



## COMPARATIVE ANALYSIS OF SELECTED LIQUOR MANUFACTURING COMPANIES IN INDIA

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### Abstract

Indian alcoholic beverages market is one of the fastest growing industries in the world with several yet to be explored segments. With compelling business potential and economies of scale poised by the market, it is expected that several international players will expand their operations into the Indian alcoholic drinks market in the coming years. A company incorporated with a mission of importing fine wines and spirits from across the world for the Indian public. India is the third largest liquor market in the world and one of the fastest growing markets in the world, on the back of economy. The comparative analysis of the study the research has made a modest attempt to highlight the various Income and expenditure of the selected Liquor Manufacturing Companies in India. Many Liquor Manufacturing Companies are neither completely public nor private sector Companies but neither have hybrid nor mixed public-private ownership. India is the third largest liquor market in the world and one of the fastest growing markets in the world, on the back of economy. The Indian liquor market, which is divided into various categories like Indian Made Foreign Liquor (IMFL), imported liquor, beer and country-made liquor, is bursting with growth. Experiments like the preventive policies of states with regard to association, manufacture, pricing, etc., increase in raw material prices and obligations applied on advertising pose enormous challenges for the liquor industry. Theory and evidence regarding the performance of private, public and mixed ownership are addressed empirically examines the influence of a Liquor ownership structure on multiple dimension of its performance. In general, the result indicate that public sector Liquor Manufacturing Companies under-perform private sectors Liquor Companies

**Keywords:** Equity Share Capital, Operating Profit, Reserve and Surplus, Other Expenses, Interest Earned.

### Introduction

Liquor is the fastest growing Indian Made Foreign Liquor (IMFL) segment in India. The management of Liquor Manufacturing Company has to play a pivotal role to attain a favourable short term liquidity position and to achieve significant position in the entire industry. Its growth is rapidly increasing due to increase in pubs, hotels, restaurants, evolving nightlife and consumer preferences. The Indian liquor market is concentrated in the southern part of the country, with this region accounting for above 60 percentages of total Indian Made Foreign Liquor (IMFL) sales and 45 percentages of beer sales. Indian alcoholic beverages market is one of the fastest growing industries in the world with several yet to be explored segments. With compelling business potential and economies of scale poised by the market, it is expected that several international players will expand their operations into the Indian alcoholic drinks market in the coming years.

A company incorporated with a mission of importing fine wines and spirits from across the world for the Indian public. India is the third largest liquor market in the world and one of the fastest growing markets in the world, on the back of economy. The Indian liquor market, which is divided into various categories like Indian Made Foreign Liquor (IMFL), imported liquor, beer and country-made liquor, is bursting with growth. In addition, changing consumer preference towards premium varieties of IMFL Indian Made foreign Liquor (IMFL) is likely to result in sales-mix increasingly improve in favour of premium brands. The global alcoholic drinks industry is expected to exceed \$1 trillion in 2014 and is expected to witness moderate growth and reach an estimated \$1,369.5 billion by 2018. Increasing demand of alcoholic beverages in emerging countries because of their enormous population base and growing consumption of alcohol by the young generation as well as rising non-refundable income supports the industry growth.

IMFL as well as the beer segments of the Indian liquor industry have demonstrated a healthy CAGR of about 8-10 percentages over the last three to four years. But the growth has not been uniform across different price segments as the liquor market is highly price-sensitive. In the liquor industry, price sensitivity does not necessarily entail declining volumes; rather, it results in down trading, that is consumers tend to switch to cheaper brands in face of price increase or recessionary conditions. For instance, since 1999, while there has been a marginal de-growth in the regular whisky segment, the cheap-to-medium-priced whisky segment has witnessed high growth. In the beer segment too, this phenomenon is evident in the higher growth rate achieved by strong beers, which provide a higher amount of alcohol per rupee. The price elasticity of demand also results in intense competition as players drop prices in a bid to retain or increase their market shares.

The comparative analysis of the study the research has made a modest attempt to highlight the various Income and Expenditure of the selected Liquor Manufacturing Companies in India. The many Liquor Manufacturing Companies are



neither completely public nor private sector Companies but neither have hybrid nor mixed public-private ownership. Theory and evidence regarding the performance of private, public and mixed ownership are addressed empirically examines the influence of a Liquor ownership structure on multiple dimension of its performance. In general, the result indicate that public sector Liquor Manufacturing Companies under-perform private sectors Liquor Manufacturing Companies. In addition, the researchers find that Liquor Manufacturing Companies with mixed ownership modes tend to perform better than public sectors Liquor Manufacturing Companies, but not worse than private sector Liquor Companies.

Invested money in contrast to dept capital is not repaid to the investors in the normal course of business. It represents the risk capital staked by the owners through purchase of a company's common stock (ordinary shares). The value of equity capital is computed by estimating current market value everything owned by the company from which the total of all liabilities is subtracted. On the balance sheet of the company, equity capital is listed as stockholders equity or owners' equity. It is also called equity financing share or share capital. Companies raise two types of capital to source money for their operations: debt capital and equity capital. Debt capital is procured through lender loans where lenders are paid interest on the funds. Equity capital is issued to individuals who want ownership rights in the company. These investors are issued shares of the company stock. There are two broad categories in which shares are issued: preference shares and equity shares.

The total shareholders' fund is a sum of share capital and reserves & surplus. Since this amount on the liability side of the balance sheet represents the money belonging to shareholders', this is called the 'shareholders funds'.

Operating profit is the profit earned from a firm's normal core business operations. This value does not include any profit earned from the firm's investments, such as earnings from firms in which the company has partial interest, and the before the deductions of applicable interest and taxes owed. Operating profit is calculated using the following formula:

$$\text{Operating Profit} = \text{Operating Revenue} - \text{COGS} - \text{Operating Expenses} - \text{Depreciation and Amortization}$$

In other words Operating profit margin shows a company's efficiency at controlling costs. The proportion is the amount of money left over after deducting variable expenses to pay off fixed expenses. To calculate operating profit margin, the manager needs operating income and net sales or revenue. Operating income is operating revenues minus operating expenses. The term operating means costs associated with running the business. Net sales or revenues are the amount of money a company made selling products or services before expenses are deducted.

### Co-efficient of Variation

The researchers compare the performance of Liquor Companies by using statistical tool of co-efficient of variation. It is used to compare the performance of the liquor companies in India.

$$C.V = \frac{SD}{Mean} \times 100$$

In probability theory and statistics, the coefficient of variation (CV), also known as relative standard deviation (RSD), is a standardized measure of dispersion of a probability distribution or frequency distribution. It is often expressed as a percentage, and is defined as the ratio of the standard deviation to the mean (or its absolute value). The CV or RSD is widely used in analytical chemistry to express the precision and repeatability of an assay. It is also commonly used in fields such as engineering or physics when doing quality assurance studies and ANOVA gauge R&R.

### Statement of the Problem

The liquor industry has created quite a few problems for this vital sector. The Industry face some problems such as, manufacturing expenses, government impose high taxes, and high cost for logistics expenses, managed by bureaucrats who lack the vision for the industry. They do not have the requisite experience and understanding of the sector. High taxes on Spirits manufacturing expenses and equally high liquor industries charge were the major cost heads for Indian carriers. In this study are attempt every year the sales and consumption of Liquor an increased. So the researcher attempt that to analyze Profitability, Liquidity Turnover and Comparative analysis and risk-return relationship of liquor manufacturing companies in India.

### Scope of the Study

The present study is undertaken to discuss the Financial Performance, and Market Efficiency of Liquor Manufacturing Companies in India. It aims at analyzing the individual performance of selected Liquor Companies in India. This Financial Performance is also evaluated by using Liquidity, Profitability and Turnover ratios. The study are analysis for a periods of five years from 2010-2011 to 2014-2015.



### Methodology

The study is empirical in nature and executed using the data published by Liquor Manufacturing Companies in India. The research study is solely based on secondary data. The financial data related to Selected Liquor Manufacturing Companies in India were collected from the website and annual reports of selected liquor companies. The present study covers a period of five years taking from March 2011 to March 2015.

### Sampling Design

The sample Liquor Manufacturing Companies are selected on the basis of convenient sampling method. A sample of Six Liquor Manufacturing Companies has been selected on the basis of availability of data and also these Six Liquor Manufacturing Companies are the main largest Liquor Manufacturing Companies in India.

The following Liquor Manufacturing Companies have been selected for the study

1. United Spirits
2. United Breweries
3. Radico Khaitan
4. Tilaknagar Industries
5. Jagatjit Industries
6. Globus Spirits

### Equity Share of the Selected Liquor Manufacturing Companies

The following table1 highlight the Equity share of selected Liquor Manufacturing Companies during the period 2010-2011 to 2014-2015.

**Table 1: Equity Share Capital of the selected Liquor Manufacturing Companies during the period from 2010-2011 to 2014-2015**

Year	United Spirits		United Breweries		Radico Khaitan		Tilaknagar Industries		Jagatjit Industries		Globus Spirits	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
2010-11	130.80	19.14	25.45	20	26.51	20	115.26	19	46.15	20	23.00	19
2011-12	130.80	19.14	26.44	20	26.54	20	120.00	20	46.15	20	23.00	19
2012-13	130.80	19.14	26.44	20	26.58	20	121.88	20	46.15	20	23.00	19
2013-14	145.33	21.28	26.44	20	26.61	20	123.77	20	46.15	20	23.00	19
2014-15	145.33	21.28	26.44	20	26.61	20	124.76	21	46.15	20	28.80	24
<b>Total</b>	<b>683.06</b>	<b>100</b>	<b>131.21</b>	<b>100</b>	<b>132.85</b>	<b>100</b>	<b>605.67</b>	<b>100</b>	<b>230.75</b>	<b>100</b>	<b>120.8</b>	<b>100</b>

Source: Computed

The data presented the table 1 shows that the amount of Equity share capital in United Spirits Limited was at Rs. 130.80 crores in 2010-2011 and it has same value of Rs. 130.80 crores till 2012-2013. In the last two years same value of Rs. 145.33 crores till 2014-2015 and the data presented in shows that the amount of Equity share capital in United Breweries Limited was at Rs. 25.45 crores in 2010-2011 and it has continuously increased to Rs. 26.44 Crores till 2014-2015.the equity share capital during the last five years is constant. The data presented in the amount of Equity share capital in Radico Khaitan was at Rs. 26.51 crores in 2010-2011 and it has increased to 26.61 crores till 2014-2015. The Equity share capital during the last five years is increased to 26.61 crores. The data presented in the amount of Equity share capital in Tilaknagar Industries Limited was at Rs. 115.26 crores in 2010-2011. And it has continuously increased till the year 2014-2015. The equity share capital during the last five years is increased. The data presented in the amount of Equity share capital in Jagatjit Industries limited was at Rs. 46.15 crores in 2010-2011 and it has same value of Rs. 46.15 crores till 2014-2016. The Equity share capital during the last five years is constant. The data presented the amount of Equity share capital in Globus Spirits was at Rs.23 crores in 2010-2011and it has same value of Rs. 23 crores in the till year 2013-2014. In the last year 2014-2015 the Equity share capital increased to 28.80.



**Table 2: Reserve and Surplus of the Selected Liquor Manufacturing Companies during the period from 2010-2011 to 2014-2015 (Rs. In crores)**

Year	United Spirits		United Breweries		Radico Khaitan		Tilaknagar Industries		Jagatjit Industries		Globus Spirits	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
2010-11	4972.9	22	1021.7	14	615.6	17	205.56	14	295.3	21	185.55	15
2011-12	5747.6	26	1264.6	18	659.5	19	263.78	18	318.7	22	224.31	18
2012-13	6261.1	28	1410.1	20	692.4	20	310.60	22	320.6	22	255.04	21
2013-14	3669.1	16	1605.3	22	745.3	21	354.05	24	272.5	19	254.57	20
2014-15	1796.7	8	1823.1	26	793.9	23	318.49	22	222.0	16	326.27	26
<b>Total</b>	<b>22447</b>	<b>100</b>	<b>7125.0</b>	<b>100</b>	<b>3507</b>	<b>100</b>	<b>1452.4</b>	<b>100</b>	<b>1429</b>	<b>100</b>	<b>1245.7</b>	<b>100</b>

Source: Computed

The data presented table .2 shows that the amount of Reserve and Surplus in United Spirits Limited was at Rs. 4972.97 crores in 2010-2011 and it has increased to Rs. 5747.69 crores in 2011-2012. In the next year 2012-2013 the Reserve and Surplus in United Spirits Limited was increased to Rs.6261.17 crores. The last two years 2013-2014 to 2014-2015 the Reserve and Surplus was decreased to 1796.75 crores. The percentage of Reserve and Surplus during the last five years is decreased from 22 % ( 2010-2011) to 8 % ( 2014- 15) The data presented in the amount of Reserve and Surplus in United Breweries Limited was at Rs. 1021.74 crores in 2010-2011 and it has increased to Rs. 1264.63 crores in 2011-2012. And next three years continuously increased to 1823.19 crores till 2014-2015. The percentage of Reserve and Surplus during the last five years is increased from 14% (2010-2011) 26 % ( 2014-2015). The data presented in the amount of Reserve and Surplus in Radico Khaitan was at Rs. 615.61 crores in 2010-2011 and it has increased to Rs. 793.97 crores in 2011-2012. In the years till 2014-2015 the Reserve and Surplus in the Radico Khaitan was increased to 793.97 crores. The percentage of Reserve and Surplus during the last five years increased from 17 % ( 2010-2011) 23 % ( 2014-2015). The data presented in the amount of Reserve and Surplus in the Tilaknagar Industries Limited was at Rs. 205.56 crores in 2010-2011 and it has increased to Rs.318.49 crores in 2014-2015. The Reserve and Surplus during the last five years is increased to 318.49 crores. The data presented the amount of Reserve and Surplus in Jagatjit Industries Limited was at Rs. 295.36 crores in 2010-2011 and it has increased to Rs.318.70 crores in 2011-2012. In the next year 2012-2013 the Reserve and Surplus increased to Rs. 320.66 and the last two years decreased to Rs. 222.09 in 2014-2015. The data presented the amount of Reserve and Surplus in Globus Spirits was at Rs. 185.55 crores in 2010-2011 and it has increased to 224.31 crores in 2011-2012. And the next three years till 2014-2015 the Reserve and Surplus continuously increased to 326.27. the percentage of Reserve and Surplus in during the last five years is increased from 15 % ( 2010-2011) 26 % ( 2014-2015).

#### t-Tests of the United Spirits Limited

**Null Hypothesis:** there is no significant relationship between Income and Expenses of United Spirits Limited.

The following table 6.13.1 gives the particulars of Income and Expenses of the United Spirits Limited during the period of 2010-2011 to 2014-2015.

**Table 3**

(Rs. In crores)

Year	Income	Expenses
2010-2011	6779.57	5682.76
2011-2012	7889.26	6773.27
2012-2013	8517.79	7305.80
2013-2014	4574.83	8904.52
2014-2015	6358.13	7583.58
Mean	6823.92	7249.99
SD	1523.276	1176.365

t- Test paired two sample for Mean Income and Expenses of United Spirits Limited.

Mean	426
SD	2411
Std Error Mean	1078
Observation	5
Hypothesized Mean Difference	0.05
Df	4
T stat	0.395

Source: Computed



**Result:** Comparing the calculated value of 't' (0.395) with table value of 't' for degrees of freedom  $= (5-1)=4$ , and at 5% level of significance (0.713) two tail test, it is clear that the calculated value of 't' is lesser than that of the table. So the null hypothesis is accepted. It reveals that decrease in income will result in decrease in expenses.

#### t-Tests of the United Breweries Limited

**Null Hypothesis:** there is no significant relationship between income and expenses of United Breweries Limited.

The following table 4 gives the particulars of income and expenses of the United Breweries Limited during the period of 2010-2011 to 2014-2015.

**Table 4**  
(Rs. In crores)

Year	Income	Expenses
2010-2011	3101.43	2666.57
2011-2012	3699.33	3233.89
2012-2013	3962.88	3447.30
2013-2014	4270.13	3658.49
2014-2015	4745.53	4087.18
Mean	3955.86	3418.69
SD	616.087	525.604

t- Test paired two sample for Mean Income and Expenses of United Breweries Limited.

Mean	537.17
SD	95.27
Std Error Mean	418.87
Observation	5
Hypothesized Mean Difference	0.05
Df	4
T stat	12.60

Source: Computed

**Result:** Comparing the calculated value of 't' (12.60) with table of 't' for degrees of freedom  $= (5-1)=4$ , and at 5% level of significance (0.713) two tail test, it is clear that the calculated value of 't' is greater than that of the table. So the null hypothesis is rejected. It reveals that increase in income will result in increased expenses

#### t-Tests of the Radico Khaitan

**Null Hypothesis:** there is no significant relationship between income and expenses of Radico Khaitan

The following table 5 gives the particulars of income and expenses of the Radico Khaitan during the period of 2010-2011 to 2014-2015.

**Table 5**  
(Rs. In crores)

Year	Income	Expenses
2010-2011	969.81	807.96
2011-2012	1169.70	988.78
2012-2013	1280.03	1065.39
2013-2014	1523.65	1293.68
2014-2015	1526.04	1310.64
Mean	1293.85	1093.29
SD	238.394	212.433

t- Test paired two sample for Mean Income and Expenses of Radico Khaitan.

Mean	200.55
SD	28.14
Std Error Mean	12.58
Observation	5



Hypothesized Mean Difference	0.05
Df	4
T stat	15.93

Source: Computed

**Result:** Comparing the calculated value of 't' (15.93) with table value of 't' for degrees of freedom  $= (5-1)=4$ , and at 5% level of significance (0.713) two tail test, it is clear that the calculated value of 't' is greater than that of the table. So the null hypothesis is rejected. It reveals that increase in income will result in increase in expenses

#### t-Tests of the Tilaknagar Industries Limited

**Null Hypothesis:** there is no significant relationship between income and expenses of Tilaknagar Industries Limited

The following table 6 gives the particulars of income and expenses of the Tilaknagar Industries Limited during the period of 2010-2011 to 2014-2015.

**Table 6**  
(Rs. In crores)

Year	Income	Expenses
2010-2011	346.94	243.31
2011-2012	491.60	358.15
2012-2013	556.79	407.31
2013-2014	618.78	473.13
2014-2015	553.49	467.21
Mean	513.52	389.82
SD	103.415	94.477

t- Test paired two sample for Mean Income and Expenses of Tilaknagar Industries Limited.

Mean	123.69
SD	27.58
Std Error Mean	12.33
Observation	5
Hypothesized Mean Difference	0.05
Df	4
T stat	10.02

Source: Computed

**Result:** Comparing the calculated value of 't' (10.02) with table value of 't' for degrees of freedom  $= (5-1)=4$ , and at 5% level of significance (0.713) two tail test, it is clear that the calculated value of 't' is greater than that of the table. So the null hypothesis is rejected. It reveals that increase in income will result in increased expenses

#### t-Tests of the Jagatjit Industries Limited

**Null Hypothesis:** there is no significant relationship between income and expenses of Jagatjit Industries Limited

The following table .7 gives the particulars of income and expenses of the Jagatjit Industries Limited during the period of 2010-2011 to 2014-2015.

**Table 7**  
(Rs. In crores)

Year	Income	Expenses
2010-2011	1033.80	998.73
2011-2012	1162.14	1125.43
2012-2013	1000.09	1006.28
2013-2014	939.41	982.07
2014-2015	834.18	885.96
Mean	993.92	999.69
SD	120.84	85.29





t- Test paired two sample for Mean Income and Expenses of Jagatjit Industries Limited.

Mean	5.77
SD	41.68
Std Error Mean	18.64
Observation	5
Hypothesized Mean Difference	0.05
Df	4
T stat	0.310

Source: Computed

### Result

Comparing the calculated value of 't'(0.310) with table value of 't' for degrees of freedom=(5-1)=4, and at 5% level of significance (0.772) two tail test, it is clear that the calculated value of 't' is lesser than that of the table. So the null hypothesis is accepted. It reveals that decrease in income will result in decrease in expenses.

### t-Tests of the Globus Spirits

**Null Hypothesis:** there is no significant relationship between income and expenses of Globus Spirits

The following table 8 gives the particulars of income and expenses of the Globus Spirits during the period of 2010-2011 to 2014-2015.

**Table 8**

(Rs. in crores)

Year	Income	Expenses
2010-2011	384.36	319.18
2011-2012	569.39	494.52
2012-2013	523.57	448.42
2013-2014	508.09	466.19
2014-2015	589.36	536.28
Mean	514.95	452.92
SD	80.118	81.796

t- Test paired two sample for Mean Income and Expenses of Globus Spirits.

Mean	62.03
SD	14.42
Std Error Mean	6.45
Observation	5
Hypothesized Mean Difference	0.05
Df	4
T stat	9.61

Source: Computed

### Result

Comparing the calculated value of 't'(9.61) with table value of 't' for degrees of freedom =(5-1)=4, and at 5% level of significance(0.01)two tail test, it is clear that the calculated value of 't' is greater than that of the table. So the null hypothesis is rejected. It reveals that increase in income will result in increased expenses.

### Co-efficient of Variation

The researchers compare the performance of Liquor Manufacturing Companies by using statistical tool of co-efficient of variation. It is used to compare the performance of the liquor companies in India.

$$C.V = \frac{SD}{Mean} \times 100$$



The following table 9 gives the particular of Liquor Manufacturing Companies operating profit during the period of 2010-2011 to 2014-2015.

**Table 9: Operating Profit of the selected Liquor Manufacturing Companies**

Year	United Spirits	United Breweries	Radico Khaitan	Tilaknagar Industries	Jagatjit Industries	Globus Spirits
2010-11	963.46	389.87	150.73	101.96	46.76	64.50
2011-12	949.22	412.05	172.05	131.99	2.03	74.29
2012-13	1108.82	476.36	184.23	147.18	27.70	74.09
2013-14	156.96	587.26	193.49	141.76	0.94	44.96
2014-15	486.24	620.76	170.41	84.30	16.07	48.72
Mean	732.94	497.26	174.18	121.43	18.70	61.31
SD	398.06	103.17	16.14	27.13	19.16	13.85
C.V	54.31	20.74	9.26	22.34	102.45	22.59

Source: Computed

Among the six companies, the operating profit of Jagatjit Industries is more consistent as the co-efficient of variation is less and also United Spirits Limited is having better operating profit as the average is higher.

The following table 10 gives the particulars of liquor companies Interest Earned during the period of 2010-2011 to 2014-2015

**Table 10: Interest Earned by the selected Liquor Manufacturing Companies**

Year	United Spirits	United Breweries	Radico Khaitan	Tilaknagar Industries	Jagatjit Industries	Globus Spirits
2010-11	467.47	78.13	35.26	34.31	21.71	2.84
2011-12	551.27	99.12	61.12	54.16	22.10	4.82
2012-13	656.17	79.89	70.06	55.13	23.08	6.33
2013-14	613.00	79.83	84.81	53.05	28.64	10.16
2014-15	592.97	72.99	89.94	82.37	31.39	14.07
Mean	576.17	81.99	68.23	55.80	25.38	7.64
SD	71.54	9.98	21.72	17.16	4.36	4.48
C.V	12.41	12.17	31.83	30.75	17.17	58.69

Source: Computed

Among the six Liquor Companies, Interest Earned of Globus Spirits is more consistent as the co-efficient of variation is less. United Spirits Limited is having better interest earned as the average is higher.

The following table 11 gives the particulars of liquor companies Other Income Earned during the period of 2010-2011 to 2014-2015.

**Table 11: Other Income Earned by the selected Liquor Manufacturing Companies**

Year	United Spirits	United Breweries	Radico Khaitan	Tilaknagar Industries	Jagatjit Industries	Globus Spirits
2010-11	133.35	44.99	11.12	1.67	35.77	0.16
2011-12	166.77	53.39	8.87	1.46	85.47	11.38
2012-13	103.17	39.22	30.41	2.30	6.69	6.01
2013-14	4172.73	24.38	36.48	3.89	3.53	14.65
2014-15	1711.69	37.59	44.99	1.98	8.01	0.67
Mean	1257.54	39.91	26.37	2.26	27.89	6.41
SD	1767.11	10.66	15.84	96.50	34.69	6.41
C.V	140	26.71	60.06	4269.91	124.38	97.56

Source: Computed

Among the six Liquor Companies, the Other Income earned of Tilaknagar Industries Limited is more consistent as the co-efficient of variation is less. United Spirits Limited is having better Other Income earned as the average is higher.

The following table 12 gives the particulars of liquor companies Employee Expenses during the period of 2010-2011 to 2014-2015.





**Table 12: Employee Expenses of the selected Liquor Manufacturing Companies**

Year	United Spirits	United Breweries	Radico Khaitan	Tilaknagar Industries	Jagatjit Industries	Globus Spirits
2010-11	369.82	144.11	61.99	19.74	73.86	6.74
2011-12	421.01	188.23	70.64	27.24	79.61	8.83
2012-13	476.45	241.00	78.73	27.64	72.23	10.31
2013-14	564.44	260.78	93.18	32.21	73.21	12.14
2014-15	618.50	297.37	107.25	18.78	77.31	14.31
Mean	490.04	226.29	82.35	25.12	75.24	10.46
SD	101.78	60.54	18.04	5.70	3.10	2.92
C.V	20.76	26.75	21.90	22.69	4.12	27.91

Source: Computed

Among the six Liquor Companies, the employee expenses of Globus Spirits are more consistent as the co-efficient of variation is less. United Spirits Limited is having better Employee Expenses as the average is higher.

The following table 13 gives the particulars of Liquor Manufacturing Companies other expenses like raw materials; power & fuel cost, manufacturing expenses, selling and administration expenses during the period of 2010-2011 to 2014-2015.

**Table 13: Other Expenses of the selected Liquor Manufacturing Companies**

Year	United Spirits	United Breweries	Radico Khaitan	Tilaknagar Industries	Jagatjit Industries	Globus Spirits
2010-11	1454.79	1129.81	302.81	130.21	268.91	22.79
2011-12	1666.84	1399.60	355.06	145.72	329.40	25.90
2012-13	1846.38	1527.73	410.42	144.14	252.35	26.96
2013-14	3069.93	1638.39	511.93	162.34	255.39	39.18
2014-15	2175.83	1865.05	493.40	177.31	244.38	57.40
Mean	2042.75	1512.11	414.72	151.94	270.08	34.44
SD	632.13	273.66	89.08	18.19	34.31	14.26
C.V	30.94	18.09	21.47	11.97	12.70	41.40

Source: Computed

Among the six Liquor Companies, the Other Expenses of Globus Spirits are more consistent as the co-efficient of variation is less. United Spirits Limited is having better Other Expenses as the average is higher.

#### Growth Rate of the Selected Liquor Companies in India

The following table 14 highlights Operating Profit by the Liquor Companies in India during the study period 2010-2011 to 2014-2015.

**Table 14: The Operating Profits of selected Liquor Manufacturing Companies during the period from 2010-2011 to 2014-2015**

(Rs. In crores)

Year	United Spirits		United Breweries		Radico Khaitan		Tilaknagar Industries		Jagatjit Industries		Globus Spirits	
	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR
2010-11	963.46	-	389.87	-	150.73	-	101.96	-	46.7	-	64.50	-
2011-12	949.22	1.48	412.05	5.68	172.05	14.1	131.99	29.4	2.03	95.6	74.29	15.1
2012-13	1108.8	16.81	476.36	15.6	184.23	7.07	147.18	11.5	27.7	1264	74.09	0.26
2013-14	156.96	85.84	587.26	23.2	193.49	5.02	141.76	3.68	0.94	96.6	44.96	39.3
2014-15	486.24	209.78	620.76	5.70	170.41	11.9	84.30	40.5	16.1	1609	48.72	8.36

Source: Computed



The data presented in the table 14 shows that the amount of operating profit in united spirits limited was at Rs.963.46 crores in 2010-2011 and it has decreased to Rs.486.24 during the period of 2014-2015 with growth rate of 209.78. The data presented in the amount of operating profit in united breweries limited was at Rs.389.87crores in 2010-2011 and it has increased to Rs.620.76 during the period of 2014-2015 with growth rate of 5.70.The data presented in the amount of operating profit in Radico Khaitan was at Rs.150.73crores in 2010-2011 and it has decreased to Rs.170.41 during the period of 2014-2015 with growth rate of 11.92. The data presented in the amount of operating profit in Tilaknagar Industries was at Rs. 101.96 crores in 2010-2011 and it has decreased to Rs.84.30 during the period of 2014-2015 with growth rate of 40.53. The data presented in the amount of operating profit in Jagatjit industries limited was at Rs.46.76 crores in 2010-2011 and it has decreased to Rs.16.07 during the period of 2014-2015 with growth rate of 1609.57. The data presented in the amount of operating profit in globus spirits was at Rs.64.50 crores in 2010-2011 and it has decreased to Rs.48.78 during the period of 2014-2015 with growth rate 8.36.

**Table 15: Interest Earned by the selected Liquor Manufacturing Companies during the period From 2010-2011 to 2014-2015 (Rs. In crores)**

Year	United Spirits		United Breweries		Radico Khaitan		Tilaknagar Industries		Jagatjit Industries		Globus Spirits	
	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR
2010-11	467.4	-	78.13	-	35.2	-	34.31	-	21.71	-	2.84	-
2011-12	551.2	17.9	99.12	26.8	61.1	73.3	54.16	57.8	22.10	1.79	4.82	69.7
2012-13	656.1	19.0	79.89	19.4	70.0	14.6	55.13	1.79	23.08	4.43	6.33	31.3
2013-14	613	6.57	79.83	0.07	84.8	21.0	53.05	3.77	28.64	24.0	10.16	60.5
2014-15	592.9	3.26	72.99	8.56	89.9	6.04	82.37	55.2	31.39	9.60	14.07	38.4

Source: Computed

The data presented in the table 15 shows that the amount of interest earned by the united spirits limited was at Rs.467.47 crores in 2010-2011 and it has increased to Rs.592.97 during the period of 2014-2015 with growth rate of 3.26 The data presented in the amount of interest earned by the united breweries limited was at Rs.78.13 crores in 2010-2011 and it has decreased to Rs.72.99 during the period of 2014-2015 with growth rate of 8.56. The data presented in the amount of Interest Earned by Radico Khaitan was at Rs.35.26 crores in 2010-2011 and it has increased to Rs.89.94 during the period of 2014-2015 with growth rate of 6.04. The data presented in the amount of Interest Earned by Tilaknagar Industries Limited was at Rs.34.31 crores in 2010-2011 and it has increased to Rs.82.37 during the period of 2014-2015 with growth rate of 55.26. The data presented in the amount of Interest Earned by the Jagatjit Industries Limited was at Rs.21.71 crores in 2010-2011 and it has increased to Rs. 31.39 during the period of 2014-2015 with growth rate of 9.60. The data presented in the amount of Interest Earned by the Globus Spirits was at Rs.2.84 crores in 2010-2011 and it has increased to Rs.14.07 during the period of 2014-2015 with growth rate of 38.48.

**Table 16: Employee Expenses of the selected Liquor Manufacturing Companies during the period From 2010-2011 to 2014-2015 (Rs. In crores)**

Year	United Spirits		United Breweries		Radico Khaitan		Tilaknagar Industries		Jagatjit Industries		Globus Spirits	
	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR
2010-11	369.82	-	144.11	-	61.99	-	19.74	-	73.86	-	6.74	-
2011-12	421.01	13.8	188.23	30.6	70.64	13.9	27.24	37.9	79.61	7.78	8.83	31.0
2012-13	476.45	13.1	241.00	28.0	78.73	11.4	27.64	1.47	72.23	9.27	10.31	16.7
2013-14	564.44	18.4	260.78	8.20	93.18	18.3	32.21	16.5	73.21	1.35	12.14	15.0
2014-15	618.5	9.57	297.3	14.0	107.2	15.0	18.78	41.6	77.31	5.60	14.31	17.8

Source: Computed

The data presented in the table 16 shows that the amount of Employee Expenses of United Spirits Limited was at Rs.369.82 crores in 2010-2011 and it has increased to Rs.618.50 during the period of 2014-2015 with growth rate of 9.57. The data presented in the amount of Employee Expenses of the United Breweries Limited was at Rs.144.11 crores in 2010-2011 and it has increased to Rs.297.37 during the period of 2014-2015 with growth rate of 14.03.The data presented in the amount of Employee Expenses of the Radico Khaitan was at Rs.61.99 crores in 2010-2011 and it has increased to Rs.107.25 during the period of 2014-2015 with growth rate of 15.09 The data presented in the amount of Employee Expenses of the Tilaknagar Industries Limited was at Rs.19.74 crores in 2010-2011 and it has decreased to Rs. 18.78 during the period of 2014-2015



with growth rate of 41.69. The data presented in the amount of Employee Expenses of the Jagatjith Industries Limited was at Rs.73.86 crores in 2010-2011 and it has increased to Rs.77.31 during the period of 2014-2015 with growth rate of 5.60. The data presented in the amount of Employee Expenses of the Globus Spirits was at Rs.6.74 crores in 2010-2011 and it has increased to Rs.14.31 during the period of 2014-2015 with growth rate of 117.87

**Table 17: Other Expenses of the selected Liquor Manufacturing Companies during the period From 2010-2011 to 2014-2015 (Rs. In crores)**

Year	United Spirits		United Breweries		Radico Khaitan		Tilaknagar Industries		Jagatjit Industries		Globus Spirits	
	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR	Amount	GR
2010-11	1454.79	-	1129.8	-	302.81	-	130.21	-	268.91	-	22.79	-
2011-12	1666.84	14.57	1399.6	23.87	355.06	17.25	145.72	11.91	329.40	22.49	25.90	13.6
2012-13	1846.38	10.77	1527.7	9.15	410.42	15.59	144.14	1.08	252.35	23.39	26.96	4.09
2013-14	3069.93	66.26	1638.3	7.24	511.93	24.75	162.34	12.62	255.39	1.20	39.18	45.3
2014-15	2175.83	29.12	1865.0	13.83	493.40	3.61	177.31	9.22	244.38	4.31	57.40	46.5

Source: Computed

The data presented in the table 17 shows that the amount of Other Expenses of the United Spirits Limited was at Rs.1454.79 crores in 2010-2011 and it has increased to Rs. 2175.83 during the period of 2014-2015 with growth rate of 29.12. The data presented in the amount of Other Expenses of the United Breweries Limited was at Rs.1129.81 crores in 2010-2011 and it has increased to Rs.1865.05 during the period of 2014-2015 with growth rate of 13.83. The data presented in the amount of Other Expenses of the Radico Khaitan was at Rs.302.81 crores in 2010-2011 and it has increased to Rs.439.40 during the period of 2014-2015 with growth rate of 3.61. The data presented in the amount of Other Expenses of Tilaknagar Industries was at Rs.130.21 crores in 2010-2011 and it has increased to Rs.177.31 during the period of 2014-2015 with growth rate of 9.22. The data presented in the amount of Other Expenses of the Jagatjith Industries Limited was at Rs.268.91 crores in 2010-2011 and it has decreased to Rs.244.38 during the period of 2014-2015 with growth rate of 4.31. The data presented in the amount of Other Expenses of the Globus Spirits was at Rs. 22.79 crores in 2010-2011 and it has increased to Rs.57.40 during the period of 2014-2015 with growth rate of 46.50.

### Correlation

Correlation is a statistical tool which studies the relationship between two variables, and correlation analysis involves various methods and techniques used for studying and measuring the extent of the relationship between two variables. Correlation is a statistical measure that indicates the extent to which two or more variable fluctuate together. A positive correlation indicates the extent to which those variable increase or decrease in parallel; a negative correlation indicates the extent to which one variable increase as the other decreases. When the fluctuation of one variable reliably predicts a similar fluctuation in another variable, there's often a tendency to think that means that the change in one causes the change in the other. However, correlation does not imply causation. There may be, for example, an unknown factor that influences both variables similarly. Pearson's correlation coefficient when applied to a sample is commonly represented by the letter *r* and may be referred to as the *sample correlation coefficient* or the sample Pearson correlation coefficient.

### Correlation of Income and Expenses

The following table 18 gives the particulars of liquor companies Income and Expenses during the period of 2010-2011 to 2014-2015.

**Ho:** there is no significant relationship between Income and Expenses of selected Liquor Companies.

**Table 18: Correlation value of selected Liquor Manufacturing Companies in India In the year from 2010-2011 to 2014-2015**

Company name	Particulars	r
United spirits	Income and Expenses	-0.5888
United breweries	Income and Expenses	+0.9986
Radico khaitan	Income and Expenses	+0.9988
Tilaknagar industries	Income and Expenses	+0.9651
Jagatjit industries	Income and Expenses	+0.9770
Globus spirits	Income and Expenses	+0.9843

The data presented in the table 18 shows that the correlation of Income and Expenses of selected liquor companies to perform the positive correlation and united spirits.



### Correlation of other Income and Interest Earned

The following table gives the particulars of Other Income and Interest Earned during the period of 2010-2011 to 2014-2015.  
**Ho:** there is no significant relationship between Other Income and Interest Earned of selected Liquor Companies.

**Table 19: Correlation value of selected Liquor Manufacturing Companies in India In the year from 2010-2011 to 2014-2015**

Company name	Particulars	r
United spirits	Other Income and Interest Earned	+0.3401
United breweries	Other Income and Interest Earned	+0.6278
Radico khaitan	Other Income and Interest Earned	+0.8764
Tilaknagar industries	Other Income and Interest Earned	+0.0308
Jagatjit industries	Other Income and Interest Earned	+0.6074
Globus spirits	Other Income and Interest Earned	+0.0031

The data presented in the table 19 shows that the correlation of Other Income and Interest Earned of the selected liquor companies to perform the positive correlation.

### Correlation of Employee Expenses and Other Expenses

The following table 20 gives the particulars of Employee Expenses during the period of 2010-2011 to 2014-2015.

**Ho:** there is no significant relationship between Employee Expenses and Other Expenses of selected Liquor Companies

**Table 20: Correlation value of selected Liquor Manufacturing Companies in India In the year from 2010-2011 to 2014-2015**

Company name	Particulars	r
UNITED SPIRITS	Employee Expenses and Other Expenses	+0.7492
UNITED BREWERIES	Employee Expenses and Other Expenses	+0.9864
RADICO KHAITAN	Employee Expenses and Other Expenses	+0.9340
TILAKNAGAR INDUSTRIES	Employee Expenses and Other Expenses	-0.0073
JAGATJIT INDUSTRIES	Employee Expenses and Other Expenses	+0.6831
GLOBUS SPIRITS	Employee Expenses and Other Expenses	+0.9277

The data presented in the table 20 shows that the correlation of Employee Expenses.

And Other Expenses of the selected Liquor Companies to perform the Positive Correlation and Tilaknagar Industries Limited perform a Negative Correlation.

### Conclusion

The comparative analysis of the study the research has made a modest attempt to highlight the various Income and Expenditure of the selected Liquor Manufacturing Companies in India. The many Liquor Manufacturing Companies are neither completely public nor private sector Companies but neither have hybrid nor mixed public-private ownership. Theory and evidence regarding the performance of private, public and mixed ownership are addressed empirically examines the influence of a Liquor ownership structure on multiple dimension of its performance. The companies, the Operating Profit of Jagatjit Industries is more consistent as the co-efficient of variation is less and also United Spirits Limited is having better operating profit as the average is higher. The Liquor Manufacturing Companies, Interest Earned of Globus Spirits is more consistent as the co-efficient of variation is less. United Spirits Limited is having better interest earned as the average is higher. Among the six Liquor Manufacturing Companies, the Other Income earned of Tilaknagar Industries Limited is more consistent as the co-efficient of variation is less. United Spirits Limited is having better Other Income earned as the average is higher. Among the Liquor Manufacturing Companies, the employee expenses of Globus Spirits are more consistent as the co-efficient of variation is less. United Spirits Limited is having better Employee Expenses as the average is higher. Among the Liquor Manufacturing Companies, Other Expenses of Globus Spirits are more consistent as the co-efficient of variation is less. United Spirits Limited is having better Other Expenses as the average is higher.

### References

1. Annual report of United Spirits limited (2010-2011) to (2014-2015).
2. Annual report of United Breweries limited (2010-2011) to (2014-2015).
3. Annual report of Radico Khaitan limited (2010-2011) to (2014-2015).
4. Annual report of Tilaknagar Industries limited (2010-2011) to (2014-2015).
5. Annual report of Jagatjit Industries limited (2010-2011) to (2014-2015).
6. Annual report of Globus Spirits limited (2010-2011) to (2014-2015).