1 million in 2001, it more than doubled in just a decade to reach 4.6 million in 2011. About 87% of South Africans profess to be Hindus, while Muslims represent about 7%. of the population and Jains almost 5%. Surat is located on the Tapti River, near where it empties into the Gulf of Cambay and the Arabian Sea. The city experiences monsoons between June and September, and in 1994 the city was seriously flooded. A 17th-century account by French gem merchant Jean-Baptiste Tavernier paints a vivid picture of a vibrant Surat, a key entry point for European merchants seeking spices, cotton, silk, and natural diamonds from India. This survey proposes to investigate “A Survey on Income, Monthly Brokerage of Diamond and Rate of Brokerage of Diamond Brokers”. This study gives details concerning diamond broker’s average monthly income, monthly brokerage, average rate of brokerage from this profession.

A broker is an individual or party (brokerage firm) that arranges transactions between a buyer and a seller, and gets a commission when the deal is executed. A broker who also acts as a seller or as a buyer becomes a principal party to the deal. Distinguish agent: one who acts on behalf of a principal.

In general, a broker is an independent agent used extensively in some industries. The prime responsibility of a broker is to bring sellers and buyers together. Therefore, a broker is the third-person facilitator between a buyer and a seller. An example would be a real estate broker who facilitates the sale of a property. Brokers also can furnish considerable market information regarding prices, products and market conditions. Brokers may represent either the seller (90 percent of the time) or the buyer (10 percent) but not both at the same time. An example would be a stockbroker, who makes the sale or purchase of securities on behalf of his client. Brokers play a huge role in the sale of stocks, bonds and other financial services.

There are advantages to using a broker. First, they know their market and have already established relations with prospective accounts. Brokers have the tools and resources to reach the largest possible base of buyers. They then screen these potential buyers for revenue that would support the potential acquisition. An individual producer, on the other hand, especially one new in the market, probably will not have the same access to customers as a broker. Another benefit of using a broker is cost- they might be cheaper in smaller markets, with smaller accounts, or with a limited line of products.

A brokerage firm, or simply brokerage, is a financial institution that facilitates the buying and selling of financial securities between a buyer and a seller. Brokerage firms serve a clientele of investors who trade public stocks and other securities. A traditional brokerage firm usually undertakes more than simply carrying out a stock or bond trade. The staff of this type of brokerage firm is entrusted with the responsibility of researching the markets to provide appropriate recommendations and in so doing they direct the actions of pension fund managers and portfolio managers alike. These firms also offer margin loans for certain approved clients to purchase investments on credit, subject to agreed terms and conditions. Traditional brokerage firms have also become a source of up-to-date stock prices and quotes.

A discount broker is a firm that charges a relatively small commission by having its clients perform trades via automated, computerized trading systems rather than by having an actual broker assist with the trade. Most traditional brokerage firms offer discount options and compete heavily for client volume due to a shift towards this method of trading.

Other ways to lower costs for these brokers is by executing orders only a few times a day by aggregating orders from a large number of small investors into one or more block trades which are made at certain specific times during the day. They help lower costs in two ways:

- By matching buy and sell orders within the firm's order book the overall quantity of stock to be traded can be reduced thus reducing commissions.
- The broker can split the bid-ask spread with the investor when matching buy and sell orders - a win-win situation in most cases. Since investor money is pooled before stocks are bought or sold, it enables investors to contribute small amounts of cash using which fractional shares of specific stocks can be purchased. This is usually not possible with a regular stock broker.

Definition of 'Broker'

1. An individual or firm that charges a fee or commission for executing buy and sell orders submitted by an investor.
2. The role of a firm when it acts as an agent for a customer and charges the customer a commission for its services.
3. A licensed real estate professional who typically represents the seller of a property. A broker's duties may include: determining market values, advertising properties for sale, showing properties to prospective buyers, and advising clients with regard to offers and related matters.

## 2. Data Collection:

The Concerned subject is wide and broad in collection with the collection of data. The data related to this study is collected by two methods are as follows:

### (1) Primary Data:

By primary data we mean the data that have been collected originally for the first time. Primary data being fresh from the field of research is very often referred to as raw data. In the collection of primary data, a good deal of time, money and energy are required. Primary data has not been published yet and is more reliable, authentic and objective. The researcher has collected the primary data by questionnaire. Questionnaire is the most commonly used method.

### (2) Secondary Data:

Secondary data are the data that are in actual existence in accessible records, being already collected and treated statistically by the persons maintaining the records. In other words, secondary data are the data that have already collected, presented, tabulated, treated with necessary statistical techniques, and conclusions have been drawn. Therefore, collecting secondary data doesn't mean doing some original enumeration but it merely means obtaining data that have already been collected by some agencies, reliable persons, Govt. departments, researcher workers etc. Secondary data are easily obtainable from reliable records, reports, books, publications and journals. The review of literature in new research is based on secondary data.

In this research, the researcher was collected the Secondary data from Indian diamond institute's library, Surat diamond association, various magazines related to diamond industry, V.N.S.G. Uni Library and internet facility.

## 3. Sample of the study:

Surat city has the largest diamond broker profession in Gujarat. A very small proportion of this profession is respectively Ahmedabad, Bhavnagar, Botad and Amreli in this profession respectively. Only Surat was included in this research. Surat has large numbers of diamond brokers, so the researcher took 130 samples from Surat city.

## 4. Objectives of the study:

- 1) To find out the average monthly incomes of diamond brokers.
- 2) To find out the average monthly brokerage of diamond.
- 3) To find out the average rate of brokerage.
- 4) To find out the Correlation between the monthly transaction in carats and monthly income of diamond brokers.
- 5) To find out the Correlation between the daily working hours and monthly transaction in carats diamond brokers.

## 5. Statistical Tools and techniques:

The researcher has used the various techniques of statistical analysis in this study with the help of SPSS and Excel. The calculated data could be tabulated according to the need of the study. The researcher has used the data were analyzed by using statistical tools are given below:

- Percentage
- Mean
- Standard deviation
- Correlation

### 5.1 Pearson's product-moment coefficient:

The most familiar measure of dependence between two quantities is the Pearson product-moment correlation coefficient, or "Pearson's correlation." It is obtained by dividing the covariance of the two variables by the product of their standard deviations. Karl Pearson developed the coefficient from a similar but slightly different idea by Francis Galton.

The population correlation coefficient  $\rho_{X,Y}$  between two random variables  $X$  and  $Y$  with expected values  $\mu_X$  and  $\mu_Y$  and standard deviations  $\sigma_X$  and  $\sigma_Y$  is defined as:

$$\rho_{X,Y} = \text{corr}(X, Y) = \frac{\text{cov}(X, Y)}{\sigma_X \sigma_Y} = \frac{E[(X - \mu_X)(Y - \mu_Y)]}{\sigma_X \sigma_Y},$$

Where  $E$  is the expected value operator,  $\text{cov}$  means covariance, and,  $\text{corr}$  a widely used alternative notation for Pearson's correlation.

The Pearson correlation is defined only if both of the standard deviations are finite and both of them are nonzero. It is a corollary of the Cauchy-Schwarz inequality that the correlation cannot exceed 1 in absolute value. The correlation coefficient is symmetric:  $\text{corr}(X, Y) = \text{corr}(Y, X)$ .

The Pearson correlation is +1 in the case of a perfect positive (increasing) linear relationship (correlation), -1 in the case of a perfect decreasing (negative) linear relationship (anticorrelation), and some value between -1 and 1 in all other cases, indicating the degree of linear dependence between the variables. As it approaches zero there is less of a relationship (closer to uncorrelated). The closer the coefficient is to either -1 or 1, the stronger the correlation between the variables. If the variables are independent, Pearson's correlation coefficient is 0, but the converse is not true because the correlation coefficient detects only linear dependencies between two variables. For example, suppose the random variable  $X$  is symmetrically distributed about zero, and  $Y = X^2$ . Then  $Y$  is completely determined by  $X$ , so that  $X$  and  $Y$  are perfectly dependent, but their correlation is zero; they are uncorrelated. However, in the special case when  $X$  and  $Y$  are jointly normal, uncorrelatedness is equivalent to independence.

If we have a series of  $n$  measurements of  $X$  and  $Y$  written as  $x_i$  and  $y_i$  where  $i = 1, 2, \dots, n$ , then the *sample correlation coefficient* can be used to estimate the population Pearson correlation  $r$  between  $X$  and  $Y$ . The sample correlation coefficient is written

$$r_{xy} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{(n-1)s_x s_y} = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \sum_{i=1}^n (y_i - \bar{y})^2}},$$

Where  $\bar{x}$  and  $\bar{y}$  are the sample means of  $X$  and  $Y$ , and  $s_x$  and  $s_y$  are the sample standard deviations of  $X$  and  $Y$ .

This can also be written as:

$$r_{xy} = \frac{\sum x_i y_i - n \bar{x} \bar{y}}{(n-1)s_x s_y} = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{\sqrt{n \sum x_i^2 - (\sum x_i)^2} \sqrt{n \sum y_i^2 - (\sum y_i)^2}}.$$

If  $x$  and  $y$  are results of measurements that contain measurement error, the realistic limits on the correlation coefficient are not -1 to +1 but a smaller range.

### 6. Limitation of the study:

- 1) The present study is based on the primary data; hence the research will be done on the information provided by the respondents through the medium of questionnaire.
- 2) Present study is limited to the Survey on Income, Monthly Brokerage of Diamond and Rate of Brokerage of Diamond Brokers.
- 3) The study is limited to the area of Surat city only.

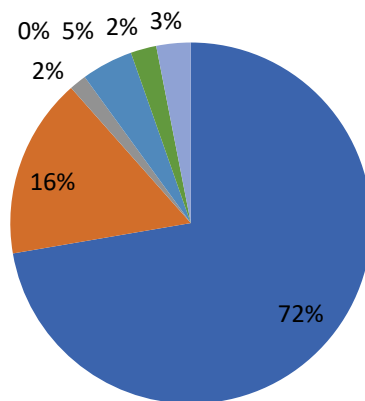
### 7. Data Analysis:

#### 7.1 Distribution of the diamond brokers on the basis of monthly income:

Income Group (In Rs.)	No. of brokers	Percentage
0-20,000	94	72.31
20,001-40,000	21	16.15
40,001-60,000	2	1.54
60,001-80,000	0	0.00
80,001-100,000	6	4.62
100,001-150,000	3	2.31
150,001-200,000	4	3.08
<b>Total</b>	<b>130</b>	<b>100</b>

### Monthly income distribution of diamond brokers

■ 0-20,000      ■ 20,001-40,000      ■ 40,001-60,000      ■ 60,001-80,000  
■ 80,001-100,000      ■ 100,001-150,000      ■ 150,001-200,000



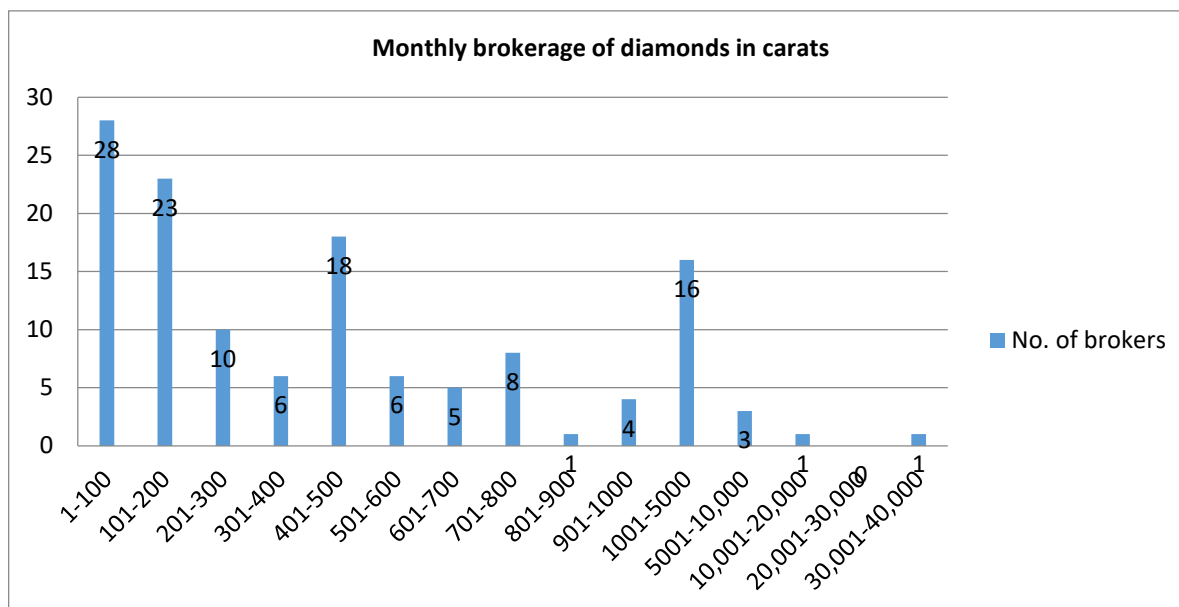
The study of above table represents the information regarding the monthly income of diamond brokers. Out of 130 diamond brokers, 94 with 72.31% are earning income up to Rs. 20000 per month, 21 brokers with 16.15% are earning income between Rs.20001 to 40000 per month, 2 diamond brokers with 1.54% are earning between Rs. 40001 to 60000 per month, 6 diamond brokers with 4.62% are earning between Rs. 80001 to 100000 per month, 3 diamond brokers with 2.31% are earning between income group Rs. 100001 to 150000 per month and 4 diamond brokers with 3.08% are earning between Rs. 150001 to 200000 per month. The average monthly income of diamond brokers is **Rs. 28061.54**.

### 7.2 Distribution of the diamond brokers on the basis of monthly brokerage of diamonds in carats:

Carats	No. of brokers	Percentage
1-100	28	21.54
101-200	23	17.69
201-300	10	7.69
301-400	6	4.62
401-500	18	13.85
501-600	6	4.62
601-700	5	3.85
701-800	8	6.15
801-900	1	0.77
901-1000	4	3.08
1001-5000	16	12.31
5001-10,000	3	2.31
10,001-20,000	1	0.77
20,001-30,000	0	0.00
30,001-40,000	1	0.77
<b>Total</b>	<b>130</b>	<b>100</b>

The study of above table represents the information regarding to the monthly brokerage of diamond in carats. Out of 130 diamond brokers, 28 diamond brokers with 21.54% have transaction between 1-100 carats per month, 23 diamond brokers with 17.69% have transaction between 101-200 carats, 10 diamond brokers with 7.69% have transaction between 201-300 carats, 6 diamond brokers with 4.62% have transaction between 301-400 carats, 18 diamond brokers with 13.85% have transaction between 401-500 carats, 6 diamond brokers with 4.62% have transaction between 501-600 carats per month, 5 diamond brokers with 3.85% have transaction between 601-700 carats, 8 diamond brokers with 6.15% have transaction between 701-800 carats, 1 diamond broker with 0.77% have transaction between 801-900 carats, 4 diamond brokers with 3.08% have transaction between 901-1000 carats, 16 diamond brokers with 12.31% have transaction between 1001-5000 carats, 3 diamond brokers with 2.31% have transaction between 5001-10000 carats, 1 diamond broker with 0.77% have transaction between 10001-20000 carats and also between 30001-40000 carats per month. The average monthly transaction of diamond is **1180.55 carats**.





**7.3 Distribution of the diamond brokers on the basis of Rate of broking:**

Rate of Broking	No. of Brokers	Percentage
1%	51	39.23
1.1 - 1.5%	37	28.46
1.6 - 2%	36	27.69
2.1 - 2.5%	3	2.31
2.6 - 3%	3	2.31
<b>Total</b>	<b>130</b>	<b>100.00</b>

The study of above table represents the information regarding to the rate of broking. Out of 130 diamond brokers, 39.23% diamond brokers are getting 1% brokerage on total selling of diamonds, 28.46% diamond brokers are getting brokerage between 1.1 to 1.5% on total selling of diamonds, 27.69% brokers are getting brokerage between 1.6 to 2% on total selling of diamonds, 2.31% brokers are getting brokerage between 2.1 to 2.5% and also between 2.6 to 3 % on total selling of diamonds. The average rate of broking is **1.4923%** on total selling of diamonds.

**7.4 Correlation between the monthly transaction in carats and monthly income of diamond brokers:**

$x$  = the monthly transaction in carats of diamond brokers.

$y$  = monthly income of diamond brokers.

$r(x, y) = 0.187$

N=130

The correlation between the monthly transaction of diamonds in carats and monthly income of diamond brokers is found 0.187. There is insignificant correlation between the monthly transaction of diamonds in carats and monthly income of diamond brokers. If the monthly transaction of diamonds in carats is higher than the monthly income will be increase.

**7.5 Correlation between the daily working hours and monthly transaction in carats diamond brokers:**

$x$  = the monthly working hours of diamond brokers.

$y$  = monthly transaction in carats of diamond brokers.

$r(x, y) = 0.172$

N=130

The correlation between the daily working hours and monthly transaction of diamonds in carats is found 0.172. There is insignificant correlation between the daily working hours and monthly transaction of diamonds in carats. If the daily working hours are increase than the monthly transaction of diamonds in carats will be increase.

**8. Findings of the Study:**

- 1) The average monthly income of diamond brokers is **Rs. 28061.54**. Out of 130 diamond brokers, 94, in total proportion of 72.31% are earning income up to Rs. 20000 per month, 21 brokers, in total proportion of 16.15% between Rs.20001 to 40000 per month, 2 diamond brokers with 1.54% are earning between Rs. 40001 to 60000 per month, 6 diamond brokers with 4.62% are earning between Rs. 80001 to 100000 per month, 3 diamond brokers with 2.31% are earning between income group Rs. 100001 to 150000 per month and 4 diamond brokers with 3.08% are earning between Rs. 150001 to 200000 per month. The average pocket expenditure of diamond brokers is **Rs.6437.69** per month.
- 2) The average monthly transaction of diamond is **1180.55 carats**. Out of 130 diamond brokers, 28 diamond brokers in total proportion of 21.54% have transaction between 1-100 carats per month, 23 diamond brokers in total proportion of 17.69% between 101-200 carats, 10 diamond brokers with 7.69% between 201-300 carats, 6 diamond brokers with 4.62% between 301-400 carats, 18 diamond brokers in total proportion of 13.85% between 401-500 carats, 6 diamond brokers with 4.62% between 501-600 carats per month, 5 diamond brokers with 3.85% between 601-700 carats, 8 diamond brokers with 6.15%

between 701-800 carats, 1 diamond broker with 0.77% between 801-900 carats, 4 diamond brokers with 3.08% between 901-1000 carats, 16 diamond brokers with 12.31% have transaction between 1001-5000 carats, 3 diamond brokers in total proportion of 2.31% 5001-10000 carats, 1 diamond broker with 0.77% between 10001-20000 carats and also between 30001-40000 carats per month.

- 3) Out of 130 diamond brokers, 39.23% diamond brokers are getting 1% brokerage on total selling of diamonds, 28.46% diamond brokers between 1.1 to 1.5% on total selling of diamonds, 27.69% brokers between 1.6 to 2% on total selling of diamonds, 2.31% brokers are between 2.1 to 2.5% and also between 2.6 to 3 % on total selling of diamonds. The average rate of broking is **1.4923%** on total selling of diamonds.

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