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VISION

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THE IMPROVING SEED STORAGE METHODS

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ABSTRACT

This article discusses how to improve harvested cottonseed storage practices and improve the quality of stored cotton. Techniques have also been explored to ensure indoor storage of seeds to maintain their fertility, as well as to ensure good seed storage. In cotton, the quality of the seeds sown next year is the timing of their harvesting in the field. The degree to which the harvest season is organized depends on the extent to which storage processes and planting preparations are carried out in accordance with the requirements of the State Standard. Many scientists, with their experience and innovations, are making a significant contribution to further improving the quality of cotton products in cotton mills.

KEYWORDS: *Product Quality, Seed Quality, Technology, Equipment, Fiber Quality, Temperature, Humidity, Processing, Climatic Conditions, Forgetfulness.*

INTRODUCTION

In cotton, the quality of the seeds sown next year is the timing of their harvesting in the field. The degree to which the harvest season is organized depends on the extent to which storage processes and planting preparations are carried out in accordance with the requirements of the State Standard. Many scientists, with their experience and innovations, are making a significant contribution to further improving the quality of cotton products in cotton mills.

Improving the efficiency of the cotton crop in cotton, increasing the quantity and quality of cotton products depends on the quality of cotton seeds and seeds. In order to improve the quality of seeds, the “Uzpakhtasanoat” Association attaches great importance to the creation of new technologies and equipment and their introduction in ginneries. Based on the above, we researched to study the improvement of methods of storage of hand-picked cotton seeds [1-3].

Cotton varieties grown in Uzbekistan are fast-ripening, high-yielding, high fiber yield, good fiber quality, rich in oilseeds and proteins, resistant to adverse environmental conditions (soil salinity, low temperature, wind, drought, etc.), as well as resistant to diseases and pests. It is required to

have effective use of agro-technical measures, mechanization of row spacing, adaptation to machine harvesting and other valuable economic features and characteristics[3-6].

MATERIALS AND METHODS

Based on the above, we researched to study the improvement of methods of storage of hand-picked cotton seeds. In cotton, the quality of the seeds sown next year is the timing of their harvesting in the field. The degree to which the harvest season is organized depends on the extent to which storage processes and planting preparations are carried out following the requirements of the State Standard.

Many scientists, with their experience and innovations, are making a significant contribution to further improving the quality of cotton products in cotton mills. Sufficient opportunities are being created by our state to introduce these innovations into production. As a result, today almost all ginneries in the country have been transferred to the cluster system and re-equipped with modern equipment. This year, it is planned to sow the seeds of 15 early-ripening, 5 medium-ripening and 8 promising varieties of cotton in the regions of the country. This means that 55.0% of the total sown area is planned for early ripening, 30.0% for medium ripening, 6.5% for promising and 8.5% for new varieties. Varieties must be adaptable to environmental changes, including soil moisture deficiency, salt-resistance, and contribute to the improvement of agro phone[6-8].

Due to the high flexibility of the cotton variety "Sultan", which is characterized by the high fiber quality and high yield, this year this variety is intended for planting in 20-50% of the areas in the Republic of Karakalpakstan, Andijan, Samarkand, Surkhandarya, Tashkent and Syrdaryaregions. Cotton growers of Andijan, Namangan and Fergana regions plan to sow high-yielding varieties such as Andijan-35, Andijan-36, Andijan-37, Namangan-77, S-8290, S-6524 on 60-70% of cotton fields.

Taking into account the growing demand in the cotton market for S-6524, which is characterized by the quality of fiber, type IV fibre, this year it is planned to plant this variety in 15-35% of cotton fields in Jizzakh, Namangan, Syrdarya, Tashkent and Fergana regions. In addition, Jizzakh, Syrdarya and Navoi regions are planting salt-resistant, fast-ripening variety "An-Boyovut-2" on 20-30% of cotton fields, which will allow getting a rich harvest in the soil and climatic conditions of the region.

Cotton is stored in a special order in tarpaulins and covered warehouses on special open areas for selection, industrial varieties and grades. Open areas for storage of seed cotton are 40 cm above the ground and their surface is 25x14 m or 22x11 m. Up to 150-400 tons of seed cotton can be stored in such open areas. Overall dimensions of closed warehouses for seed cotton 54x18x8 m; 54x24x8 m, their capacity is 600x750 t and must be assembled from reinforced concrete blocks (blocks) or built of baked brick. Shelters can also be used from four-sided open sheds. According to the research conducted by G.D.Djabborov, S.D.Baltaboev, the fiber residue of the seed also changes with the change in the quality of the processed cotton. To do this, the fibers are cleaned from the fiber flow over the vibrating net. The cleaned seeds fall out of the net hole at the required level. Seeds with a fiber residue of 0.12-0.19% and a moisture content of 12% are left on the net for re-cleaning[5-9].

It can be seen that poorly dried seeds have a negative effect on the sorting process. Complex physiological-biochemical processes occur during the storage of seed cotton and seeds in cotton mills. This will not only save them but also improve their quality.

Khodjiev M.T., Tadjiev U.S., Mubarakov A.Ya. According to (1999), cotton received from farms in cotton processing plants and points is stored in different ways and under different conditions. Cotton absorbs a certain amount of moisture when stored in different humid winter conditions in bunts, warehouses and warehouses under a covered shed. In this case, the humid environment can adversely affect the cotton fibre and seeds (especially seeds). This, in turn, leads to a deterioration in product quality. Increased humidity and excessive temperature rise or fall can impair the quality of the seed, its forgetfulness, quantity, as well as the deterioration of fibre quality[2-7].

In particular, while seeds need to be stored in closed warehouses, due to the lack of such warehouses, second-and third-generation seed cotton and seeds are also stored in cages. We know that Uzbekistan occupies a significant place in world cotton production not only in terms of quantity but also in terms of fibre quality.

Given that the climatic conditions of Uzbekistan are highly variable, cotton harvested from the fields accumulates in different autumn weather conditions. This leads to differences in the quality of cotton products received. Mannopov A., Boronov H. (2001) noted that the ginning industry is the last stage in the Republican cotton complex. Therefore, improving the quality of work of the industry will largely depend on the fact that its work organization is equipped with 5-2 modern tools.

Prepared cotton and seeds are dewatered after processing or left with a small amount of hair. They are shed in pots and stored at low pressure, and such seeds are exposed to a variety of natural conditions. The effect of moisture on cotton and the associated temperature during storage is important in one way or another for the quality of seeds and fibre. If the temperature in the seed rises, a state of spontaneous heating occurs, resulting in accelerated respiration of the seed, which leads to premature depletion of the available energy reserves in the seed.

Moisture and contamination of cotton increase with the increase of machine harvesting in the seed cotton crop. This situation leads to an intensification of drying and cleaning operations in treatment plants.

According to Iksanov M.I., Egamberdiev A., Khalmanov B. measures should be taken to preserve the natural properties of fibre and seeds in the storage of first-grade cotton with a raw material of up to 11% and low-grade cotton with a moisture content of up to 13%. However, in practice, there are cases when very high-moisture cotton is also harvested. In this case, there are cases of spontaneous heating of cotton in some parts of the yard[5-9]. Therefore, it is advisable to open tunnels and remove hot air during long-term storage of 1-11 varieties with a moisture content of up to 11% and low-grade cotton with a moisture content of 13%. Mirahmedov S. M. etc. (1989) the moisture content of seeds is of great practical and economic importance. High moisture content reduces the germination of seeds and rots them during storage. Seed production should not exceed 10% in Central Asia. Seeds are divided into three classes depending on moisture, germination and other quality indicators: the germination of seeds of the first class should be at least 95%, the second class - 90%, the third class - 85%. Seeds with a germination rate of less than 85% were considered unfit for sowing.

RESULTS AND DISCUSSION

Observations showed that as the shelf life of the seed increased and the heat increased, the protein content in the seeds decreased by an average of 2-3% in one-year seeds and by 5% in two-year seeds. Detected. However, it was also found that the activity of the total protease enzyme was slightly activated depending on the shelf life of the seed. Seeds stored for one year have been proven to have a higher rate of germination and growth energy than 2-3-year-old seeds.

In ginneries, heavy-duty cleaning equipment is installed from the horizontal to the vertical side of the pneumatic transport. In this case, the air velocity, which can lift and move the cotton in a vertical direction, allows the separation of other compounds that are heavier than it. The biggest disadvantage of these side-based devices is that cotton falls to the bottom of the chamber along with heavy mixes. To overcome this, experiments have been shown to reduce the size of the pocket at the bottom of the chamber, and it has been found that quality seed preservation can be achieved as a result of its elimination.

In ginneries, fibrous seeds are stored in reservoirs for 1-4 months. During storage, the temperature is basically kept constant. The seeds are first dehydrated and then desalinated with 96% sulfuric acid.

Up to 30% of seeds that do not meet the required size in accordance with GOST are sent to oil companies. Cotton fibre, lint and fibrous waste bales are stacked on top of each other in sheds, if there are no special sheds, timbers are placed under the sheds and covered with a tarpaulin. According to the results of the experiment, it was found that cotton fibre stored in the closed state is 3.7-4.1% more than in the open.

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IMPACT OF CURRENCY FLUCTUATION ON THE INDIAN STOCK MARKET AND RELATED INVESTMENT OPPORTUNITIES

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ABSTRACT

This paper assesses the impact of currency fluctuation on the Indian Stock Market and relative investment opportunities for an investor during the period 2013-2018. For this purpose, a descriptive as well as causal research is conducted where we have tested the hypothesis to come out with the major findings, conclusions, limitations and recommendations of this study. In order to achieve the main objectives of our study that is how currency fluctuation and several other factors impact the Indian Stock Market, how investors design their portfolio by investing in particular sectors to take advantage of currency fluctuation to gain maximum returns and finally to establish a relationship between exchange rates and Nifty50 sectors we have used statistical techniques of data analysis like correlation, regression and ANOVA. Data is collected through primary as well as secondary sources. We established that Nifty50 and currencies like USD, Yen, Euro and GBP have a negative correlation and that USD is the most influential currency that affects Nifty50. Also, the auto index, power sector, oil and gas sector show negative correlation and IT index and healthcare show no significant correlation with USD. This paper recommends investors to sell their shares of the power, oil and gas sector when the Indian Rupee depreciates to reduce losses or go on a short position. Similarly, investors can go on a long position if the Indian Rupee appreciates. Also, Investors can either hold their existing positions or exit the market when it comes to IT and pharmaceutical sector as they can move in any direction due to currency fluctuation. All in all, to obtain maximum returns investors can look at inflation or

interest rates to predict the currency movements, and thereby design their portfolio in the respective Nifty50 sectors.

KEYWORDS: *Currency Fluctuation, Interest Rates, Inflation, Investor Sentiments, Fii, Investment Opportunities.*

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INTRODUCTION

The currency rate is an important financial variable that has an impact on the decisions made by foreign exchange investors, exporters, importers, bankers, businesses, financial bodies, policy builders and tourists in the developed as well as developing world. Currency rate fluctuations affect the worth of foreign investment portfolios, competition from exports and imports, foreign reserves worthiness and currency value of debt settlements. Movements in exchange rates thus have significant insinuation for the economy's business cycle, trade and cash flows and are therefore critical for understanding financial growth and changes in industry policy. Therefore, to assess the effect of changes in exchange rate on Indian stock markets is necessary.

A currency has value, in comparison to other foreign currencies, and those values change persistently. If demand for a currency is high because investors want to invest in that country's stock exchange or buy exports, the value of its currency will go up. Just the contrary will occur if that country goes through an economic downfall, or investors lose confidence in its markets. While some currencies fluctuate independently against one another, such as the Yen, American Dollars, others are pegged or linked. They may be pegged to the value of another foreign currency, such as the American Dollar or the Euro, or to a basket, or weighted average.

Most of the speculation in the Indian stock market takes place on its two stock exchanges: BSE NSE. Both of these follow similar trading mechanism, trading timings, settlement process etc. The two significant indexes are Sensex and Nifty. Sensex is the oldest market index for equities; it consists of shares of 30 companies listed on the BSE, which represent about 45% of the index's free-float market capitalization. Another index is Nifty it includes 50 shares listed on the NSE, which constitute about 62% of its free-float market capitalization. FIIs can infuse money directly into any of the companies listed on any of the stock exchanges. Most portfolio investments comprise of investment in stocks in the primary and secondary markets, including shares, and debentures of firms listed or to be listed on an established stock exchange in India.

As an investor in shares and bonds, movements in exchange rate are less distinct than you might predict. The basis behind that is that principally with stock markets, a movement in currency can be offset by a move in the stock exchange.

For share investments, currency moves aren't an easy pass-through. They can affect the underlying profitability and asset worth of firms in ways that can further more offset or make a currency move worse. For bond investments, currency moves are normally more direct, but second-order impacts can still occur. Also, even this examination is uncomplicated, forces such as taxation, tariffs, currency hedging plans by businesses and competitive dynamics additionally make things more complex. Hedging currency exposure, such as a hedged ETF, doesn't always reduce currency risks. Due to the existence of second-order impacts, it just modifies them. So when predicting currency moves on investments, take into account that second-order impacts can be just as relevant as the currency move itself and that hedging doesn't necessarily reduce risk, but changes the return profile of the investments.

Problem Statement

An investor is exposed to several risks due to the volatility of the stock market, one of the major reasons being currency fluctuation which in turn is caused by several other factors. To take advantage of these currency fluctuations how should an investor design his portfolio that is which sector should he invest his money in, in order to get maximum returns.

Objectives of the Study

Primary Research Objective:

- Analyzing the impact of currency fluctuation on the Indian Stock Market.
- To identify the correlation between currency and Nifty sectors.

Secondary Research Objective:

- How investors design their portfolio by investing in particular sectors to take advantage of currency fluctuation to gain maximum returns?

Review of Literature

Khatri, Yogita (2017), the author states that the rupee and stock market are related both directly and indirectly through a number of factors. The main reason for this primary correlation between the rupee and stock market is foreign institutional investors (FII's). FII's pour in and the market thus rises. The same can happen in a negative manner as well. When there are FII outflows then the market and currency both suffer.[1]

ChowdharyPiyali, A Anuradha (2018) ,the research paper states that Stock markets have a number of variables that cause its volatility, exchange rate fluctuations being very important. Thus, the article aims to know the relationship of exchange rate and Sensex from the period 2010-2016 by using correlation analysis. The study recommends to the Indian stock financial specialists to put resources into Indian securities exchange for long periods to get higher returns and stay away from the transient variance in the share trading system.[2]

Team FinancePost (2018), the article states that there seems to be a 0.5 positive correlation between the stock market and dollar/rupee. The first being common economic factors like global markets, government policies, trade deficits, etc. The second is FII's. Third being global cues like oil prices, sentiments towards Asian markets, etc. affect both. India imports 80% of their oil. So, to pay for this the rupee is converted into foreign currency and which weakens the economy.

IT Stocks and rupee are negatively correlated. This is due to them largely relying on exports thus weakening the rupee and helping the markets.[3]

Singh Ayush, Mishra Vinaytosh, B.SinghAkhilendra (2016), the paper aims to understand the impact of currency fluctuations on the economy. Also, study the real implications of the depreciation of the rupee on the Indian economy and also different stringent measures by Indian government to make rupee stronger. A country's currency needs to be strong in order to attract investment from abroad, which will help the economy. Depreciation of rupee reduces the inflow of foreign capital, rise in the external debt pressure, and also grow India's oil and fertilizer subsidy bills. Government can create a stable, political and economic environment to help overcome challenges. [4]

JędrzejBiałkowski, Katrin Gottschalk and Tomasz Piotr Wisniewski (2008) conducted a study to find whether national elections lead to higher volatility in the stock market. The research found the impact of elections on the second moment of return distribution with the help of a volatility event-study approach. It included data from 27 OCED countries. Also the MSCI World Index, an index measuring the performance of all the developed equity markets, was used as proxy for the global portfolio. The analysis was done after isolating the country-specific component of variance within a GARCH (1, 1) framework. The main conclusion from the research was that volatility during the week of elections almost doubles. They also found five factors that influence the level of volatility, closely contested elections, and change in political orientation, a hung parliament, compulsory voting laws and trading time duration.[5]

C. Ionnidis and R.S. Thompson (1986) conducted a study to find out the impact of opinion polls on the stock market volatility and whether investors can use the opportunity to make abnormal profits. The opinion poll factor was included in the methodology keeping in mind that the primary guide to the election result is the level of lead of the favorable party, the change in level of lead of the party, and the closeness of the election. The Dow Jones index was taken as the world index, and bank rate was taken to account for other internal changes. Bank rate data and the stock market returns of London and New York were taken from London Business School database. Monthly observations were taken from a period of March 1960 to December 1979. The major finding of the research proved that there wasn't any major change in the stock market, as the result is already priced in due to opinion polls. [6]

DhanorkarSanket (2014) talks about strategies to tackle the market volatility due to elections. The main suggestions included, looking at the individual company instead of the market as a whole. The valuation of the company is something that should be considered, as overvalued companies tend to be more volatile. Also investors should avoid companies that are over leveraged, as due to increased uncertainty in the industry, the ability of the company to pay debts is somewhat compromised, leading to more risk, and hence more volatility in the stock. As a general strategy, the article advised the investors to invest across multiple sectors and industries to reduce the amount of individual exposure to the risk of each industry. [7]

Maddahl Roxana (2017) talks about the link between elections and stock market volatility. The main idea propagated in the article is the fact that even though there are many forces at play in the volatility of the stock market, the same increases with uncertainty in the market, and elections bring uncertainty. Thus when there is more speculation about the winner, their margin of victory the uncertainty increases. This particularly happens because different governments

bring in different policies, and outlook into play, which results in uncertainty in the industry regarding the kind of policies being passed. [8]

Shah Nilesh (2018) talks about factors affecting the FPI inflows in the stock market, which directly affects the performance of the market, particularly the Indian market as a major portion of our markets are supported by FPIs. According to the article, the major factor that affects the confidence of FPIs is the political scenario in the country. The main concern is the continuity of economic policies, particularly with a change in government. Thus, if the incumbent government or all the opposition parties in the political scenario are able to convince the FPIs that there is less likely to be a policy change, we can retain their investments, prevent outflows and thus reduce the volatility that comes with elections. [9]

Cioffi Andrew (2018) in this article helps us to understand how currency fluctuation has several impacts on the Indian Economy. The first being, currency fluctuation changes the market competitiveness. When the currency becomes powerful for an extended time span, the economy can encounter inner pressure. This can cause dormancy and reduced competitiveness. It also affects inflation. Depending on the general trading patterns of an economy, currency fluctuation can lead to either minimal amount of inflation or excessive levels of inflation. Most countries that have excessive levels of local manufacturing and consumption are generally not affected by inflation a lot when the currency fluctuates.[10]

Mishra Mayank (2018) in this paper talks about certain factors that have a vital influence on the stock prices. One of the most important being market sentiments. Indians have a mentality of following the herd, if the price is falling down there will be massive selling from nearly all of the speculators/traders. Similar happens when prices are rising. A sentiment (either bullish or bearish) if inserted into the market is followed majorly by traders and speculators.[11]

Daley Michael (2016) helps us understand that when the U.S. dollar appreciates against a currency like the euro, investments denominated in euro lose value for a dollar-based investor. This influences the investment returns of a portfolio of European securities, since the U.S. investor would have to convert into dollars any revenue or sales proceeds from the European securities. Since the euro has lost value, the investment proceeds would purchase lesser U.S. dollars, which eventually would lead to a decline in the gross return of the European investment for a U.S. investor. Certain investors therefore decide to lessen or entirely remove currency risk by hedging the portfolio or entering into financial contracts that safeguard against unsought movements in currencies. [12]

Chand Smriti (2016) in this article states the main causes of fluctuations in the exchange rate. There are various elements which affect the demand for and supply of foreign currency (or mutual demand for each other's currencies) which are eventually responsible for the short-term alterations in the exchange rate. The most prominent among them being trade movements, any change in imports or exports will surely cause a change in the rate of exchange. If imports exceed exports, the demand for foreign currency increases; hence the rate of exchange moves against the country. Capital movements also plays a major role in this, any export or import of capital from one country to another will lead to a change in the rate of exchange.[13].

Research Design

To come up with a solution to our research questions and objectives an applied research needs to be conducted. Under applied research, to provide a more comprehensive and detailed analysis of the problem, in turn a descriptive research has to be carried out. Since our sample which consists of only investors who keep on entering and existing the market, nor cross sectional nor longitudinal research can be conducted.

Furthermore, to establish a cause and effect relationship between the independent and dependent variable, a causal research is conducted. Since the area of our research mainly is the impact of currency fluctuation on the stock market, Currency fluctuation is the independent variable and Stock Market is the dependent variable. Fluctuation in currency leads to certain events which in turn impact the stock market, making all of those factors the intervening variables. Also, apart from currency fluctuation there are several other factors that lead to an impact on the stock prices, making them the moderator variables in our research study.

Data Collection: Data has been collected by Primary and Secondary sources. Primary data has been collected through a formalized and concealed questionnaire.

Sampling Design: Sample size is 150 respondents and random sampling has been carried out. The period for the study has been taken for five years (from 2013-2018) using monthly data of Nifty50

Hypothesis Statements:

For Currency Fluctuation Analysis

H₀ = There is no significant relation between Nifty50 and different currencies.

H₁ = There is significant relation between Nifty50 and USD.

H₂ = There is significant relation between Nifty50 and Euro.

H₃ = There is significant relation between Nifty50 and GBP.

H₄ = There is significant relation between Nifty50 and Yen.

For Nifty50 Sectorial Analysis

H₀ = There is no significant relation between Sectors and USD.

H₁ = There is significant relation between Auto index and USD.

H₂ = There is significant relation between Healthcare index and USD.

H₃ = There is significant relation between IT index and USD.

H₄ = There is significant relation between Power sector and USD.

H₅ = There is significant relation between Oil and Gas sector and USD.

Data Analysis

Foreign Institutional Investors (FIIs)

These are the investors on investment funds that are registered in a country other than the one they are investing in. The Indian economy and markets have been greatly impacted because of

FII's. They have cumulatively invested around Rs 12.51 trillion in the Indian markets from the financial year 2002 to 2018.

The Securities and Exchange Board of India (SEBI) regulates the FII activity in the country whereas the RBI maintains the ceiling on FII investments in the country.

The different methods through which FII's can invest in India are enlisted bellow –

- Hedge Funds
- Foreign Mutual Funds
- Sovereign Wealth Funds
- Pension Funds
- Trusts
- Asset management Companies
- Endowments, University Funds, etc.

Year	Net FII(Cr.)	AVERAGE CLOSING VALUE(SENSEX)
1996	10,803.60	3388.7
1997	6,207.30	3801.587
1998	-1,479.90	3568.71
1999	6,697.30	3753.86
2000	6,510.90	4167.02
2001	12,494.80	4605.91
2002	3,677.90	3486.99
2003	35,153.80	3872.96
2004	42,049.10	5563.08
2005	41,663.50	7392.89
2006	40,589.20	11440.04
2007	80,914.80	15563.59
2008	-41,215.50	14492.67
2009	87,987.60	13700.82

2010	1,79,674.6	18206.91
2011	35,392.80	17777.76
2012	1,63,350.1	17617.03
2013	62,287.90	19722.42
2014	2,56,211.85	24638.95
2015	63,662.21	27352.17

Source: The Economic Times (Secondary Data)

The capital flows through FIIs can have a major impact on how the Indian Stock Markets function. Inflows bring in new money and forex and are greatly beneficial for market growth and expansion. Outflows retract the money and dampen growth and expansion opportunities.

It was found that the correlation between FIIs and BSE Sensex is 0.659¹⁰; indicating that they are positively correlated. There is a strong correlation between the Sensex and FII flows. Whenever the FII flows change an impact in the same direction can be seen in Sensex.

Investor Sentiments

The most important factor responsible for movement in the stock market is the investor sentiments. Investor sentiment means what is the attitude of investors about a particular security or the whole market. It simply means that if the prices of stock in the market is going up it signals a bullish sentiment and if prices are going down it is the bearish sentiment. One of the major examples of what investor sentiment can do can be seen in the year 2008. On February 6, 2008 Sensex closed at 18139 points, the next 2 days Sensex saw a downfall and closed at 17464 points. On Monday February 11, 2008 Sensex fell by 800 points around 4.37%. The major reason behind this was that the investors were worried about global economic slowdown. This reason also affected the IPO of Reliance Power Ltd. The issue price of the share was Rs 450, it was listed at a premium of 21% at Rs 547. When IPO was floated many investors took loan in order to invest in this share. The IPO was 14.4 times oversubscribed. QIB invested a heavy amount of Rs 5, 00,000 Crore. This was the largest IPO of the country and everyone felt that the share price of the company will increase very much in future. These things happened in mid-January. Market was showing a positive trend in January as well in the starting of February. But due to the global worries in the month of February this share fell by 17% in a single day (February 11, 2008). India was the biggest loser in the Asian market, on the same day, Hong Kong's Hang Seng Index fell by 3.64% similarly South Korea's market also fell by 3.29%. These all things happened majorly because of investors who were predicting that the world is going to witness economic slowdown.

06-02-2008	07-02-2008	08-02-2008	09-02-2008	10-02-2008	11-02-2008	12-02-2008
18,139.49	17,526.93	17464.89	NIL	NIL	16630.91	16,608.01

Source: BSE.com (Secondary Data)

Government Debt

Government debt is how much a country owes to others. This can include individuals, businesses as well as other governments. Thus, if the Indian government owes a large amount to such individuals, businesses and other governments, payments on these amounts have to be made as well. Many a time debt can be funded from foreign governments which tends to increase the external debt pressure on the government as well. This excessive debt pressure can have multiple negative outcomes with the two most prominent being rise in inflation as well as a default on their payments. The greater the debt undertake the higher becomes the risk of default. This higher risk of default makes investors vary. Due to this uncertainty, in order to protect themselves from risks of defaulting investors lay down higher terms of interest on their debt. This causes inflation in the country. A fear of these two prominent factors influences foreign investors majorly. Upon seeing huge amounts of debt, they chose to withdraw their investments from countries. This causes a loss of foreign currency which inadvertently affects the currency and exchange rates.

Year	Government Debt (in USD Billions)	USD-INR Rate
2012	973.4	54.741
2013	1090.48	61.81
2014	1197.29	63.035
2015	1363.69	66.208
2016	1501.64	67.955
2017	1690.64	63.84
2018	1851.26	69.57

Source: Statista.com & Investing.com

From 2012 to 2018 the government debt of India has gone up by 90.18%. At the same time from 2012 to 2018 the USD-INR Rate has gone up by 27.09%. This shows how the Indian government debt has an inverse relationship with the Indian rupee value. As the debt has gone up the value of the INR has depreciated while the USD-INR rate has thus gone up.

Currency Fluctuation

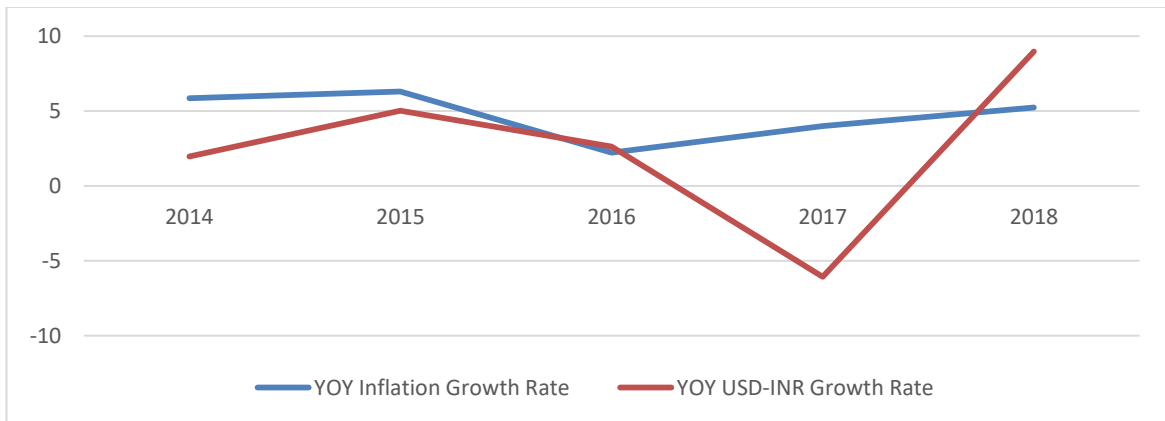
Exchange rates constantly fluctuates, every day some currency appreciates while some depreciates. This exchange rate fluctuation is caused due to one major factor, demand and supply of currency. If the supply of a particular currency, for example Rupee falls down or its demand increases, it causes the value of Rupee to appreciate. If supply increases or demand decreases, value of Rupee will depreciate. Supply and demand of a currency is affected due to a lot of factors like monetary policy, inflation, political conditions of the country, and many more factors.

Monetary Policy

In simple words it is defined as how the country controls the money supply in the country. Money supply is the amount of currency in the economy. Government or Central Banks of the country controls the supply of money with the help of interest rates. If supply increases Government reduces the interest rates so that people and businesses can borrow more money and economy can be developed. On the other hand, interest rates are increased if money supply decreases.

Inflation

It is defined as a general increase in prices and the fall in the purchasing power of money. The definition itself shows us that inflation and the currency of a country are inversely related. Inflation generally occurs when demand exceeds supply causing an inflationary gap in the economy. This excess demand causes a rise in prices leading to inflation. Where the rupee comes into picture is that whenever the supply is not enough to meet the demand the demand must be satisfied by importing goods and services from other countries. The means to pay for this is in the foreign currency, thus causing the foreign currency's value to appreciate in comparison to the domestic currency. On the other hand, if inflation rates are low and supply is exceeding the demand, then there is an excess of goods and services in the country. These can be exported and these earnings help appreciate the domestic currency in comparison to the foreign currency.



Source: Investing.com & Inflation.eu (Secondary Data)

The above graph shows how inflation and the USD-INR rates are related. As and when the Year over Year (YOY) inflation rate has fallen, the value of the rupee has become stronger and thus the Y-O-Y USD-INR growth rate falls. However, when the inflation rate rises, the rupee loses its value and thus the USD-INR growth rate rises. This shows how inflation and the value of the rupee are inversely related.

Interest Rates

The interest rates in a country can have a major effect on the currency value of a country. The change in interest rates can have multiple effects that cause this. If the interest rates are hiked it tends to attract foreign investment into the country and thereby strengthens the domestic currency. On the other hand, if the interest rates fall, it becomes unattractive of foreign investment causing the domestic currency to weaken. The Reserve Bank of India (RBI) is the

apex financial institution in India. It has control over the repo or repurchase rate in India. The repo rate is the rate at which the RBI lends money to the other commercial banks operating in the country. A change in the repo rate impacts the interest rate and the yield on fixed rate financial instruments. If the repo rate is increased by the RBI, the interest rate and yield on bonds and debentures increases as well. This is attractive for foreign investors as they will earn more on their investment in the Indian market than what they could have earned by investing in other markets. Thereby and inflow of foreign currency takes place which in turn strengthens the Indian Rupee. On the other hand, if the repo rate is decreased by the RBI, the interest rate and yield on bonds and debentures falls causing disinterest and withdrawal of money from Indian markets as their money may earn higher returns elsewhere. This weakens the value of the Indian Rupee.

	USD-INR	Repo Rate
31st March 2014	60.015	8.00%
31st March 2015	62.291	7.50%
31st March 2016	66.255	6.75%
31st March 2017	64.86	6.25%
31st March 2018	65.115	6.00%

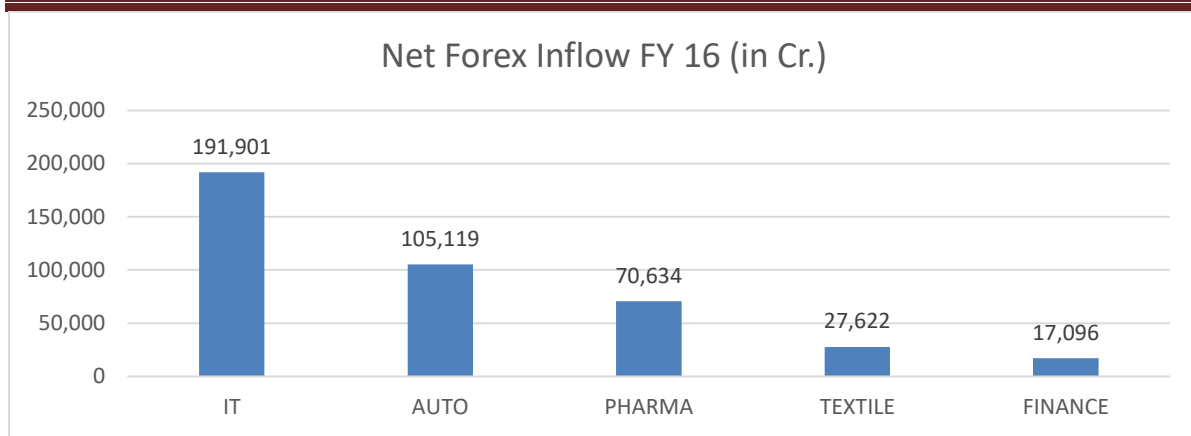
Source: Investing.com & Myloancare.in

As shown in the table above, as and when the interest rates in the country have fallen the value of the rupee has correspondingly decreased. The only exception to this is the financial year 2016-17, wherein the rupee was more or less stable at 66 rupees to 1 dollar before falling to 64 in March 2017.

Sectors affected due to currency fluctuation:

Rupee appreciating is not a good sign for most of the corporates. Companies whose major income comes from exports are impacted as their earnings reduces, if Rupee appreciates. But for the economy Rupee appreciation can be beneficial mainly because of two reasons. First one is that the foreign fund inflows will increase as USD weakens. Second one is that as India is a net importer, so the cost of importing things decreases, especially crude oil.

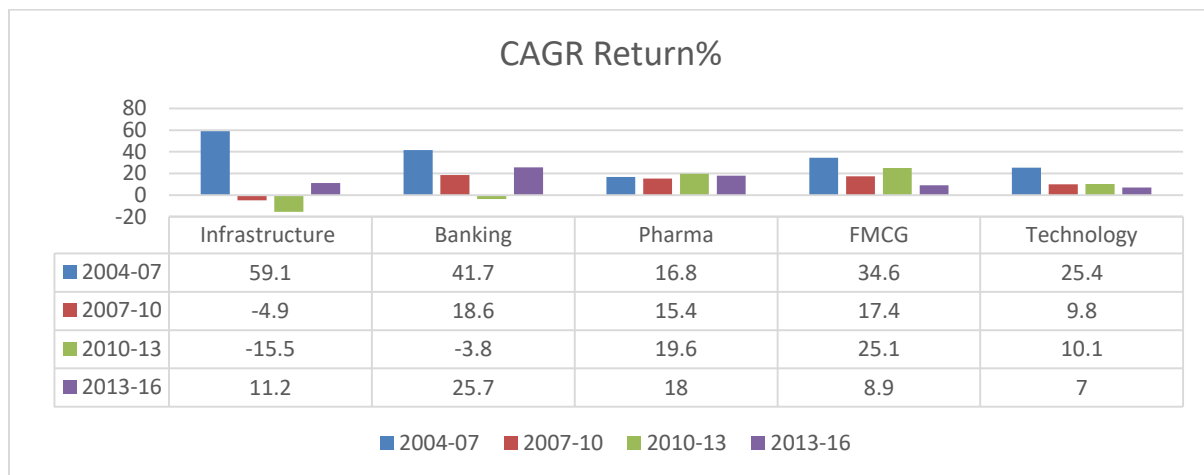
According to UBS Securities India Pvt. Ltd, every 1% appreciation in Rupee can cut 0.6% of the Nifty earnings. Some of the sectors whose major part of income come from exports are IT, Pharma, Auto, Textile and Finance.



Source: livemint.com (Secondary data)

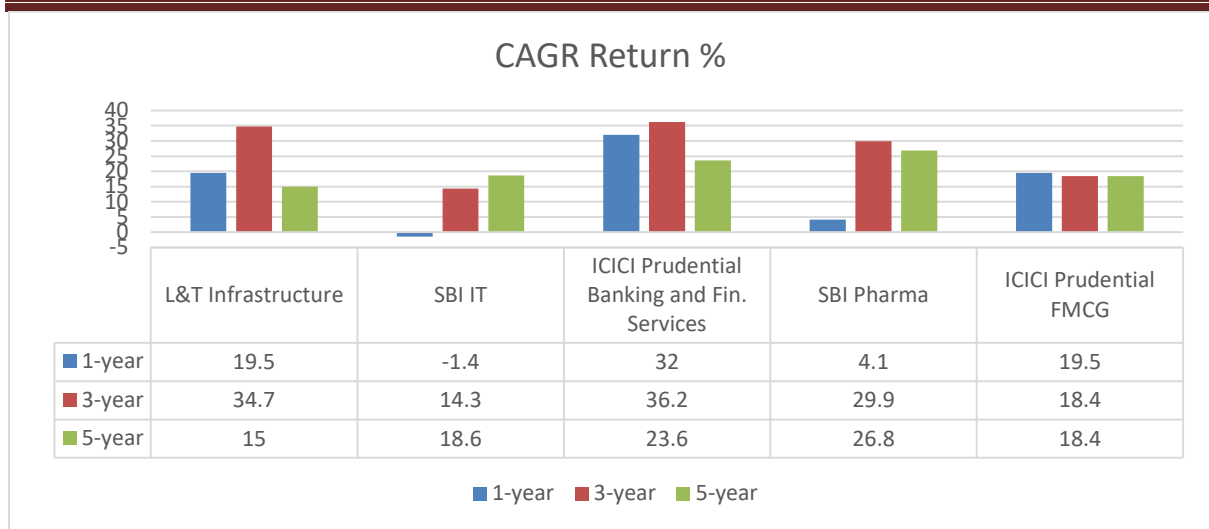
This graph clearly shows that IT and Auto sector will be heavily impacted due to Rupee appreciation. On the positive side if rupee depreciates these sectors revenue increases by a lot. On the other hand, some sectors like Power, Telecommunication, Oil and Gas sector are heavily dependent on imports, so if Rupee depreciates these sectors will be adversely affected. For investing in currencies investors need to keep a check on exchange rates as they are highly volatile in nature.

Investors who want to invest on a long-term basis can invest in sectorial mutual funds.



Source: The Economic Times Wealth (Secondary Data)

The above chart shows the CAGR returns of different sectors from 2004-2016. (CAGR is calculated on a 3-year basis). Investors who seek stable returns can invest in Pharma sector mutual funds, as over the last 12 years its returns are constant, they are not fluctuating by a big margin. Although, banking and infrastructure funds are highly volatile but investors who can afford to do risky investments can invest in these sectoral funds, as there is a chance of high CAGR growth. FMCG and IT funds are volatile but they have managed to maintain a positive CAGR over 12 years. These sectorial mutual funds provide a great investment opportunity, with proper knowledge about these funds, investors can make a lot of profit.

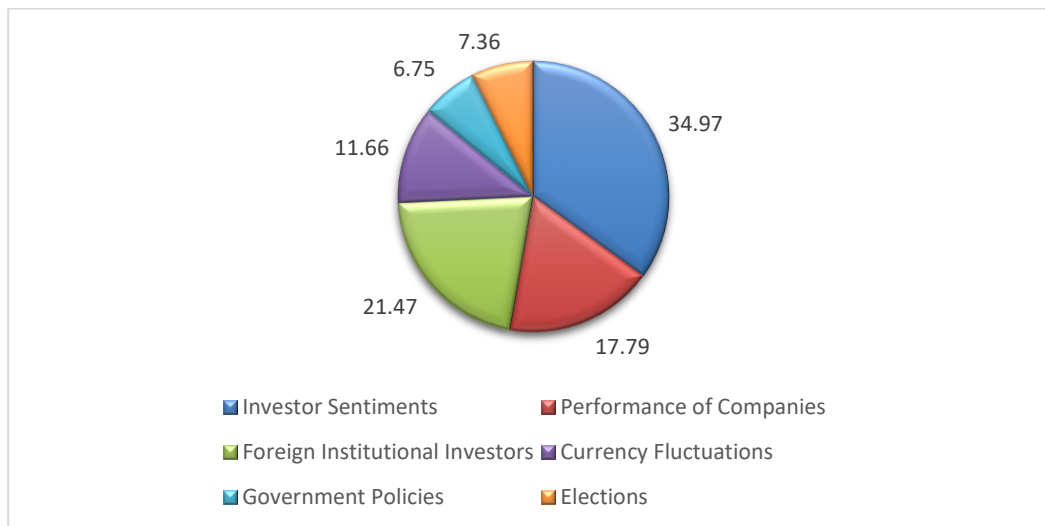


Source: The Economic Times Wealth (Secondary Data)

Chart shows the different CAGR return (1, 3 and 5-year) of some of the best sectoral mutual funds. Every sectoral fund shows a good CAGR return for a period of 3 years. From the graph it can be observed that these sectoral mutual funds are not a good investment option for a period of 1-year and 5-year.

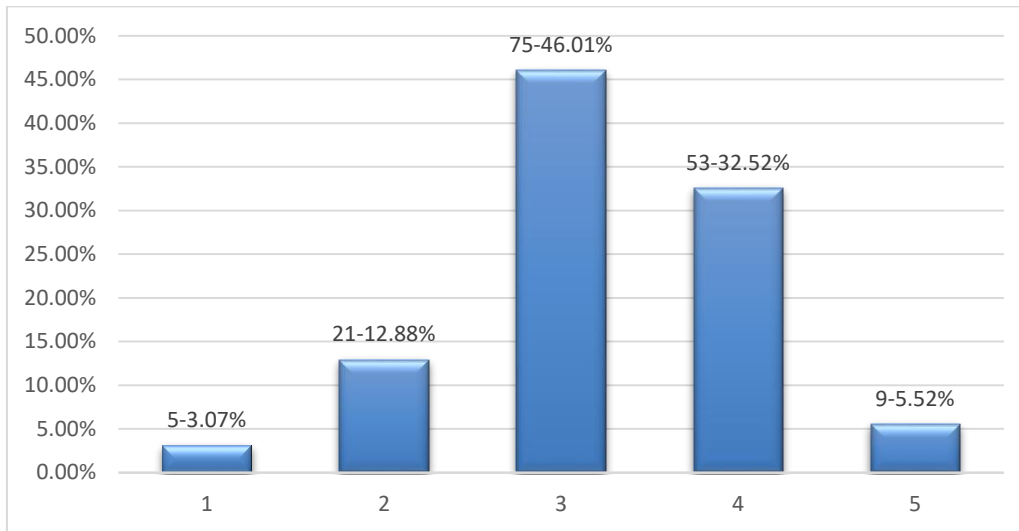
A survey conducted through means of a questionnaire among various investors from different backgrounds, ages and walks of life found the following information -

Which factor influences the stock market the most?



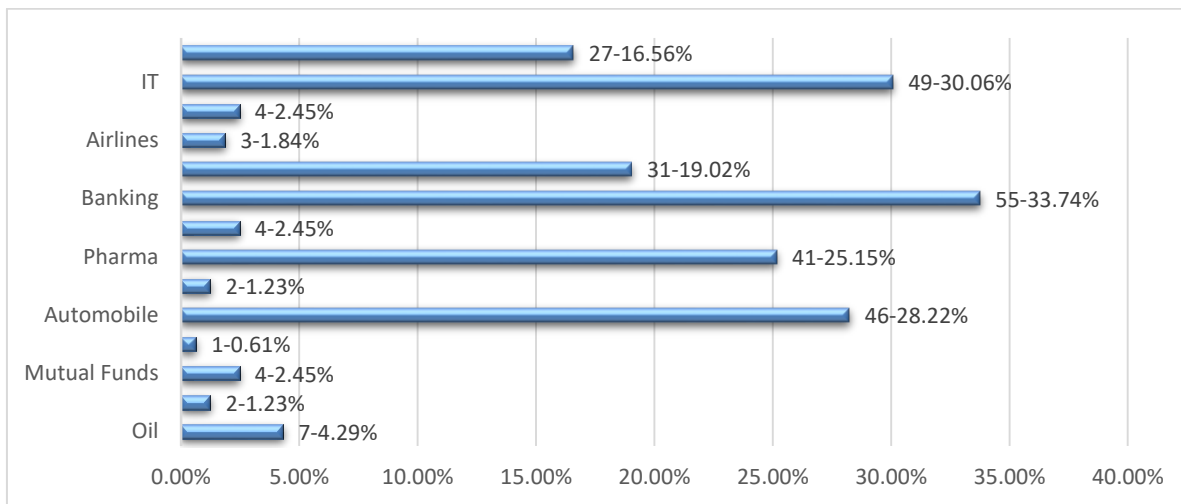
When asked which factor influences the stock market the most it was found that people majorly tend to believe that the stock market is majorly influenced by speculation with 34.97% people having such a viewpoint. This is widely because speculation tends to make stock prices fluctuate far before actual facts are revealed to the public and can help gain profits for investors. FIIs too were believed to play an important role in the stock market changes

In your opinion how much is the impact of currency fluctuation on stock market?

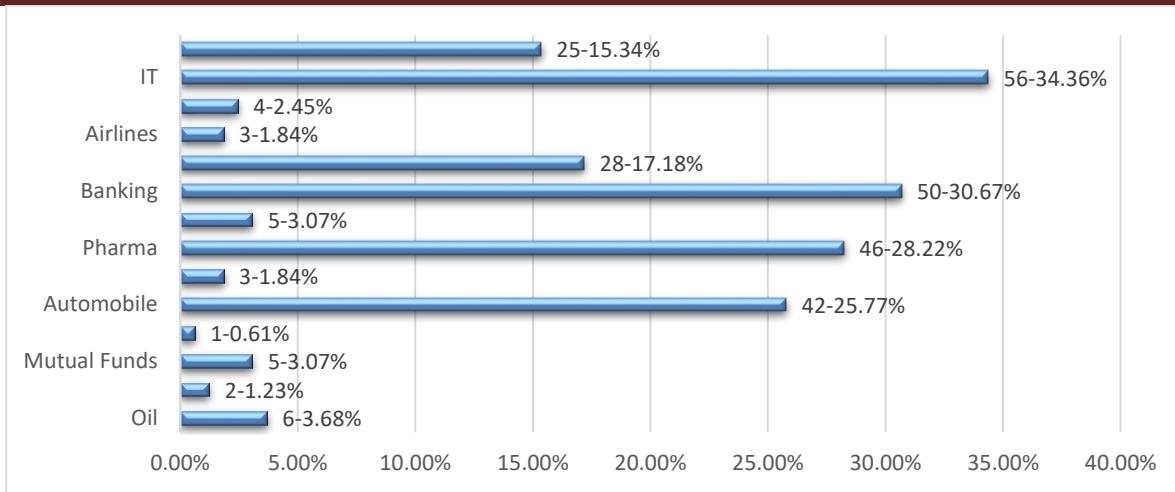


People generally did not believe that currency fluctuation played a very significant role in the stock market volatility. However, it wasn't completely overlooked by them. The majority believed that currency fluctuations have a moderate effect on the stock market. It also showed that the investors weren't completely aware that currency fluctuations play a major role in the stock market as very few believed that its influence is very strong, only around 5.52%.

In which sectors do you generally invest in?



If you think currency fluctuation impacts stock market, then in which sectors will you invest your money?



Investors were asked what their general investment avenues are and then if they believe that currency fluctuations would affect stock markets what would be their investment avenues. It was found that major down trends were found in the banking and automobile sectors. Banking fell from 33.74% to 30.67% and Automobile fell from 28.22% to 25.77%. Major uptrends were seen in the IT and Pharmaceutical sectors. IT rose from 30.06% to 34.36% and Pharmaceuticals rose from 25.15% to 28.22%. This shows that if people were of the belief that stock markets are affected by currency fluctuations then a greater amount of their investments would go towards more stable sectors like IT and Pharma.

To test the relation between the independent variable (Currency) and dependent variable (Stock Market), regression analysis is used to test whether there is a correlation between Nifty50 and various currencies (USD, Euro, GBP, Yen).

Hypothesis for the study: -

H₀ = There is no significant relation between Nifty50 and different currencies.

H₁ = There is significant relation between Nifty50 and USD.

H₂ = There is significant relation between Nifty50 and Euro.

H₃ = There is significant relation between Nifty50 and GBP.

H₄ = There is significant relation between Nifty50 and Yen.

Calculation of Regression between Nifty50 and USD: -

Regression Statistics	
Multiple R	0.6229
R Square	0.3880
Adjusted R Square	0.3773
Standard Error	0.0314
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0355	0.0355	36.1374	0.0000001378
Residual	57	0.0561	0.0010		
Total	58	0.0916			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0140	0.0041	3.3782	0.0013	0.0057	0.0223
USD	-1.1841	0.1970	6.0114	0.0000001378	-1.5786	-0.7897

Calculation of Regression between Nifty50 and Euro: -

Regression Statistics	
Multiple R	0.3714
R Square	0.1380
Adjusted R Square	0.1228
Standard Error	0.0372
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0126	0.0126	9.1224	0.0038
Residual	57	0.0790	0.0014		
Total	58	0.0916			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0112	0.0049	2.3040	0.0249	0.0015	0.0210
Euro	-0.5387	0.1784	3.0203	0.0038	-0.8958	-0.1815

Calculation of Regression between Nifty50 and GBP: -

Regression Statistics	
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Multiple R	0.3124
R Square	0.0976
Adjusted R Square	0.0818
Standard Error	0.0381
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0089	0.0089	6.1664	0.0160
Residual	57	0.0827	0.0015		
Total	58	0.0916			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0107	0.0050	2.1478	0.0360	0.0007	0.0206
GBP	-0.4134	0.1665	-2.4832	0.0160	-0.7467	-0.0800

Calculation of Regression between Nifty50 and Yen: -

Regression Statistics	
Multiple R	0.4519
R Square	0.2042
Adjusted R Square	0.1903
Standard Error	0.0358
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0187	0.0187	14.6273	0.0003
Residual	57	0.0729	0.0013		
Total	58	0.0916			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0111	0.0047	2.3838	0.0205	0.0018	0.0205
Yen	-0.5532	0.1447	-3.8246	0.0003	-0.8429	-0.2636

From the above 4 regressions, it has been observed that the null hypothesis can be rejected as Significance F value or the P-value is less than 5%, indicating that there is significant relation between IV (Independent Variable) and DV (Dependent Variable). All the 4 currencies impact the Nifty50 and the correlation which is shown by the value of Multiple R is also high. R Square shows how much of the deviation in DV is caused due to IV. Adjusted R Square also shows the same thing but it is a more conservatism approach.

$$Y = C + mX$$

In this equation Y is the DV (Nifty50) and X is the IV (Currencies). C is the intercept value and m is the slope value which is shown as the coefficient of IV in the regression analysis. Coefficient value in all the 4 regressions is negative indicating that there is a negative correlation between IV and DV.

Regression analysis shows that out of the 4 currencies USD is the most influential currency. Correlation between USD and Nifty50 is very high, it is 62.29% also, the coefficient is high, it is -1.1841.

To analyze various investment opportunities arising from the currency fluctuation, regression analysis has been done on various sectors (Auto, Healthcare, IT, Power, Oil and Gas) and USD. Sectors are considered as dependent variable and USD as the independent variable, USD has been chosen here as it has the most impact on Nifty50 as compared to other currencies.

Hypothesis for the study: -

H₀ = There is no significant relation between Sectors and USD.

H₁ = There is significant relation between Auto index and USD.

H₂ = There is significant relation between Healthcare index and USD.

H₃ = There is significant relation between IT index and USD.

H₄ = There is significant relation between Power sector and USD.

H₅ = There is significant relation between Oil and Gas sector and USD

Calculation of Regression between Nifty Auto Index and USD: -

<u>Regression Statistics</u>	
Multiple R	0.5250
R Square	0.2757
Adjusted R Square	0.2630
Standard Error	0.0175
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0067	0.0067	21.6921	1.96E-05
Residual	57	0.0175	0.0003		
Total	58	0.0242			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.0057	0.0024	-2.4264	0.0184	-0.0104	-0.0010
USD	-0.2194	0.0471	-4.6575	0.0000	-0.3138	-0.1251

Calculation of Regression between Nifty Pharma Index and USD: -

Regression Statistics	
Multiple R	0.0400
R Square	0.0016
Adjusted R Square	-0.016
Standard Error	0.0206
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	4E-05	4E-05	9E-02	0.7638
Residual	57	2E-02	4E-04		
Total	58	2E-02			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.0032	0.0027	1.1702	0.2468	-0.0086	0.0022
USD	-0.0169	0.0558	0.3019	0.7638	-0.1287	0.0950

Calculation of Regression between Nifty IT Index and USD: -

Regression Statistics	
Multiple R	0.1305
R Square	0.0170
Adjusted R Square	0.000

Standard Error	0.0204
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0004	0.0004	0.9874	0.3246
Residual	57	0.0237	0.0004		
Total	58	0.0242			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-0.0025	0.0027	-0.9274	0.3576	-0.0079	0.0029
	0.0486	0.0490	0.9937	0.3246	-0.0494	0.1467

Calculation of Regression between Power Sector and USD: -

Regression Statistics

Multiple R	0.5216
R Square	0.2721
Adjusted R Square	0.2593
Standard Error	0.0626
Observations	59

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.0836	0.0836	21.3087	2.27E-05
Residual	57	0.2236	0.0039		
Total	58	0.3072			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0108	0.0083	1.3119	0.1948	-0.0057	0.0274
USD	-1.8160	0.3934	-4.6161	2.27E-05	-2.6038	-1.0282

Calculation of Regression between Oil and Gas Sector and USD: -

Regression Statistics	
Multiple R	0.3783
R Square	0.1431
Adjusted R Square	0.1281
Standard Error	0.0514
Observations	59

ANOVA					
	Df	SS	MS	F	Significance F
Regression	1	0.0251	0.0251	9.5190	0.0031
Residual	57	0.1505	0.0026		
Total	58	0.1757			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.0158	0.0068	2.3281	0.0235	0.0022	0.0294
USD	-0.9958	0.3228	-3.0853	0.0031	-1.6421	-0.3495

Regression analysis of Auto index shows that there is a negative correlation between USD and Auto index. P-value is less than 5%, therefore alternate hypothesis H_1 is accepted. IT and Pharma index both show very low correlation. Also, the P-value is much higher than 5% which indicates that no significant correlation can be established between USD and these 2 sectors. Hence, null hypothesis is accepted in these 2 sectors. For Power and Oil sector top 5 companies based on market capitalization was taken for the study. Both these sectors show significant correlation of 52.16% (Power) and 37.83% (Oil and Gas). Null hypothesis is rejected in both these sectors due to P-value being lesser than 5%. Coefficients in these sectors are negative, indicating a negative correlation of USD and these sectors (when taken individually).

Major Findings

- Nifty50 and Currency (USD, Euro, GBP, and Yen) shows a negative correlation.
- USD is the most influential currency that affects Nifty50.
- Auto Index, Power Sector, Oil and Gas Sector shows negative correlation with USD.
- IT Index and Healthcare Index does not show any significant correlation with USD.

CONCLUSION

USD is considered as the most influential currency due to a number of factors like dollar is used as the benchmark index for most of the commodities which are global assets. Gold, silver, energy including oil prices all these things uses dollar. Also, the US Federal Reserve rates increase very frequently where European rates have remained constant for several years. These interest rate movements have always been in favor of USD, as a result USD outperforms several global currencies. If USD becomes stronger it affects the Indian economy, as Rupee weakens.

Although, exports in automobile sector is increasing but still the value of imports is much higher than exports. Companies like Maruti Suzuki imports 20% of its components from Japan as well as USA. Also, Tata Motors has taken foreign currency loans about Rs 3000- Rs 4000 Crores. Auto Index has shown negative correlation mainly due to these factors only. Similarly, Power and Oil sectors show negative correlation due to large dependence on imports. IT and Pharma sector major source of revenue is from exports only but still a relation can be obtained as there are multiple extraneous variables which offset the effect of currency fluctuation. Hence, no correlation can be established between USD and these 2 sectors.

RECOMMENDATION

Investors can obtain benefits arising from currency fluctuations. Above regression analysis shows that if Rupee depreciates or Dollar becomes stronger then due to negative correlation Power Sector, Oil and Gas Sector will go down. So, investor can either sell their existing shares of companies of these sectors to reduce losses, or can go for a short position. Similarly, investors can go for long position if Rupee appreciates. Same situation arises for investors who invest in auto sectors. Although, the slope value of auto index is less so impact on auto index due to currency fluctuation also becomes less. So, if investors seek to generate money faster then, the investors have an option to invest either in Power or Oil sectors. IT and Pharma are the 2 sectors which can move in any direction due to currency fluctuation, so, investors can either hold their existing positions or they can exit the market by netting of their positions. Investors can either invest in shares of the companies of these sectors or they can invest in sectoral mutual funds (as discussed earlier). To obtain greater advantage investor can always look at the prevailing interest rates, or the inflation rate to predict the currency movement.

LIMITATIONS

- The effect of extraneous variables cannot be quantified and these variables can affect the relation between currency and stock market.
- No significant relation can be obtained in cases of IT sector and Pharma sector as the effect of extraneous variables on these 2 sectors is very high.
- Regression analysis is done between one dependent variable and just one independent variable. A multi-variate analysis can be done to assess the impact of multiple independent variables on dependent variable

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WELFARE SCHEMES FOR SCHEDULED CASTES IN PUNJAB: AN OVERVIEW

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ABSTRACT

The welfare of Scheduled Castes has been placed in the State List.¹ Therefore, it becomes the constitutional responsibility of the State Governments to promote and protect the interests of the Scheduled Castes/Scheduled Tribes within the broad policy framework laid down by the Union Government and NITI AYOJ. Article 46 of the Indian Constitution states that the State shall promote with special care, the educational and economic interests of the weaker sections and in particular of the Scheduled Castes and Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.²

KEYWORDS: *Planning Commission, Promoting, Directorate, Administrative.*

INTRODUCTION

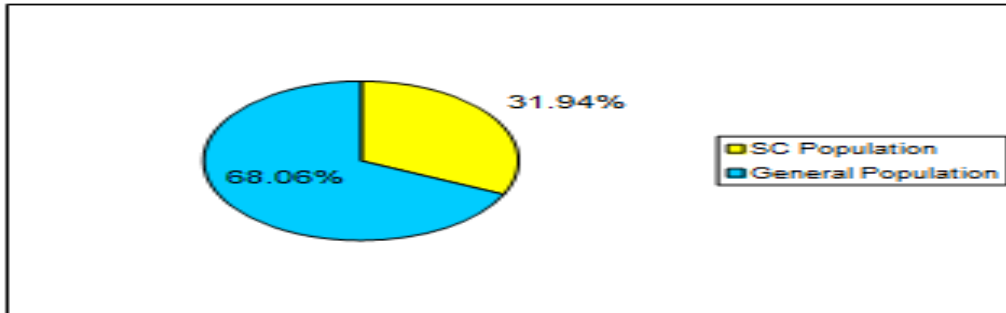
The erstwhile Planning Commission now NITI AYOJ allocates appropriate funds under various heads and provides guidelines and consultancy support to states in regard to the welfare and development of Scheduled Castes. The various State Governments have evolved and strengthened the Social Welfare Departments entrusted with the responsibility of developing and promoting the interests of Scheduled Castes. Every State has three level of administrative structure which is engaged in the activities relating to the welfare and development of Scheduled Castes. These three levels are the Minister, Social Welfare, the Secretariat and the Directorate. Invariably these levels operate from the State Head Quarters (SHQ) or any other specified place identified by the State Government. The field staff of the Directorate is located at District, Tehsil, and Block and Village levels. [1]

As per the Census 2011, the State of Punjab has the highest percentage of Scheduled Caste population amongst all the States of the Country. The Scheduled Caste population in Punjab is 88.60 lac which is 31.94% of the total population (277.43 lac) of the State. Punjab accounts for 2.3% of the total population and 4.3% Scheduled Caste population of India. The decennial growth rate of the Scheduled Castes population in the State was 26.06% as compared to 13.89 % for the State as a whole. However, a sizeable number of SC families still live below the poverty line. The Figure 6.1 shows the Scheduled Castes in Punjab:[2]

Figure-6.1

Scheduled Castes Population

Total Population : 277.43 lac
SC Population : 88.60 lac (31.94%)
General Population : 188.83 lac (68.06%)



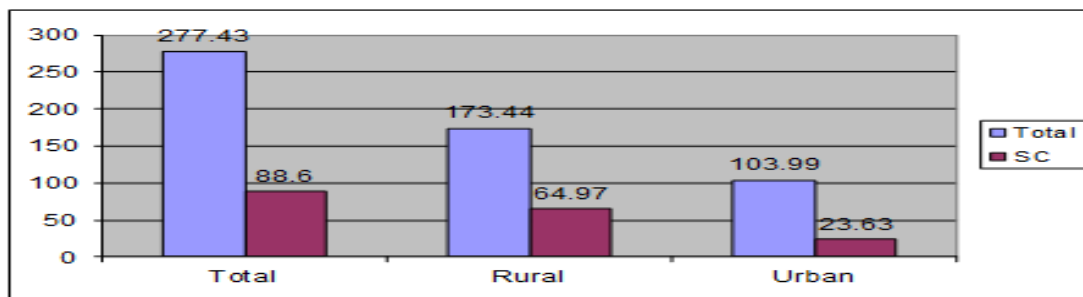
(Source: Census 2011)

The Scheduled Caste population is predominantly rural by residence. As per the Census 2011, 73.33% of the Scheduled Castes population lives in the rural area, whereas 26.67% reside in the urban area of the State. The distribution of SC population among the districts of the State indicates that percentage of the Scheduled Castes population is high in the districts of Shaheed Bhagat Singh Nagar 42.51%, Sri Muktsar Sahib 42.31%, Ferozpur 42.17%, Jalandhar 38.95%, Faridkot 38.92%, Moga 36.50%, Hoshiarpur 35.14%, Kapurthala 33.94%, Tarn Taran 33.71%, Mansa 33.63%, Bathinda 32.44%, Barnala 32.24% and Sri Fatehgarh Sahib 32.07%. This indicates that in the majority of the districts in Punjab have one third or more of their population belongs to the Scheduled Castes. Out of the total 12,168 inhabited villages in the State, 57 villages have 100% SC population and 4,799 villages (39.44%) have 40% or more SC population. Among 217 towns, 175 towns have 20% or more SC population, and the majority of them are either small towns or census towns. The Figure 6.2 depicts the same:

Figure-6.2

Total, Rural and Urban SC population

	Total	SCs
Total	277.43 lac	88.60 lac
Rural	173.44 (62.52%)	64.97 (73.33%)
Urban	103.99 (37.48%)	23.63 (26.67%)



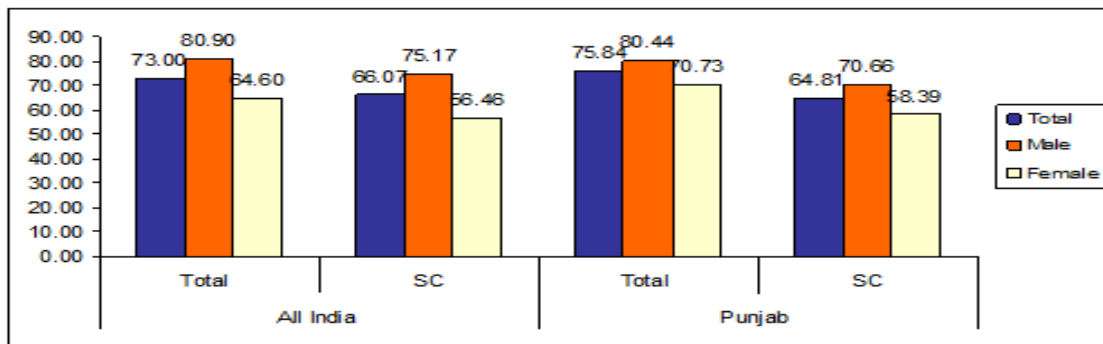
(Source: Census 2011)

The Census shows that the literacy rate among SCs is 64.81% as compared to the total literacy rate of 75.84% of the state and 73.00% of the country as a whole. The SC female literacy rate at 58.39% in the State also lags behind that of the total 70.73% of the State. However, it is better than the SC female literacy rate at 56.46% of the Country. The SC male literacy rate at 70.66% of the State is also lower than the total male literacy rate of 80.44% in the State. The Figure 6.3 illustrates the same:

Figure-6.3

Total and sex-wise literacy rate of SC Population (in %age)

	All India		Punjab	
	Total	SCs	Total	SCs
Total	73.00	66.07	75.84	64.81
Male	80.90	75.17	80.44	70.66
Female	64.60	56.46	70.73	58.39



(Source: Census 2011)

Out of the total SC population, the SC labour force constitutes 35.88%; out of which, 79.20% and 20.80% are main and marginal workers respectively. The majority of this segment of society is agricultural labourers or is engaged in low wage and arduous occupation.[3]

This segment of the SC population constitutes an important stratum in Punjab, not because they form about 31.94 percent of Punjab’s population, but because they occupied and still occupy a unique position as ‘untouchables’. They are the disadvantaged sections of society who suffered from social neglect and economic backwardness and were denied access to education for a long time till independence which, in turn, had its impact on their occupational status and socio-economic backwardness.[4] Now the State Governments are committed to uplift this underprivileged section of the society by improving the socio-economic and educational development by providing them with technical skills for vocational jobs and link their present occupation/activity with the larger activity. In this regards the State Government’s major schemes of social justice and empowerment especially related to the development and upliftment of the Scheduled Castes have been highlighted as under:-

WELFARE PROGRAMMES FOR SCHEDULED CASTES ADOPTED BY PUNJAB GOVERNMENT

The Punjab Government has taken many concrete steps to uplift the interests of the Scheduled Castes. To quote a few;

1. Shagun to Scheduled Castes, Christian Girls, Backward Classes and other Economically Weaker Families (State Plan);

2. The Attendance Scholarship to Scheduled Castes Primary Girl Students;

1. SHAGUN SCHEME TO SCHEDULED CASTES, CHRISTIAN GIRLS, BACKWARD CLASSES AND OTHER ECONOMICALLY WEAKER FAMILIES (STATE PLAN SCHEME)

The Shagun Scheme was started by the Government of Punjab on April 1, 1997. Under the Scheme financial assistance (Shagun) of Rs.15000 is given to the parents/guardians of girls belonging to the Scheduled Caste/Backward Classes/Castes, Economically Weaker Sections/Widows/Divorcees/Daughters of widows of any caste of Punjab domicile on the occasion of their marriage, subject to the condition that annual income of parents/guardians from all sources does not exceed Rs. 32,790. The scope of the scheme was extended for the Christian girls' w.e.f. September 1, 1997 on the same terms and conditions. The scheme was renamed as Ashirwad on January 26, 2004.

There is a provision in the scheme that the applicant will have to submit his application for getting financial assistance in prescribed performa before the date of marriage or after the 30 days of the marriage of the girl. The girl should be 18 years old or above. The Scheme is limited up-to only two girls of a family. The disbursement of financial assistance (Shagun) is transferred through DBT Scheme directly into the accounts of beneficiaries, which has been proved very successful method in favour of poor beneficiaries, delay and harassment of beneficiaries is also reduced.

2. ATTENDANCE SCHOLARSHIP TO SCHEDULED CASTES PRIMARY GIRL STUDENTS (STATE PLAN SCHEME)

The Attendance Scholarship to Scheduled Castes Primary Girl Students scheme was introduced in 1992-93 as the district-level scheme on Plan Side. Subsequently in the year 2008-09, the scheme has been transferred to State Plan Sector. The prime objective of the scheme is to adopt some ways and means so that the dropout tendency is checked initially at the primary stage and to provide financial assistance for the upliftment of the Scheduled Castes girl students studying in primary classes. Generally, it has been observed that the number of Scheduled Caste girl students in educational institutions is much less than their population because of the fact that the parents/guardians of these girls are very poor and they do not pay heed to the education of the female child. If all of these girls are admitted to the school, they drop out of school to assist their parents to augment the family income by taking up nominal jobs. Keeping these circumstances in view the Government of Punjab decided to adopt this Scheme.

Under this scheme, a condition that the attendance scholarship @ Rs. 50/- per month, per student for 10 months in a year is awarded to the girls belonging to the Scheduled Castes, who have domicile of the State of Punjab and are studying in primary classes. Their parents should not own more than five acres of land and should not be income taxpayers. At least 75% class attendance is required for the scholarship award.

SCHEME FOR SANCTIONING SPECIAL GRANT TO SCHEDULED CASTE GIRL STUDENTS STUDYING IN POST- MATRIC AND POST GRADUATE CLASSES

The Scheme for Sanctioning Special Grant to Scheduled Caste Girl Students Studying in Post-Matric and Post Graduate Classes was started in the year 1980-81. The prime objective of the scheme is to provide financial assistance for the upliftment of the Scheduled Caste girl students studying in post-matric and post-graduate classes. Currently, this is a Non-Plan scheme and is being implemented through the Department of Education/DPI Colleges & Schools, Director of Research & Medical Education and Director of Technical Education.

Under the Scheme, the girl students belonging to the Scheduled Castes residing in the State of Punjab are eligible for Special Grant. The annual income of their parents/guardians from all sources should not exceed Rs.60965. The financial assistance is given to students studying in post-matric and post-graduate classes @ Rs.50 and Rs.60 per month, per girl student, respectively. This grant is in addition to the Post-Matric Scholarship and transferred through DBT Scheme directly into the accounts of beneficiaries by the Department of Welfare. There is a provision in the scheme that the special grant will be paid from the 1st April or from the month of admission, whichever is later, to the month of completion of examinations at the end of the academic year, provided that if the students secure admission after the 20th day of the month, the payment will be made from the month, following admission.

3. ENCOURAGEMENT AWARDS TO SC GIRL STUDENTS FOR PURSUING 10+2 EDUCATION (STATE PLAN SCHEME)

The Encouragement Awards Scheme to Scheduled Castes Girl Students for pursuing 10+2 Education is implementing since 2007-08 by the Government of Punjab through the Department of Welfare. The objective of the scheme is to check the high drop-out rate from schools amongst the SC girl students, improve the female literacy rate and also to empower the SC women as well. Currently, the dropout rate among SC girl students is very high being 30.13% at the Primary level, 46.96% at the Middle level and 63.62% at the Secondary level. The Literacy rate of the General Category in the State is 69.70% against 56.22% of Scheduled Castes. The Female literacy rate among SCs is very low being 48.25% against 63.40% of the general female literacy rate. Therefore, on the pattern of the Madhya Pradesh Government, the Government of Punjab has decided to adopt this Scheme to curb the tendency of dropout from schools amongst the Scheduled Castes girl students pursuing 10+2 Education and to provide financial assistance for their upliftment.

Under the Scheme, a lump sum annual amount of Rs. 3000 is provided to each SC girl of 11th & 12th classes. Resident of the State of Punjab is eligible for the Grant. The wards of beneficiaries should not be income taxpayers. The scheme is implemented by the Director of Welfare of SCs and BCs. The demand is sent to the Department of Welfare by the DPI (School).

4. GRANT TO SCHEDULED CASTE STUDENTS STUDYING IN MEDICAL & ENGINEERING COLLEGES (NON-PLAN SCHEME)

The Government of Punjab has introduced this scheme from the year 1982-83, on the pattern of scholarship fixed by the Government of India, under Centrally Sponsored, "Post-Matric Scholarship Scheme for Scheduled Castes Students". The students belonging to Scheduled

Castes community are financially weak and cannot afford to join professional colleges i.e. Medical and Engineering colleges.

Under this scheme, a special grant is being provided to the Scheduled Castes students studying in Medical and Engineering Colleges @ Rs.125 and Rs.250 per month, for Day Scholar and Hosteller respectively and whose Parents/Guardian's annual income from all sources does not exceed Rs. 60,965. This scheme is being implemented through the Director, Public Instructions (Colleges), Punjab. Under this scheme, recommendations are obtained from the colleges along-with applications of the students. According to the rules of the Scheme, the eligible students are required to apply in time to the Head of Institution in which he/she is studying. Recommendations received from such colleges are scrutinized at the headquarters and approved. Thereafter, the sanctioned amount is disbursed directly into the bank account of the students through the Online Management System.

AWARD TO BRILLIANT SCHEDULED CASTE STUDENTS (NON-PLAN SCHEME)

The Award to Brilliant Scheduled Caste Students Scheme was introduced in the year 1984-85. The aim of this scheme is to inculcate the spirit of the competition among Scheduled Caste students in the field of education.

Under this scheme, the Scheduled Castes students studying from 6th to 12th classes are awarded @ Rs.100 per month, per student, who secures 1st, 2nd and 3rd positions amongst educational block. There are 228 educational blocks and students (3 boys and 3 girls) are selected annually in each educational block on the basis of merit secured at the level of each examination i.e. 5th, 8th and 10th classes and get an award for 3 years, 2 years and 2 years respectively, conducted by Punjab School Education Board. The Scheme is implemented through the Director, Public Instruction (Secondary Education), Punjab. The sanctioned amount is disbursed directly into the bank account of the students through the Online Management System.

5. AWARD TO SC SPORTS STUDENTS FOR 6th TO 12th CLASSES (STATE PLAN SCHEME)

The Award to Scheduled Castes Sports Students for 6th to 12th Classes State Plan Scheme was started during the year 1990-91. The aim of this scheme is to inculcate the spirit of competition among Scheduled Castes students in the field of sports. Keeping this in view, the Scheduled Castes students studying from 6th to 8th, 9th to 10th and 11th to 12th classes are awarded @ Rs. 500, Rs. 750 and Rs. 1000 per annum, per student respectively, who secure first, second and third position amongst Scheduled Castes Students in each educational block and in the 5th, 8th and the 10th class competition. Consequently, 3 boys and 3 girl students are awarded at each level competition and this award is continued for three year, two years and two years respectively.

6. FINANCIAL ASSISTANCE TO THE SC YOUTH FOR FLYING TRAINING OF COMMERCIAL PILOT LICENCE (STATE PLAN SCHEME)

Commercial Pilots are in great demand all over the world. Flying training being a costly phenomenon, Scheduled Castes who are mostly poor are unable to get the training for Commercial Pilot Licence. Hence, the representation of Scheduled Castes among Commercial Pilots is almost zero. In order to have a fair representation of Scheduled Castes in Commercial Pilot Licence, it is imperative that the State should come forward to provide financial assistance

to Scheduled Castes trainees. Therefore, the Financial Assistance to the Scheduled Castes Youth for Flying Training of Commercial Pilot Licence (CPL) Scheme is being implemented by the Government of Punjab through the Department of Civil Aviation from 2014-15.

To obtain a commercial pilot licence, a candidate has to undergo flying training for a total period of 200 hours and the cost of flying operation varies from Rs. 9600 to Rs. 10,500 per hour depending upon the type of aircraft flown by the trainee. Thus, the total cost of the commercial pilot licence training course is around Rs. 25.00 lac. In view of this, the Department of Welfare proposes to provide financial assistance @ Rs. 25.00 lac per candidate to the registered flying clubs in India.

As per the scheme, the candidates belonging to the Scheduled Castes residing in the State of Punjab are eligible for Special Grant. The annual income of their parents/guardians from all sources should not exceed Rs.2.50 lac and only one member of a family would be able to get the benefit. A total of 4 fresh Scheduled Castes candidates are to be covered under the schemes annually. The age of the candidate will be 18 to 25 years as on date of registration and the minimum qualification is 10+2 (2nd division) with Physics & Maths and should be a Graduate. Any eligible candidate can register his name with the flying clubs and he has to pass the written examination as well as a "Pilot Aptitude Test" to become a Commercial Pilot. Candidates will also have to undergo a medical examination as per the flying standards. After declared medically fit, the candidate will submit a bank guarantee of Rs. 1.00 lac in favour of the Director, Welfare of Scheduled Castes and Backward Classes, Punjab, which will be refunded after completion of the training. The total cost per beneficiary i.e. 25.00 lac will be provided as financial assistance by State Government. However, the beneficiary has to sign an agreement/bond with the Government that after his/her placement as CPL, he will return 50% (Rs. 12.50 lac) of total assistance provided to him. He/She will return the amount in 12 equal installments within a year. The granted cost of flying training is directly given to the flying clubs not to the candidates.

7. NEW COURSE/VOCATIONAL TRAINING IN ITIs FOR SCHEDULED CASTES STUDENTS (STAFF EXPENDITURE & SCHOLARSHIP TO SC AND SC BPL STUDENTS COVERED UNDER ETC.) (STATE PLAN SCHEME & SPECIAL CENTRAL ASSISTANCE)

The New Course/Vocational Training in ITIs scheme for Scheduled Castes Students was started in the year 2004-05. The aim of the scheme is to provide skill development/vocational training in NCVT/SCVT approved trades to the Scheduled Castes youth. Under the scheme, the Skill training is imparted to the youngsters with minimum qualifications in NCVT/SCVT approved trades by the Industrial Training Institution of Technical Education and the Industrial Training Department of Punjab. The ILO accredited certificates issued after the completion of the training in these trades are valid across the country. Due to this recognition, the youth people with these certificates will also be able to get jobs abroad. As the dropout rate of the Scheduled Caste youth from schools is very high, so it is very important to provide them skill training as well.

As per the scheme, the norms and duration of courses will be prescribed by the National Council for Vocational Training or the State Council for Vocational Training. The National Trade Certificate (NTC) of NCVT or the State Trade Certificate (STC) of SCVT is awarded after qualifying the All India Trade Test or the State Trade Test. The total number of trades approved by NCVT is 124. The duration of these trades ranges from 6 months to three years. However,

most of the trades are for a period of one or two years. The number of trades/courses approved by SCVT is 4, duration for which ranges from 6 months to 2 years. The Apprentices are sponsored by the Welfare Department, who have the required qualifications as per NCVT/SCVT norms. Admission is strictly on Merit.

8. PROVIDING OF EQUIPMENT AND RAW-MATERIAL TO THE TRAINEES OF TRAINING-CUM-PRODUCTION CENTRES OF WELFARE DEPARTMENT (SCA)

The Scheme of Training cum Production Centre was started in the year 1977-78. The aim of the scheme is to make the Scheduled Caste women, girls and boys trained in technical trades and supplement them for their family income so that they can become self-employed and awaken to live a dignified life. So as per the scheme, the duration of the training is one year. During the training, the items are prepared by the trainees in the centers and are sold by the trainees at 10% profit by putting up exhibitions on different occasions. The funds raised from the income are utilized as revolving funds for the purchase of raw material for the concerned trade to train the trainees. Under the scheme, a stipend of Rs. 500 per month, per trainee, has been provided to 25 Scheduled Caste trainees living below the poverty line at each Training Cum Production Center.

As per the scheme, there is a provision to shift the production centers to those villages, where the population of Scheduled Caste families is more than 40 and most of them belong to BPL families and a well rent-free building with proper arrangement of water and light has been arranged by the concerned village panchayat and the village community is ready to participate in the activities of the center.

9. COACHING FOR STENOGRAPHY TO SCHEDULED CASTE CANDIDATES(NON-PLAN SCHEME)

The Coaching for Stenography to Scheduled Caste Candidates scheme was introduced in the year 1978-79. The objectives of the scheme are to ensure adequate representation of the Scheduled Castes candidates in the cadre of Punjabi Stenographers and Steno Typists in Punjab Civil Secretariat and other offices of the State Government. The persons who are otherwise qualified in the trade are being given special training to meet the required standard.

The total number of seats under the scheme is 230 (15 in each district and 20 seats at Chandigarh) and a stipend of Rs. 250 per month, per trainee, has been provided. In response to the advertisements in leading newspapers in the month of July, all the applications received from the candidate are scrutinized and selected on merits by the selection committee. The candidate should be a graduate from a recognized university or institution and belong to the Scheduled Caste community. Currently, the scheme is being implemented in 14 Districts of the State through the Department of Language.

10. IMPARTING TRAINING IN DRIVER-CUM-MECHANIC (LIGHT MOTOR VEHICLE AND HEAVY MOTOR VEHICLE) (SPECIAL CENTRAL ASSISTANCE SCHEME)

The Training in Driver-Cum-Mechanic scheme was started in the year 2005-06 to provide employment/self-employment to the candidates of the Scheduled Castes. Under the scheme, the Department of Industrial Training is imparting training to the eighth/matric pass candidates to develop industrial skills, become employable in industries and other organizations and enable them to become self-employed. The modalities of the scheme are sponsored by the Department

of Welfare under the Special Central Assistance (SCA) Scheme. The institute has to open a separate account to deposit this amount in the name of "Account for incurring expenditure on providing training in Driver-Cum-Mechanic Trade". The Principal/Head of Institute has the authority to incur the expenditure i.e. he is the DDO for this scheme. The Scheme proposes to run 23 units (one unit in each district and two units in big districts viz. Gurdaspur, Ludhiana and Patiala (17+6 =23) and each unit has 20 courses.

According to the scheme, candidates belonging to the Scheduled Castes living below the poverty line in rural and urban areas in the State of Punjab are eligible for the Grant and should be in the age group of 18 to 35 years. The norms and duration of courses are determined by the National Council for Vocational Training or the State Council for Vocational Training. The National Trade Certificate (NTC) of NCVT or the State Trade Certificate (STC) of SCVT is awarded after qualifying the All India Trade Test or the State Trade Test. The candidates are selected on merits by the selection committee. The scheme also provides that in addition to employment opportunities in the government/semi-government institutions, special measures may be taken by the government to provide self-employment to the trainees. For this purpose active engagements can be made with the KVIC, NABARD, major banks and leading loan agencies.

11. SUPPLY OF FREE TEXT BOOKS TO SCHEDULED CASTES STUDENTS STUDYING IN 1ST TO 10TH CLASSES (NON PLAN SCHEME)

The Scheme Free Text Books to Scheduled Castes Students studying in 1st to 10th classes was started in the year 1976-77 for Middle Classes and the scope of the scheme was enlarged to cover High and Primary Classes from the year 1981-82 and 1986-87 respectively. This scheme has been covered under Dedicated Social Security Fund from the year 2005-06. The funds under this scheme are provided on Non-Plan Side. The textbooks are provided to the Scheduled Caste students studying in 1st to 10th class in government as well as private recognized schools. This scheme is being implemented by the Department of Welfare and the textbooks are got printed by the Punjab School Education Board, Mohali. There is no income limit under this scheme. The strength of scheduled caste students studying in 1st to 10th class (class-wise) in the District is obtained from District Education Officer (Primary and Secondary) by D.G.S.E thereafter demand is sent to the Secretary, Punjab School Education Board for supply of books. The Board starts supplying the books in the month of February. Currently, the books have been supplied by the Punjab School Education Board through its Book Depots located in each District directly to concerned schools as per the demand sent by D.G.S.E. The concerned District Welfare Officers with the assistance of the Tehsil Welfare Officers are responsible for fair and timely distribution of the books.

12. SETTING UP OF INSTITUTE FOR TRAINING TO SCHEDULED CASTE CANDIDATES IN STENOGRAPHY (SPECIAL CENTRAL ASSISTANCE) AT MOHALI, PATIALA, FEROZEPUR AND AMRITSAR

Keeping in view the deficient representation of Scheduled Caste in the cadre of Steno typists/Stenographers and non-availability of such qualified persons with Punjab Subordinate Service Selection Board and State Employment Exchange, the State Government has decided to start a scheme namely "Setting up of Institute for Training to Unemployed/ Below Poverty Line Graduate Scheduled Castes Candidates in Stenography", at Mohali out of SCA funds in the year

1987-88. The scope of this scheme has been extended by opening similar stenography centers at Patiala and Ferozepur from the year 1999-2000 and at Amritsar from the year 2002-03.

The scheme is implemented by the Directorate of Welfare of SCs/BCs. Under the Scheme, candidates should have a graduate degree with relevant language as an elective or optional subject or has an equivalent degree in any discipline from recognized University/Institution. The annual income of the candidate from all sources should not exceed Rs.1.00 lac. To select the candidate a selection committee under the chairmanship of Deputy Director, Department of Welfare of SC/BC with concerned District Language Officer and concerned Instructors as Members and District Welfare Officer as Member Secretary has been constituted so as to give fair selection on the basis of merit. The duration of the training period is one year. The number of seats in Mohali Institution is 80 having 40 seats each in Punjabi and English. The number of seats in Patiala, Ferozepur and Amritsar institutes are 50 each (25 each in Punjabi and English). During the training period, each trainee is provided a stipend of Rs. 750 per month and in addition to this the trainees are also provided stationery, library books and other material required for the training.

With the increasing use of information technology, the computer components have also been added in these institutes to make them result-oriented and to create new avenues for the candidates who pass from these institutes.

13. REMOVAL OF UNTOUCHABILITY UNDER PROGRAMME FOR IMPLEMENTATION OF PROTECTION OF CIVIL RIGHTS ACT-1955 AND THE SCHEDULED CASTES & SCHEDULED TRIBES (PREVENTION OF ATROCITIES) ACT, 1989 (CENTRALLY SPONSORED SCHEME)

To remove untouchability from its grass-root level, a scheme namely "Removal of Untouchability under Protection of Civil Rights Act, 1955" was introduced in the State of Punjab during the year 1986-87. Under this scheme, an encouragement award is given to the inter-caste married couples (wherein one of the spouses belongs to Scheduled Caste) and to the Panchayats, Voluntary Organizations who work for the all-around development of Scheduled Caste are given suitable financial assistance. Besides this, seminars, debates and Mass Lunch are also organized at the Block level. Wide publicity of the Welfare Schemes is also made through advertisements in various Newspapers and distribution of Pamphlets etc. It is a Centrally Sponsored Scheme and the budget is share by the State Government and Centre Government on 50:50 bases. An amount of Rs. 50,000 is provided to the inter-caste married couples and an amount of Rs. 25,000 is also provided to the Panchayats who are doing outstanding work for the development of the Scheduled Caste Community.

In order to reduce the atrocities at the grass-root level, a scheme has been drawn up "Setting up of SC Protection Cell and Providing Monetary relief to the victim of atrocities and their dependents". With the introduction of this scheme, the State Government has now been able to take effective steps to curb atrocities and to cope with any offence against the Scheduled Castes & Scheduled Tribes. The scheme provides various incentives/monetary relief to the victim of atrocities as per the norms laid down by the Government of India under POA Rules, 1995.

14. ASSISTANCE TO REPUTED AND REGISTERED NGO'S/TRUST AND OTHER SOCIAL INSTITUTIONS SOLEMNIZING MASS MARRIAGES FOR SCHEDULED CASTES/INTER-CASTE (STATE PLAN SCHEME)

The scheme provides financial assistance to the reputed and registered Institutions, Trusts, and NGOs and to the Scheduled Castes & inter-caste married couples to eradicate untouchability and to maintaining communal harmony in the State. To meet the objectives, the State Government has decided to involve the reputed and registered NGOs, Trust and other Social Institutions who solemnize the mass marriage of poor and needy Scheduled Castes, so that the parents of this poor stratum of society are relieved to some extent. The scheme covers only marriages between the Scheduled Castes (at least one of the members should belong to BPL category), non-Scheduled Caste bride and Scheduled Caste BPL bridegroom or vice-versa. Financial assistance in the form of cash is provided to individuals or institutes which solemnize more than ten mass marriages of SC couples. Rs.0.75 lac per marriage is given to Institution/Trust/NGO, out of which Rs. 60,000 is given to the couple for providing utensils, furniture and gold etc. while Rs. 15,000 is given to the organizer, individual/institute as an encouragement award.

15. STRENGTHENING OF 108 COMMUNITY CENTRES FOR PROVIDING EQUIPMENTS AND RAW MATERIAL (SCA)

The Community Centers Scheme was started in the year 1956-57 to provide equipments and raw materials. Under the scheme, a one-year training programme in cutting, tailoring and embroidery has been provided to the women and girls of Scheduled Castes living below the poverty line and the Women and Girls of the other sections of the society to become self-employed and self-reliant. During the training, the readymade items are prepared by the trainees in the centers and are sold by the trainees at 10% profit by putting up exhibitions on different occasions. The funds raised from the income are utilized as revolving funds for the purchase of raw material for the concerned trade to train the trainees.

As per the scheme, there is a provision to shift the centers to those villages, where the population of Scheduled Caste families is more than 40 and most of them belong to BPL families and a well rent-free building with proper arrangement of water and light has been arranged by the concerned village panchayat and the village community is ready to participate in the activities of the center.

16. HOUSES TO HOUSELESS SCS IN RURAL AND URBAN AREAS (DISTRICT PLAN)

To provide houses to Scheduled Castes families who are either houseless or having Kacha houses in a dilapidated condition, grants are provided by the State Government for the purchase of plot and construction of houses. From the years 2008-09, the SC families having a maximum upper limit of annual income is 1.00 lac is covered under this scheme. Considering the present rate of land, a grant of Rs 50,000 has been given to each SC houseless family for the construction of a new house with one room and one kitchen. However, funds for the construction of toilets are provided under the "Rural Sanitation Programme." Besides this, a grant of Rs 20.00 thousand for each beneficiary is provided for the conversion of Kacha houses into Pucca houses.

As per the scheme, families living in Kacha or dilapidated houses are subject to the condition that they have not availed any relief grant for houses under any government scheme before. The family must be a permanent resident of the state of Punjab and have their own plot. Families who have a plot of their own or have got plot under the Panchayati land or free or partial free from any other government institution is preferred.

17. CONSTRUCTION OF DR. B.R. AMBEDKAR BHAWANS (STATE PLAN SCHEME)

To commemorate the birth of Bharat Ratna Baba Sahib, Dr. B.R. Ambedkar the Punjab Government had decided to set up Ambedkar Bhawan at each district headquarters. The construction of Bhawans has been completed in the district of Ropar, Ferozepur, Moga, Patiala, Gurdaspur, Bathinda, Faridkot, Sangrur, Fatehgarh Sahib, Kapurthala, Mukatsar, Mansa, Ludhiana and Nawan Shahr. The construction work is going on the district of Amritsar, Hoshiarpur and Jalandhar, whereas the matter for allotment of land for construction of Ambedkar Bhawans at S.A.S. Nagar, Tarn Taran and Barnala is under consideration of the Government.

18. CONSTRUCTION OF SC DHARAMSHALAS/CHAUPALS

The scheme for construction of Dharamshalas/Chaupals for Scheduled Castes was started in the year 1969-70. Under this scheme, Dharamshalas are constructed in the Scheduled Caste Basties in the State so that these people can avail the community benefits and arrange their social functions at these places. A grant of Rs. 1.00 lac has been provided for the construction of a new Dharamshala and Rs. 50 thousand has been provided for the repair of incomplete Dharamshala. Land and the labour for the construction of Dharamshala are arranged by the Community/village Panchayat itself. Grant has been provided for the construction of new Dharamshala in the village/town having suitable site measuring 10 marlas to one Kanal in village and 4 marlas in town inhabited by 10 to 15 Scheduled Caste families.

Under this scheme, the Managing Committee consisting of the District Welfare Officer as Chairman, Tehsil Welfare Officer (Ex officio) as Member Secretary, one Panch/Counsellor/M.C. of Scheduled Caste as Member-cum-Cashier, the Sarpanch/Panch/Counsellor/M.C. other than Scheduled Caste as member and any Scheduled Caste member, preferably lady member of Gram Panchayat in village & lady counselor in Urban area acting as member. The scheme comes under the Punjab Nirman Programme from the year 2005-06. There are 12,729 villages in the state; Out of which 11,783 have been covered and 17,848 Dharamshalas have been constructed.

19. SPECIAL EMPLOYMENT CELL

The state government had set up a Special Employment Cell on April 28, 1970 in the Directorate of Welfare of Scheduled Castes and Backward Classes to register the names of unemployed educated persons belonging to the Scheduled Castes and Backward Classes, across the State, who have certificates in respect of academic/technical qualifications. The scheme provides that those Scheduled Caste Candidates, who have already registered their names in the Employment Exchange, are also eligible to register their names with the Special Cell. Along with the Employment Exchange, the Employment Cell has also continued its usual efforts to find jobs against reserved as well as general posts for the candidates belonging to the Scheduled Castes and Backward Classes. The objective of the scheme is to safeguard the interest of Scheduled Castes and Backward Classes in the matter of appointment both at the time of initial recruitment and also by promotion.

As per the provisions of the scheme, whenever a department advertises any permanent/temporary or short term vacancies to be filled by the department committees at the headquarter/district/tehsil level, such requirements are forward to the required Public Service Commission/Employment Exchange, a copy of such advertisement/requirement is also sent to

the Special Employment Cell and the Cell in turn sends the names of suitable persons in its list on the basis of seniority to the department/recruitment authority concerned and recruitment authority consider such candidates as per their requirements.

There is provision in the scheme that the department shall have to obtain a non-availability certificate from the Employment Cell before the vacancies reserved for Scheduled Castes/Backward Classes are offered to other candidates. The Cell works both at the headquarter level in the office of the Director, Welfare of Scheduled Castes and Backward Classes and at the district level in the offices of the District Welfare Officers.

20. AWARENESS PROGRAMME (NON-PLAN SCHEME)

For effective implementation of Protection of Civil Rights Act, 1955, general awareness among poor Scheduled Castes is essential. This is possible only if the various welfare schemes implemented by the Welfare Department of Punjab as well as the Protection of Civil Rights Act, 1955 and the Prevention of Atrocities Act, 1989 are widely publicized through press and electronic media i.e. Radio, T.V, printing and distribution of folders, pamphlets, booklets etc.⁴⁶

21. AWARD TO VILLAGE PANCHAYATS FOR PROMOTING EDUCATION & SOCIO ECONOMIC DEVELOPMENT OF SCHEDULED CASTES (NEW SCHEME)

It has been observed that village Panchayats can play an important role in the overall development of the Scheduled Castes. There are a total of 12,238 villages in the State of Punjab out of which 3,788 villages are identified as SC dominated villages with 40% and above SC population. Under the scheme, there is a condition of the Welfare Department that an award of Rs. 50,000 is given to the Panchayats which shows outstanding performance in the eradication of untouchability under the Protection of Civil Rights Act, 1955, and making efforts for providing monetary relief to the victim of atrocities under the Scheduled Castes & Scheduled Tribes (Prevention of Atrocity) Act, 1989, bringing down the drop-out rate of SC and ensure their 100% enrolment in government schools and providing basic amenities such as drinking water, electricity, repair of roads, drains etc. in the SC basties of the village. The main thrust of the scheme is to reduce the dropout rate of SC students and ensure 100% enrolment in the government schools.

The award amount to be given to Panchayats is only subject to the condition that 25% of the total award amount will be spent on the overall development and empowerment of Scheduled Caste women. It is the duty of the Panchayat to involve the SC women in Panchayat development works and assist/train them to get a loan from Financial Institutions/Banks on easy installments to make them self-reliant. The Panchayat should take steps to eradicate social evils such as female feticide, dowry, drug addiction etc. and aware SCs about their rights & duties for the development of society.

Under the scheme, the selection of village Panchayats is made by the District Level Committee consisting of the Deputy Commissioner as Chairman, the Sub-Divisional Magistrate and the District Development & Panchayat Officer as members, the District Welfare Officer as member secretary.

As per the provisions of the scheme, the District Welfare Officer forward the recommendations of eligible village Panchayats duly recommended by the District Level Committee to the Director, Welfare of Scheduled Castes & Backward Classes, Punjab, who issue the approvals in

the name of eligible Panchayats and send the award money to the concerned District Welfare Officer in the shape of RTRs. The District Welfare Officer is overall responsible for the proper utilization of funds. Eligible Panchayats are honoured by the concerned Deputy Commissioner by distributing RTRs on National Days/relevant occasions such as on the Republic Day or on the Independence Day.

To conclude, apart from the general development programmes, the government of Punjab during the last five decades, numbers of special schemes has been launched for welfare of the Scheduled Castes. The scholarship schemes for the Scheduled Castes students have been the most regular in terms of their implementation. Some schemes such as Legal Aid Clinic in all districts, Residential Schools for Scheduled Caste boys and girls etc. were never started and remained only on paper. Grants for some of the other schemes were sanctioned irregularly. Important among these are, schemes relating to opening of hostels for Scheduled Castes boys and girls. Post-Matric Scholarship to Scheduled Castes students, Pre-Matric Scholarship etc. The Rural Landless Employment Guarantee scheme introduced in Sixth Five Year Plan was changed into JawaharRojgarYojana in the year 1981 and then into Prime Minister RojgarYojana in 1991, and presently named SwaranJyantiSwaiRojgarYojana in April 2000. A prominent scheme known as Development of Women and Children in Rural Areas (DWACRA) was changed into Self-Help Groups Scheme. The basic contents of these schemes remained almost similar. It was like the old wine in new bottles. Welfare bureaucracy expanded as new agencies and offices with new designation were created.

Thus if we compare the decadal economic condition of the Scheduled Castes, we have found that this decade of 2001-2011 has shown a considerable change in their conditions, especially their economic conditions. Their literacy rate in India and Punjab in 2001 was 34.76 and 56.2 percent respectively. It has improved to 66.07 and 64.81 percent respectively in India and in Punjab in 2011. More and more parents are now sending their children to schools. The infant mortality rate has decreased. Their clothing has improved. Reservation in jobs and admission in professional courses have benefited them a lot.

However, despite many schemes and programmes for the development of Scheduled Castes, more than 3.21 lac families of Scheduled Castes are still living below the poverty line. If we look at the number of schemes for the welfare of Scheduled Castes people, it is very encouraging. But if we look at their implementation, the sole purpose of the concerned government agencies seems to be to fill the official records and achieve the targets, whether in reality or on papers only. No one seems to care whether the Scheduled Castes have actually benefited from the schemes or not or what kind of schemes the Scheduled Castes need.

Numerous studies have revealed that government agencies do not have any feedback mechanism to determine the success or failure of the schemes. Therefore, there is an urgent need for a proper check mechanism to implement the schemes. In addition, Panchayati Raj institutions and intellectuals in the same fields should have appropriate participation and role in the formulation and implementation of the schemes. For successful policymaking and implementation of welfare and development programmes, it is very essential to develop a sound social management system. Existing administrative establishments at district, block and village levels should be strengthened.

A strong administrative structure is needed to support the public service delivery system for the weaker sections and backward classes of the society. In view of structural shortcomings, the bureaucratic system must be organized on functional lines to facilitate proper command and coordination. The biggest structural problem at the moment is the lack of people's participation. As such, leaders or wards members of the oppressed sections of the society should be invited to various forums for planning, programming and execution of various welfare and development programmes and schemes. So, the schemes can be more relevant and change the lives of the downtrodden.

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FORMATION OF PROFESSIONAL COMPETENCE IN FUTURE TEACHERS

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ABSTRACT

To understand the characteristics of the pedagogical profession and the special requirements of this profession, to clarify the attitude to the chosen profession, to form the ability to use one or another method of teaching and learning, taking into account the psychophysiological characteristics of students. , is required to operate as a mature staff. This article examines aspects of shaping professional competence in future teachers.

KEYWORDS: *Competence, Professional Competence, Pedagogy, Innovation, Educational Effectiveness, Diagnostics, Communication, Social Competence, Ability, Knowledge, Skill.*

INTRODUCTION

To understand the characteristics of the pedagogical profession and the special requirements of this profession, to clarify their attitude to the chosen profession, formed the ability to apply this or that method of educational work, taking into account the psychophysiological characteristics of students. Also, a modern teacher is required to act as a mature cadre, who has great spiritual qualities, embodies human qualities.[1]

In today's fast-paced world, many changing challenges have arisen in the face of changing modern school education due to the need for a new approach to the content and structure of education. Nowadays, modern students need to develop and teach the skills of independent learning and striving to improve their knowledge, rather than using traditional teaching methods in teaching.[2]

MAIN PART

Therefore, the teacher must have professional skills, be able to use new modern educational technologies that meet modern requirements. The purpose of the pedagogical activity of any science teacher, especially primary school teachers, is to prepare students to become mature, well-rounded, aspiring people who will be required in the future in modern society. Knowledge of the introduction of innovative technologies.[3]

“The extent to which a person uses his mind is determined by the amount of knowledge he has acquired. The more you use your mind, the more knowledge and social significance you will

have. In addition, man is distinguished from other creatures by many secondary characteristics. In the process of achieving the goal, a person overcomes a number of natural and artificial obstacles. It will take a number of measures to address these barriers”[4].

This requirement of the modern age proves that teachers should be creators of the educational process as a person with high pedagogical skills and technical abilities, aware of the secrets of pedagogical competence, rich in universal qualities. It should be noted that "if teachers teach interesting lessons, both in content and form, the school will become a center of spiritual life"[5]. Summarizing the definition and description of the concept of "professional competence of the teacher", it can be interpreted as follows: Professional competence of a teacher is one of the most important aspects of professional competence in pedagogical activity. Represents their interests.

At the heart of the teacher's multifaceted and complex activity are important tasks such as educating the younger generation politely, attentively, equipping them with scientific knowledge. The implementation of these depends on the various activities of the teacher: teaching children, the ability to organize and conduct extracurricular and out-of-class educational work, pedagogical advocacy among parents, and so on. All this requires the teacher to have in-depth knowledge, to love their field, the children.[6]

With the birth of man, he begins to form social qualities in himself. These qualities begin to take on the character of a personal quality, passing through the influence of personal character, client, emotion, attention, perception, and memory. Man gradually acquires the status of a person. Individuals are divided into simple, powerful, and great individuals depending on the extent of their knowledge and the extent to which they can change people's destinies.[7]

The process of maturation of a person is complex, it is influenced by the program in the hereditary units (eternal destiny), personal will and the external natural and social environment, as well as purposeful educational processes. As a biosocial being, man undergoes qualitative changes during his social development, rising from a representative of a biological species to an individual. The driving force behind social development is crucial. The driving force of human social development is the relationship between the objective factors that occur under the influence of human needs, the set of needs and their ability to meet them, from simple, biological and physical (material) needs to higher (spiritual and spiritual) needs.[8]

Needs create reasons for this or that activity. One seeks means and resources to meet one's needs. When there are opportunities to meet a need, one feels happy. Otherwise, knowing that he is unhappy, he will have the driving force.[9]

Information and methodological support plays an important role in the formation of their professional competence in the training of future teachers. The effective use of information technology in distance learning and teaching aids is a key factor in shaping the professional competence of future teachers in improving the quality and effectiveness of education. It is applied when there are problems in the implementation of the distance education system or when the conditions require this process. This process provides the basis for the adequate use of modern technologies to increase the effectiveness of education in a given environment.[10]

Qualification is an important criterion of competence in the formation of professional competence in future teachers, which is manifested as a result of repeated application in different

situations, as well as in problematic situations. The types of competencies currently required of a prospective teacher are:[11]

- Regularly enrich the knowledge of the future teacher, be ready to improve their skills, keep abreast of innovations in education and society;
- Have the skills and abilities to use all types of information and communication technologies, information technologies and teaching aids in the educational process;
- Independent thinking, goal setting, proper use of textbooks and additional resources;
- To be proactive and feel responsible for their actions;
- To be able to think critically and to quickly and effectively solve problematic situations that arise during the lesson in a positive way;
- To be able to cooperate, to understand each other, to show empathy, to establish pedagogical dialogue based on mutual respect and trust;
- To be knowledgeable in their profession.

One of the important requirements for a teacher is that he has a deep knowledge of the subjects he teaches and has mastered his methodology. Deep knowledge of the subject and its theory, the ability to make it interesting for students, increases children's interest in the subject. Raises the reputation of the teacher. Students not only appreciate the ability of the teacher's knowledge to convey this knowledge to children, but also appreciate his interest in the subject, his dedication.[12]

A modern teacher should not only know our national values, but also be an ardent promoter of it in the wider parent community, in the classroom. Education is characterized by two-way communication (learning and teaching), comprehensive personal development and other features. Education is a unique cognitive process guided by the educator.[13]

The role of the educator as a guide is reflected in the ability of students to fully master the knowledge, skills and abilities that ensure the development of intellectual and creative abilities. Education is also the process of the teacher's communication with students. He explains the content of the training material to students, asks questions and assignments, monitors their activities, identifies mistakes and shortcomings, corrects mistakes, re-shows how to work.[14]

Any education reflects the activity of the educator and the pupil, that is, the activity of the educator in teaching and the pupil in the study, in other words, the direct, indirect and relative relationship. In the process of education there is an interaction between the teacher and the pupil. The concept of "communication" has a broader meaning than the concept of "education".[15]

In the process of education there is an interaction between the teacher and the pupil. The concept of "communication" has a broader meaning than the concept of "education". Education is a process aimed at developing students' cognitive abilities, practical skills and abilities, as well as the formation of their worldview on the basis of imparting theoretical knowledge to students.[16]

The description of the educational process as an integrated system It is impossible to equate the "integrity", "systematization" and "complexity" of the educational process. However, the integrity of the educational process is inextricably linked with its structure. A system (as an

independent concept) is a strong unity and mutual integrity between many interconnected elements (components).[17]

Management of the educational process consists of the following stages:

- 1) Planning;
- 2) Organization;
- 3) Management (incentives);
- 4) Control;
- 5) Evaluation and analysis of results.

The competence of the future teacher is the manifestation of his theoretical and practical knowledge, skills and abilities, worldview, beliefs and all the private individual social psychological qualities. One of the important factors in ensuring the quality and effectiveness of education is that the teacher has competence in his / her subject.[18,19]

CONCLUSION

In conclusion, it can be said that in the works devoted to the study of the professional competence of the teacher, it is distinguished by the following types:

- Special educational ability - a sufficiently high level of professional activity, the ability to design their future professional development;
- Ability to social upbringing - mastery of joint professional activity, cooperation, as well as methods of professional communication, social responsibility.

It is formed on the basis of professional competence of the future teacher, willpower, intellectual potential, emotional qualities, practical skills, interdependence of self-management abilities and individual qualities that reflect the level of socio-cultural activity of the individual[20,21].

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A STUDY OF SOLID WASTE MANAGEMENT AND NEED OF RE-FRAMING THE CURRICULUM OF EDUCATION: AN OVERVIEW OF MUZAFFARNAGAR CITY (UP)

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ABSTRACT

The spread of hazardous, non-biodegradable solid waste is one of the most unhealthy, uncontrolled, and anti-nature activities of human, which is now appearing as plethora of problems. Under the second phase of 'Swachh Bharat Abhiyan' NITI Aayog has initiated a scheme of 'Cleaning up Our Cities' in the year 2019, with proper monitoring and ranking of areas for improving sanitation, cleanliness and hygiene all over the country. This paper is an attempt to survey the actual scenario of Swachh Bharat Abhiyan phase 2 in city Muzaffarnagar along with the study of need of major changes to re-frame our curriculum as according to the needs of the hour. The proposed study is an analytical survey research based on primary as well as secondary data. To fulfil its objectives the researcher has developed a questionnaire on topic "Clean India Mission: An Overview in Muzaffarnagar City." to collect the primary data and analysed New National Education Policy 2020 as secondary data of this study. A sample of hundred residents covering various areas of Muzaffarnagar city was selected by random sampling technique. The study concludes that the general awareness regarding solid waste management in the city is not highly satisfactory, showing the lethargies of both local municipal board as well as public, towards the problem How a city with an average of 65 % aware people can achieve the target on clean India mission with in time. The study suggests that local bodies should initiate some awareness campaign in collaboration with schools to increase general awareness among masses and there is an urgent need of re-framing of curriculum in new national education policy to make these habits by default.

KEYWORDS: *Solid Waste Management (Swm), Clean India Mission, New National Education Policy 2020 (Nep 2020), Curriculum, Awareness, Swm Rules 2016.*

INTRODUCTION

The spread of hazardous, non-biodegradable solid waste is one of the most unhealthy, uncontrolled, and anti-nature activities of human, which is now appearing as plethora of problems. In compliance of Hon'ble National Green Tribunal order number 199 of date 5 February 2015, National Action Plan of Municipal Solid Waste Management Report was presented by Central Pollution Control Board (CPCB). This report stated that "It has been observed that municipalities do not keep/maintain regular data on waste generation and its

composition. Only few references of National Environmental Engineering Research Institute (NEERI) on selected towns [CPCB's study on 59 cities (2008-09)] and other institutes are available. Further, the estimation based on the information collected by CPCB from time-to-time, the reported/estimated waste generation in the country is 1, 41,064 tons/day and out of which, 127,531 tons/day (90%) is collected, and only 34,752 tons/day (27%) of this is processed. [1] This picture clearly depicts the helplessness in reducing all hazardous non degradable garbage resulted due to progress in human world. What will be the use of all development when human himself is helpless to survive? It is the prime duty for all of us to check our environmental enemy endeavours immediately.

Significance of the Study:

Clean India Mission is a grand behaviour as well as scenario changing campaign in the field of sanitation and hygiene, launched by our Hon'ble prime Minister Sri Narendra Modi on 2nd October, 2014, saying that 'A clean India would be the best tribute India could pay to Mahatma Gandhi on his 150-birth anniversary in 2019.' Swachh Bharat Mission was launched throughout length and breadth of the country as a national movement. The campaign aimed to achieve the vision of a 'Clean India' by 2nd October 2019, the most ambitious goal of this campaign was to make India 100% free from open defecation up to October 2019. According to a report by NITI Aayog titled *SDG-India: Index and Dashboard 2019-2020*: "Nearly six million villages, 633 districts (90.7 per cent of all districts) and 35 states / Union territories were verified as ODF in December 2019... 17 states and 5 UTs already have declared and verified all their districts to be ODF under Swachh Bharat Mission (Grameen)." [2] To cover up such a huge target only economic resources were not sufficient as its success was totally depending on the behaviour change of citizens. With the achievement of this grand target the Swachh Bharat Abhiyan moved to its second phase i.e., Solid Waste Management (SWM). Under the second phase of 'Swachh Bharat Abhiyan' NITI Aayog has initiated a scheme of 'Cleaning up Our Cities' in the year 2019, with proper monitoring and ranking of areas for improving sanitation, cleanliness and hygiene all over the country. According to a news in Economics Times "The NITI Aayog has suggested setting up an authority which will take up installation of 'waste to energy' plants in public-private partnership (PPP) mode to clean up municipal solid waste, which, it said, has become a "serious threat" to public health. The Aayog underlined that, cities have been "slow to develop effective ways" to dispose municipal waste and called for accelerated action to combat the problem and also added that, the mountains of waste, which can now be seen in nearly all cities, have become a serious public health threat,"

After the launch of Swachh Bharat Abhiyan in 2014 October, the Solid Waste Management Rules of the year 2000 have also been replaced by new Solid Waste Management Rules (SWM) in the year 2016 by the Union Ministry of Environment, Forest and Climate Change (Mo.E F&CC). [3]The major highlights of the SWM rules 2016 are segregation of bio-degradable and non-biodegradable waste at source, the collection and disposal of sanitary waste, the collect back scheme for Packaging waste, and charging of user fees for collection of garbage which is to be decided by the local authorities. It also prohibited littering and non- segregation of waste and banned throwing, burning, or burying the solid waste on streets, open public spaces, in the drain, or water bodies. The most pertinent question at this point is, why our habits of hygiene and cleanliness are not developing by default? Why are these forced upon, in place of arousing from within? This is a most significant study of this time when efforts are being made by our policies

makers to reach the target, it may explore the ways of intensifying their impact. New education policy 2020 has also declared to achieve the target of United Nation's Sustainable Development Goals by the end of 2030. It is well said that, if you want to change any nation change its education. This paper is an attempt to survey the actual scenario of Swachh Bharat Abhiyan in city Muzaffarnagar along with the study of need of major changes to re-frame our curriculum in this regard.

Review of Related Literature: The review of related literature is essential step to avoid unessential repeat of work, along with formulation of research plot for the work in hand. Following are review of some most related literature in this field:

Pushpanjali S. et.al. (2016) conducted a study titled as "Status of sanitation and hygiene practices in context of Swachh Bharat Abhiyan in two districts of India". A total sample of 190 households was selected for the study from district Ghaziabad, Uttar Pradesh and district Jabalpur, Madhya Pradesh. Finding shows that 76% of total respondent were not aware about the "Swachh Bharat Abhiyan" and 56% were not aware about the significance of keeping good sanitary conditions. It was also observed that among the total respondents only 54% were defecating in the toilet and 8% of respondents don't wash their hands after defecation and 11% of the respondents never wash their hands before meals. [4]

Prem S. Panda et.al (2017) Conducted study titled "Prevalence of open-air defecation and awareness and practices of sanitary latrine usage in rural village of Raipur District." It adopted simple random sampling technique by lottery method. A structured questionnaire was used. Majority of the study participants 109 (70.3%) had sanitary latrines in their houses. The prevalence of open-air defecation in the study area was found to be 23.2%. Around 2/3rd (65.2%) of study subjects were not aware about spread of disease due to open air defecation. Awareness regarding spread of diseases due to open air defecation is poor. [5]

Chaudhary A. (2017) conducted research titled "Swachh Bharat Mission- Need, Objectives and Impact". This study was based on descriptive analysis examined the need, objective, and impact of Swachh Bharat Mission on India's overall economic development. The study concludes that this campaign has a positive impact on overall growth of India. The study also explore that Swachh Bharat Mission will financially benefit each & every citizen of India. [6]

Kishor K.J. et.al. (2018) conducted research titled "Study to assess knowledge, perception and practices regarding Swachh Bharat Abhiyan among rural people of Nalgonda district in Telangana state". This was a cross-sectional study conducted among 328 subjects of rural area with a semi structured questionnaire. It concluded that most of the people were having positive perception only 25.98% have participated in SBA activities and main source of information was found to be television and newspaper. [7]

Ganage N.P. (2018) conducted research study titled "Assess the effectiveness of sociodrama on knowledge and attitude regarding open air defecation in Swachh Bharat Abhiyan among people residing in selected rural areas of Maharashtra." A quasi experimental one group pre-test and post-test research design was used. A sample of 80 was selected through simple randomized sampling technique. Pre- test knowledge score with mean 9.08 and post -test knowledge scores with mean 11.42. The correlation between knowledge score and attitude level was 0.87, hence it concludes that sociodrama on attitude regarding open air defecation in Swachh Bharat Abhiyan among people was effective. [8]

Padmakala, S. (2019), conducted a study titled “Awareness of clean India Mission among higher secondary students in Kanyakumari district.” The study revealed the level of awareness of Clean India Mission among higher secondary students at moderate level (58.8 %). Male-female, Tamil medium-English medium as well as Rural-Urban higher secondary students differed significantly in the awareness of Clean India Mission. [9]

The review of related literature clearly depicts that there is a need of a study related to actual status of Clean India Mission in real scenario so that the re-framing of curriculum in New Education Policy 2020 may get some essential directions.

Objectives of the Study: The main objectives of proposed study are as follows-

1. To analyse the residents’ views on prevailing scenario of solid waste management in Muzaffarnagar city.
2. To analyse the efforts made by local municipal board for enhancing awareness among citizens.
3. To analyse the scope of re-framing curriculum in New Education Policy 2020 for sustainable development.

Research Methodology:

The proposed study is a descriptive survey research based on primary as well as secondary data. To fulfil its objectives the researcher has developed a questionnaire on topic “Clean India Mission: An Overview in Muzaffarnagar City.” to collect the primary data based on present scenario of prevailing practices in the city and efforts made by municipal board to enhance awareness and implementation of SWM 2016 rules. The open-ended question is also being used to seek public opinion about effective implementation of the mission in the city. A sample of hundred residents covering various areas of Muzaffarnagar city was selected by random sampling technique. A percentage wise study of primary data was being used as statistical tools. The study also analyses the New National Education Policy 2020, to find new prospective regarding re-framing the curriculum to accelerate the pace of this mission for making it more effective and sustainable.

Analysis and Interpretation:

The researcher analysed the data as according to the objectives of the study, which are one by one described as under-

Objective 1-To analyse the residents’ views on the present scenario of solid waste management in Muzaffarnagar city.

For the fulfilment of first objective the researcher has collected primary data regarding Awareness and effectiveness of Clean India Mission in Muzaffarnagar City through an online questionnaire. This questionnaire has 12 questions related to different aspects of this Mission, so it is necessary to analyse them all.

First four questions of the questionnaire are related to the prevailing practices regarding this mission, table 1 is indicating the public opinion about prevailing practices for cleanliness in the city.

TABLE 1- PREVAILING PRACTICES REGARDING PREVAILING PRACTICES

S.N	Question	Yes%	No%
1	Are the people in your colony aware for not spreading garbage hither and thither in the lane?	74.3	26.7
2	Do the municipality staff of your city collect garbage from your home daily?	62.4	38.6
3	Does the municipal staff collect your garbage in blue and green bins after dry and wet segregation?	37.6	64.4
4	Do you use your kitchen garbage to make fertilizer?	38.6	62.4

The question no. 1 is about general etiquette of common people regarding solid waste management. For this question 74.3 % people have answered yes while 26.7% people are still accepting that there is less awareness among people for not spreading their garbage in lane. Second question is related to the system adopted for cleanliness of the city. There is a little disappointing picture for the answer of this question. Here only 62.4 % people have answered 'Yes' and 38.6 % people have answered 'No'. It depicts that nearly 40 % garbage is still mismanaged despite of all efforts made by local bodies. In response of question number 3 and 4 the picture is again far from satisfactory. Only 64.4 % people are segregating their garbage before being collected but here the picture also shows that the personnel of municipal board too is not collecting garbage separately. This shows that neither public nor the local government is taking it as a serious issue. Further, a very few percentages of people i.e., 38.6 % are seem to be aware about possibility of making fertilizer out of their kitchen garbage. Thus, the findings of table 1 concludes that the contribution of local citizens as well as local government for the above-mentioned issues are still far from satisfactory. The dream of Clean India Mission may never come to be true with merely 75 % aware people of any society. Its target needs 100% aware people in this regard.

Objective 2: To analyse the efforts made by local municipal board for enhancing awareness among citizens.

TABLE 2- CHANGE IN PRESENT SCENARIO OF AWARENESS AFTER IMPLEMENTATION OF SBM PHASE 2

S.N.	Question	TC/H	SC/SH	NC	W
5	Do people around you not throw solid waste in drains to maintain the flow in drains?	31.7	50.5	4.9	12.9
6	Do you find your city fully clean after implementation of this mission?	7.9	71.3	17.8	3.0
7	Is your surrounding environment totally free from open defecation?	71.3	25.7	Nil	Nil
8	What change is there regarding the use of polythene bags in your city?	3.0	56.4	32.7	7.9
9	Do you feel that people are more aware about	13.9	71.3	3.9	10.9

	cleanliness after covid 19?				
10	What is the change in efforts made by local bodies to spread awareness of SBM?	25.7	54.5	8.9	9.9
11	What type of involvement of students of different levels of education is taken by the local bodies to spread the message of in this mission?	High Inv. 75	NA	NA	No Inv.25

Total Change/High (TC/H), Slight change/Slight High (SC/SH), No Change (NC) and Worsen (W).

Table-2 is presenting the extent of change in scenario of awareness after implementation of SBM and SWM Rules 2016. Questions No.5 to 11 are related to the opinion of citizens regarding the prevailing practices and awareness in the city. Responses on question number 5 are depicting a mix picture of this city. Here, 31.7 % people have accepted high change while 50.5 % people accept slight high change in this regard, but the no change and worsen situations about presence of solid waste in drains are still there in the city, showing unsatisfactory picture. Question number 6 is depicting the picture of cleanliness in the city indicating that there is high percentage of people (71.3 %) accepting slight high change due to this mission as compared to the previous situation. Responses on question 7 present a reversing situation i.e., people accepted high percentage (71.3% and 25.7%) of open defecation free situation in the city, but still it is not presenting 100% free condition as declared in the year 2019. It depicts that unless and until we don't have sustainability of any achievement in this field all efforts will ultimately be diluted and situations may revert themselves. Question 8 is related to polythene bags usage in the city, here the data indicates that the city is not totally free from polythene usage. People have shown a high reduction in its use (56.4%) but still it is far from satisfactory. In the responses of question 9, the awareness for cleanliness regarding covid 19, 71.3 % people have shown slight high and 13.9% have shown a complete high awareness in this direction, and this data is depicting the cause of covid free environment in the city, when covid was at its peak in other cities, this city was rather under controlled situation. In response of question 10, people have accepted that there are enough efforts made by the municipal board (25.7% high change and 54.5% slight high change) to spread the awareness about the cleanliness mission in the city. Further, in question number 11, 75% People have indicated the high involvement of students taken by the local government for the spread of awareness while 25% have denied it. Over all this table envisages that the pace of this mission is rather slow in the city, as according to the time duration for achieving the target in time. So, there is an immediate need to enhance the awareness among people in this regard.

Objective 3: To analyse the scope of re-framing curriculum in new education policy 2020 for sustainable development.

For the fulfilment of this objective the researcher has used an open-ended question 12 in the research questionnaire to collect the public opinion about effective implementation of SBM in the city. The responses on this question as well as the study of new National Education Policy are helpful in analysing the need to re-frame our educational curriculum. It depicts that people themselves have admitted a lack of awareness. They also admitted a need of forceful imposition of rules regarding SWM 2016. A good number of them (aprox.50%) have suggested to spread this awareness through education by changing the school scenario for developing nature friendly habits amongst students. The researcher also analysed the new National Education Policy 2020

which is now promising a sustainable holistic development of individuals. According to National Education Policy 2020 “the world is undergoing rapid changes in the knowledge landscape. With various dramatic scientific and technological advances, -----in conjunction with multidisciplinary abilities across the sciences, social sciences, and humanities, will be increasingly in greater demand. With climate change, increasing pollution, and depleting natural resources, there will be a sizeable shift in how we meet the world’s energy, water, food, and sanitation needs, again resulting in the need for new skilled labour, particularly in biology, chemistry, physics, agriculture, climate science, and social science.” This statement depicts the fact that National Education Policy is very much aware about all the global challenges and is committed to develop holistic personalities capable to face and solve all the challenges skilfully. As a direction for curriculum designing this policy has a clear vision to include environmental education too with various other globally compatible skills at relevant stages of education. It has stated that “Concerted curricular and pedagogical initiatives, including the introduction of contemporary subjects such as Artificial Intelligence, Design Thinking, Holistic Health, Organic Living, Environmental Education, Global Citizenship Education (GCED), etc. at relevant stages will be undertaken to develop these various important skills in students at all levels.” [10]

The analysis of primary as well as secondary data the researcher has concluded that there is an urgent need to re-frame education curriculum as according to the needs of the hour to increase the sustainability of achievements of this mission.

CONCLUSION AND SUGGESTIONS: The conclusions and some practicable suggestions of the study are as follows:

- The study concludes that the present scenario regarding solid waste management in the city is not very satisfactory. The table 1 depicted that none of the question has indicated more than 75% extent of any such practices in the city. How a city with an average of 65 % aware people can achieve the target on clean India mission with in time.
- The study concludes that the efforts made by local municipal board for the spread of general awareness about covid 19 are rather satisfactory, but still the extent of cleanliness in city is not satisfactory showing the lethargies of both local municipal board as well as public, towards the problem. The change in cleanliness in the city has also not exceeded to 75%. Even it is not 100% free from open defecation.
- The study also concludes that there is an urgent need of re-framing of curriculum in new national education policy to make these habits by default. Some suggestions in this regard are as under-
 - The study suggests that, there should be strong actions against the violation of rules and regulations. Sudden inspection at ward levels, vigilance by camaras fitted in all streets should be used along with some incentives for cleanliness as well as penalty for dirtiness.
 - Here, it is suggested that without sustainability of any achievement there may be no celebration. So, that local bodies should initiate some awareness campaign for enhancing general etiquette among masses.
 - Our new national education policy 2020 has included initial life span {ECCE (3-6)} of a child in formal education. It is suggested that this step will certainly prove to be fruitful if we

pay sincere attention towards inculcation of environmental value at this early age through simple plays.

- Some primitive audit habits such as audit of clean water, surroundings, use of dustbins and waste management, sanitation and hygiene etc. should be included in their curriculum.
- The study suggests that environmental education should be included with other subjects to enhance more speedy result for inculcation of environmental values.
- The study suggests that the curriculum of environmental education should be based on some real cases and situations so that students may understand the consequences of carelessness for our environment.

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GOVERNANCE AND ROLE OF STATE IMPACTING THE GREEN INDUSTRY

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ABSTRACT

Institutional norms and state policies are very important for defining equitable and sustainable use of the resources of the planet in which private sector plays a vital role more so in case of India. The focus of this essay is more in relevance to the country India. The governance impacting the private sector practices with particular attention to resource management, benefits and reduced cost associated with the green businesses).

KEYWORDS: *Governance, Puritans, Quakers, Republican, Marxists, Aristocrat, Trend Setters, Rational Buyers, Net Workers, Stake Holders, Liberal Consumerism, Rational Consumerism, Critical Consumerism, Radical Consumerism, Green Wash, Libertarian Extension, Ecological Extension, Conservation Ethics.*

1. INTRODUCTION

Introduction: Governance is all the processes of interaction be they through the laws, norms, powers or language of an organized society[1] over a social system (family, tribe, formal or informal organization, a territory or across territories). It is done by the Government of the state, by a market, or by a network. It is a decision making among the actors involved in a collection problem that lead to the creation, reinforcements or reproduction of social norms and institution. True, a variety of entity can govern, the most common and paramount importance is given to government as it is presumed that majority is represented by the elected majority. Other types of governing could also be socio-political groups who in case of green could be reflected as the Puritans, the Quakers, the Republicans, the Marxists, the Aristocrat and the Systems groups. Each of these groups have had their own norms and in their quest of research the norms have been explicitly depicted[2]. The consumerism depicted by them are the following.

Groups	Beliefs and norms
Puritan	Consumption culture is spiritual and therefore it defiles that which is holy by destroying land, polluting air and water and needlessly killing flora and fauna.
Quakers	Consumption culture is wasteful and ignores its true costs

Republican	Consumption culture encourages civic irresponsibility.
Marxist	Consumption culture is based on social injustices
Aristocrat	Consumption culture is threat to the survival of the system
Systems Perspective	Consumption that seeks to impose order on complex dynamics by conceptualizing patterns of related objects and processes as systems.

While we talk of such groups it is implied that these groups need not be always formal, they could also be in form of formal and informal and they guide the consumerism patterns that largely the private sector addresses. These stakeholders are loosely held yet inter-twined in form of local publics, citizens' forum, government publics, media publics and financial publics, etc. "Governance is the way, norms and actions are structured, sustained, regulated". The norms, actions and structures refer to minimization or mitigation of risk out of commercial exchange and often get a formal shape in terms of Industry. Therefore Governance and Industry are two sides of the same coin.

2. GOOD GOVERNANCE

Good Governance is the goal of both the formal organization and informal organization. The organization. The organization that is formal and profound under the present democratic systems is 'Government'. The Government exhibits its action through regulations. The relationship between Government Regulation and Governance is stated as under:

GOVERNMENT REGULATION	GOVERNANCE
State actors and government	Government, industry, non-government organisations, public, etc.
Government authorises	Government participates, steers and guides
Command and control regulation	Collaboration and negotiations between actors
Minimal actors/administrators	Many actors/stakeholders
Homogeneous information	Heterogeneous information
One size fits all	Different jurisdictional and spatial scales
Knowledge flows from the top down	Knowledge flows between actors
Predicted on existing knowledge	Emphasizes continuous generation of knowledge
Change is slow	Dynamic, evolving, iterative processes
Static management plans/ policies	Adaptive co-management plans
Plans takes years to change	Plans respond to system feedback-iterative

The whole facts of good governance culminates to two moot points the performance and the compliance. The governance principles are the following:

1. Direction (including Viability and Sustainability)
2. Stakeholder engagement (prime is handling the consumer public and issues of consumerism)
3. Risk Management

4. Performance Management
5. Compliance
6. Feedback and Reporting on it (Ethics init)

1) Direction:-

The Prime Minister of India Mr. Narendra Modi made the country proud in COP26, the ongoing climate summit at Glasgow not only catching the world on backfoot by committing Net-Zero pledge by 2070[3], but also nudging the developed world to accept the terms of the developing world. The Prime Minister announced five tangible goals⁷, these are the following;

1. Net Zero emission by 2070
2. By 2030 reduction in projected emissions by 1 billion tones.
3. By 2030, reduction in GDP's carbon intensity.
4. By 2030, achieving installed non-fossil fuel generation capacity of 500GW
5. By 2030 meeting half of India's energy requirements from renewable resources.

Our Indian Prime Minister, called for an Rs75Lakh crores climate fund from the rich countries to help the poor nations with mitigation and adaptation. Therefore, the industry policy will be two irrespective of its nature of business the 'Mitigation and Adaptation'. Non-fossil includes besides renewable like solar, scalable nuclear power, wind energy (electricity) and hydro- electricity. The role of green hydrogen based technology will bring sea change in the system, size and design of the process, delivery of value and technology to follow. Added support will come from electrolyses and green steel. Time will only say is it achievable or will need to be revisited by our government, none the less it is true it is indicating the direction of Indian Economy and the major shift of industry. Massive investment is required and the growth of this investment will be generated and super powers of non-fossil economy will be Western and the Southern States since the East and North will be badly impacted. The coal belt will face spiral loss of income and unemployment with estimated 20 million plus workers losing their breads and high income uncertainty will prevail. The coal based infrastructure, upward and downward supply chain and the tertiary sector feeding the coal industry with value generation will be badly impacted.. Thus unbalanced economic growth during the next 30 years will be witnessed by Indian and new opportunities will arise. An October study by the Council on Energy, Environment and Water (CEEW)[4]outlined 12 sectoral path ways for India fit were to attain the pledge. However, there exists a confusion on whether the target is all greenhouse gasses (GHGs) or the CO₂. If it is GHGs then India is complaint at 1.5°C warming but if it is CO₂ it is only 2°C complaint. India represents 1/6th of humanity and has the largest cohort of young people in the range from 0.1 till 44 years are 81.4% who can be trained in Science, Technology, engineering, mathematics and the creative arts whose imaginative, innovative combination alone can halt, if not reverse the climate change. India also has third-largest Unicorns in the world, behind only the US and China[5]. The startup culture is catching on, the fresh Indian entrepreneur have gone past the stage of trying to build Indian imitation of the foreign success and therefore will be able to factor in the conditions of leanness and artificial intelligence to business and supply chains supporting the mitigation of GHGs and CO₂ emissions and develop new structure, size and design of industry. The last yardstick against which a firm was measuring was by following Paris

Agreement. Today, one finds that Mahindra has committed to aligning its operations with the science-based target[6]. Paris Agreement is a voluntary agreement in which countries are free to choose their climate targets, called nationally determined contribution. The Paris Agreement is, therefore based on the goodwill and moral persuasion. The assumption is that goodwill will prevail, countries will enhance their targets and collective action would meet climate goal. The Paris Agreement drafted on December 12, 2015, signed on April 22, 2016 and came into force on November 4, 2016 has 196 nations' states as signatories. Its goal is to limit global warming well below 2 degrees Celsius and preferably to 1.5 degrees Celsius the frame work of reporting for the country is Enhanced Transparency Framework (ETF). But, the fact is every country is looking out for its own narrow interest. The previous Donald Trump and China have had reservation on the limit of commitment, therefore are committing to do as little as possible this is the Achilles heel of the Paris Agreement. Thus, the agreement may not be able to limit warming below 2 degrees Celsius. Today, more than 2/3 of the world richest 100 entities of the planet are corporation and not governments. And just 100 firms have been responsible for 71% of the global emissions since 1988, the year Intergovernmental Panel on Climate Change (IPCC) was established. Corporations, therefore, are the source of this emission and then again will be ultimate of solution and not Governments. They have the resources to decarbonizes, and could make the target for any nation state to achieve. Of course there has been efforts to make organizational performance measurement holistic. The most successful one has been Robert Kaplan and David P Norton's the 'Balance Score Card', which achieves its balance by incorporating financial and non-financial parameters, outcomes and inputs and but short-term and long term actions across four perspectives- financial, customer, internal processes and learning and growth. It did not include environment therefore with focus on environment one has to follow the Paris Agreement and the COP26. At the end of the Glassgowconference of course one in COP 26 has found the developed world dragging its feet on the issue of yearly fund to the developing and less developed countries again, not only so instead of complete end of use of all coal and phase out of fossil fuel subsidies the chair released the draft proposal-"the phase-out of unabated coal power and of inefficient subsidies from fossilfuel".

In India, TATA's have also strongly signaled that they are moving out of the coal sector and moving into renewable energy, electric vehicle and hydrogen based steel making. RIL is planning multi-billion dollar investments investment in hydrogen, wind, solar, fuel cells and battery to become one of the world's top 'new energy' companies. Reliance Industries would become a net zero-carbon company by 2035. Adani is investing hugely in the solar business to become the 'world's largest' green enterprise. At the recent G20 summit Prime Minister Narendra Modi also said that the country has been taking concrete action to meet and even exceed the Paris Agreement targets.[7]

The other conventional metrics for the firm is the conventional 'Triple Bottom Line', the approach is correct but it varies from country to country in regard to the priority of the variables and the number of the variables and it is not mandatory in India. Basing this approach different Government of different states have taken different methodology of assessing the natural capital, human capital and profit. Whichever Industry comes up the market is the focal point since it is market that need to be accessed. Therefore, one need to study the market. The market is addressing the need of the consumer and the generic groups that are classified into three. Based

on the values that are sought by customers, the customers could be grouped into the following three segments: a) Trend Setters, b) Rational Buyers and c) Net Workers.

TABLE: THREE GENERIC SEGMENTS

Trend Setters	Rational Buyers	Net Workers
a) State –of-the art Product	a) Re-engineering	a) Nurture a culture of commitment and trust.
b) Speed to the market.	b) Benchmarking	b) Market focus.
c) Re-invent the industry.	c) Cost-cutting	c) Customization.
d) Get different	d) Excellent services	d) Build relationship.

The generation it will address is largely the 'Net Workers' or some who nurture a culture of commitment and trust, understand value in their own terms with urge to solve finding a customer within a customer and building a community which is more reliable than family or peers. Kotler has referred them as 'Netizen'.

3. STAKEHOLDER ENGAGEMENT

The stakeholders in other facebook of social accounting represent themselves through consumerism. Antonides and Van Raaij have distinguished different types of general consumerism in reference to underlying political and social commitments[8]. The following are the types enumerated below.

1. Liberal consumerism which focuses on looking after the rights and increasing the powers of the consumers in the markets.
2. Responsible consumerism, that focuses on the societal responsibility of consumers.
3. Critical consumerism which focuses on questioning some features of the prevailing consumption system, e.g. demanding legislation and government action for better and safer products.
4. Radical consumerism that focuses on attacking the capitalist ideology of consumption, i.e., the inequity that prevails in the social system.

The four types of consumerism stated above of Antonides and Van Raaij as mapped by the author on market domain turns out as stated in the table below

TYPES OF CONSUMERISM	DOMAINS OF MARKETING
Liberal consumerism	Defining the market and understanding the value.
Responsible consumerism	Determine the value proposition.
Critical consumerism	Deliver the value.
Radical consumerism	Monitoring the value

Addressing these domains of marketing is bringing in the concept of how to meet these objectives in a world that is largely well connected virtually and is being forced to look towards a buyer oriented market where buyers are to answer with each occupied with not only to the

firms offer but to another buyer and a virtual community with blurred vision of ethics. While the author is talking to organic farming in India it has its own dimension where genetically modified seeds are not acceptable but in countries like Cuba which as state policy has organic farming permits genetically modified seeds. This in fact opens up the domain of responsible consumerism and critical consumerism with networkers' way of developing business. The firms have to therefore depend on 'Radical trust[9]. The term 'Radical Trust' refers to trust bestowed on others when organization shift control to their customer and users.

The biggest stakeholder is the state government who has to meet the COP26 target as part of Central Government's commitment as well as convert it to business opportunities for local business community always places itself as proponent of 'Liberal Consumerism' by defining the market and understanding the value. The Government of West Bengal in this regard has taken the initiative of transforming its public vehicle fleet from being petrol or diesel oriented to Green fuel namely electricity, liquefied petroleum gas (LPG) and compressed natural gas (CNG) by 2030. This means adopting of electric vehicle s will generate new investment, generate jobs double that of IC engine vehicle manufacturing, intercity electrification of green routes with 1 lakh electric charging stations. Similarly, responsible consumerism is evidenced where in NGO Sunderban Green Environment Association (SGEA) using community volunteers has been able to plant 10 lakh saplings of mangroves over 10 km embankment maintaining the diversity and thereby giving space out to not one variety of mangrove but based on land the available 30 varieties. This NGO is using community as well as stopping economic leakage from the place of incidence. The proposition is clear bio-diversity be maintained as sustainability with no economic leakage this is definitely the part of critical consumerism also. Radical consumerism is being noticed where in one finds the 105 countries in the COP26 summit have pledged to reduce the Methane emission by 30% from 2020 levels by 2030. CO₂ after all is not the only greenhouse gas of concern IPPC research states that a quarter of global warming at the doorstep of CH₄ instead. The question is whether the industrialized meat production system will be part of reform-globally 32% of anthropogenic methane emission come from the livestock sector. Therefore, one has to understand how to produce meat which is part of the climate solution. Question is why has India not signed on it as yet? In this respect India with its paddy cultivation method and livestock which is source of 8% of CH₄ emission. ICAR for example has developed a feed supplement for livestock that cuts down the methane emission by 17-20%. India must be part of 'Green Meat' production which could be either synthetic or lab grown as in case of Singapore which is essentially laboratory production. This is the outcome of monitoring the value and source of new production Lab grown "it is made by growing muscle cells in a nutrient serum and encouraging them in muscle like fibres" according to India-based magazine Swarajya[10]. Lab-grown chicken meat made a historic debut in Singapore. It was introduced by a startup 'Eat-just' in December 2020at restaurant '1880' in Singapore. Singapore is the first country to approve the sale of cultured meat. Demand for sustainable meat alternatives is rising. This is due to growing concerns about the environment & animal welfare. Meat consumption is projected to increase more by 2050 and these alternatives play an important role in ensuring a secure foodsupply.

4. RISKS MANAGEMENT IN THE GREEN BUSINESS:

One would ask the firm(s) to be realistic and not optimistic. Their adrenalin rush should not act as blinkers on the eyes. The genesis of risk comes under three categories these are namely:

Unrealistic views of markets: expecting customers' to take pains by expecting acceptance of low quality & service and/or premium price or assuming customers will readily accept a radically different product to the one they used to.

Bursting of Balloons: Investing in immature or ineffective technologies and/or not have the right supply chain

Green Wash: Overstating your case and getting found out, or not being able to deliver on promises and having to back out.

The author here in will push in his observations while deliberating on some of these categories. One for benefit of the readers will elaborate on each of these categories.

The reason of organic cereal not catching up in the market is because the price of the product stands to vary between the escalations clauses of 130% to 150% this is the understanding of the author who has worked on organic vegetable projects. People respond to Value Innovation [11] and nothing less. The prices should be coming down and the offering value should be high. The organic rice or organic wheat (not default organic) will be adopted only when it reaches the consumers at prices that are at par with the non-organic. The unrealistic view of market does not lead to commercialization as after trial it fails to get growth.

The Bharatiya Mazdoor Sangh said it opposes the proposal of WTO [12] on banning subsidies to fisherman in the name of illegal, unreported and unregulated fishing by unorganized sector fisherman. WTO is right in doing this as lot of literatures are showing that trawlers are depleting some of the marine fishing reserves of deep sea and even coastal belts at an warranted rates. The Sunderban Bio Reserve is facing similar problems but owing to votary banks it is left and therefore the Hilsa Fish population while nesting get caught and the reserve is depleting. On the other hand, the logic is that the local fishing community will suffer as livelihood will get affected, this is a clear case of Green Wash.

5. PERFORMANCE MANAGEMENT OR VALUE

Method of assessing values refers to developing some index where in the contribution to green could be recorded. The balanced score card by Kaplan [13] did come with some approach of assessing the value but failed to record the green element in it. It is plausible that it may have been due to the fact that at that time it did not do so since at that time including green was only in its nascent stage.

The balanced score card included data elements across four perspectives, namely, financial, customers, internal process and learning and growth. One has come a long way, since 2015, Harvard Business School's 'CEO 100' ranking not only is based on financial performance but also on environmental, social and governance (ESG) filter. It has used ESG score to account for 20% of the each CEO's ranking. Microsoft in 2019 received No1 rating for both environment and social within the Institutional Shareholder Services (ISS) Environmental and Social Disclosure (E&S) Quality Score, which measures corporate performance on 200 factors. One drives in the fact that ESG index is extremely becoming important [14].

One important way is to incorporate Extended Producer Responsibility (EPR) [15] and say Plastic Waste Management (PWM) in case of India. India did take effective steps to import ban on plastic scrap in 2019. Firms too are doing their bit including plastic users such as sports gear

makers. Adidas as well as plastic generators and processors such as petrochem giant Reliance Industries Limited (RIL) and packaging major UFlex. Under the 'Run for the Ocean' initiative, Adidas has sold 11 million pairs of shoes made from up-cycled marine plastic waste in 2019. UFlex doesn't waste its own waste it creates and recycles its own plastics and also recycles the waste generation from its own raw material sourced. RIL converts annually two billion post-consumer PET bottles into fibres apart from running awareness drives for waste segregation at source and efforts towards cleaning Mumbai's MethiRiver. The first step of performance management without being over ambitious is the compliance step. Readers would be benefited if they understand that compliance has to be also the first step of the governance exercise.

6. COMPLIANCE

Compliance in simple english vocabulary means 'the state of being compliant' in business the extended form of the term would be "the Department of Business that ensures all government regulations are complied with". Normally the firms have a monitoring cell under the aegis of the board of Directors who account the initiative to be complaint. Carbon trading for the firm is the weakest compliance mechanism and is an 'outside inside' mechanism for a polluting firm and with the years to follow will not remain so as the global exercise of Conference of Parties (COP) framework has started questioning the premise itself. It should be the Life Cycle Analysis that should be done with a Cradle-to-Cradle approach as against Cradle-to -Grave[16] Approach. The concept of Cradle -to -Grave is linear leading to incineration and landfills whereas the Cradle-to

- Cradle concept of DFE where waste concept is redundant at the time of disposal.

Compliance is having two purposes 1) reducing the probability of an incident of risk and 2) reducing the impact of the risk. Both are important for governance in the green business sector or the ensuring of sustainability. Resource Management basic tools encompass, waste minimization, energy efficiency and water conservation. And these can be combined into a single 'Resource Management Programme[17] these are executed through:

1. Auditing: gathering data, observing operations and behavior, and using tools such as mass balances to identify opportunities for improvement.
2. Maintenance: A good maintenance regime can eliminate resource loss.
3. Culture change and staff engagement is vital as many of the potential quick wins in an organization require different behaviour from employees.
4. Use of quick performance indicators and monitoring equipment/systems for monitoring resource use. These can identify sudden changes in resource use or inexplicable high consumption.

One finds that the ultimate icing on the cake of governance is based on the concept of the Ethics the firm would like to follow.

Feedback and Reporting in it hallmark of governance. Let one state the un-codified governance that exists in and among a small community in the Sunderban bio-reserve a well-known Bio- sphere Reserve and UNESCO World Natural Heritage Site (declared in 1987) and world's largest Mangrove forest[18]. The fishermen, the honey collector, the forest product collectors worship 'Bon Bibi' as they know the unknown code of maintaining a balance

between their need(human need) and the nature and agreeing to do so. It is governed by the folklore of Sunderban region 'BanbibirJahuranama'[19]. This 'BanabibirJahuranama' narrates that a sage living in the forest turned greedy and refused to share any of the forest resources with other human beings. Through his ascetic power, he took

The form of tiger and called 'Dakshin Rai'. He attacked humans who entered the forest. He legitimized the killing as tax payment with life for the produced usurped from the forest. Therefore the dominance of 'Dhakshin Rai' remained unchallenged. God chose a young girl 'Bon Bibi' who lived in the forest. The folklore describes how Bon Bibi saved Dukhee, a poor boy from the clutches of Dakshin Rai. The story narrates that after saving Dukhee from Dakshin Rai, Bon Bibi that nothing more should be extracted from the forest than what is need to survive. The governance principle as 'BanbibirJahuranama' is a light house in alerting us to avoid a path of extraction of resources and leakage of local economy. The ethics that framed this reporting was 'Conservation Ethics'. Therefore, for the readers understanding the bases of feedback and reporting is essential.

7. FEEDBACK AND REPORTING

It depends on the wisdom of the individual/group /institution(s) incharge of the governance in the use the approaches of ethics. Here in while we focus on this paper the ethics in sustainability are the following as enumerated below[20].

The three approaches are the following.

1. The libertarian extension- The concept of individual rights is extended to all human non-human animals and possibly in inanimate entities. This means that all individual entities should be given the right to an uninterrupted freedom of existence. Some ecologists would extend the concept to include all ontological things (i.e., beings and objects that actually exists). The interpretation means that a being does not have to possess an intrinsic value (alternatively expressed as consciousness) to have an ethical value.
2. Ecological extension-Emphasis is not placed upon individual rights but upon interrelatedness of all entities in the geophysical structure of the planet and their essential diversity. This approach is referred to as 'eco-holism' and is exemplified in Gaia hypothesis proposed by James Lovelock.
3. Conservation ethics- In this approach, emphasis is placed on ecological conservation for the benefit of humankind. The environment has an instrumental value in which it is not seen as an end in itself, but a means of gaining pleasure and profit. This is most common form of moral reasoning over the environment and the most common dictate of environmental policy.

Having stated that ethics is followed while documenting the feedback and executing it depends largely also on the individual and the gravitating force sometimes not visible to the source and the limitations of data collected or observed and the systems of bounded rationality.

8. CONCLUSION:

Industry rarely has a role to play in the framing of ordinance or acts in the parliament while it is the polity guided by the votaries who have the say and decide on the zone of agreement. Thus industry is evaluated based on the governance they exhibit and the positive externality they effulge on the society through a well negotiated bends between the innumerable pollutions laws

sometimes confusing but normally manageable. The above stated governance principles helps it to be relevant both for the Government and the society of the world where green is governed not only by conservation ethics but equally by libertarian and ecological extensions.

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ON THE SPONSORSHIP ACTIVITIES OF THE TEMURIAN PRINCE

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ABSTRACT

The article analyzes the patronage of the Timurid princes in science, literature and art on the basis of historical sources. Works and works of art created on the initiative of Timurid princes are presented. It also examines the landscaping work carried out in the country under the auspices of the princes and analyzes the direct participation of princes in cultural life. It is recognized in various countries of the world that our great ancestor Sahibkiran Amir Temur and the Timurids made a worthy contribution to the development of world civilization and culture. Particularly noteworthy are the issues of direct participation and sponsorship of the Timurid princes in cultural life.

KEYWORDS: Amir Temur, Ibrahim Sultan, Iskandar Mirzo, Sponsorship, "MajlisUn-Nafois", Science, Cultural Life, BoysungirMirzo, Sultan Abusaid, "Habib Us-Siyar", "Zafarnoma", Palace Library.

INTRODUCTION

It is recognized in various countries of the world that our great ancestor Sahibkiran Amir Temur and the Timurids made a worthy contribution to the development of world civilization and culture. Particularly noteworthy are the issues of direct participation and sponsorship of the Timurid princes in cultural life. Historical sources emphasize that the representatives of the Timurid dynasty, such as Amir Temur, Shahrukh Mirza, MirzoUlugbek, Iskandar Mirzo, Ibrahim Mirza, Boysungur Mirza, Abulqasim Babur Mirza, Sultan Abusaid Mirza, Sultan Hussein Boykaro, made a great contribution to the development of science and culture. Therefore, scientific research on the participation and sponsorship of the Timurids in cultural life is being conducted in our country and abroad. H. Vamberi's statement that "the desire for a culture similar to that of the Timurids - with the exception of the heyday of the Umayyad state of Andalusia and the first period of Abbasid rule in Arabia - did not occur anywhere else in the Islamic world". Here we will focus on the sponsorship of some Timurid princes.

MAIN PART

One of the princes who grew up under the influence of the cultural environment of the Timurid palace was Iskandar Mirzo, who became famous as a mature poet and patron of culture. AlisherNavoi's "Majlis un-nafois" also states that the prince wrote poetry in Turkish and was a literary enthusiast. The prince also sponsored calligraphers [1,p.421]. He brought Maruf Baghdadi to his library in Isfahan and commissioned him to manage the palace library. During

the short reign of Alexander the Great, Sheraz became a center of science and culture. In particular, along with Persian-language writers, there were also Turkish poets. Among them are such poets as HaydarKhorezmi, Hafiz Khorezmi. HaydarKhorezmi wrote “Makhzanul-asror”, “Gul vaNavruz” dedicated to Iskandar mirza [2, p.14].The prince also sponsored calligraphers. He brought Maruf Baghdadi to his library in Isfahan and commissioned him to manage the palace library. Maruf Baghdadi is a Mervite, and Khandamir, in his work “Habib us-siyar”, states that he was a skilled craftman and that he was famous for his calligraphy. Historical sources say that he served Sultan Ahmad Jalayir, a dispute arose between the two and went to the palace of Iskandar mirza. Later, Maruf served in the palace of the calligrapher Shah Ruk Mirza. NizamiGanjavi’s “Khamsa” of 546 pages was also copied on the instructions of Iskandar mirza. This rare manuscript is housed in the British museum in London [3, p.12].

One of the princes who made a name for himself with his enlightenment activities was Ibrahim Sultan. According to historical sources, the prince had a high interest in literature and art. “Zafarnoma”, one of the most important sources on the history of the Timurid period, was created under the auspices of the prince. Prince MawlanaSharafuddin Ali Yazdi helped him in writing this book in every possible way, giving him gifts and support. The Zafarnoma states that the first source for the work was written by palace historians and Ibrahim Sultan himself. One of the most energetic and talented princes of the Timurid dynasty was MirzoBoysungir. The prince was not only a politician, a skilled warrior, but also a patron of science, culture and art. The Timurid dynasty was proud of him because of his good morals and high virtues [4, p.11]. He unconditionally obeyed the decrees issued by the owner (father) of the kingdom and served the state selflessly. He was on friendly terms with the people of knowledge and perfection, and showed extraordinary kindness. The artisan was never indifferent to people. The Fazilu-Fuzals came to Herat from Iran and Turan and gathered in his kitchen. Mature sages came and served from Iraq, Azerbaijan and Persia. The prince tried to educate this category by giving them gifts and alms [5, p.430].

Mirza Boysungir also wrote poems in Arabic and Persian, was well versed in the science of music, and was a fan of masters and calligraphers in the field of muhaqqaq and suls calligraphy [6, p.144]. Correspondence was held between Ulugbek, Ibrahim Sultan and BoysungirMirzo on these issues. However, these correspondences have not been investigated. In 1420, a library was established in the palace of Shahzoda. The library was also engaged in art and crafts. It should be noted that at the beginning of the XV century, the library had 4 calligraphers, 2 miniature artists, 13 painters, 3 covers, 2 masters of pattern design, a total of 25 craftsmen. However, some sources say that the number of artisans working in the library exceeded 40. The library was headed by calligrapher MawlanaJafarTabrizi, who was one of the students of Mir Alinin, the master of Nasta'liq writing. It is noteworthy that Boysungir Mirza knew calligraphy perfectly and wrote his own letters in the Gavharshodbegim mosque. [7, p.254].although a number of illustrated books created under the auspices of the Prince have been distributed in various places, some have survived. Most of them are kept in libraries in Istanbul, London and Tehran. Religious and secular sciences also flourished during the reign of Sultan Abu Sa'id. In particular, Khandamir in his work "Habib us-siyar" noted that Amir SayyidMazidArgun, Amir Mahmud Musiqā, Amir Ahmadiyah, MirakAbdulkarim, MirakAbdurahim Sadr, Amir Abdulvahhob, MawlanaQutbiddinTabib and other musicians and doctors served in the palace. There were also discussions with Sultan Abu Sa'idMawlanaFathullahTabrezi on religious knowledge. Because,

Mawlana was skilled in religious and secular sciences and was also a teacher in the madrasa [8, p.56].

The Temurid prince Khalil Sultan was also not indifferent to literature and art. AlisherNavoi writes about Khalil Sultan in his Majlis un-nafais: "In the description of the divan, HajjaIsmatullah recited the qasida, but it was not found" One of the most important figures in the cultural life of the Timurids was Hussein Boykaro. During his reign, special attention was paid to science, literature and art. There are also art manuscript schools in Herat. In the second half of the 15th century, the school of artistic manuscripts and calligraphy reached its peak in the library of the Herat Palace thanks to such artists as KamoliddinBehzod, MirakNaqqash, Sultan Ali Mashhadi, MavlonoYori[9, p.5-6]. In the seventh session of the Majlis un-nafais, AlisherNavoi describes the twenty generations of Timur, Shahrukh and the Temurids, trying to determine the attitude of these people to art and science. In particular, Shahrukh's third son, Boysunqir Mirza, says the following: I am a calligrapher and a painter and a musician. The famous composer Khoja Yusuf Andijani caused a conflict between Boysunqir Mirza and Ibrahim Mirza. In this regard, the work of the last ruler of the Timurids in Fergana, Zahiriddin Muhammad Babur, as well as his patronage of science and culture, was formed in the cultural environment of the Umarshaikh Palace. Umarshaikh Mirza and Babur's palace were also attended by people engaged in special sciences. HojaKalonbek's brother is HojaMullo Sadr. Special attention was paid to such people in the palace of Babur Miro [10, p.39]. He is mentioned in historical sources as a scholar with a good knowledge of vocabulary and essays. A room will be built on the Baroque Mountain near Osh. The building, built by Babur Mirza, was small in size but had a very good architectural appearance. Information about calligraphers, artists and painters created during the reign of Timur and the Timurids can be found in the work of Zahiriddin Muhammad Babur "Boburnoma". Ibn Arabshah's History of Amir Temur repeats the above information. It contains information about Samarkand and Movarounnhr craftsmen and architects, as well as foreign craftsmen (French). However, their names are kept secret. Clavijo, who visited Samarkand in 1404, also wrote interesting information about the patterns of painting and calligraphy. Sahibkiran Amir Temur took part in the ceremony of his grandchildren's wedding in Konigil district and wrote in detail that he organized exhibitions by artisans and saw amazing things. KamoliddinBehzod was a well-known representative of the Herat School of Painting, and MirakNaqqash and AlisherNavoi played an important role in the development of the young artist. The future artist was born in 1455 in Herat to a family of craftsmen. He learns the secrets of painting and painting with great enthusiasm and works in the library of AlisherNavoi. Hearing the young artist's description, Sultan Hussein Boykaro invited him to the palace library. Khandamir writes interesting information about his appointment in his book "Noman nomiy" [11, p.54]. His work in the garden of Sultan Hussein Boykaroni is known all over the world as KamoliddinBehzod's gallery. Italian and Neo-Dutch merchants were trying to obtain royal masterpieces created in this gallery. If we look at the works of KamoliddinBehzod, we can see that most of his works were created during the reign of Sultan Hussein. Behzod's first work was Boston, which is housed in the Chester Beatty Library in London. Another famous work is Nizami'sHamsa, copied in 1442. It is now housed in the British Museum. The mausoleum of Shah Fazl in Safedbulon village of Olabuka district of the Kyrgyz Republic is also believed to have been built during the reign of Amir Temur and the Temurids. According to locals, the mausoleum was built by order of Amir Temur under the supervision of his son Umarshaikh. A group of researchers, based on the information in the "Story of Safedbulon", states that the

mausoleum was built by Babur Mirza. It should be noted that the upper part of the mausoleum is decorated with magnificent patterns. Although there are no separate centers of painting and calligraphy in the Fergana Valley, it can be seen that these areas are developed. During the reign of Amir Temur and the Timurids, Herat and Samarkand were major centers of calligraphy [12, p.6].

CONCLUSION

In conclusion, it should be noted that due to the order established during the reign of Amir Temur, the Timurids received a good education, which served as an important factor in their future fame as patrons of science and culture. The Timurid prince made a worthy contribution to the development of science, education, literature, art and cultural life. It can also be seen that they were directly involved in the life of the culture and carried out sponsorship activities. The princes not only supported the artists in every way, but they were also creative. That is why the "renaissance of the Timurid period" took place.

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GROWTH AND INSTABILITY OF PULSES PRODUCTION IN UTTAR PRADESH:A DECOMPOSITION ANALYSIS

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ABSTRACT

An analysis of changes in the area, Production, and yield of pulse crops is thought to be useful for their management and policy-making to guarantee the nutritional security of the world's rising population. The facts demonstrated that the yearly growth rates of Production and yield of other pulses were much higher than those of total pulses. Other pulses area, Production, and yield instability indices were 6.34, 23.56, and 18.26, respectively, lower than total pulse crops farmed in the state. (Expect total pulses in production 21.62). The breakdown analysis discovered the yield effect of other pulses. The likely cause of the negative yield effect is low productivity and its cultivation by marginal and small farmers under rain-fed circumstances with inadequate crop management techniques. The findings revealed that the location had the greatest effect on Production, while yield had no role in the state. The study stressed increasing pulse crop yield through technical interventions and expanding the area under pulse crops.

KEYWORDS: *Compound Growth Rate, Decomposition Analysis, Pulses, Instability, Policy-Making.*

INTRODUCTION

The fundamental global issue is providing a balanced diet to provide food and nutritional security. Food quantity and quality must be increased to combat hunger and malnutrition while production efficiency and sustainability are improved. Pulses have long been a mainstay of the human diet. Nonetheless, their nutritional worth is not well recognized, and their consumption is frequently discounted. As a result, pulses have long been considered the poor man's primary source of protein in India, and they play a vital role in providing a healthy diet to impoverished

people. Rain-fed lands support more than 40% of the country's human population and two-thirds of its livestock. This region contributes to more than 80% of overall pulse production. Historically, pulses have been a significant component of farming and consumption patterns and the sole high-protein source (20-25%) for 43 percent of vegetarians (48 percent urban and 41 percent rural). Furthermore, pulses promote soil fertility by converting 72 to 350 kg of atmospheric nitrogen per hectare per year into soil N-compounds. The government chose to capitalize on the potential of pulses with the dual aim of ensuring food and nutritional security and enhancing farmer revenue in rain-fed areas. Several farmer-focused methods and programs, To achieve the desired results, programs such as the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), the Pradhan Mantri Fasal Bima Yojana (PMFBY), the Prampragat Krishi Vikas Yojana (PKVY), the Soil Health Mission (SHM) and the Soil Health Card (SHC), and the Electronic National Agriculture Market (e-NAM) were launched in 2015-16. To increase pulse output and productivity in the country, 578 KVKs delivered pulse seed mini-kits, incentives for producing quality seeds, seed hubs, improved breeder seed production, and cluster frontline demonstrations in 2016-17. Massive public awareness efforts in connection with the International Year of Pulses (IYOP – 2016), as well as the establishment of a Price Support Scheme (PSS) at a higher Minimum Support Price (MSP), as well as the provision of Processing and Storage Facilities (PSF), and Imposition of import taxes (30, 50, and 10% on gram/lentil, yellow pea, and Tur, respectively) benefited both consumers and pulse farmers. Consequently, productivity grew in 2017-18, culminating in a record pulse production of 25.23 million tonnes, a huge success story, and a revolution in pulse self-sufficiency (Department of Agriculture, Cooperation and Farmers Welfare, 2017-18). India is the world's largest producer and consumer of pulses, accounting for around 35% of the area and output of pulse crops. Pulse manufacturing technology advancements may reduce production costs and, as a result, pricing. It would result in increased demand for pulse crops. The NFSM intervention had a positive impact; as a result, the area under pulses increased to 19%, Production increased by 34%, and yielded 13% during 2017-18, resulting in improved per capita availability of pulses.

India is the world's largest producer and consumer of pulses, accounting for around 35% of the area and output of pulse crops. Pulse manufacturing technology advancements may reduce production costs and, as a result, pricing. It would result in increased demand for pulse crops. The NFSM intervention had a positive impact; as a result, the area under pulses increased to 19%, production 34%, and yield 13% during 2017-18, resulting in better per capita availability of pulses. In terms of quantity and variety, Uttar Pradesh is India's second-largest producer of pulses. Pulses are the principal source of protein for the state's and country's poor and vegetarian Indian populations. At the same time, pulse crop was almost included in the traditional cropping plan. Whether is a mixed crop, or in the rotation, the commercialization of agriculture has pushed the practice of sole cropping. Preliminary estimates show that Uttar Pradesh contributes around 13.17 percent of national Production. Because the vast majority of Indians are vegetarians, it is widely accepted that pulses are high in protein and serve as a key source of protein in national and state dietary composition. They are used in India to provide low-cost food that satisfies the protein demands of a larger population. Pulses, however, are growing out of reach for the bulk of the country's population due to escalating pricing. A substantial proportion of the malnourished population lives in the state. Increased consumption of pulses, which are abundant in proteins, minerals, iron, and fiber, can help to reduce protein-energy malnutrition and micronutrient deficiencies. After correcting for seed, feed, and trash, per capita pulse availability in 2014 was

at 38 gm per day, down from 65 gm per day in 1961. It is less than the daily recommended amount of 40 grams. After accounting for 3.5 million tonnes of imports, net availability reached 44 mg, greater than the minimum daily need. Pulses would help to counteract widespread malnutrition caused by protein deficiency among large segments of the Indian population in a country that was experiencing continual protein inflation and favored a vegetarian diet (Kumar & Singh, 2016) [1]. Despite ample natural resources, the recurring mismatch between supply and demand for pulses was cause for concern, resulting in a price increase and a good source of protein that is frequently unavailable to the poor. Due to soaring import bills, the unpredictability of price rises, and lower net profit compared to competing for crops, the poor performance of pulses production in the state and at the national level increased the deficit on the one hand and depletion of foreign currency reserves on the other. (Joshi and Saxena 2002 [2]; Srivastava, Sivaramane, and Mathur 2010) [3] The state's pulses were trapped in a vicious spiral of low and unpredictable productivity. Lower per hectare returns contribute to farmers' preference for growing pulses on irrigated and fertile parcels of land (farmers chose to plant pulses on marginal land with no usage of production input), resulting in unstable and low yields (Singh et al. 2016 [4] Lingareddy, 2015 [5]). Due to various circumstances, technical growth in these crops is slower than in cereals and other income crops. Crops must compete for natural and scientific resources and infrastructure with superior grains and cash crops (Ramasamy & Selvraj, 2002 [6]; Singh, Singh, Prakash, Kumar, & Dwivedi, 2015 [7]; Jain et al., 2016 [8]; Ahmad, Sinha, & Singh, 2018 [9]). Pulses are called secondary crops to cereal crops and are consigned to marginal soils since they are regarded to be low-yielding and less profitable crops. Under these conditions, The present study focused on the increase and instability of the primary pulses area, Production, and yield in Uttar Pradesh.

METHODOLOGY

Data Sources

The current study was based on secondary data acquired from official websites and various published sources of the governments of Uttar Pradesh and India, covering the years 1990-91 to 2018-19. The study examined the area position of pulses in Uttar Pradesh; the state's cropping pattern was determined and characterized as the distribution of acreages represented in percentages of total cultivated area (Ramasubban, 1963 [10]). For major pulses such as red gram, gram, lentil, and green gram, compound annual growth rates (CAGR), instability, and decomposition analysis were performed during 30 years (1990-91 to 2018-19) to investigate the increase or reduction and its reasons in the area, Production, and. The period was split into three sub-periods (Period-I: 1990-91 to 2000-01, Period-II: 2000-01 to 2010-11, and Period-III: 2010-11 to 2018 19).

Exponential trend equation:

An exponential function was employed to calculate the compound growth rates in area, Production, and yield.

Instability

Instability is defined as a divergence from the trend, and many studies employed the coefficient of variation (CV percent) as an indicator of instability. The Cuddy-Della Valle index, a better measure of variability, created the instability index (Cuddy & Della, 1978 [11]).

Decomposition of production growth: The component analysis approach was used to calculate the relative contribution of area and yield to total output change for each crop. The design is

$$\Delta P = A_0 \Delta Y + Y_0 \Delta A + \Delta A \Delta Y$$

Change in production = Yield effect + Area effect + Interaction effect

ΔP = Change in production,

A_0 = Area in base year,

A_n = Area in current year

Y_0 = Yield in base year

Y_n = Yield in current year

ΔA = Change in area ($A_n - A_0$)

ΔY = Change in yield ($Y_n - Y_0$)

As a result, the overall change in Production may be split into yield, area, and the interaction effects caused by yield and area changes.

RESULTS AND DISCUSSION

Contribution of pulses to food grains basket

Foodgrains account for 65 percent of the gross cultivated area in India, with cereals accounting for 50 percent and pulses accounting for roughly 15 percent. Gram accounts for 5% of the total area within pulses, with urad accounting for 3%, arhar accounting for 2%, and mung accounting for 2%. Other pulses account for around 3% of the total cultivated area. After the Green Revolution, the pulses in the overall foodgrain production basket remained stable at 6-7 percent until 2015-16. (1960-70). During this period, the area likewise stayed stable at 22-24 Mha or 19% of the total foodgrain area. The slowing of pulses' percentage contribution to the total foodgrains basket caused the Ministry of Agriculture and F.W. to adopt and strongly pursue NFSM-Pulses with a slew of interventions, including R&D, procurement, marketing, and import-export policies, among others. The government's multi-pronged policy to defend farmers' and consumers' interests resulted in an increased percentage contribution of roughly 9% pulses to total foodgrains in 2017-18, up from 6-7% in 2015-16. This is the highest level since 1980-81. Table-1.0 depicts the year-by-year Production of foodgrains and the proportion of pulses to the overall foodgrains basket.

TABLE 1.0{AREA- MILLION HA, PRODUCTION- MILLION TONES, YIELD- KG/HA}

Year	Pulses			Foodgrain			Pulses Share to Foodgrains %	
	Area	Production	Yield	A	P	Y	A	P
1990-91	37.25	20.36	547	140.83	182.49	1300	26.45	11.16
2000-01	20.35	11.08	544	121.05	196.81	1626	16.81	5.63

2010-11	26.40	18.24	691	126.67	244.49	1930	20.84	7.46
2013-14	25.21	19.25	764	125.04	265.04	2120	20.16	7.26
2014-15	23.10	17.16	743	122.07	252.67	2069	18.92	6.79
2015-16	24.91	16.35	656	123.22	251.57	2042	20.22	6.50
2016-17	29.44	23.13	786	129.23	275.11	2129	22.78	8.40
2017-18	29.36	24.51	835	126.98	279.51	2201	23.12	8.77

Source: DES, Ministry of Agri. & F.W. (DAC&FW), Govt. of India; 2017-18*- IIIrd Adv. Est

TABLE 2.0 THE TRENDS OF GROWTH IN DIFFERENT PULSES IN UTTAR PRADESH (AREA IN 000 HECT. PRODUCTION 000 M.T.& AVERAGE YIELD IN MT / HECT)

Year	Other pulses			Total Pulses		
	Area	Production	yield	Area	Production	Yield
1990-91	1764.732	1650.255	935	3039.986	2771.809	1842
1995-96	1824.357	1490.045	817	2830.279	2188.331	1899
2000-01	1858.671	1988.960	1017	2691.678	2160.356	1353
2005-06	1947.402	1570.697	807	2640.389	2205.398	835
2010-11	1859.791	1474.088	793	2448.127	2016.513	824
2015-16	1613.211	948.914	588	1880.840	1112.323	591
2018-19	1718.453	1680.040	978	2290.836	2407.985	1051

Other pulses

(a) Area

The total area under other pulses in Uttar Pradesh declined from 1764 thousand hectares to 1718 thousand hectares between 1990-91 and 2018-19. The overall growth trend reveals a significant annual growth rate of -0.09 percent. Except for the third sub-period, the compound growth trend analysis for the region under other pulses shows a decreasing tendency in the compound growth rate.

(b) Production

Uttar Pradesh produced 1650 thousand tonnes of various pulses in 1990-1991, which nearly doubled to 1680 thousand tonnes in 2018-19. Other pulse output rose at a significant rate of 0.06

percent between 1990 and 2019. The sub-period growth trend analysis shows that the growth rate was positive in all sub-periods except the second, which shows a negative growth rate from 2000-01 to 2018-19.

(c) Yield

From 1990-91 to 2018-19, the state's per hectare output of other pulses increased from 935 kg/ha to 978 kg/ha. According to the growth trend analysis, the yield of other pulses rose at a compound annual growth rate of (0.15) percent from 1990-91 to 2018-19. Except for the second sub-period, which shows a negative growth rate of -2.46 percent, the yield is positive in the sub-period-wise research.

Total Pulses

(a) Area

The overall area under total pulses in Uttar Pradesh declined from 3039 thousand hectares to 2290 thousand hectares between 1990-1991 and 2018-19. The general growth trend reveals a significant annual growth rate of -0.94 percent. The compound growth trend analysis shows that all sub-periods are negative. The compound growth rate in total pulses shows a declining trend.

(b) Production

Uttar Pradesh produced 2771 thousand tonnes of various pulses in 1990-1991, which nearly quadrupled to 2407 thousand tonnes in 2018-19. Total pulse production decreased at a significant rate of -0.47 percent between 1990 and 2019. The sub-period growth trend study shows that the growth rate was negative in all sub-periods until the final one, 2010-2019, which shows a positive growth rate.

(c) Yield

In 1990-1991, Uttar Pradesh produced 2771 thousand tonnes of pulses, which nearly tripled to 2407 thousand tonnes in 2018-19. Between 1990 and 2019, total pulse production fell at a considerable rate of -0.47 percent. According to the sub-period growth trend analysis, the growth rate was negative in all sub-periods except the final one, 2010-2019, which indicates a positive growth rate.

Figure 1.0

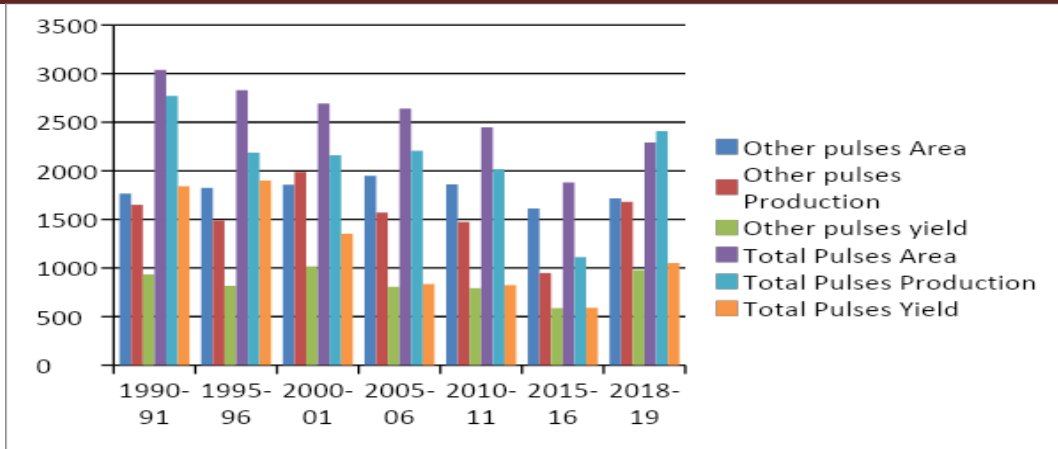


TABLE 3.0 THE COMPOUND ANNUAL GROWTH RATE OF AREA, PRODUCTION AND YIELD OF DIFFERENT PULSES IN UTTAR PRADESH

Periods	Other pulses			Total Pulses		
	Area	Production	Yield	Area	Production	Yield
Periods I	0.5	1.88	0.84	-1.21	-2.46	-3.04
Periods II	0.01	-2.95	-2.46	-0.94	-0.69	-4.84
Periods III	-0.87	1.46	2.36	-0.74	1.79	2.74
Over All	-0.09	0.06	0.15	-0.94	-0.47	-1.85

TABLE 4.0 INSTABILITY RATE OF AREA, PRODUCTION, AND YIELD OF DIFFERENT PULSES IN UTTAR PRADESH

Periods	Other pulses			Total Pulses		
	Area	Production	Yield	Area	Production	Yield
Periods I mean	1815	1709	923	2853	2373	1698
SD	47	254	100	175	345	300
CV	2.5	14.86	10.83	6.1	14.53	17.66
Periods II Mean	1888	1677	872	2593	2127	1004
SD	50	273	125	128	98	302
CV	2.64	16.27	14.33	4.93	4.42	30.07
Periods III Mean	1730	1367	786	2206	1845	822

SD	123	376	195	292	664	230
CV	7.10	27.50	24.80	13.23	35.98	27.98
Over all Mean	1798	1543	847	2546	2123	1199
SD	109	313	145	321	507	515
CV	6.06	20.28	17.11	12.60	23.88	42.95
CDVI	6.34	23.56	18.26	7.76	21.62	21.60

Other pulses

Provides information on other pulses areas, Production, and yield in Uttar Pradesh for the entire period (1990-91 to 2018-19) and sub-periods. The biggest variation was observed in Production in comparison to output and yield across the whole period. The area variance was 7.76%, whereas the production and yield differences were 23.56% and 18.26%, respectively. During the sub-period research, the third sub-period had the highest volatility, with a 7.10 percent variance in area, a 27 percent variation in Production, and a 24 percent fluctuation in yield. The consistency of the area under other pulses cultivation demonstrates that pulses constitute a significant component of the state's cropping pattern.

Total Pulses

Provides information on total pulses area, Production, and yield in Uttar Pradesh for the entire period (1990-91 to 2018-19) and sub-periods. The biggest variation was observed in Production compared to output and yield across the whole period. The variance in the area was 6.34 percent, whereas the variances in Production and yield were 21.62 percent and 21.60 percent, respectively. During the sub-period research, the third sub-period had the highest volatility, with a 13.23 percent variance in area, a 35 percent variation in Production, and a 27 percent fluctuation in yield. The consistency of the area under other pulses cultivation demonstrates that pulses constitute a significant component of the state's cropping pattern.

TABLE 5.0IN UTTAR PRADESH, THE PRODUCTION GROWTH OF VARIOUS PULSE CROPS HAS BEEN DECOMPOSED.

Periods	Other pulses			Total Pulses		
	Area Effect	Yield Effect	Interaction Effect	Area Effect	Yield Effect	Interaction Effect
Periods I	2.6002	4.12	0.21	10.49	24.32	-2.78
Periods II	0.01	-8.09	-0.043	-22.83	98.85	-8.92
Periods	-5.42	0.01	1.26	-3.32	14.21	-0.9172

III						
Over All	-1.433	25.28	-0.65	37.90	66.03	-16.27

Decomposition analysis of pulse crops of Uttar Pradesh

Decomposition is used to determine the area, yield, and interaction effect on pulses production increase in Uttar Pradesh during the whole period (1990-91 to 2018-19), and then individually for each sub-period. Table 5 displays the results. The total period analysis reveals that the area and yield impacts were -14.33 percent and 25.28 percent, respectively, while the interaction effect was -0.65 percent. This indicates that both acreage and yield contributed to the increase in pulse production in the state. According to the sub-period study, area had a positive influence of 2.6% on pulse output during the first sub-period, while yield also had a positive effect. The area, yield, and interaction effects during the second sub-period of the research were 0.01 percent, -8.09 percent, and -0.043 percent, respectively. During the third sub-period, there was a beneficial impact of yield and interaction on pulse production. A negative area effect on production was seen in the most recent sub-period. The examination of growth and instability in the pulses area determined that the area was decreasing at an annual growth rate of -0.9% over the whole research period; nevertheless, the sub-period wise analysis revealed a diminishing tendency in growth over time. Throughout the research period, productivity grew at a 0.06 percent yearly pace. Throughout the sub-periods, both production and productivity increased at a positive pace. When the instability was examined, it was shown that production instability (23.56%) was higher than area (6.3%) and yield instability (18%) during the whole time. When each sub-period was examined independently, the other pulses production -period was determined to have the highest level of instability. Using decomposition analysis, it was discovered that the interaction impact was critical in the increase of pulses production in the state throughout the research period. [12-18]

CONCLUSIONS

During both reference periods, the percentage change in area and production under pulse crops decreased. Only the production of other pulses was found to be increasing. The findings also indicated that, with the exception of other pulse crops, the growth rates of area and production of all pulse crops were negative. Nonetheless, the yield increase rate for all of the pulse crops under examination was positive over the investigation period. In comparison to other pulse crops grown in the state, overall stability indices for the area, production, and yield of total pulses throughout the whole time in the state were determined to be relatively low. Decomposition study found that the region mostly controlled pulse generation, while yield had no bearing on the state. The region beneath the total pulses remained quite stable. To fulfil the increased demand for pulses, the research stressed the need to extend the area under pulse crops and improve pulse production by technological intervention.

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CLASSIFICATION OF DATA IN ERP SYSTEMS USING DECISION TREE ALGORITHMS

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ABSTRACT

ERP systems has become indispensable for business intelligence, varying from small enterprises to multinational corporations. Its significance as a hub for enterprise data analysis will develop exponentially throughout the next years. In terms of the recent developments in machine learning and artificial intelligence, using intelligent classification techniques for data analysis will hereby be the supreme exciting area. As the extensive usage of ERP systems increase, great volume of business information gets generated and managing such large information automatically becomes a challenging task. The accurate classification of data also becomes an additional multifarious task. It is an essential part for operative ERP applications and classical machine learning problems. This paper presents an overview of machine learning principles using decision trees to classify data in ERP systems, which can greatly benefit legacy systems, not powered with machine learning tools.

KEYWORDS: *Machine Learning, Data Analytics, Decision Trees, Algorithms, Classifier.*

INTRODUCTION

Classification is a major problem in data analysis; hence it is a primary focus of machines learning. In recent decades, substantial research and practical development were made in this field. Numerous algorithms and frameworks were developed to achieve more reliable and accurate classification models. All these discoveries have wide range applications in miscellaneous fields and problem domains. Despite this rapid growth in machine learning, ERP systems until recently were largely slow and conservative in integrating its capabilities, mainly because of adherence to existing models and difficulty in bringing rapid change to underlying business processes. However, it has become so obvious, that by using machine learning ERP systems would gain substantial improvement in terms of data analysis and forecasting. [1]

Small scale to giant scale sized businesses who use ERP systems spend a substantial part of their time, money, and struggle - in categorizing their data. Such categorization in traditional ERP systems is made by system administrators and operators manually. However, with the growth of data and categories this task becomes time consuming and error prone. A lot of modern versions of popular ERP systems come with some sort of machine learning capabilities, but their

functions are generally standardized and applicable to certain predefined scenarios. Gradient boosted decision trees are well known for accuracy in classifying structured data. Therefore, it is very important if one can shed a light for using algorithms based on this technique in categorizing data of general ERP. [2]

MAIN PART

Decision trees are very adaptable prediction models that may quickly classify, categorize, or value things based on a variety of criteria. They're also a fantastic technique to quickly depict a multi-factor choice. [3]

Decision trees are sets of "if then" rules that you may envisage connecting the tree's branches. If you have a lot of input data, you may use a variety of 'if/then' rules to proceed down multiple branch splits until you reach a leaf, which is an outcome or plausible prediction of a target variable. [4]

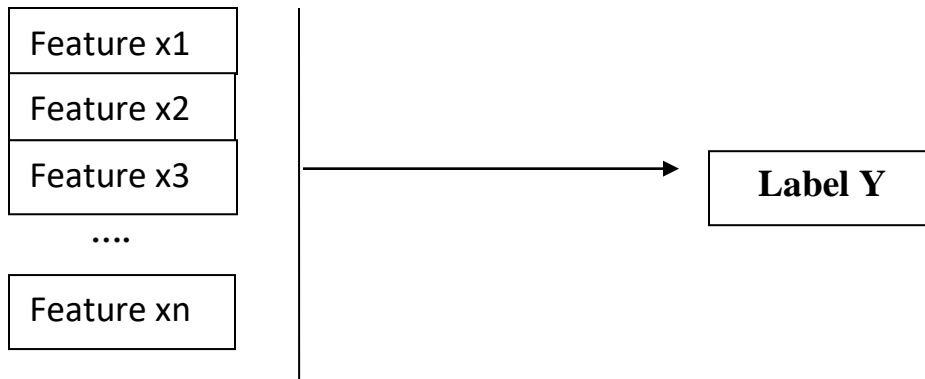
Decision trees are made up of three elements: nodes, branches and leaves.

Root nodes contain the overarching question or the decision your tree is seeking to answer. Branches, represent options, criteria or courses of action. Leaf nodes which appear at the end of branches represent either a further question to be asked (decision node), outcome (end node) or probability / uncertainty of an outcome (chance / change node). [5]

Decision trees can be used to make two different kinds of predictions using classification (grouping and typifying) or regression (valuing and weighting). The main difference between a classification tree and regression tree is whether the prediction that you are making is a category as in the case of a classification tree or whether the outcome is a continuous value as in the case of a regression tree. [6]

Decision tree based machine learning algorithms are quite accurate in classifying data in relatively small datasets. Though their performance on large datasets can be improved with various techniques. Main advantage of such algorithms besides accuracy is explainability, which means that model predictions can be explained through visualized decision tree. Therefore, decision trees are not "black boxes", where there are no clues about decision making process and this fact strongly supports ethical use of such models. [7]

The type of decision tree algorithms used for classification is called CART → (Classification and Regression Tree). Initially, any machine learning classification model requires pre-classified data to be trained on. This data is considered an input. Input data is divided into two types: label and features. Features are properties that serve to correlate with label. The label would be an outcome associated with given features. Basic classification dataset might look like this: [8]



Machine learning models operate only on certain types of data, mainly floating-point numbers and their vectors. Therefore, data types like text should be converted into floating point numbers before use in training. The process of preparing raw data for training is often called data transformation. Basically, before training our model, the dataset should contain a vector of features \mathbf{x}_n and label \mathbf{Y} . [9]

$$(\mathbf{x}, Y) = (x_1, x_2, x_3, \dots, x_k, Y)$$

In training machine learning models using decision tree algorithms the ideal tree would be the shortest tree possible, with the fewest splits, that can classify all data points appropriately. This appears to be an easy problem; however it is actually an NP-hard problem. The time it takes to build the optimal tree is polynomial, and it grows exponentially as the dataset grows. [10]

For a dataset with only ten data points and an algorithm of quadratic complexity, $O(n^2)$, the algorithm builds the tree in $10 \times 10 = 100$ iterations. When you increase the size of the dataset to 100 data points, the number of iterations the algorithm will do jumps to 10,000.

The program tries to partition the dataset into the lowest subset possible at each split [11]. The purpose of this approach, like any other Machine Learning algorithm, is to reduce the loss function as much as feasible. However, because of separating data points into classes, the loss function should calculate a split based on the proportion of data points in each class before and after the split. In other words, a loss function that evaluates the split based on the purity of the resulting nodes is required. Gini Impurity and Entropy are loss functions that compare the class distribution before and after the split [12].

There are several methods to measure the efficiency of decision trees. One of them is Gini Impurity which is the measure of variance across the different classes [13].

$$G(\text{node}) = \sum_{k=1}^c p_k (1 - p_k)$$

$p_k = \frac{\text{number of observations with class } k}{\text{all observations in node}}$

\uparrow Probability of *not* picking a data point from class k
 \downarrow Probability of picking a data point from class k

Another one is Entropy. It is like Gini Impurity, is a measure of chaos within a node. In the context of decision trees, chaos is defined as a node in which all classes are equally represented in the data. [14]

$$\text{Entropy}(\text{node}) = - \sum_{i=1}^c p_k \log(p_k)$$

$p_k = \frac{\text{number of observations with class } k}{\text{all observations in node}}$
↓
 Probability of picking a data point from class k

In classification of data in ERP systems a big part of effort should be directed at evaluating feature importance, because the model predictions can vary depending on set of features used in training. A single feature can be used in the different branches of the tree, feature importance then is its total contribution in reducing the impurity. [15]

The decrease in node impurity is weighted by the likelihood of accessing that node to compute feature significance. The number of samples that reach the node divided by the total number of samples is the node probability. The higher the value the more important the feature.

FeatureImportance

$$\text{number_of_samples_at_parent_where_feature_is_used} \times \text{impurity_at_parent} - \text{left_child_samples} \times \text{impurity_left} - \text{right_child_samples} \times \text{impurity_right}$$

Impurity is the gini/entropy value, then

Normalized importance = feature importance/number_of_samples_root_node(total num of samples)

It is advisable to keep number features used in training optimal, because less or more features can lead to underfitting or overfitting. Selected features should be the most relevant ones to prediction. [16]

CONCLUSION

Though effectiveness of data classification in ERP systems based on a single type of algorithms, like decision trees, might not yield high efficiency due to variety and complexity of data, there are many hybrid approaches, like boosting, that can significantly improve model performance. However, simple implementation of decision trees with basic principles described above can be a good start for enhancing many legacy ERP systems with machine learning analytics. [17,18]

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THE SYSTEM OF EDUCATION AND ITS INTERACTION WITH THE CONCEPT OF SPIRITUALITY

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ABSTRACT

On the basis of the reforms carried out in our country, while the education system is in the main place, the changes that have taken place in the education system, the achievements gained in this regard and the existing problems are identified and proposals on their practical solutions are of great scientific and practical importance. The process of education and training embodies the sum of individual and social, conscious and unconscious influences on a person, is aimed at an individual, at a certain community, at a people or nation. This article examines the system of education and its interrelationships with the concept of spirituality.

KEYWORDS: Society, Spirituality, Education, Youth, Reforms, Social Life.

INTRODUCTION

Today we are living in a time when our people are putting noble and glorious goals before them, living a peaceful life, first of all relying on their own strength and opportunities and achieving great results in the construction of a Democratic state and civil society. It is known that education is the main factor that increases the individual's cognitive abilities. Systems aimed at the cultivation of individual abilities are manifested in the manner of certain didactic rules. Didactic principles set out the requirements for the content and processes of Education. The purpose and functions of Education vary historically in accordance with the social system, as well as the function of certain educational institutions. "If we explain the legalities of the educational process, they are the necessary links between the parts of education as a whole, arising from the need for an evolutionary projection of the educational process. Indeed, the necessary link between the educator and the educator or the educational program and the necessary link between the educator and the educational program"[1].

MAIN PART

The positive qualities, qualities, values of our ancestors, as well as the historical social experience they have acquired, the source of knowledge and knowledge represent the professional skills of the educator. Therefore, the skill of upbringing is sometimes interpreted as art. The decisive factor in the development of a person as an independent

person is also considered as the result of the educational work carried out by society. Education is also a conscious practical activity aimed at a specific goal, carried out according to a specific program, plan. [2]

"Education as a social institution is a phenomenon that arises at the stage of the development of a particular society. Similarly conscious educational influence directs human activities towards the benefit of a particular social group, stratum, individual or nationtiradi." [3]

About spirituality it is possible to say, write as much as possible. But spirituality is not philosophy, with all the interpretations of the world, with the help of which you define and understand the rule of law, you can be valued as an intelligent, educated, logical-minded person, but these do not indicate that you are spiritually competent. Again, you can be extremely talented, about Vatan, about independence, about which you can end a wonderful revenge. Of course, talent is also a sign of spirituality, but Vatan prosperity with descriptive descriptions is not secured, independence is not strengthened. The main criterion of the spirituality of independence, the Foundation-a sense of responsibility. [4]

Spirituality always develops in harmony with enlightenment, that is, with knowledge. If we can achieve the harmony of each of the two, we can achieve the upbringing of our youth as spiritually harmonious, faithful, patriotic, humane, conscientious, pious, honest and pure people. The fact that a person occupies knowledge and knowledge and applies them in everyday practical activities leads to the further strengthening of many spiritual qualities, such as conscience, faith, sincerity. [5]

LEVEL OF STUDY OF THE SUBJECT

Today in our country it is possible to recognize the activity of the educational process on the basis of a system consisting of meaningful and organizational and methodical principles: [6]

1. Meaningful principles of education. They reflect the laws that relate to the selection of educational content and represent the following ideas:

- Citizenship;
- Science;
- Educative education.

The principle of citizenship. According to him, the content of education should be manifested in the development of the subject of the individual, in the direction of his spirituality and social maturity. It provides for the humanization of the content of education and is connected with the formation of an understanding of citizenship, the system of reflections on the social and political structure of the Republic of Uzbekistan, the psychological features of the culture of the Uzbek people, its mental features, the formation of reflections on such pressing issues as national policy and culture. [7]

The principle of the science of Education expresses the content of education in accordance with the level of development of modern science and technology, the experience of the world civilization. This principle requires that the content of Education, which is carried out during and outside of education, is aimed at bringing the students closer to revealing the

object scientific facts, phenomena, laws, modern achievements and prospects for development, and to acquaint them with the main theories or conceptions of this or that area. [8]

The principle of upbringing of education relies on the laws of unity of education and upbringing in a holistic process. This principle implies the formation of a harmoniously developed personality in the educational process. Effective upbringing in the educational process is associated with the intellectual development of the individual, first of all, with the consideration of the interests, perception and individual abilities of young people. [9]

2. Organizational and methodological principles of education. The methodology of organizing education can not be freely chosen as the formation of educational content. In this regard, it is necessary to take into account certain social, psychological and pedagogical requirements. Such requirements are expressed in the content of principles that are considered organizational and methodological principles of Education: [10]

- Consistency, systematization, sequence of education;
- Consciousness and creative activity in education;
- Visualisation in education;
- Effectiveness and reliability of training (consistency);
- Understanding of education;
- The relevance of education to the age and individual characteristics of students;
- Pedagogical cooperation.

The effectiveness of social reforms taking place in society depends on the spirituality that its citizens possess. The moral and moral foundations of the development of society are:

- Loyalty to universal values;
- Colonization and development of the spiritual heritage of our people;
- The free manifestation of a person's abilities;
- Patriotism.

After all, the development of society dictates not only its economic development, but also its spiritual growth.

Spirituality is one of the main criteria that determines the development of society, the perfection of the nation and the perfection of personality. Therefore, the issue, which is now closely related to spirituality, is the system of Education. We can see the link between these two is confirmed by the various reforms currently being carried out. [11]

"Spirituality serves to strengthen the mind, perception and intelligence kengaytirib, to add strength to the power of man over all his life. It is an invaluable treasure of spirituality and spiritual wealth, values, state, nation, personality and a source of development"[12].

Spirituality is a positive, spiritual factor that determines the strength, development, opportunities and prospects of a person, people, state and society. A spiritual person is

educated, has a certain profession, is a faithful citizen of his homeland. Moral and moral education and the requirements to it in order to form moral qualities corresponding to certain social and moral requirements in this society is to influence the person in accordance with his consciousness, qualities and behavior and systematically. [13]

The duties of spiritual and moral education are as follows:

1. Formation of spiritual and moral consciousness in youth.
2. Upbringing and development of spiritual and moral feelings in them.
3. Content of spiritual and moral behavior skills and habits in young people.

According to the essence of spiritual and moral education, human consciousness is connected with society, it is a duty before society, it understands the dependence of its behavior on the level of development of society, the moral norm recognized by society, the violation of ideal and responsibility for the fulfillment of requirements, the transformation of spiritual and moral knowledge into a belief, and the understanding that it is, it consists in the formation of spiritual-moral habits and others. [14]

In connection with the emergence of the need to put on the agenda the issue of restoring national and universal values in the content of spiritual and moral education, there have been fundamental changes. Of course, since the future of the country depends on the growing youth, one of the main tasks that we have now is to educate young people as spiritually competent, knowledgeable and intelligent people, to love them from the heart the land where our ancestors lived, to preserve every inch of her land, to become a worthy generation of our ancestors, to form [15]

In addition, being in the educational institution as a value to young people is also becoming relevant. After all, one of the most important, fundamental principles in the principles of education is the humanization and democratization of education, the main essence of which requires the reader to be in a human relationship with his person, to liberalize the educational process. [16]

CONCLUSION

Another most valuable value in spiritual-moral education is freedom. Along with the democratization of Education, a person develops respect for his freedom and right. And this in turn educates the skills of the reader to feel responsibility in his person, to adhere to a conscious discipline. Also of great importance is patriotism, friendship and cooperation among peoples, sense of responsibility, upbringing of duty, honor, conscience, order, fairness and other qualities. [17]

Top top the content of moral and moral addictions in the behavior system. In this regard, it is desirable to fulfill the following requirements:

- The upbringing of moral and moral qualities in young people is carried out with the expression of the educators of their point of view in cases of active life situations, violation of moral norms;
- To train skills in the organization of actions aimed at evoking in a person the feelings that he / she aspires to his / her ideal;

- To carry out the work on spiritual and moral education, taking into account the experience of the educators, the acceptance of the rules of upbringing and their readiness to do so, the understanding of the merits of good and bad behavior;

- High moral and moral qualities in educators-humanity, human dignity, kindness, politeness, culture of treatment in the organization of social relations and compliance with the rules of morality, etc. should be content. [18]

In the organization of spiritual and moral education, it is necessary to pay special attention to the negative habits that are visible in the behavior of young people-to speak hard in community places, to use rude words, to give in to emotions, to speak thoughtfully, to think in the direction of events that are not credible and not confirmed by evidence.

It appears to be trivial, but the fact that the individual is in such a state of habit as it is necessary to have success in the organization of future life and professional activities is considered to be one of the important tasks of the teachers to help the students. [19]

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