

# EFFECT OF ELECTIONS ON INDIAN ECONOMY

**Project Report for CCS** 



**Presented to Prof. Charan Singh** 

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# Acknowledgement

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### **Abstract**

This report explains the impact of Lok Sabha election on different economic factors like inflation, exchange rate, stocks and deficit. Working with this data from 1970 to 2014, we have found out that there is no particular pattern in these economic variables before and after the election. Before 2000, India was going through various ups and downs in the economic growth in addition to major political changes happening in the country. In almost every year there is a state election that is happening in India which along with the other factors could have been the reasons that we don't find political business cycles or political budget cycles in India. As the Indian economy shows steady growth in future, it is possible to have political budget cycles as it is present in most of the developed countries.

### 1. Introduction

Political budget cycles theories indicate that macroeconomic variables like output, unemployment, inflation show a particular pattern during the election year<sup>1</sup>. In India also, we can see political parties change their stances a lot to lure the voters for their benefits. In the Sensex data plot from 1979, we can see that a year before an elections, Sensex surges almost all the election periods except for 1998 elections. This trend could be attributed to the fact that investors were afraid of the possibility of coalition government causing the policy paralysis. There is also an observable pattern in the Sensex performance for the post-election years. Except for 1999, Sensex always surged up after the elections happened. That exception might be there because earlier Atal Bihari Vajpayee led coalition government failed to get confidence vote because of allied parties removed the support in between. Investors were still not sure that government will last for 5 years.

For the Exchange rate for USD, there is no particular pattern found before or after the elections. Exchange rate has been changing continuously over the years as India's imports are increasing very fast as compared to exports which have been increasing slowly. Government policies rarely have affected the exchange rate changes.

In India, CPI data from 1958 does not give any particular pattern in terms of increase or decrease before and after the elections, but mostly inflation decreases pre-election year. There have been many theories which suggest that inflation increase before the elections. Government increases its spending pre-election year, which specially affects inflation in the manufacturing products. But government controls the inflation in primary articles which affects the common man directly to indicate that they are efficient. In India, Government generally spends money on the schemes that directly benefit to the people. Because of illiteracy, government doesn't spend money on capital investment. But since people are becoming more and more aware government has to think long term before the elections.

There is a pattern in the pre-election and post-election year deficits in most of the years. Fiscal deficit goes up pre-election and a drop in the fiscal policy is observed post-election year.

<sup>&</sup>lt;sup>1</sup> http://econweb.umd.edu/~drazen/working\_papers/palgrave\_pbusinesscycle.pdf

But sometimes an opposite pattern is also observed. This might happen because just before the election, government doesn't spend more money, just divert the money to those schemes which will attract the people's attention. India surely has seen various schemes getting more funding just before the election period.

## 2. Objectives

Government policies regarding the public welfare change suddenly as per general observation. The objective of this project is

- 1. To analyze the patterns of economic variables like deficit, inflation, exchange rate and stocks during the election period
- 2. To see whether political budget cycle and political business cycles exist in India by the help of these economic variables.

### 3. Review of literature

Drazen (2001) focused on the study of political business cycles. Before elections, aggregate economic situations like per capita output, income growth have a significant impact on the voting patterns in USA and other countries. Aggregate economic activities doesn't seem to be increasing before the elections. Post electoral inflation is clearly observed in OECD countries. In USA, there is an evidence for such inflation prior to 1979, but thereafter no evidence was found. Pre electoral money growth is also observed in many countries. In USA, it was observed between 1960 and 1980. Partisan effect is also observed on economic activities in USA, economic activity being higher during democrats as compared to that of republicans in their first half terms. Before the elections, evidence of transfers and fiscal policy instruments found in many countries. In USA, it was evident till 1980's. This paper assesses the literature on political business cycles and provides a different model which combines fiscal and monetary policies to form a new opportunistic model.

Chauvet and Collier (2008) have mentioned that there is always a chance that elections affect the economic policies where we can find different scenarios before and after the election period. We will focus on two types of effects of elections on the economy i.e. Structural and cyclical effects. Effects that are cyclical rely on the fact that elections are periodical in nature. The political party in power always tries to introduce economic benefits and reforms that is particularly an incentive for the voters in the pre-election period to attract more votes.

Investments and reforms mostly in this period can be referred to as short term political costs for long term benefits. For example in elections of 1991 in Zambia saw a 400 percent increase in money supply by President Kaunda. The election year of 2008 in Zimbabwe saw confiscation of foreign currency bank accounts followed by distribution of proceeds. In case of policies which have short horizons might gradually start losing effect till the next elections. According to evidences it was found that there are rarely any such cycles in developed countries but the scenario is different in developing countries. CPIA (Country Policy and Institutional Assessment) is used as an important measure to rate effect on economy of a country. It is an annual rating system for

different aspects of economic policy and institutions. Using these rating systems it was concluded that elections could have an effect on policies and economy if conducted in a rightful manner in the right time period.

Lessem and Urban (2013) have explained how spending from primary elections in presidential selection helps local economy in that state. This earning depends on the duration and order of primary campaigns. This spending doesn't include advertising expenses. States with primaries tend to see expenditure of \$1.5m to \$19m in and election cycle which is enough to increase per capita income. As ordering of primaries in different states is not fixed, states enjoying this spending may not see this in the next election cycle. Primary campaigning depends on the decision of democrats and republicans. Funding for primary comes from sources individual contributions, federal mutual funds and political action committees, but mostly from individual contributions. This paper concludes that "this money boosts per capita income in the service sector specially accommodation and retail sector."

Snowberg, Wolfers, and Zitzewitz (2007) observed the effect of presidential election on equity prices, oil prices, nominal and real interest rates and dollar values. Equity market changes reflect the policy changes in favor of certain businesses, also it effect of partisan on nominal bond yields was only because of real interest rates not because of expected inflation. Oil prices were increased by the Bush's reelection that reflected the higher demand due to economic expansion. This paper concludes that market changes mostly because of expectations of market traders rather than actual partisan effect.

Kaplan (2006) has concluded that political business cycles reveal that competitive elections within democracies lead to unfavorable economic outcomes, such as a post-election recession or inflation. According to this theory, incumbent politicians stimulate the economy prior to elections to secure re-election, causing a post-election economic slowdown. According to the literature of this article it has produced fairly robust evidence of a post-election rise in the inflation rate in developed count. The developing country literature exclusively examines fluctuations in macroeconomic policy levers, with little focus on their economic effect.

Schuknecht (1996) found significant empirical evidence for political budget cycles in his study of 35 developing countries from 1970 to 1992. According to his results, the average fiscal deficit fluctuated by as much as 0.66 percent of GDP around elections.

In contrast, we may find empirical support for fact that elections lead to inflation and other unfavorable real economic changes. Such a finding would bolster the assumption of PBC (political business cycle) theory that pre-electoral fiscal stimulus leads to post-election inflation. In this scenario, one of two patterns would have to emerge.

- 1) Inflation would rise in the post-election environment, as predicted by rational and traditional opportunistic theory.
- 2) Alternatively, the economy would expand (i.e. higher real GDP and lower unemployment) before elections, and significantly slow (as characterized by lower real GDP, higher unemployment, and higher inflation) after elections, as anticipated by traditional opportunistic cycles.

The article concludes suggesting that in developing countries the lag could render macroeconomic changes not being tinkered with during the election period .PBC theory did suggest that parties aiming to gather votes might boost up the economic condition during preelection period. However little systematic change in macroeconomic conditions were found before elections in developing countries. Literature suggests elections might not be the only reason of macroeconomic changes rather, long term outcomes could be more due to poor governance issues intertwined with minute policy changes during the election period.

Khemani (2010) has introduced the concept the correlation between the public infrastructures spending in various states with different voter turnout and good/bad governance. Targeted employment and welfare transfers can attract more voters, while delivery of infrastructure as public good can be uncertain in elections. There is a differential correlation of voter turnout with the budget composition in states considered to be having weaker governance. There is always a negative correlation between voter turnout and capital spending, as poor cast their vote even for a small directly transferred welfare to his family.

Khemani (2004) has studied policy instruments used just before the elections using the detailed tax revenue breakdowns and categories of spending allocated to different states. This paper also gives effect of elections on public services like road construction by state PWD's. Road construction projects which are languished for a while are executed very fast under political pressure or because central government provides funds to its affiliated states.

Around the election period, pattern of policy manipulation is found that targets the narrow interest groups for election campaign support. This paper concludes that there are differences between electoral correlation with fiscal policies when elections are scheduled and when they happen during incumbent government's term.

Sen and Vaidya (1996) have studied different political business cycle models in the Indian context and tried to find out the evidence with empirical data. There is a strong evidence of pre electoral increase in the budget deficit being financed by money creation. However, there is no clear evidence of an increase in the inflation rate during the time of elections. There is an evidence of increase in the industrial prices (but not agricultural prices). Also output is unaffected by the increases in the budget deficit and money supply which shows that there is no political business cycles in India. But surely political cycles in budget in India are found out.

Effect of monetization is resulted only with a one period lag so that there would be a postelection increase in the inflation. Industrial price rise occurs may be because of demand-pull effect of expansionary policies. There is no increase in the agricultural prices because government has taken some measures to neutralize the demand-pull effect of expansionary policies. So electoral cycles are present in prices of manufactured products but not in the primary articles.

Rogoff's (1990) non-monetary model focusses on government expenditure on consumption and investment<sup>2</sup>. Increase in the investment expenditure increases the efficiency and productivity but it will be observed after one lag period, increase in the consumption expenditure is observed during the election year itself. In order to appear competent, incumbent parties shift focus on consumption rather investment expenditure which results into distortion of public spending programme.

There is a strong evidence of a political cycle in the budget in India. Key assumption of PBC model is that elections timings are perfectly known to incumbent government, opposition and voters. Nordhaus (1975) assumed that "opportunistic" parties and non-rational (voters assume adaptive expectation and are short sighted in the sense that their voting is based on current performance of government.)<sup>3</sup>. But voters are rational and they care about post-election performance of the government, then government has no incentive to inflate the economy. So in these RPBC models, incumbent parties exploit information asymmetry and try to showcase them as competent as possible before elections. There is one more aspect of business cycles i.e. "Partisan theory". But it is not applicable to India, as India don't have only two parties like in various democracies.

Political business cycle models predict that before an election year, revenue receipts will fall and revenue expenditure will rise. But evidence does show that budget deficit causes because incumbent government has increased expenditure or cut taxes in every election but not both. Income taxes play an important role in electoral policy manipulation. In India, Government prefer to monetize the pre-election increase in the current account deficit than capital expenditure adjustments. In India, it can concluded that political budget cycles are evident, but business cycles (i.e. in output) are not.

DK Srivastava (2008) examines the degree to which political cycles play a role in deciding the fiscal deficits. It is found that, the political party in power adopts policies to stimulate the economy by increasing spending. Over time the amount of debt keeps on accumulating due to the increasing deficits above non-permissible limit. This might create an inefficient fiscal policy that is short sighted in its vision that falls short of its mark aiming at growth or stability. This article points out that the government spending on construction of roads is higher in the election years in India. Besley and Burgess (2000) developed a model that was based on the solution from political agency problems. A very interesting fact that came out was that the public food distribution and

<sup>&</sup>lt;sup>2</sup> http://scholar.harvard.edu/files/rogoff/files/51\_aer90.pdf

<sup>&</sup>lt;sup>3</sup> http://econweb.umd.edu/~drazen/working\_papers/palgrave\_pbusinesscycle.pdf

disaster relief expenditure were higher in those areas where governments had greater accountability in elections and highest newspaper circulation.

Chaudhuri and Dasgupta (2006) used data from the 14 major states of India, to understand if state governments' fiscal policy choices were influenced by political considerations. Conclusions are as they showed that few fiscal policies experienced electoral cycles: less commodity tax revenue was raised by the government, less spending on the current account was made, and there was larger capital account expenditures incurred in election years.

Ebeke and Olcer (2013) provided an insight to the economy of low income countries (LICs) and their response to election related cycles. These countries find themselves with a higher risk of risk while conducting the election related fiscal policies. Owing to their weak institutional capacity and other factors LICs are most vulnerable in the macroeconomic scenario.

Wallner (2012) doesn't tend towards a fiscal approach to political business cycles. After examining a large no of countries the authors point out that on an average there is almost one percentage point increase in government deficit as a part of the GDP. Political business cycles are found to be much larger in developing than in developed countries.

### 4. Data and facts

Since India became a democratic country in 1950 much importance has gone into the election periods the outcome of which decides the dominance of power by a political party and to some extent the fate of India. There has always been an overrated hype about elections leading to more media coverage, campaigning and increased spending to win the hearts of the public during that period. This very idea brings a huge curiosity towards analyzing the patterns of economic indicators and how they change during election period. To start with the same, various plots of economic indicators have been prepared focusing on each decade 1970-80, 1980-90 and so on till 2015.

In the graphs below, we can see what are the different others events happening during the election period

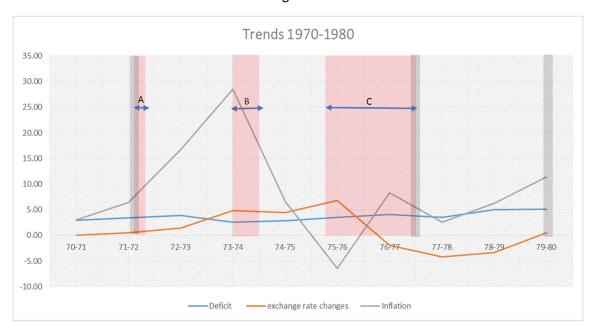


Figure 1:

Source: Handbook of statistics on Indian economy, RBI official site

### Important social, political and economic events:

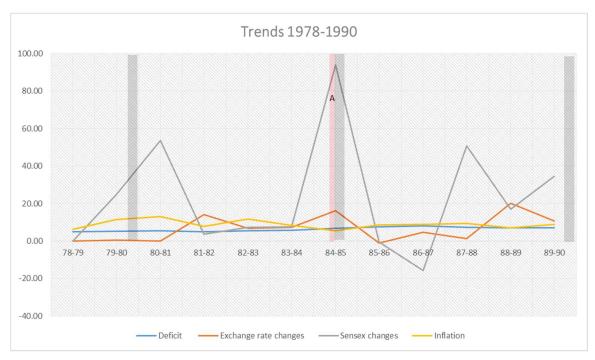
A. India Pakistan War (Dec 1971)

B. 1973 Oil Crisis

c. Emergency declared during Indira Gandhi Government

• Grey color region indicates the Lok Sabha elections

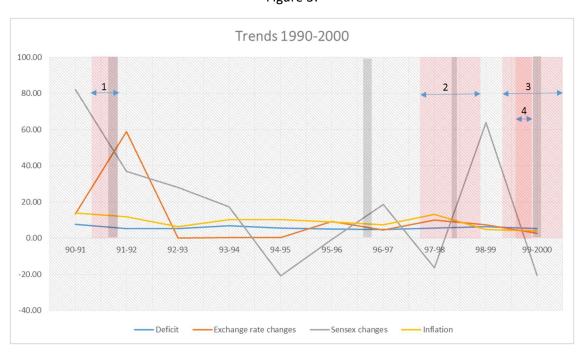
Figure 2:



Source: Handbook of statistics on Indian economy, RBI official site and BSE website

### A. Indira Gandhi Assassination

Figure 3:

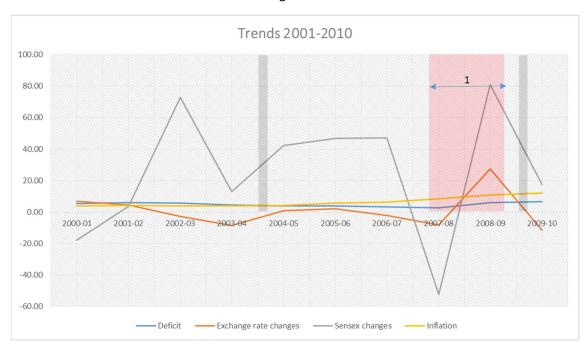


Source: Handbook of statistics on Indian economy, RBI official site and BSE website

# Important social, political and economic events:

- 1. Indian Economic Crisis
- 2. Asian Crisis 1997
- 3. Dot Com Bubble
- 4. Kargil War

Figure 4:



Source: Handbook of statistics on Indian economy, RBI official site and BSE website

# 1. Global Financial Crisis

Trends 2011-2015 40.00 30.00 20.00 10.00 0.00 2010-11 2011-12 2012-13 2013-14 2014-15 -10.00 -20.00 -30.00 Sensex changes Exchange rate changes

Figure 5:

Source: Handbook of statistics on Indian economy, RBI official site and BSE website

Following graph shows pattern of change in the economic variables in the pre-election and postelection period

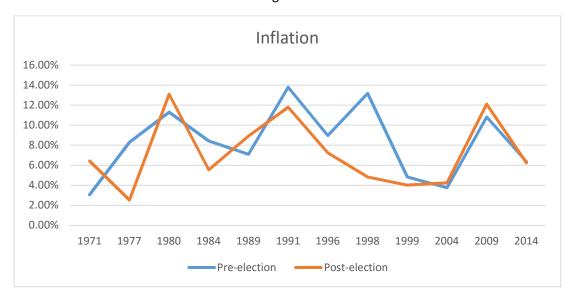
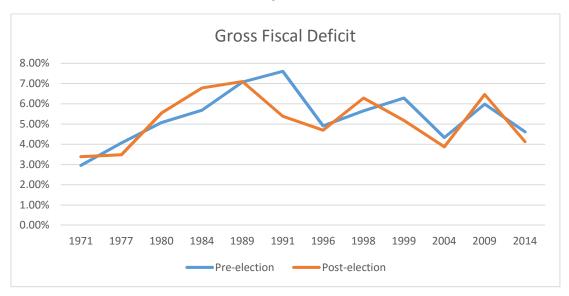


Figure 6:

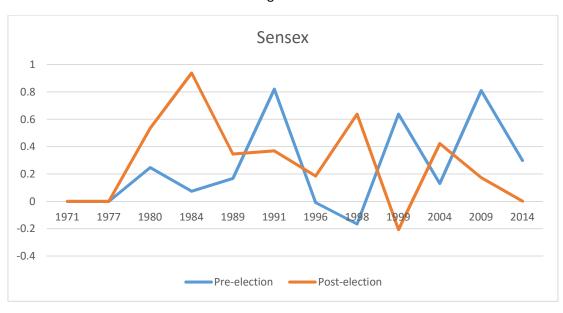
Source: Handbook of statistics on Indian economy, RBI official site

Figure 7:



Source: Handbook of statistics on Indian economy, RBI official site

Figure 8:



Source: BSE website

Exchange rate 70% 60% 50% 40% 30% 20% 10% 0% 2014 1971 1977 1980 1984 1989 1991 1996 1998 1999 -10% -20% Pre-election Post-election

Figure 9:

Source: Handbook of statistics on Indian economy, RBI official site

### 1971 election

The period from 1971-72 to 1975-76 registered an average inflation quite high. Due to a few drivers of these inflations like oil shocks, drought and currency devaluation, persistence of inflation were a common pattern when inflation was high. The decade of the 1970s stands out as the most turbulent period in India in terms of inflationary uncertainty, witnessing very high inflation mainly driven by the supply shocks emanating from agricultural and oil prices. Independent India's highest inflation occurred in September 1974 when it reached 33.3% as seen in figure 1. Country's worst inflationary episode was from November 1973 to December 1974 when inflation never dropped below 20% and was above 30% for four consecutive months starting June 1974. Referring to the severity in inflation, particularly that of agricultural commodities in 1972-73 and 1973-74, the RBI Annual Report 1974-75 observed that "even the seasonal decline in prices, particularly agricultural commodity prices, to which the Indian economy is traditionally accustomed, did not take place during the last two years".

Indira Gandhi won the snap parliamentary elections in 1971 .Despite the victory against Pakistan, the Congress government faced numerous problems during this term. Some of these were due to high inflation which was in turn caused by war time expenses referring to the 1971 indo-Pakistan war, drought in some parts of the country and more importantly, the 1973 oil crisis. In May 1971, taxes were imposed on abroad travel that devalued the rupee further to around 7.5 rupees against US dollar as observable in figure 1.

The high peak that we find in inflation as we observe might not have taken place due to the elections rather due to other events as mentioned above. We actually don't see any existence of political business cycle, but we can see the opposite of it happening.

### 1977 election

The deficit as percentage of GDP increases in the pre-election period by around 17% as shown in figure 7. And as there were no significant events that affected the economy in that period, the increased spending during the election year could be the very reason why the deficit increased by such a rate. India was going through a period of deflation during 1975-76 owing to the political unrest and emergency in that period. However inflation rose in 1977 because of poor food grain production leading to food unavailability and inflation dropped again in the next year 1978 as seen in figure 1 because of the bumper crop production.

The Janata government could not leave a positive impact through economic reforms. It launched the Sixth Five-Year Plan, aiming to boost agricultural production and rural industries in 1977. They tried to promote economic self-reliance through indigenous industries, the government required multi-national corporations partner up with Indian corporations. The policy proved to be controversial, diminishing foreign investment and led to the high-profile exit of corporations such as Coca-Cola and IBM from India. But the government was unable to address the issues of resurging inflation, fuel shortages, unemployment and poverty.

From the data there are indications that inflation and deficit show existence of political budget cycle. But we can't be sure of inflation, as agricultural output declined because of drought in that period which could also have been driver for this inflation rise.

### 1980 election

In the build up to election, the investors started taking interest in India as the 1980s reforms proved to be crucial in building the confidence of politicians regarding the importance and ability of policy changes such as trade liberalization, devaluation and delicensing of investments to improve growth without disruption

A similar pattern is seen as above where inflation rose in the election year and dropped back to normal in the post-election year. In absence of any other significant event during that period, this presents a strong evidence in favor of the fact that government spending increased in that election year that led to increased inflation. The elections and change of government, government proposed changes played an important role in impacting the stock market. In this election deficit shows exact opposite effect of what PBC models explain but inflation shows the existence of PBC.

### 1984 election

Move toward liberalized industrial policies launched by Rajiv Gandhi government (Mr. Pranab Mukherjee was Finance Minister). Beginning of industrial liberalization process, marked 1st phase of shift in policy toward freer markets as key to poverty eradication and growth. These reforms and policy changes towards the pre-election period in 1984 attracted a lot of investors

which is why stocks shot up in that period and went down to normal in the post-election period. This provides strong evidence that elections were responsible for the above event.

On the contrary sudden death of Indira Gandhi led to this election, so we cannot predict any effect of policies on economy. In turn we cannot predict the existence of PBC here.

### 1989 election

There was no external effect on the economy during the elections, but in this election we can see the exact opposite effect of what PBC models explain in terms of inflation and deficit data. Sensex moved in positive direction before the election year which is also showing opposite impact to the fact that PBC exist in India.

### 1991 elections

Due to the Gulf war, price of the crude increased and in the same period, demand for the crude oil increased a lot. This resulted into higher import but there was no significant increase in the exports. Due to balance of payment crisis, dollar value was appreciated in 1990-91 and in 1991-92, dollar appreciated much more. Inflation was at its peak due to low agricultural outcome in 1990-91, but inflation reduced a bit in 1991-92 due to good agricultural production as observable from figure 3. Because of BOP crisis, government was not able to import also to inflation. But new government took lot of new measures to control the situation which resulted in Sensex value increasing and deficit reduction.

Both the previous and new governments had no control on exchange rate and Sensex movement which were mostly affected by balance of payment crisis. But the P Narasimha Rao government was able to reduce the deficit and inflation with its policy measure. Less agricultural output and BOP crisis impeded previous government from controlling inflation. We don't have any reason to believe that political business/budget cycle existed for this election.

### 1996 elections

During this election, there were not many external influencing factors to affect the economy. H. D. Deve Gowda government took many policy measures in areas like industrial delicensing, foreign investment, trade policy, financial and capital markets. Because of these, economy was well recovered. During the tenure of previous government also economy was growing well with economic factors showing positive indication.

During this election previous government might have taken some measures to allure the voters, but figures show the different story. This may be the result of economic growth which may have overshadowed the political business cycle effect.

### 1998 elections

Asian crisis was the reason for many economic changes in India, especially Sensex movement. Sensex went up just after crisis was about to over. Inflation was suddenly decreased after the election which may have been the effect of new government's strict measures to control the economy. Previous Government launched a new public distribution system and sluggish

industrial growth caused shortfall in collection of indirect taxes. This caused the Deficit to increase rapidly in the pre-election year. Exchange rate was also growing up as exports declined (because of tighter quality, standard and testing requirements as well as low export prices) before and after the elections.

This election gives a few hints towards a political business cycle existence, as deficit and inflation was high in pre-election year, which reduced after the election.

### 1999 elections

Atal Bihari led NDA government could not sustain for long leading to immediate reelection after one year. As this government was collapsed just after 13 months (when AIADMK removed its support from government), they didn't get much time to change their policy to allure the voters. Most economic changes were naturally affected by government and external factors.

But once again when new government was formed, they took certain measure to improve the economy. During his term, Atal Bihari Vajpayee was faced with India- Pakistan Kargil war. But this election doesn't show political business cycle existence in India.

### 2004 elections

This was very important election as India was growing fast and first time non congress government completed 5 years of their term. But after the election new government with different party was formed. During first year of congress government headed by Dr. Manmohan Singh, Sensex was booming because of good IT development, and high expectations from Dr. Manmohan Singh (Good reputation as an economist) as the prime minister.

Gross fiscal deficit shows the exact opposite effect of what political budget cycle explains, but inflation data indicates the existence of political business cycle. Sensex improved because of previous government's policies. Exchange did not show much change after the elections.

### 2009 election

This election happened during the global financial crisis. Many economic factors were affected by this recession. Also before the election, government increased the MSP for agricultural produce, waiving off the famers' loans which increased the inflation, fiscal deficit as well as affected the exchange rate.

We can see the existence of political budget/business cycle in this election. But most probably we can never say that it was due to politics because economy was declining, so government had taken measures to control it which resulted in very high fiscal deficit, high inflation as government was pouring money into markets. Also Sensex was under the pressure from worldwide situation.

### 2014 elections

During 2009-14, government announced many schemes to lure the voters as government was facing many corruption charges and government wanted to save face and make a comeback

in the election with its subsidies and schemes. But data shows that these all schemes were launched during the full term, not in the pre-election year only. New government has taken many strict measures to improve the economy. Also reduction in the crude oil prices helped the new government reduce the deficit, inflation as well exchange rate.

By looking at the empirical data, inflation and deficit shows exactly opposite effect what is expected out of political budget/business cycle.

### Index of Industrial Production data (1981-2015)

One of the many other factors that was looked into was the Index of industrial production to try and find any interesting pattern and search for an indication towards relating it to existence of political business cycles but as observable from figure 10 no such pattern was present.

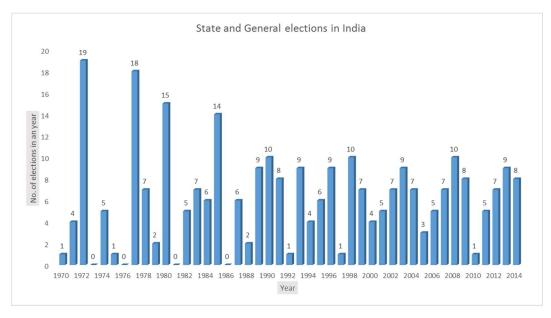


Figure 10:

Source: Handbook of statistics on Indian economy, RBI official site

### General and State elections in India every year (1970-2014)

Figure 11:



**Source**: election commission of India (http://eci.nic.in/eci main1/ElectionStatistics.aspx)

# 4.4 Conclusion and policy recommendations

There were very few elections wherein the PBC effect can be seen with certain economic factors. Also within those years also, some effects can be seen considered as effect of the external ad international economics. The following table mentions some of those factors and years when PBC effect can be seen.

| election<br>year | Sensex | Deficit | Inflation rate | exchange<br>rate |
|------------------|--------|---------|----------------|------------------|
| 1971             |        |         | Yes            |                  |
| 1977             |        | Yes     | Yes            |                  |
| 1980             |        |         | Yes            |                  |
| 1984             | Yes    |         |                |                  |
| 1989             |        |         | Yes            |                  |
| 1991             |        | Yes     | Yes            |                  |
| 1996             | Yes    |         |                |                  |
| 1998             | Yes    | Yes     | Yes            |                  |
| 1999             |        | Yes     |                | Yes              |
| 2004             | Yes    |         |                |                  |
| 2009             |        | Yes     | Yes            | Yes              |
| 2014             |        |         |                | Yes              |

Yes: PBC due to international or other economic reasons

Yes: PBC effect might be due electoral cycle

We don't find any particular pattern in Sensex, Deficit, Inflation rate, Exchange rate and IIP in the Lok-Sabha election period i.e. there is no proof of Political business or budget cycle in India. This might happen due to variation in the election timings in state and general elections. Every year India faces at least 1 election mostly state elections. And Regional parties and opposition relate any progressive activities in that state to the Central governments funding.

People also believe that Central government plays a larger role in the state's development. So because of this central government has to intervene in the state elections that happen in almost every year in some or other state in India which is unlike other countries of the world. It does so to avoid any losses to its party in the state in terms of image and funds as well. Due to this, Central government is always engaged in the wooing people from different regions during the election periods. So therefore we don't find much difference between these economic factors before or after election year. We can say that design of the federal structure in India is such that we don't find existence of PBC unlike most of the western developed countries.

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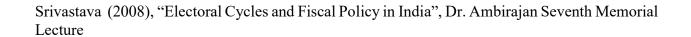
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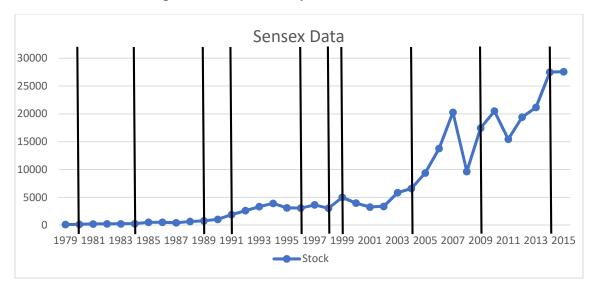


Wallner (2012), "Elections and Inflation – in search of a political business cycle", LUND university, Bachelor thesis 2012.

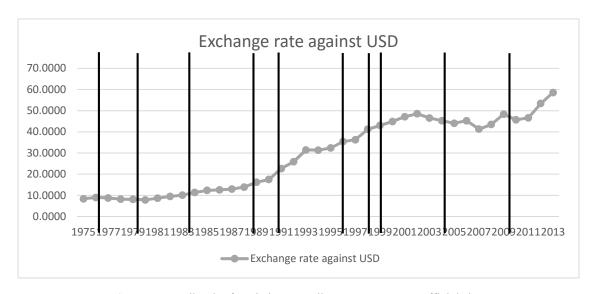
### 4.7 Annexure

The following graphs indicate the changes in the economic variables over the years:

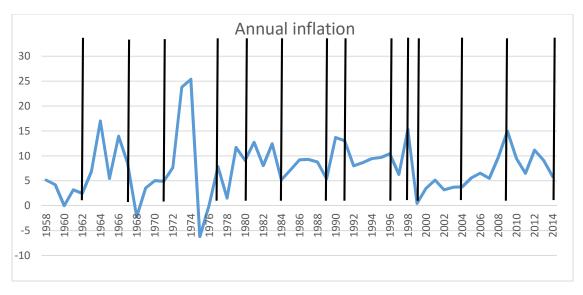
# The black vertical lines represent the election years.



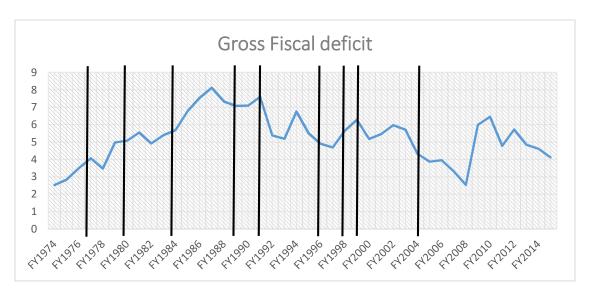
**Source:** BSE website (http://www.bseindia.com/)



Source: Handbook of statistics on Indian economy, RBI official site



Source: Handbook of statistics on Indian economy, RBI official site



Source: Handbook of statistics on Indian economy, RBI official site

# Percentage changes in the economic factors during election year

| Election<br>Year | Sensex   |          | Gross Fiscal<br>Deficit |          | Inflation rate |          | Exchange Rate |          |
|------------------|----------|----------|-------------------------|----------|----------------|----------|---------------|----------|
|                  | Pre-     | Post-    | Pre-                    | Post-    | Pre-           | Post-    | Pre-          | Post-    |
|                  | election | election | election                | election | election       | election | election      | election |
| 1971             | NA       | NA       | 2.96%                   | 3.39%    | 3.07%          | 6.43%    | 0%            | 1%       |
| 1977             | NA       | NA       | 4.07%                   | 3.48%    | 8.31%          | 2.54%    | -2%           | -4%      |
| 1980             | 25%      | 54%      | 5.08%                   | 5.55%    | 11.30%         | 13.10%   | 0%            | 0%       |
| 1984             | 7%       | 94%      | 5.69%                   | 6.79%    | 8.43%          | 5.55%    | 7%            | 16%      |
| 1989             | 17%      | 35%      | 7.08%                   | 7.10%    | 7.11%          | 8.92%    | 20%           | 11%      |
| 1991             | 82%      | 37%      | 7.61%                   | 5.39%    | 13.80%         | 11.80%   | 13%           | 59%      |
| 1996             | -1%      | 19%      | 4.91%                   | 4.70%    | 8.98%          | 7.25%    | 9%            | 5%       |
| 1998             | -16%     | 64%      | 5.66%                   | 6.29%    | 13.17%         | 4.84%    | 10%           | 8%       |
| 1999             | 64%      | -21%     | 6.29%                   | 5.18%    | 4.84%          | 4.02%    | 7%            | 3%       |
| 2004             | 13%      | 42%      | 4.34%                   | 3.88%    | 3.77%          | 4.25%    | -9%           | 1%       |
| 2009             | 81%      | 17%      | 5.99%                   | 6.46%    | 10.83%         | 12.11%   | 27%           | -11%     |
| 2014             | 30%      | 0%       | 4.62%                   | 4.13%    | 6.37%          | 6.25%    | 11%           | 5%       |

Source: Handbook of statistics on Indian economy, RBI official site

# General and state elections data from 1970-2015:

| year   | 1970   | 1971        | 1972              | 1973 | 1974          | 1975    | 1976 | 1977             | 1978              |
|--------|--------|-------------|-------------------|------|---------------|---------|------|------------------|-------------------|
|        | Kerala | Orissa      | Andhra Pradesh    |      | Manipur       | Gujarat |      | Bihar            | Andhra Pradesh    |
|        |        | Tamil Nadu  | Arunachal Pradesh |      | Nagaland      |         |      | Delhi            | Arunachal Pradesh |
|        |        | West Bengal | Haryana           |      | Orissa        |         |      | Goa              | Assam             |
|        |        | Loksabha    | Jharkhand         |      | Pondicherry   |         |      | Haryana          | Karnataka         |
|        |        |             | Maharashtra       |      | Uttar Pradesh |         |      | Himachal Pradesh | Maharashtra       |
|        |        |             | Orissa            |      |               |         |      | Jammu & Kashmir  | Meghalaya         |
|        |        |             | Sikkim            |      |               |         |      | Kerala           | Mizoram           |
|        |        |             | Himachal Pradesh  |      |               |         |      | Madhya Pradesh   |                   |
|        |        |             | Jammu & Kashmir   |      |               |         |      | Nagaland         |                   |
| states |        |             | Karnataka         |      |               |         |      | Orissa           |                   |
|        |        |             | Madhya Pradesh    |      |               |         |      | Punjab           |                   |
|        |        |             | Maharashtra       |      |               |         |      | Pondicherry      |                   |
|        |        |             | Manipur           |      |               |         |      | Rajasthan        |                   |
|        |        |             | Meghalaya         |      |               |         |      | Tamil Nadu       |                   |
|        |        |             | Mizoram           |      |               |         |      | Tripura          |                   |
|        |        |             | Punjab            |      |               |         |      | Uttar Pradesh    |                   |
|        |        |             | Rajasthan         |      |               |         |      | West Bengal      |                   |
|        |        |             | Tripura           |      |               |         |      | Loksabha         |                   |
|        |        |             | West Bengal       |      |               |         |      |                  |                   |
| Total  | 1      | 4           | 19                | 0    | 5             | 1       | 0    | 18               | 7                 |

**Source**: election commission of India (http://eci.nic.in/eci\_main1/ElectionStatistics.aspx)

| year   | 1979    | 1980              | 1981 | 1982             | 1983            | 1984              | 1985             | 1986 |
|--------|---------|-------------------|------|------------------|-----------------|-------------------|------------------|------|
|        | Mizoram | Arunachal Pradesh |      | Haryana          | Andhra Pradesh  | Arunachal Pradesh | Andhra Pradesh   |      |
|        | Sikkim  | Bihar             |      | Himachal Pradesh | Assam           | Goa               | Assam            |      |
|        |         | Goa               |      | Kerala           | Delhi           | Manipur           | Bihar            |      |
|        |         | Gujarat           |      | Nagaland         | Jammu & Kashmir | Mizoram           | Gujarat          |      |
|        |         | Kerala            |      | West Bengal      | Karnataka       | Tamil Nadu        | Himachal Pradesh |      |
|        |         | Madhya Pradesh    |      |                  | Meghalaya       | Loksabha          | Karnataka        |      |
|        |         | Maharashtra       |      |                  | Tripura         |                   | Madhya Pradesh   |      |
|        |         | Manipur           |      |                  |                 |                   | Maharashtra      |      |
|        |         | Orissa            |      |                  |                 |                   | Orissa           |      |
| states |         | Punjab            |      |                  |                 |                   | Punjab           |      |
|        |         | Pondicherry       |      |                  |                 |                   | Pondicherry      |      |
|        |         | Rajasthan         |      |                  |                 |                   | Rajasthan        |      |
|        |         | Tamil Nadu        |      |                  |                 |                   | Sikkim           |      |
|        |         | Uttar Pradesh     |      |                  |                 |                   | Uttar Pradesh    |      |
|        |         | Loksabha          |      |                  |                 |                   |                  |      |
|        |         |                   |      |                  |                 |                   |                  |      |
|        |         |                   |      |                  |                 |                   |                  |      |
|        |         |                   |      |                  |                 |                   |                  |      |
|        |         |                   |      |                  |                 |                   |                  |      |
| Total  | 2       | 15                | 0    | 5                | 7               | 6                 | 14               | 0    |

**Source**: election commission of India (<a href="http://eci.nic.in/eci\_main1/ElectionStatistics.aspx">http://eci.nic.in/eci\_main1/ElectionStatistics.aspx</a>)

| year   | 1987            | 1988      | 1989           | 1990              | 1991          | 1992   | 1993             | 1994           |
|--------|-----------------|-----------|----------------|-------------------|---------------|--------|------------------|----------------|
|        | Haryana         | Meghalaya | Andhra Pradesh | Arunachal Pradesh | Assam         | Punjab | Delhi            | Andhra Pradesh |
|        | Jammu & Kashmir | Tripura   | Goa            | Bihar             | Haryana       |        | Himachal Pradesh | Goa            |
|        | Kerala          |           | Karnataka      | Gujarat           | Kerala        |        | Madhya Pradesh   | Karnataka      |
|        | Mizoram         |           | Mizoram        | Himachal Pradesh  | Pondicherry   |        | Meghalaya        | Sikkim         |
|        | Nagaland        |           | Nagaland       | Madhya Pradesh    | Tamil Nadu    |        | Mizoram          |                |
|        | West Bengal     |           | Sikkim         | Maharashtra       | Uttar Pradesh |        | Nagaland         |                |
|        |                 |           | Tamil Nadu     | Manipur           | West Bengal   |        | Rajasthan        |                |
|        |                 |           | Uttar Pradesh  | Orissa            | Loksabha      |        | Tripura          |                |
|        |                 |           | Loksabha       | Pondicherry       |               |        | Uttar Pradesh    |                |
| states |                 |           |                | Rajasthan         |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
|        |                 |           |                |                   |               |        |                  |                |
| Total  | 6               | 2         | 9              | 10                | 8             | 1      | 9                | 4              |

**Source**: election commission of India (<a href="http://eci.nic.in/eci\_main1/ElectionStatistics.aspx">http://eci.nic.in/eci\_main1/ElectionStatistics.aspx</a>)

| year   | 1995              | 1996            | 1997   | 1998             | 1999              | 2000    | 2001        |
|--------|-------------------|-----------------|--------|------------------|-------------------|---------|-------------|
|        | Arunachal Pradesh | Assam           | Punjab | Delhi            | Andhra Pradesh    | Bihar   | Assam       |
|        | Bihar             | Haryana         |        | Gujarat          | Arunachal Pradesh | Haryana | Kerala      |
|        | Gujarat           | Jammu & Kashmir |        | Himachal Pradesh | Goa               | Manipur | Pondicherry |
|        | Maharashtra       | Kerala          |        | Madhya Pradesh   | Karnataka         | Orissa  | Tamil Nadu  |
|        | Manipur           | Pondicherry     |        | Meghalaya        | Maharashtra       |         | West Bengal |
|        | Orissa            | Tamil Nadu      |        | Mizoram          | Sikkim            |         |             |
|        |                   | Uttar Pradesh   |        | Nagaland         | Loksabha          |         |             |
|        |                   | West Bengal     |        | Rajasthan        |                   |         |             |
|        |                   | Loksabha        |        | Tripura          |                   |         |             |
| states |                   |                 |        | Loksabha         |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
|        |                   |                 |        |                  |                   |         |             |
| Total  | 6                 | 9               | 1      | 10               | 7                 | 4       | 5           |

**Source**: election commission of India (<a href="http://eci.nic.in/eci\_main1/ElectionStatistics.aspx">http://eci.nic.in/eci\_main1/ElectionStatistics.aspx</a>)

| year   | 2002            | 2003             | 2004              | 2005      | 2006        | 2007             |
|--------|-----------------|------------------|-------------------|-----------|-------------|------------------|
|        | Goa             | Chhattisgarh     | Andhra Pradesh    | Bihar     | Assam       | Goa              |
|        | Gujarat         | Delhi            | Arunachal Pradesh | Haryana   | Kerala      | Gujarat          |
|        | Jammu & Kashmir | Himachal Pradesh | Karnataka         | Jharkhand | Pondicherry | Himachal Pradesh |
|        | Manipur         | Madhya Pradesh   | Maharashtra       |           | Tamil Nadu  | Manipur          |
|        | Punjab          | Meghalaya        | Orissa            |           | West Bengal | Punjab           |
|        | Uttar Pradesh   | Mizoram          | Sikkim            |           |             | Uttar Pradesh    |
|        | Uttarakhand     | Nagaland         | Loksabha          |           |             | Uttarakhand      |
|        |                 | Rajasthan        |                   |           |             |                  |
|        |                 | Tripura          |                   |           |             |                  |
| states |                 |                  |                   |           |             |                  |
|        |                 |                  |                   |           |             |                  |
|        |                 |                  |                   |           |             |                  |
|        |                 |                  |                   |           |             |                  |
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|        |                 |                  |                   |           |             |                  |
|        |                 |                  |                   |           |             |                  |
|        |                 |                  |                   |           |             |                  |
|        |                 |                  |                   |           |             |                  |
| Total  | 7               | 9                | 7                 | 3         | 5           | 7                |

**Source**: election commission of India (<a href="http://eci.nic.in/eci\_main1/ElectionStatistics.aspx">http://eci.nic.in/eci\_main1/ElectionStatistics.aspx</a>)

| year   | 2008            | 2009              | 2010  | 2011        | 2012             | 2013           | 2014              |
|--------|-----------------|-------------------|-------|-------------|------------------|----------------|-------------------|
|        | Chhattisgarh    | Andhra Pradesh    | Bihar | Assam       | Goa              | Chhattisgarh   | Andhra Pradesh    |
|        | Delhi           | Arunachal Pradesh |       | Kerala      | Gujarat          | Delhi          | Arunachal Pradesh |
|        | Jammu & Kashmir | Haryana           |       | Pondicherry | Himachal Pradesh | Karnataka      | Haryana           |
|        | Karnataka       | Jharkhand         |       | Tamil Nadu  | Manipur          | Madhya Pradesh | Jharkhand         |
|        | Madhya Pradesh  | Maharashtra       |       | West Bengal | Punjab           | Meghalaya      | Maharashtra       |
|        | Meghalaya       | Orissa            |       |             | Uttar Pradesh    | Mizoram        | Orissa            |
|        | Mizoram         | Sikkim            |       |             | Uttarakhand      | Nagaland       | Sikkim            |
|        | Nagaland        | Loksabha          |       |             |                  | Rajasthan      | Loksabha          |
|        | Rajasthan       |                   |       |             |                  | Tripura        |                   |
| states | Tripura         |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
|        |                 |                   |       |             |                  |                |                   |
| Total  | 10              | 8                 | 1     | 5           | 7                | 9              | 8                 |

**Source**: election commission of India (http://eci.nic.in/eci\_main1/ElectionStatistics.aspx)

# IIP data:

| Year    | IIP growth(%) | Year    | IIP growth(%) | Year    | IIP growth(%) |
|---------|---------------|---------|---------------|---------|---------------|
| 1981-82 | 9.3           | 1994-95 | 9.1           | 2005-06 | 8.6           |
| 1982-83 | 3.202195791   | 1995-96 | 13.01558203   | 2006-07 | 12.89134438   |
| 1983-84 | 6.737588652   | 1996-97 | 6.082725061   | 2007-08 | 15.57911909   |
| 1984-85 | 8.554817276   | 1997-98 | 6.651376147   | 2008-09 | 2.470007057   |
| 1985-86 | 8.722264728   | 1998-99 | 4.086021505   | 2009-10 | 5.303030303   |
| 1986-87 | 9.148486981   | 1999-00 | 6.680440771   | 2010-11 | 8.240680183   |
| 1987-88 | 7.285622179   | 2000-01 | 4.90639122    | 2011-12 | 2.900302115   |
| 1988-89 | 8.713942308   | 2001-02 | 2.769230769   | 2012-13 | 1.115678215   |
| 1989-90 | 8.568269762   | 2002-03 | 5.748502994   | 2013-14 | -0.116144019  |
| 1990-91 | 8.248472505   | 2003-04 | 7.021517554   | 2014-15 | 2.8           |
| 1991-92 | 9.078080903   | 2004-05 | 11.69312169   |         |               |

Source: Handbook of statistics on Indian economy, RBI official site