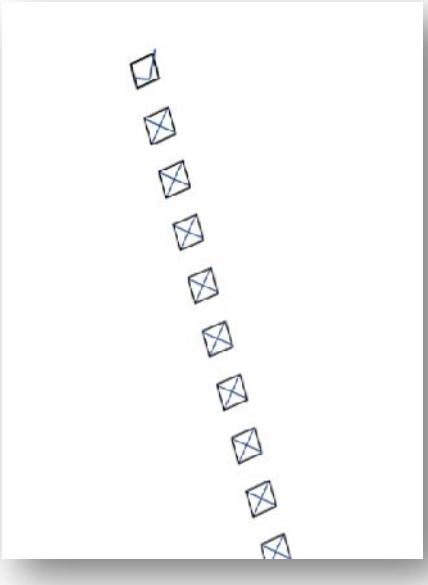
INFLATION TARGETING IN CANADA RE-EVALUATED



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Economic Policy Dialogue

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Preface

Those were the yesteryears of the 1970s and 1980s when inflation and inflation expectations persisted stubbornly high and volatile in Canada despite using all available policy tools. Consequently, inflation-targeting, a non-conventional monetary framework then, was introduced in 1991 as a policy solution. It has achieved low and stable inflation since as desired and also provided an anchor to the monetary policy to work around. However, this is one side of the story. There is another side of the story as well about the disappointing economic and social consequences of the inflation-targeting and remains mostly overshadowed by the inflation rate laurels in Canada.

The inflation-targeting framework has undoubtedly been successful in bringing under control the one set of prices, i.e., consumer goods' prices. However, it has caused another set of prices to go wild at the same time, i.e., assets' prices, including real estate. Because of the latter, a large portion of ordinary Canadians is struggling to pay monthly rents, and many of them are being pushed towards homelessness. Affording an own home has become an item of the wildest dream for the majority of them. There are many other ordinary things which many are fighting for after paying either high and increasing rents or enormous mortgage payments of ever-increasing home prices. For example, three times' food on the table, monthly bills of the basic utilities/services, child care, education cost, and prescription medication. Thanks to the low rates of interest (permitted by low-&-stable inflation under the inflation-targeting regime) and also the liberalized and innovative financial sector, borrowing has never been easier! If income is not able to finance the required expenditure, debt can readily fill the gap. No wonder why Canada has been facing mounting household debt, one of its major problems, for quite some now.

The way inflating rental or house price preoccupies an individual's pocket, spiraling assets' values do absorb national resources and economic activities of an economy as well. Resource allocation and wealth distribution all tilt towards the more profitable sectors. No surprise why trio – real estate, construction, and financial – are dominating industries in Canada. Also, this is a wonderland of wealthy asset-based macroeconomy that crowds out the majority of the Canadians of it! Widespread economic hardship and wealth inequalities give rise to social discontent and political alienation that is visible in the nation as well.

Another aspect relates to the faltering state of the real economy, the main components of which are income, investment, employment. Whether apply supply-side Say's law (supply creates its own demand) or demand-side Keynes' law (demand creates its own supply) to explain the Canadian stagnation, yet neither low policy rates nor abundant money supply is able to push the real economy out of it. Perhaps that is the reason the real economy has been unable to provide secure jobs, sufficient earning, decent living, and comfortable retirement for the majority of the Canadians. Missing the middle class is an

endogenous phenomenon out of these real economy conditions. And as a result, an inflating national debt has been fueling the asset economy rather than the real economy. The financial sector, over-leveraged with the asset-debt duo, has been accumulating vulnerabilities in the process. The real-economy stagnation and financial sector progression during the post-inflation-targeting period is perhaps out of the evaluation criteria of Canada's central bank, as it is obsessed with the inflation-targeting.

If policy-makers remain occupied with the yesteryears' inflation problem, which is no more a problem now, and in the end, they award a crown of laurels on their achievements – this serves no purpose except self-fulfilling prophecy. Also, blinded by the inflation priority, they are just ignoring the contemporary more urgent economic issues as their singly objective focus delimit their vision beyond that priority. Furthermore, by being obsessed with inflation targets single-minded, they are creating more severe economic and social problems with their policy-choices in the process.

Policy re-evaluation will be the first step towards the policy correctness. Recognizing the urgent need, the present research study undertakes the re-evaluation task of the inflation-targeting monetary framework in Canada.

Introduction

Inflation targeting has defined Canada's monetary policy for more than a quarter-century now. However, initially, when Canada announced adopting this framework, following New Zealand's lead, the move was taken differently by its peers.[1] Over the course of time, inflation-targeting has become a popular monetary policy framework globally. It is said to be practiced by 38 central banks representing 64 percent of the world economy.[2] The central banks of all sorts of countries[3] – industrialized (including European Union), emerging, and developing – have joined the inflation-targeting rush. Its results have been claimed to be impressive[4] in Canada since its introduction on February 26, 1991[5]. In 2016, the silver anniversary year, Stephen S. Poloz, Bank of Canada Governor, remarked, "… inflation targeting has truly been golden…. proven its worth repeatedly, both in good economic times as well as turbulent ones."[6] However, this study is not to award a crown of laurels to the inflation-targeting as enough has done already. Instead, it questions its role in an abysmal performance of the Canadian economy during the post-inflation-targeting period.

A monetary policy uses the inflation target[7] as an anchor to achieve price stability in an economy. It is realized through the policy rate that affects the saving, investment, borrowing, exchange rate, assets, and ultimately the overall macroeconomy. That is why, to evaluate the inflation-targeting price stability cannot be separated from other real, monetary, financial, international aspects of the economy. It is necessary, therefore, that the role of inflation-targeting is re-evaluated in an interface with all other related aspects of the economy, rather than evaluating the inflation performance as a standalone entity as generally has done in practice.

There is no doubt that low and stable inflation has been achieved in Canada after introducing the inflation-targeting.[8] But, the Canadian economy has since experienced troubling chronic economic conditions too challenging the role of monetary policy in

[1] Murray (2006). See section 2.1, pp. 49-50. Phase 1 (1990–91): "Why would any sensible central bank take such a risk?"
[2] Poloz (2016).
[3] Jahan (2012).
[4] Bank of Canada (Oct. 2016), p. 5: "The results of Canada's inflation-targeting framework have been impressive. Inflation in Canada, as measured by the CPI, has been remarkably stable since 1991."
[5] Bank of Canada (1991). Press Release: Targets for Reducing Inflation. p. 5.
[6] Poloz (2016).
[7] The inflation target was initially set in 1991 at 3 percent for 1992, and then since 1993 as 2 percent with the midpoint of a 1 to 3 percent inflation-control range. Original objective "reducing inflation and reaching price stability" was later changed as "low, stable and predictable inflation". See for details Murray (June 2018) Presentation at Hutchins Center Conference.
[8] By the way, countries that did not adopt inflation-targeting during the 1990s also had inflation stabilized at the same time in their economies, e.g., the US, Switzerland, and Germany. The US introduced inflation targeting in 2012, Switzerland in 2000, and Germany still does not have inflation-targeting per se (as it follows the monetary targets).

general and the inflation-targeting in particular. For example, Canada's overall economic conditions can be explained by the anemic growth, joblessness, deflationary conditions, financial sector vulnerabilities, household debt, fiscal deficits, current account deficits, etc. (representing the real, financial, fiscal, foreign sectors of the economy). Canada's success at inflation, however, amid overall challenging economic conditions necessitates a critical review of the inflation-targeting as a framework of monetary policy. The present study takes up the task and undertakes a re-evaluation of the inflation-targeting in Canada.

Because Canada shares its experience of inflation-targeting with most of its peer economies, the conclusion of this study may apply to those too.

The study will be divided into two main parts: the first will describe how Canada's economy has performed before and after adopting the inflation-targeting; the second part will be on the modus operandi – how inflation targeting has been achieved successfully amid quite a challenging macroeconomic performance. The first part will further have three sub-parts discussing Canada's inflation experience in the first, macroeconomic performance in the second, and structure of the economy in the third. Whereas the second part will be divided into two sub-parts wherein global factors and domestic factors will be analyzed, respectively. Global factors will subsequently include – firstly, low relative prices of tradables, secondly, cheap imports, and then thirdly, Canada's lack of competitiveness; and domestic factors will cover – firstly, low rate of interest, secondly, debt-fueled economy, and thirdly, real estate and financial activities as the main source of economic growth. The study will be over with the reflections and recommendations at the end.

Part 1. Canadian Economy Before and After Inflation Targeting

It is contextual to begin this part with the excerpts from the Preamble to the Bank of Canada Act, which set the mandates for the Bank of Canada[9]:

> "… To regulate credit… in the best interests of the economic life of the nation, to control and protect the external value… and to mitigate… fluctuations in the general level of production, trade, prices and employment… and generally to promote the economic and financial welfare of Canada."

Thus, Canada's central bank has been entrusted with a three-pronged mandate: one, regulating the domestic credit; two, stabilizing the economy (internally regarding the output, prices and employment, and externally regarding the exchange rate and trade); and three, promoting the general economic and financial welfare. However, Bank's obsession with inflation stability seems to have been causing harm to the other aspects of the Canadian economy, as it will be evident from the following discussion in this part.

[9] Extracted from "Appendix A: Selections from the Bank of Canada Act", Crow (2009), p. 13.

1A. Canada's Inflation Experience Before and After Inflation Targeting

Years that led to the adoption of inflation targeting in Canada are remembered as "the bad old days of the 1970s and 1980s"[10] because of very high and volatile inflation rates. In fact, the period of high inflation began in the late 1960s in Canada[11] as well as its other trading partners[12] (USA, UK, France, Japan, Germany, and Italy).[13] The annual average rate of inflation seemed to rise to a new plateau close to 4 percent during 1966-1972 after a relative price stability with a 1.5 percent rate during 1953-65.[14] Canada's battle against the inflation problem was highlighted in the budget speech[15] of 1969 by Edgar J. Benson, then finance minister, as:

> "There can be no question that the number one priority in economic policy today must be to deploy all available forces – public and private – more aggressively than ever in the battle against inflation in Canada."

However, it was the "inflation era"[16] of the 1970s and 1980s that the inflation-targeting[17] was adopted as a savior in Canada, just like many other peer countries, in the early 1990s[18].

Canada has experienced an annual average inflation rate of 3.1 percent over the long run, from 1915 to 2017. In the context of inflation targeting, a period of more than a century 1915-2017 can be divided into three distinctive subperiods (Graph 1): 1915-72 with 2.4 percent annual average inflation rate; 1973-90 when it surged to 7.4 percent; and the period of inflation targeting since 1991 when it was 1.9 percent (this study covers data

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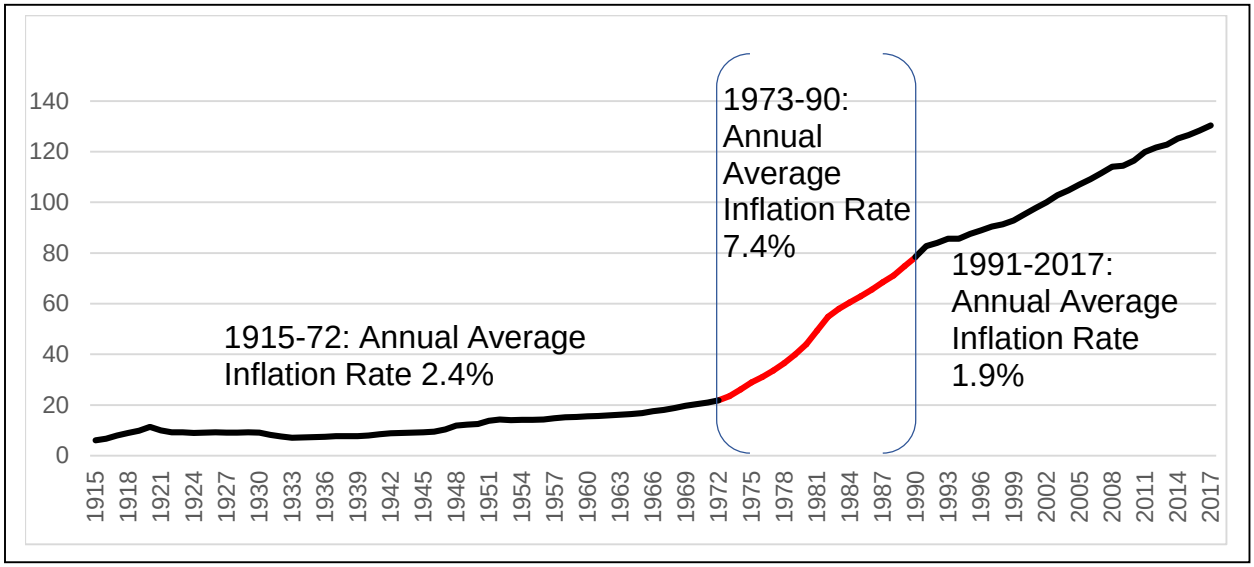
[10] Poloz (2016).
[11] Rising domestic inflation led to the establishment of the Prices and Incomes Commission in 1968, and the introduction of a restrictive stance on monetary policy. Powell (2005), p. 71.
[12] Department of Finance (1969), p. 3.
[13] The possible causes (along-with the sources) are listed as: i) the US was pursuing expansionary policies associated with the Vietnam War and with a major domestic program of social spending. (Powell (2005), p. 71); ii) Canada followed the US inflation under a fixed exchange rate until 1970, indeed Canada's inflation rate was always within one percentage point of the US rate throughout the 1960s. (Department of Finance (1978), p. 9); iii) higher commodity prices and strong external demand for the Canadian exports of raw materials and automobiles. (Powell (2005), p. 71); iv) as higher rates of inflation became established over the period, these were incorporated into wage settlements due to higher inflationary expectations of both workers and firms. (Department of Finance (1978), p. 9); v) The year 1970 was one of slow growth for Canada as well as for most other western industrial economies. The global response to this period of slow growth was the adoption of highly expansionary aggregate demand policies. (Department of Finance (1978), p. 9).
[14] Department of Finance (1978), p. 7.
[15] Department of Finance (1969), p. 2.
[16] Department of Finance (1978), p. 9.
[17] Canada announced the inflation targets formally in February 1991. Under the inflation-targeting framework, the Bank of Canada conducts its monetary policy aimed at keeping inflation, as measured by the total consumer price index (CPI), at 2 percent, with a control range of 1 to 3 percent. This framework is in a joint agreement between the Bank of Canada and the Government of Canada and is reviewed and renewed every five years. Bank of Canada (2016), p. 2.
[18] New Zealand (1990), Canada (1991), United Kingdom (1992), Australia (1993), Sweden (1994). See Jahan (2012) for the relevant list.

up to 2017). So monetary authority seems to have achieved its mandate of keeping inflation within a range of 1 to 3 percent with the inflation-targeting framework.

Graph 1: Canada's annual Consumer Price Index (2002=100), 1915-2017 and sub-periods

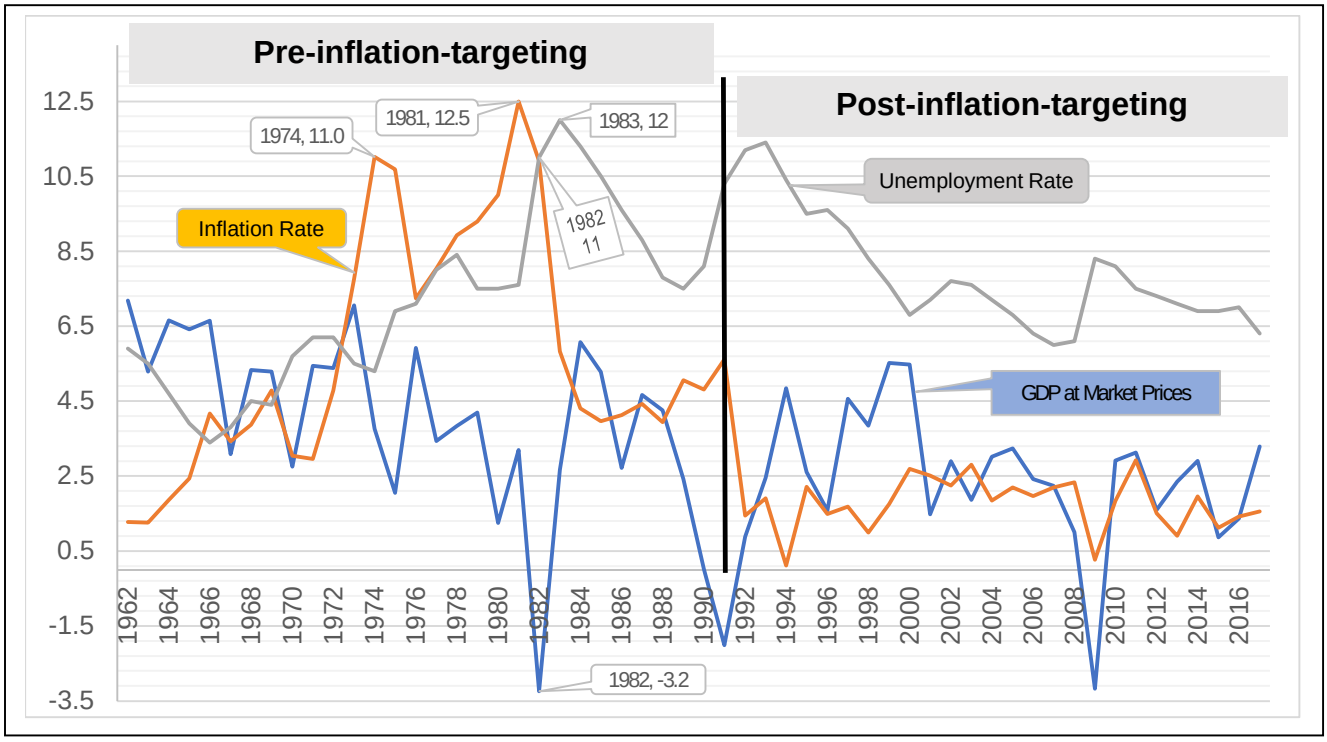


Source: Calculation from Statistics Canada, Table 326-0021: Consumer Price Index (CPI), annual (2002=100).

1B. Canada's Macroeconomic Performance Before and After Inflation Targeting

Graph 2 and Table 1 present the macroeconomic performance before and after inflation targeting. Post-inflation-targeting macroeconomy appears to have relatively stabilized, especially after 2000, as Graph 2 shows less variability in the macroeconomic variables – GDP, unemployment, and inflation rates. In fact, the inflation rate seems to have stabilized since 1992, much earlier than stabilization of GDP and unemployment rates. There is a catch with the aforesaid macroeconomic stability, however. The same Graph 2 shows that the stability during the post-inflation-targeting period has been along the lower levels of economic (GDP and employment) outcomes than the pre-1973 period. The post-2000 GDP annual average growth rate has been lower than not only the pre-1973 level but also the pre-2000 levels. That means the long-term trend of GDP growth has been on the decline. Unemployment rates, too, never seem to have touched the level prevalent during the pre-1973 period, except for two years 2007 and 2008 during the post-inflation-targeting era. The minimum unemployment rates of those 2007-2008 years during the post-inflation-targeting were almost the same as the maximum unemployment rates (1971-72) during the pre-1973 period.

Graph 2: Canada's Macroeconomic Variables Before and After Inflation Targeting during 1962-2017: GDP, Inflation, and Unemployment Rate



Source: See Table 1 for the related sources.

Table 1 presents the macroeconomic performance more specifically before (three decades from 1961 to 1990) and after the inflation-targeting (three years shy of three decades, from 1991 to 2017). All the macroeconomic variables listed in the table, except the inflation rate, have deteriorated substantially after adopting the inflation-targeting. These are GDP growth rate, investment rate, unemployment rate, current account balance, and per capita debt. The annual average GDP growth rate has fallen by 44%, the investment rate declined by 55%, the unemployment rate has increased by 11%, the current account balance has grown by 169%, and per capita total debt has risen by 117%. Without any doubt, the macroeconomy has been on a decline. It implies that the objective of price stability has been achieved but at a heavy price. So, it shouldn't be an exaggeration that monetary policy has failed the Canadian economy – especially its mandates "to promote the economic and financial welfare of Canada" and "to regulate credit". Nevertheless, the internal and external stability has been brought about, but economic stagnation is unquestionably too high a price.

Another intriguing point in Graph 2 regarding macroeconomy, especially in the context of stagnant GDP growth and price stability[19], is that the annual inflation rate never crossed the upper bound, however, dipped below the lower bound three times (0.1% in 1994,

[19] The annual inflation rate has been stabilized during the post-inflation-targeting period hovering between a range of 1 and 3 percent most of the time.

0.3% in 2009, 0.9% in 2013) during the post-inflation-targeting period. It implies that the economy hardly had an inflationary environment but definitely had deflationary fears during the inflation-targeting period. That is why, perhaps, a low policy rate has become a necessity for the Bank of Canada, despite the urgent need to increase the same in light of inflating real estate value and piling debt.

Declining investment appears to be one of the root causes of the stagnation, causing a vicious cycle of low levels of investment-income-employment-demand-investment. Some factors contributing to the declining investment may be – higher and (almost uni-directional) increasing returns on the financial and real estate assets, shrinking domestic market (due to deindustrialization, increased inequality, and missing middle class), lacking real-economy business avenues, short of cost/price competitiveness, expensive commercial space and also high rentals on it, expensive business services, doing business comparatively costly affair (as compared to competitors because of regulations, financing, transportation, postage, commuting, insurance, legal and business services), and comparative low risks/ better returns in the real estate and other financial assets markets, etc. The lower domestic investment has undoubtedly led to the stagnant employment, and actual and potential GDP growth rates (and thus higher debt to fill the income gap and sustain the consumption-based economy).

Table 1: Inflation, GDP, Investment, Unemployment, Current Account Balance, and Per Capita Debt Before and After Inflation Targeting, Period Averages

	Pre-inflation targeting 1961-1990	Post-inflation targeting 1991-2017	% Increase or Decrease*** During 1991-2017 From 1961-1990
Inflation Rate (%)	5.6	1.9	-66
Gross Domestic Product Growth Rate at Market Prices (at 2007 constant prices) (%)	4.1*	2.3	-44
Gross Investment Growth Rate (%)	10.4*	4.7	-55
Unemployment Rate (%)	7.1	7.9	11
Current Account Balance ($ X 1,000,000)	-6,638	-17,875	169
Per Capita Debt	51,581**	111,790.4	117

Notes: *1962-1970

** During 1990, as debt data not available prior to that.

*** minus sign denotes decrease, and no sign means increase.

Sources: Statistics Canada Tables which are used to calculate the variables are listed as below:

Inflation Rate: Table 326-0021: Consumer Price Index (CPI), annual (2002=100).

Unemployment Rate: Table 14-10-0018-01: Labour force characteristics by sex and detailed age group, annual.

GDP Growth Rate: Table 36-10-0369-01: Gross domestic product, expenditure-based, at 2007 constant prices, annual (x 1,000,000).

Gross Investment Growth Rate: Table 36-10-0111-01: Current and capital accounts - National, Canada, quarterly.

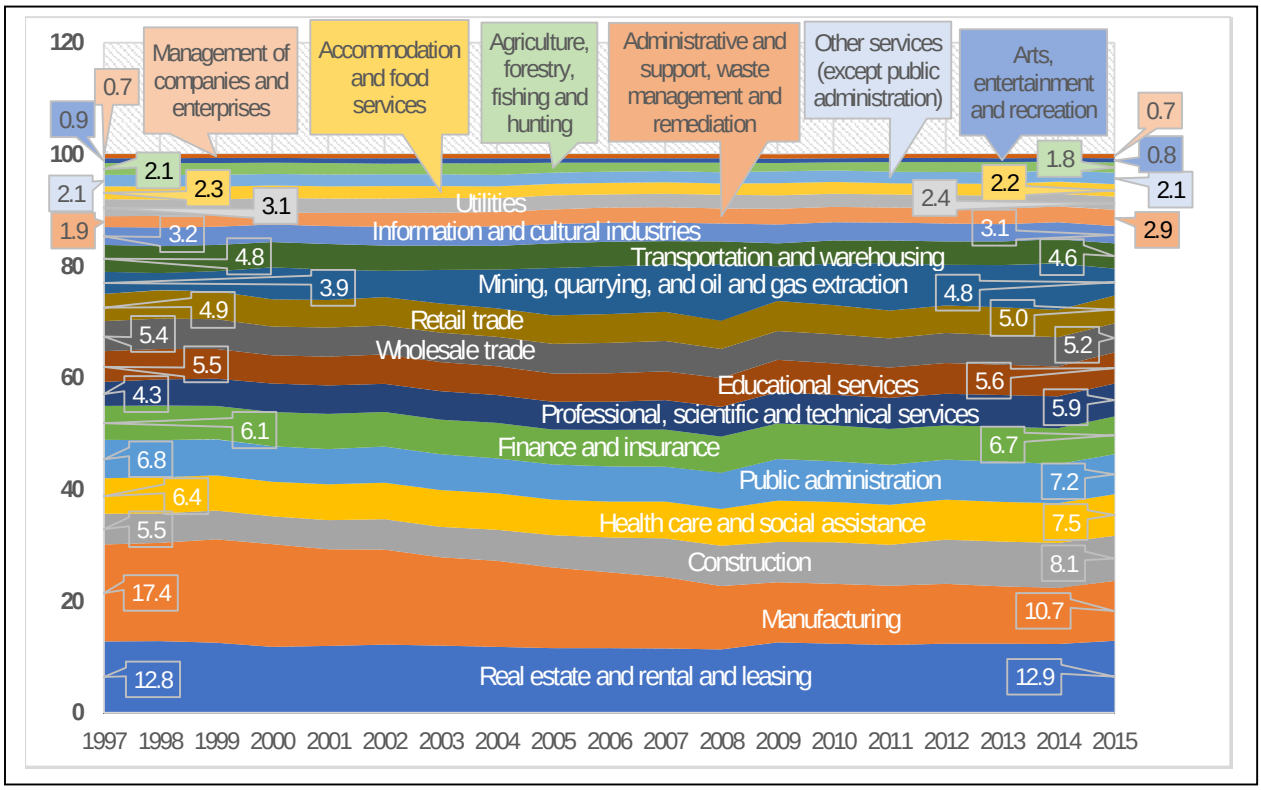
Current Account Balance: (For data up to 1980) Table 376-0101: Balance of international payments, current account and capital account, annual; and (For data since 1980) Table 376-0001: Balance of international payments, current account, annual.

Per Capita Debt: Same as Graph 11.

1C. Structure of the Canadian Economy

Another way of judging the health of the Canadian economy is to look at the structure of the economy. Since the latest data available (at the time of analysis) were from 1997 to 2015, so the trend can be used to conclude which way the structure of the economy has been heading during the inflation-targeting period. Graph 3 presents the GDP by industries during 1997-2015.

Graph 3: Percentage Distribution of GDP by Industry, 1997 to 2015



Notes: 1. GDP is at Basic Prices.
2. Industries are classified as per the North American Industry Classification System.

Source: Calculated from Statistics Canada. Table 36-10-0401-01 Gross domestic product (GDP) at basic prices, by industry (x 1,000,000).

Real estate and related activates make a lion share accounting for about 13 percent of the total GDP. Manufacturing, the most dominating industry in 1997 with 17.4 percent, has declined to 10.7 percent in 2015. The other two major industries are construction and financial services, which have increased their share (the former from 5.5 to 8.1 and the latter from 6.1 to 6.7 percent) during the period under consideration. Real estate, construction, and financial services together have increased from 24.3 to 27.7 percent during 1997-2015. Resource industry (mining, quarrying, oil and gas extraction), subjected to volatility, has traveled from 3.9 percent in 1997 to 4.8 percent in 2015, however, after peaking at 10 percent in 2008. During the period under consideration, it got its share increased from around the final years of the 20th century (thanks to an

increasing resource demand by China) until 2008 when the industry saw the first halt because of the global recession and then the second halt in 2014 when oil prices fell. Public sector (including three industries: public administration, health care and social assistance, and educational services) has also its share increased from 18.7 to 20.2 percent during 1997-2015. Trading (retail and wholesale together) uninterruptedly made about 10 percent of the GDP. Another industry that has increased its share is professional, scientific and technical services from 4.3 to 5.9 percent during 1997-2015.

Nevertheless, three leading industries – real estate, construction, and financial – seemed to dominate the economic landscape combined with the de-industrialization (declining manufacturing) during the inflation-targeting period. However, these industries, with higher speculative-cyclical-financial biases, are inherently riskier and more disruptive in adverse economic shocks. Overemphasis on these industries creates an imbalance in the macroeconomy because of the following reasons: one, the rate of return misalignment affects adversely the investment in other productive sectors which generally bear use-value as contrary to these industries which have investment/speculative value too; two, it makes entire macroeconomy susceptible to instabilities and business cycles as these industries inflate more during the boom and dip deeper during the bust; three, the financial sector being overleveraged becomes vulnerable and prone to systemic failure because of over-exposure to such (pro-cyclical and speculative) asset-based industries; and four, it creates indebtedness in the economy as the increasing assets' values necessitates buyers to take higher loans, and also the same higher assets' values enable asset-holders to accumulate more debts because of the wealth-effect.[20] To note, the findings of this section would apply to section 2B-III also where the indispensability of the asset-economy in Canada will be covered.

Part 2. How Inflation Targeting Has Worked in Canada

This part of the study answers how inflation targeting could bring about price stability successfully alongside the under-performing macroeconomy and over-performing financial sector in Canada. Global and domestic, both factors have played their role in it. Graph 4 briefly describes the whole dynamics of the interplay of these factors. Global factors have kept the inflation low and stable, and domestic factors have led the contrasting outcomes – stagnant real economy and overheated financial economy.

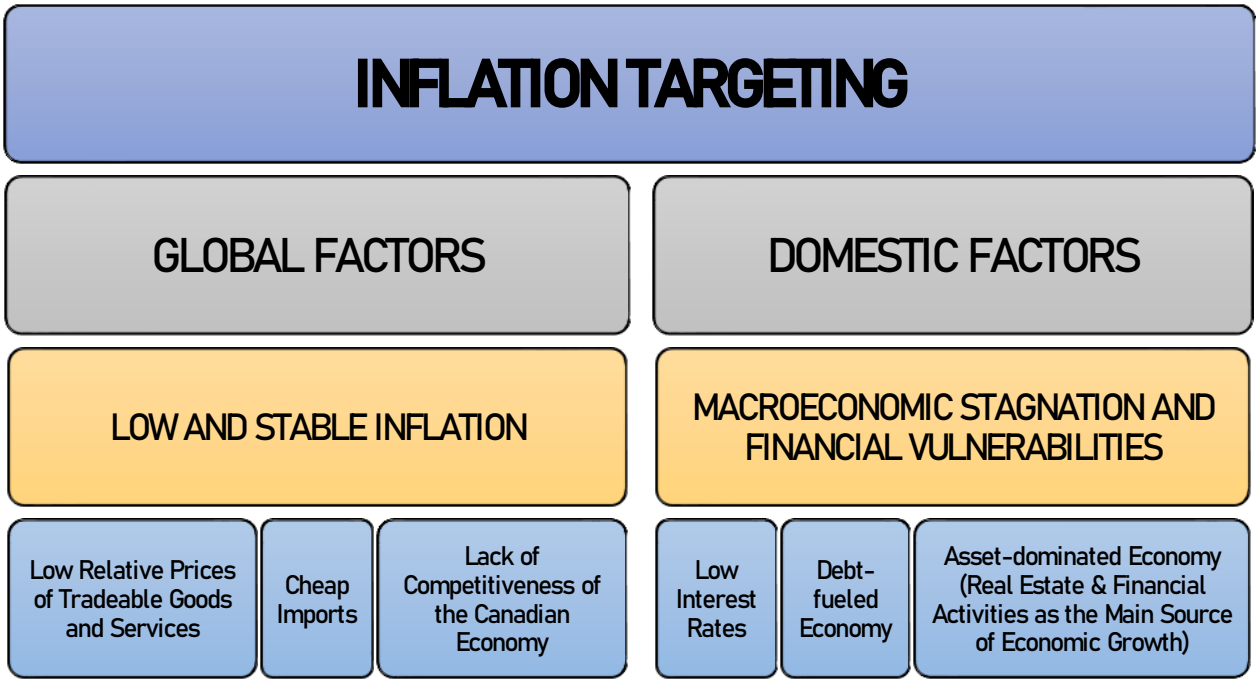
The first segment of this part will cover the position of Canada with respect to the global factors. As a highly integrated and competitive international economy has decreased the relative prices of tradable goods and services globally. These lower relative prices have given challenges to the producers on the one side, and bonanza to the consumers and policy-makers on the other in Canada and other western economies. Challenges to the

[20] Kumari (2012), pp. 17-20.

domestic producers reflect a lack of required competitiveness in these economies. The cheap-imports bonanza has reduced prices of goods and services for the consumers, and it has provided the means to achieve the desired (low and stable) inflation rates for policy-makers (especially the inflation-targeters).

The second segment of this part will cover the play of the domestic factors in Canada. The low and stable prices have kept the interest rate low for an extended period in developed economies like Canada. And low rates, in turn, have fueled the assets market. Lack of production opportunities in the real economy (ousted from the global competition) on the one hand and abundant credit at low rates (facilitated by the financial liberalization/innovations), on the other hand, have played their role in fueling the assets market. Rate of return differential (low returns in the real economy versus high returns in the asset-economy) has contributed to the fuelling, too. And debt has come to the rescue to carry out a tempo of consumption expenditure in the stagnant real economy.

Graph 4: Modus Operandi of the Inflation-targeting in the Canadian Economy



The interplay of the imported goods and services, domestic debt-financed consumption, and asset-based activities have essentially run the macroeconomy in the western world for quite some time now. Economic stagnation, anemic growth, struggling macroeconomy, or challenging economy, etc. are different terms for the same phenomenon which describes the plight of present-day post-industrial nations. With this general background, it is time now to research how these factors have played their role really in the Canadian economy.

2A. Global Factors and Inflation Targeting in Canada

2A-I. Low Relative Prices of Tradeable Goods and Services

This sub-part examines how tradability or non-tradability has affected the relative prices of different types of goods and services in Canada over time. As a backgrounder, Box 2A-1 describes how domestic agents make economic decisions (producing, buying, selling, etc.) based on global relative prices in an integrated world economy.

Box 2A-1: Global Relative Prices and the Domestic Decision-making

The whole price system in any economy is made up of product prices (goods and services), wages (labor), rate of interest (capital), and exchange rate (currency). In a capitalist economy, economic decisions (what, how, and for whom) are made based on this price system. It is a complex system of relative prices that signals and directs the decisions in the product, factor, and currency markets together. Other things remaining the same, higher prices indicate a scarcity and lower prices an abundance. Normally, production activities take place towards scarcity (higher prices) or away from abundance (lower prices), and contrariwise consumption activities towards lower prices and away from higher prices.

In the real globalized world (because of cheaper travel, transportation, communication), international product, labor, and financial markets have integrated to the extent that there are virtually no boundaries of the price system. The price system that used to work internally within the national boundaries directing the domestic activities and, therefore, the resource allocation now works differently. Relative prices are a global affair now. Global relative prices now determine the domestic decision-making. For example, a pin or plane manufacturer makes a decision based on international prices. International trade agreements, offshore manufacturing, subcontracting, outsourcing (onshore or offshore), global supply-chains, trade in tasks, global value chains, vertical specialization, migration, on-site temporary (skilled and unskilled) foreign workers, real-time financial flows, etc. have become the contemporary terms of reference either as a source of or as a coping mechanism against the low global relative prices. Now, computer-aided designing is in one continent, different parts being produced in other continents, assembly and processing may be in yet other continents, final products are located in fulfillment centers all over the world, and consumers place and collect their orders with just one click from anywhere in the world. Producers facing global relative prices (of products and factors) make decisions – such as what, how (including where), and for whom – in a different way now than during the post-WWII (pre-globalization) years of the 1950s and 1960s. Therefore, globalization has transformed the landscape of market, competition, and of course, the price system. If any supplier/nation can supply comparable quality at a competitive price, it can join the global value chain. That is why no wonder most of the western world slowly lost its once shining manufacturing sector in competition to the factory Asia. Although not all the developed economies have the same fate, for instance, Germany and Japan have maintained their competitiveness.

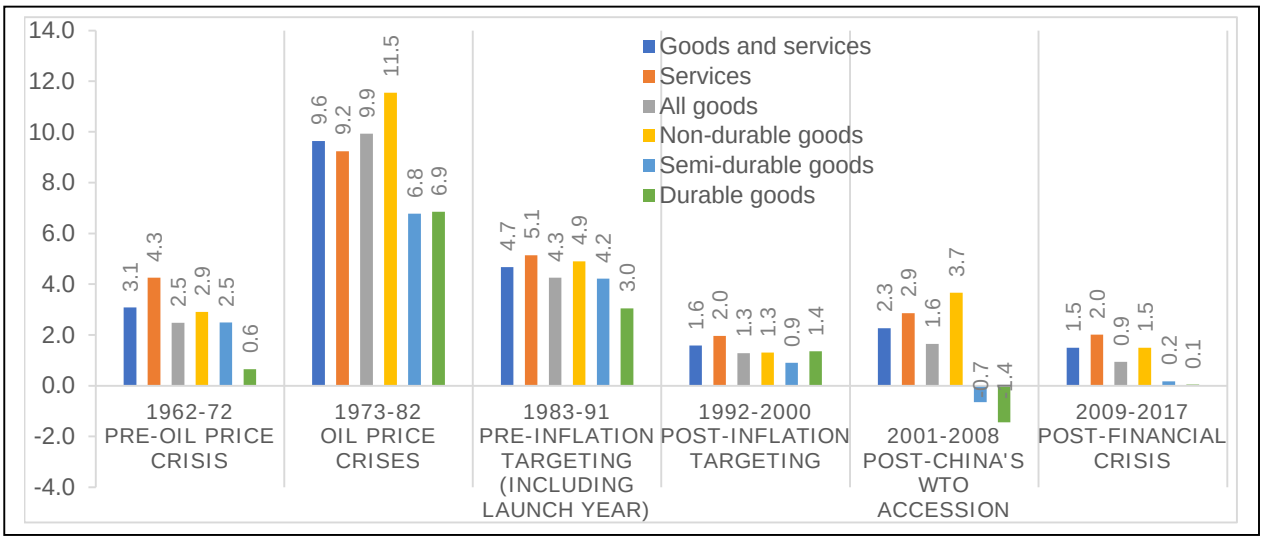
All sorts of structural changes in the job market like gig employment, casualization, or precariousness from the earlier generally permanent/high-wage/high-benefits/high-pension jobs in the rich countries may be seen as a response to the increased global competition, especially from the low-wage/low-price countries. Developed nations' competition with such relatively low wages-costs-prices economies has affected not only the employment scene but the whole socio-economic structure of these nations. Undoubtedly, the relative price differential seems to be at the root.

It is worth mentioning the select lines from an article published more than a decade ago, which predicted precisely what the world has been experiencing for quite some time now:

"China's growing influence stretches much deeper than its exports of cheap goods: it is revolutionising the relative prices of labour, capital, goods and assets in a way that has never happened so quickly before…. Over the coming years, developed countries' inflation and interest rates, wages, profits, oil and even house prices could increasingly be "made in China"." (The Economist, 28 July 2005)

Low relative prices of tradables, low inflation rate, low interest rates, low wage rates, low margins, and pricey assets are the ground realities with which the western nations are struggling. Canada is not an exception.

Graph 5: Average Inflation Rates for Goods and Services and its Sub-categories (based on Consumer Price Indexes, 2002=100), Event-wise Period Averages, 1962-2017



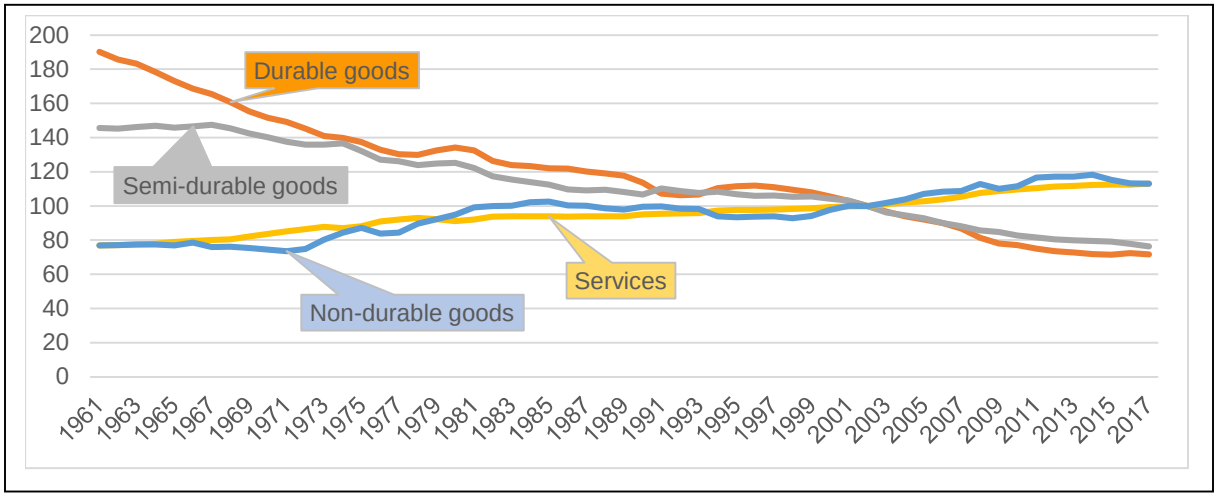
Source: Calculated from Statistics Canada, Table 18-10-0005-01: Consumer Price Index, annual average, not seasonally adjusted.

Graph 5 depicts the average inflation rates for various categories of goods and services for the periods corresponding to major economic turning-points from 1962 to 2017.[21] Categories of consumer goods and services include: 'all goods and services' combined; 'all goods' and 'services' separately; and three sub-categories of goods[22] – 'non-durable', 'durable' and 'semi-durable'. The 'non-durable goods' and 'services' had relatively high average inflation rates than all other sub-categories of goods, mostly in all the sub-periods. Whereas, 'semi-durable' and 'durable' goods had relatively low average inflation rates throughout; the lower rates in these goods' categories exhibit the trade-effect as these both represent the tradeable manufacturing sector generally. (Note: trade-effect and other effects are described on the p. 15 below). The China shock (after China's WTO accession) undoubtedly led the average inflation rates for these two categories to enter negative territory, meaning thereby that the absolute prices actually declined for the semi-durable and durable goods. Even before the Chinese-dragon-effect dominating the global trade landscape, the Asian-tigers-effect since the 1960s is clear from the graph (before

[21] The average annual changes in various categories of goods and services in the consumer price indexes are termed as the average inflation rate for the respective categories during the said periods.
[22] Goods are physical or tangible commodities usually classified according to their life span into non-durable goods, semi-durable goods, and durable goods. Non-durable goods are those goods that can be used up entirely in less than a year, assuming normal usage. For example, fresh food products, disposable cameras, and gasoline are non-durable goods. Semi-durable goods are those goods that may last less than 12 months or greater than 12 months, depending on the purpose to which they are put. For example, clothing, footwear, and household textiles are semi-durable goods. Durable goods are those goods which may be used repeatedly or continuously over more than a year, assuming normal usage. For example, cars, audio, and video equipment and furniture are durable goods. Source: 'Footnote 8 of the original Statistics Canada table'; see reference under the Tables 5 and 6.

which the Japanese-effect dominated the scene after WWII).[23] Period 1973-82 stands out because of the highest annual average inflation rates during this time. However, during the 1973-82 period, in contrast to other sub-periods, there were relatively low average inflation rates for the services than that for the 'all goods' category (and so as in the 'all goods and services' combined) highlighting hike in the international commodity prices. After the inflation-targeting in 1991, the average inflation rates were relatively small in the case of all the categories during all the sub-periods.

Graph 6: Consumer Price Indexes for Different Goods' Categories and Services Relative to All-items (excluding Food and Energy) Index (2002=100), 1961-2017



Source: Calculated from Statistics Canada, Table 18-10-0005-01: Consumer Price Index, annual average, not seasonally adjusted

It will be interesting to see the effect of trade, directly from the relative prices of the different categories of goods and services in Canada over the period of time. Graph 6 is drawn for that purpose. It depicts the consumer price indexes for 'durable', 'semi-durable', 'non-durable' goods, and 'services' relative to the more stable all-items consumer price index (CPI) excluding food and energy during the years from 1961 to 2017. Relative to the CPI (for all-items excluding foods and energy items), indexes for the 'durable' and 'semi-durable' goods have been decreasing since 1961, whereas for the 'non-durable' goods and 'services' increasing. The relative index has declined from 190 in 1961 to 72 in 2017 (62% decline) for the 'durable' goods and from 146 to 76 (i.e., 48% decline) for

[23] East Asia's and then China's trade success story is an open secret now. Starting in the 1960s, Chinese Taipei, South Korea, Hong Kong, and Singapore used exports to promote sustained growth and industrial transformation, as Japan did at the end of World War II. Once these economies committed to export-oriented policies, the pressure of global competition pushed firms in these countries to keep costs low and to achieve higher and higher levels of performance. This policy resulted in export growth rates reaching 20 percent (or more) per year over extended periods in these countries. The effect of it could be seen perfectly in the case of China. From 2000 to 2007, it alone accounted for 13 percent of the world's growth in output. When the growth in the United States reached its peak in the middle of the 19th century, income doubled within a single generation. At those growth rates, income in China would rise a hundredfold within one generation. WTO (2008), pp. 73-74.

the ‘semi-durable’ goods over the same time. These relative indexes were much higher for the ‘durable’ and ‘semi-durable’ goods than for the ‘services’ and ‘non-durable’ goods in 1961. However, the situation in 2017 was different – relative indexes for the ‘durable’ and ‘semi-durable’ goods came down to 70s (from 190 and 146 in 1961, respectively) and that for both the ‘services’ and ‘non-durable’ goods increased (47%) to 113 from 77.

Why there is a declining trend in relative prices of the ‘durable’ and ‘semi-durable’ goods and increasing trend in that of the ‘services’ and ‘non-durable’ goods. Several factors seem to have played their role; however, tradability has been among the main. Increased trade openness has intensified the declining trend as these ‘semi-durable’ and ‘durable’ consumer goods consist mostly of the highly tradable manufacturing sector than the services sector and non-durable consumer goods sector.[24] Higher productivity appears to be another factor.[25] Another related factor, to drag these relative prices down to such an abnormally low levels in recent decades, may have been the global manufacturing, especially the Factory Asia[26]. Non-durables (comprising mostly agricultural goods and commodities) are undoubtedly tradable; however, these face demand constraints owing to the low income elasticity of demand (Engel’s Law). Also, that is why the primary sector may not benefit an economy as much as the manufacturing sector can from the expansion of the world markets.[27] On the other hand, Baumol’s cost and price disease may explain why services have higher relative prices; services have relatively low productivity and high wages (wages in services are increased to match the higher wage rates in the more productive goods’ sector).[28] Also, increasing expenditure shares on services associated with the rising per capita incomes (demand shift towards services[29]) along with low productivity and high wages has led to services with higher relative prices.

Thanks to the new business models and advances in technology, new ways of achieving efficiency and reducing trade costs in goods have not left services untouched too.[30]

[24] “Underpinning the productivity benefits was the sector’s tradability in international markets, which not only reinforced scale economies and technology diffusion, but importantly, also provided greater opportunities to access demand beyond the domestic market and increased competition.” Hallward-Driemeier and Nayyar (2018), p. 1.
[25] “Manufacturing is the major source of productivity growth in the Canadian economy. Firms pass this productivity growth on in the form of lower price growth. As a result, prices of manufactured goods do not rise as rapidly as the overall price level; hence, a relative decline in manufacturing prices occurs.” Baldwin and Macdonald (2009), p. 8.
[26] “During the past two decades, the world has witnessed the rise of Factory Asia. Fueled by cheap and abundant labor, Asia has supplied many of the manufactured consumer goods the world needs, particularly final goods destined for the United States and Eurozone economies. This model, i.e., “supply from the East, consume in the West”, has driven global economic prosperity to unprecedented heights.” Choi and Rhee (2014), Executive Summary, p. xii.
[27] Hallward-Driemeier and Nayyar (2018), pp. 9-10.
[28] Nordhaus (2006), pp. 4-5. And also, Nishi (2016), pp. 1-2.
[29] As established by Colin Clark’s hypothesis (which essentially may be seen as an extrapolation of Engel’s Law). Ramaswamy and Rowthorn (1998), p. 4.
[30] WTO (2017), p. 45.

Advances in technology since the 1980s[31] – personal computers, telecommunications, global data transfer, and large-scale software applications, etc. – have revolutionized the services sector also the same way it has done with the global manufacturing sector[32]. These developments have facilitated the trade in services and the establishment of another class of service industries, like process outsourcing in knowledge (KPO), business (BPO), research (RPO), legal (LPO), medical business (MBPO), and human resource outsourcing (HRO). As a result of such developments, services' costs have been reduced. For example, shifting the information technology (IT) activities from the US to Canada benefits a company between 20 and 30% and from the US to India 50 to 70%.[33]

One more way to fight the higher domestic relative wage-price of services has been to employ the onshore temporary foreign workers (TFWs) in Canada (and also other migrant-friendly rich countries). For example, all the five major Canadian banks[34] were reported to have hired the cheaper TFWs to replace the Canadian employees. Although economic migration is not a new phenomenon in Canada, but substituting or replacing Canadian workers is worrisome when there is already joblessness in the domestic economy. However, a backlash against TFWs led the Canadian federal government to announce the reforms in the TFW Program in June 2014. These reforms aimed mainly to protect the Canadian workers as businesses appeared to use the Program to build their business model to reduce costs and increase profits with the low wage TFWs by avoiding or replacing the qualified domestic workers.[35]

2A-II. Cheap Imports

Continuing with the discussion in 2A-I above that the tradability of goods and services have kept the relative prices low, this subpart directly shows the inflow of imports to Canada with the help of trade data and also the declining manufacturing from the domestic industry data.[36] These cheaper imports have enabled the inflation-targeting

[31] The PwC cites in its report "A Fine Balance" three eras of globalization based on Thomas Friedman, author of The Lexus and the Olive Tree. The first era driven by falling transportation costs from the late 1800s to the first World War I, the second era from 1980s to 2000 by spread of personal computers and falling telecom costs, and then the current third wave driven by massive undersea fibre-optic cable (sending data anywhere almost free), proliferation of personal computers, and the rise of software application (facilitating the global collaboration and distribution of workflow). See PwC (2004), p. 2.
[32] "In recent years, improvements in information technology have allowed firms to increasingly fragment production tasks across borders in both manufacturing and information and business services. Firms no longer just ship goods between countries. They can now also locate intangible production tasks, such as research, design, management, and IT support across a number of different countries." Oldenski, 2012, p. 2.
[33] PwC (2004), p. 4.
[34] "Outsourcing bank jobs is common practice, say employees." CBC News 9 April 2013.
[35] The Effect of these reforms was that the TFWs declined to just over 90,000 in 2015 from the peak of just over 199,000 in 2012. Office of the Auditor General of Canada (OAG), 2017.
[36] Globalization and the associated rise in trade integration have reduced the barriers to market access by foreign producers. This tends to bolster price competition in domestic markets and increase imports. It has also led to the relocation of the production of many internationally traded goods and, to a much

monetary regime to achieve low and stable inflation domestically. Before moving forward to the discussion, it is relevant to mention a quote retrospectively and see how Canada has relied on the imports in the past to fight domestic inflation. Following is the quote from 1969 Budget speech by Edgar J. Benson, then Minister of Finance (p. 5):

> "… I propose that the final rates which were to come into effect on January 1, 1972, should come into effect as of tomorrow morning. This means that the remaining Kennedy Round tariff reductions which had not yet been given effect are to apply immediately….
>
> I recognize that some producers will feel they are being denied the time for adjustment to increase competition, which the phasing of the Kennedy Round reductions would have provided. However, I believe that in today's climate, when failure to counter inflation holds its own risks for our competitive position, more time is not necessary for our producers to adapt themselves to these tariffs. I am confident that the whole economy will gain by the step we are taking."

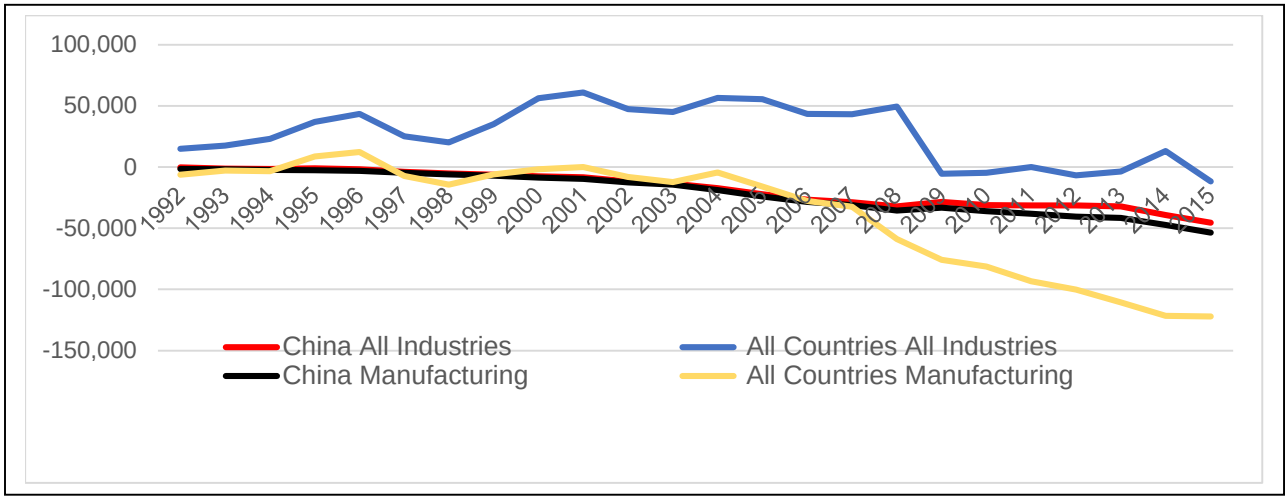
The above lines make clear how the imports were dependent on in desperation to fight the inflationary pressure during the General Agreement on Tariffs and Trade (GATT) era. Imports as a short-term strategy to buy time for the domestic adjustments is not a bad idea, but dependence on these as a permanent way of economic management is addictive and bad for the economic health of a nation. It is the latter which is noticeably reflected in the above quote. Instead of creating a conducive environment and giving sufficient (allowable) transition time, the domestic industry was forced to international competition. This might have been a part of the Canadian industrial strategy throughout. As is implied in a quote by Baldwin and Macdonald (2009):

> "Industrial strategies designed to increase the competitiveness of Canadian manufacturing plants through trade liberalization were implemented throughout the 1961-2005 period." (p. 27)

Perhaps that is the reason manufacturing trade deficit has become a permanent feature (Graph 7), and domestic manufacturing production has been on the decline (Graph 8 and Table 2). However, total (all industries) trade surplus in Graph 7 obscures more than what it reveals; and manufacturing trade balance tells Canada's actual position for manufacturing. There had been an overall trade surplus during the post-inflation-targeting period until the financial crisis. Whereas manufacturing trade remained in deficit throughout from 1992 to 2015, except for two years of 1995 and 1996. Manufacturing trade deficit seemed to be on the loose after the financial crisis. So far trade with China is concerned, there has been a deficit in the total as well as manufacturing trade continuously since 1992 (the earliest data available); it started becoming wider from the mid-90s, and yet increasing further after China's accession to the WTO in 2001.

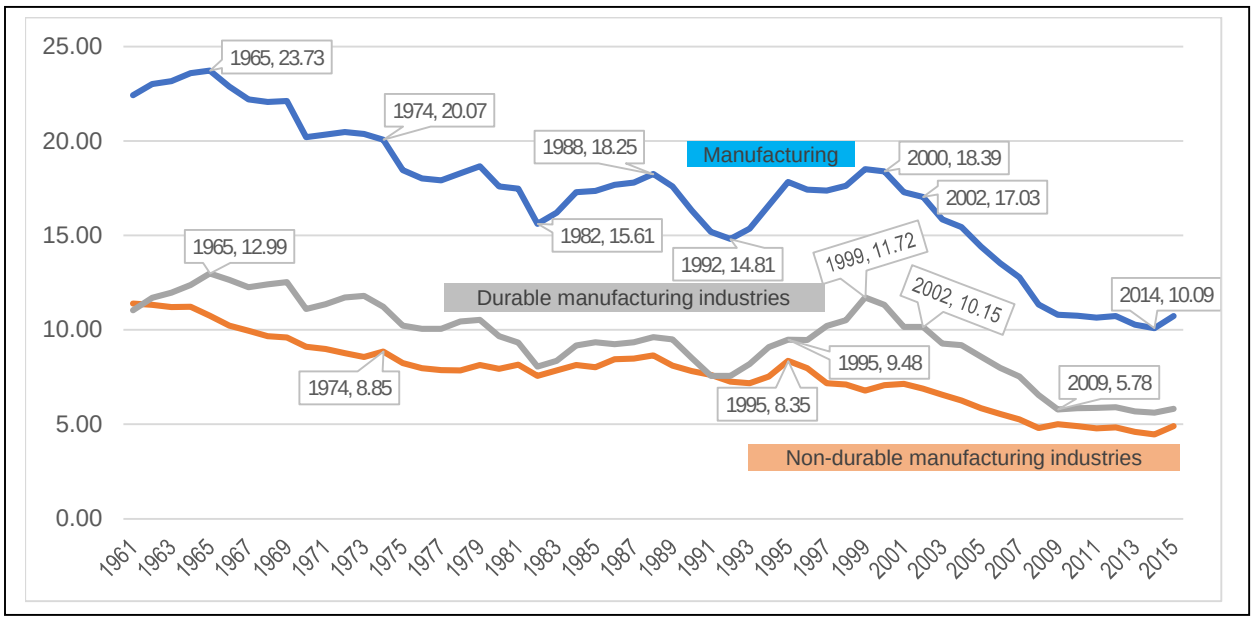
smaller extent, of services to the most cost-efficient firms in the countries with a comparative advantage. As a result, the prices of affected goods or services typically decline compared to the general price level—in other words, their relative price declines. IMF (2006), p. 101.

Graph 7: Canada's All Industries and Manufacturing Trade Balance with All Countries and China



Source: Calculation with the data from Murray (2017), Table 1, p. 5.

Graph 8: Manufacturing, Durable and Non-durable Manufacturing Industries (% of GDP at Basic Prices), 1961-2015



Notes: **Durable manufacturing** ((NAICS codes 321, 327-339) includes wood, mineral, metal, machinery, electronic, electrical, transport, furniture, etc. products. **Non-durable manufacturing** (NAICS codes 311-316, 322-326) includes food, beverage, tobacco, textiles, clothing, leather, paper, printing, chemical, plastics, rubber, petroleum & coal, etc. products.

Sources: Calculations with the following two Statistics Canada tables:

(Data up to 1996) Table 36-10-0395-01: Gross domestic product (GDP) at basic price in current dollars, System of National Accounts (SNA) benchmark values, special industry aggregations based on the North American Industry Classification System (NAICS) (x 1,000,000); and

(Data since 1997) Table 36-10-0401-01: Gross domestic product (GDP) at basic prices, by industry (x 1,000,000).

These results match Canada's manufacturing production data, too, in Graph 8. To remind, the same finding was observed in Part 1C above also, especially from the Graph 3 there. Graph 8 shows that manufacturing has been declining continuously: it was between 20 and 24 percent of GDP during the 1960s and up to the mid-1970s; then hovered between 15 and 19 percent till 2004; afterward, it started sliding and finally reached a new plateau around 10 percent after the 2008 financial crisis. Manufacturing of both types of goods, durable and non-durable, were in the range of above 11 percent of GDP in 1961, and both fell more than half reaching between 4 to 6 percent range in the post-2008 crisis period. Thanks to the Auto Pact in 1965, Canada-US Free Trade Agreement in 1989, and NAFTA in 1994, durable manufacturing industries seemed to hold ground until 2002, however, since then, slid down drastically[37]. From the graph 8, three things are clear about the inflation-control efforts. First, manufacturing decline after 1988 might have been caused by the monetary tightening; second, jump in industrial activity during the mid-90s might be attributed to NAFTA, primarily contributed by the auto sector in the durable category (Table 2 confirms it too); and third, post-inflation-targeting (except for the year 1995) non-durable manufacturing seemed to decline at a higher pace.

Table 2 also shows that the share of durable manufacturing has increased (12.7 percent) in the total manufacturing from 1961 to 2017. Six out of all ten industries mentioned in the durable goods category saw their share increased (names given below), and the remaining four (electrical, primary metal, computer & electronic, and non-metallic mineral product) decreased during this period. Out of six industries which had their share increased, transportation equipment manufacturing had seen an enormous jump (more than doubled) followed by machinery, furniture & related product, miscellaneous, fabricated metal product, and wood product manufacturing. In non-durable manufacturing, which had seen its share decreased (11.8 percent) in 2017 from the level of 1961, five industries experienced a decrease (beverage and tobacco, textile, clothing, paper, and printing), three increase (petroleum and coal, chemical, and plastics and rubber products), and one (food) industry's share remained almost same during this period. Three industries, dominating Canada's manufacturing scene, have been the transportation equipment, food, and chemical. By the way, during the period from 1961 to 2017, the biggest gainers were petroleum and coal products (159 percent), plastics and rubber products (136 percent), and transportation equipment (104 percent) in the entire manufacturing sector. Manufacturing industries which seem to have lost their share in competition with the imports are clothing (including leather products), textile and textile

[37] Exchange rate must have remained one of the major factors responsible for this slide. The Canadian dollar touched an all-time low of US$0.6179 on 21 January 2002. It recovered after that. It appreciated sharply through 2003 and 2004, peaking at over US$0.85 in November 2004, a level not seen for thirteen years. This was a trough-to-peak appreciation of roughly 38 percent in only two years. Powell (2005), p. 82.

product mills, electrical product (equipment, appliance and component), beverage, and computer and electronic product.

Thus, increasing manufacturing imports and declining domestic manufacturing (actually two sides of the same coin) seem to be a part of the modus operandi of the inflation-targeting framework to keep its promise of inflation within its targeted range in Canada.

Table 2: Canada's Manufacturing Sector, 1961-2015

Industry	1961	1970	1980	1990	2000	2010	2015	% Change in Share from 1961 to 2015
	Percent of Total Manufacturing							
Food	12	10.8	10.1	11.2	8.4	13.2	12.0	0.0
Beverage and tobacco product	4.9	4.6	3.5	3.7	2.7	3.8	3.3	-32.7
Textile and textile product mills	2.5	2.3	2	1.9	1.5	0.8	0.6	-76.0
Clothing*	4.4	4	3.5	2.9	2.4	0.9	0.6	-89.8**
Leather and allied product*	1.5	1.1	0.9	0.5				
Paper	10.7	9	10.5	8.2	7.3	5.1	4.3	-59.8
Printing and related support activities	2.7	2.5	2.7	3.9	3.0	2.9	2.2	-18.5
Petroleum and coal products	2.9	1.5	2.1	1.3	1.3	4.6	7.5	158.6
Chemical manufacturing	8.2	7.6	7.9	10.3	7.0	9.4	10.0	22.0
Plastics and rubber products	2.2	2.8	3.1	4.1	4.7	4.9	5.2	136.4
Non-durables	51.9	46.2	46.2	47.9	38.4	45.6	45.8	-11.8
Wood product manufacturing	4.4	4.2	5.8	4.1	6.5	4.1	4.5	2.3
Non-metallic mineral product	3.7	3.6	3.4	3.3	2.3	3.4	3.1	-16.2
Primary metal manufacturing	8.9	9	8.8	6.3	6.2	6.3	5.7	-36.0
Fabricated metal product	6.6	7.7	7.3	6.4	6.7	7.4	7.7	16.7
Machinery	4.3	5.4	7.1	5.9	6.5	7.1	7.5	74.4
Computer and electronic product	4.5	5.3	4.7	5	6.7	4.8	3.2	-28.9
Electrical equipment, appliance and component	4.2	4.3	4	3.4	2.4	2.2	1.9	-54.8
Transportation equipment	7.9	10.6	9.2	13.3	19.7	13.9	16.1	103.8
Furniture and related product	1.7	1.8	1.8	2.7	2.8	2.6	2.4	41.2
Miscellaneous	1.8	1.9	1.8	1.7	1.8	2.6	2.2	22.2
Durables	48.1	53.8	53.8	52.1	61.6	54.4	54.2	12.7

Notes: *Since 2000, Clothing include Leather and allied product too.
** For Clothing and Leather and allied product combined.
Shaded columns are for durable manufacturing (see notes of Graph 8 for the definition).

Sources: Calculations with the data taken from:

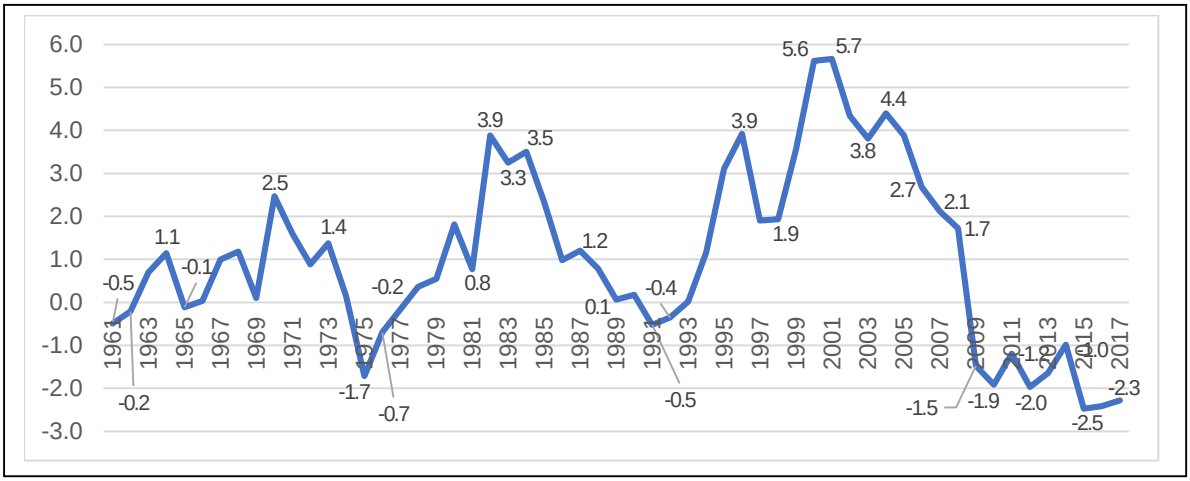
(Data up to 1990) Table 4, Baldwin and Macdonald (2009). {Data accessed on 18 Jan 2019 from https://www150.statcan.gc.ca/n1/pub/11f0027m/2009057/t017-eng.htm}; and

(Data since 2000) Statistics Canada. Table 36-10-0401-01 Gross domestic product (GDP) at basic prices, by industry (x 1,000,000).

2A-III. Lack of Competitiveness of the Canadian Economy

This part of the study delves into Canada's economic position in comparison with its trading peers. Since in the present dynamically competitive world, being merely a trading nation does hardly any good as more competitive nations may soon take over. Although Canada had a trade surplus most of the time from 1961 to 2008, that too turned into deficit after the 2008 crisis (Graph 9); however, the foremost question remains to be seen is how far Canada is internationally competitive. Tables 3 and 4 present Canada's comparative position vis-a-viz other trading partners.

Graph 9: Canada's Trade Balance (%age of GDP)



Source: Calculated from the table: Statistics Canada. Table 36-10-0104-01: Gross domestic product, expenditure-based, Canada, quarterly (x 1,000,000).

Table 3 shows Canada and other major exporters' share in the world merchandise exports during 1948-2017. Canada stands at the 12th rank with a share of 2.4 percent in the world merchandise exports in 2017 that has fallen (more than half) from 5.5 percent in 1948. The US has also seen its share declined over the same period (to 9 percent from 21.6 percent), but it still holds the second rank. China tops the list with its share jumped from less than 1 percent in 1948 to over 13 percent in 2017. Germany, Japan, six East Asian traders, and Mexico all have seen their share significantly increased from 1948 to 2017. So, Canada looks like losing its ground at merchandise exports.

Table 4 displays another competitiveness indicator, namely, manufacturing exports (and also its surplus over imports). Every economy strives for the manufacturing sector because of its enormous potential benefits in terms of employment, scale, innovation, productivity, spillovers, and trade, etc. As the table shows, Canada has done no better on that front too – not only manufacturing imports were higher than their exports, imports increased at double the annual rate (2 percent) than the exports (1 percent) during 2010-2017. Again, China has been the top manufacturing exporter in the world, with about 18 percent share in 2017 (surpassing even the entire extra-EU export-share of about 14

percent). China's manufacturing exports increased by 5 percent annually during 2010-17. The US ranked second at manufactures exports as an individual nation (otherwise EU as a group was second) with a 3 percent annual rate of increase.

Table 3: Canada and Other Major Exporters' Percentage Share in World Merchandise Exports during 1948- 2017, Selected Years

	1948	1953	1963	1973	1983	1993	2003	2017	Rank in 2017****
World Merchandise Exports Value (USD Billion)	59	84	157	579	1838	3688	7379	17198	
Shares (Percentage)									
World	100	100	100	100	100	100	100	100	
China	0.9	1.2	1.3	1	1.2	2.5	5.9	13.2	1
United States of America	21.6	14.6	14.3	12.2	11.2	12.6	9.8	9	2
Germany*	1.4	5.3	9.3	11.7	9.2	10.3	10.2	8.4	3
Japan	0.4	1.5	3.5	6.4	8	9.8	6.4	4.1	4
Canada	5.5	5.2	4.3	4.6	4.2	3.9	3.7	2.4	12
Mexico	0.9	0.7	0.6	0.4	1.4	1.4	2.2	2.4	13
Six East Asian traders**	3.4	3	2.5	3.6	5.8	9.6	9.6	10.1	
EU***	-	-	24.5	37	31.3	37.3	42.8	34.3	

Notes: * Figures refer to the Fed. Rep. of Germany from 1948 through 1983.
** Hong Kong, China; Korea, Republic of; Malaysia; Singapore; Chinese Taipei; Thailand.
*** Figures refer to the EEC(6) in 1963, EC(9) in 1973, EC(10) in 1983, EU(12) in 1993, EU(25) in 2003, and EU(28) in 2017.
**** Rank is taken from Table A6, where data included re-exports or imports for re-exports (Note: World Merchandise Exports Value was US $17,730 bn in this table).

Sources: Tables A4 (p.122), and A6 (p.124), WTO, World Trade Statistical Review, 2018.

Table 4: Canada and Other Major Exporters and Importers of Manufactured Goods during 2000-2017, Selected Years

	Value (USD Billion)	**Share in World Exports/Imports**				**Annual %age Change**
	2017	2000	2005	2010	2017	2010-17
Exports						
China*	2132	4.7	9.6	14.8	17.8	5
Extra-EU(28) exports	1720	14.2	15.0	14.5	14.3	3
US	1126	13.8	10.0	9.5	9.4	3
Mexico	333	3.0	2.3	2.2	2.8	6
Canada	206	3.7	2.8	1.9	1.7	1
Imports						
US	1828	19.8	16.2	13.2	14.1	4
Extra-EU(28) imports	1379	12.6	12.1	11.6	10.6	2
China*	1153	3.5	6.4	8.6	8.9	4
Canada**	335	4.1	3.2	2.8	2.6	2
Mexico**	330	3.1	2.4	2.3	2.5	5

Notes: * Includes significant shipments through processing zones.
** Imports are valued f.o.b.

Source: Table A17, WTO, World Trade Statistical Review, 2018, p.138.

In an era of hyper-globalization[38], it becomes yet more urgent to become more competitive than just a trading nation. As per the Global Manufacturing Competitiveness Index 2016 (by Deloitte, an international consulting firm), Canada stood at the ninth rank out of 40 countries based on a survey of global manufacturing executives. China ranked as the world's most competitive manufacturer followed by the United States, Germany, Japan at 2nd, 3rd, and 4th ranks, respectively. According to the report, manufacturing labor cost was $30.6 (in USD) per hour in 2015 in Canada, whereas its peer average was $18.7; China had $3.3 and other Asian countries (Thailand, Malaysia, Vietnam, India, Indonesia) even lower than that of China.[39]

Exchange rate cycles also affect the competitiveness of Canada.[40] For instance, depreciation (especially vis-a-viz USD) would make Canadian goods comparatively attractive than of its counterparts. Two such cycles in the recent history were during the 1980s[41] (up to 1987) and 1990s[42] (1992 to 2002) when the Canadian dollar depreciated against the US dollar.[43] During this period, Canada saw a deviation in the long-term declining trend in the manufacturing goods, as shown in Graph 8.[44] Here lies a significant implication for the monetary policy, how important it is to stabilize other sectors of the economy (especially manufacturing) by smoothening the exchange rate appreciation cycles led by the commodity booms.[45] Isn't exchange rate, macroeconomic, employment or industrial stability as essential as price stability? The central bank needs to be innovative to smoothen those fluctuations and provide a cover to other parts of the economy from the exchange rate appreciation cycles led by the commodity booms.[46] That

[38] UNCTAD Trade and Development Report 2018 terms the period since 1986 as hyper-globalization. (p. 40). Elasticity of world trade to global output (ratio of trade growth to GDP growth) was highest at 2.4 during the 1986-1998 period, remained around 2 during 1998-2008 and around 1.3 during 2008-2016 (after the global financial crisis). It was around 1.5 during the golden age of 1950-73 and around 1 during the difficult years of 1973-86. Data source: figure 2.1.B, p. 37, UNCTAD (2018).

[39] Global Manufacturing Competitiveness Index 2016 (by Deloitte), Figure 12, p. 22.

[40] "Exchange rate fluctuations affect the speed of relative price changes. The manufacturing sector has had to adapt to several exchange rate cycles over the study period. The cycles are associated with changes in the competitive pressures faced by Canadian manufacturers, as their domestic and export prices come under more (or less) pressure as the Canadian dollar appreciates (or depreciates) against the U.S. dollar." Baldwin and Macdonald (2009), p. 8.

[41] Monetary tightening-led global recession, developing countries' debt problems, economic reforms, and global imbalances and exchange rate problems, etc. featured the 1980s during which Canada faced exchange rate depreciation. Kumari (2019), pp. 3-4.

[42] Several national (recession, political uncertainty, current account, and fiscal deficits) and international factors (teething problems of Europe, and Crises in Mexico, East Asia, Russia, and the US) contributed to it. Powell (2005), pp. 80-81.

[43] See Chart 6 on p. 84., Powell (2005).

[44] Trade agreements during those years were also partly responsible for this deviation.

[45] In simple words, protecting other sectors from the Dutch Disease.

[46] Some lines are worth mentioning from the article "Norway's Energy Policies A Lesson For The World". OilPrice.com 29 November 2014:

"… The country decided to do what… many other oil-producing states never do: deliberately limit how much oil revenue enters the economy.

can help the economy remain diversified and prosperous over generations; besides that, it can save the nation from the real economic costs of unemployment and plant closures during the appreciation cycles, and also from the industrial rebuilding and human resource retraining costs during the depreciation cycles. Moreover, the industrial sector, once lost, may not necessarily be recovered in the present era of global competition.

Other countries' competitiveness is worth mentioning, especially that of China, to demonstrate the level of fierce global competition and also implicitly how hard Canada has to work to increase its competitiveness. The point to be noted is that the below-discussion considers only one year of 2017, however, those countries have been continuously in the race of the respective list and reap the fruits of years' competitiveness efforts. In 2017, China had the highest percentage share of 18.2 in world GDP based on PPP (USA had 15.3 and Canada 1.4).[47] China alone accounted for 13 percent of the world's growth in output from 2000 to 2007[48], which is estimated to have reached 33 percent in 2017[49]. In the world's exports of goods and services in 2017, China had the highest share of 10.7 percent (USA had 10.4 percent, Germany 7.7, Japan 3.9, and Canada 2.2).[50] In the world merchandise exports, China is at the top with a share of 13.2 percent (USA with 9, Germany 8.4, Japan 4.1, and Canada 2.4).[51] Manufactured goods accounted for 70% of the world's total merchandise exports in 2017[52], and just 10 exporters exported over 84% of it[53]; EU(28) topped with almost 39% share ($4.67 trillion)[54], China stood second with 18% ($2.13 trillion), and USA ($1.13 trillion) was third with 9% share[55] (Japan got the 4th rank with $603 billion, and Canada 10th with $206 billion)[56]. China's manufacturing exports make about 96% of its total merchandise exports

Initially, the government decided to take all the profits generated by its state-owned oil companies and reinvest them in searching for and producing more oil.

But by 1995, the flood of income had grown beyond what this could absorb. So, Norway created a special buffer fund to keep the oil profits out of the economy by declaring them the property of future generations of Norwegians. The government forbid itself from using more than 4 percent of the money for current infrastructure and other public projects and invested the rest in financial markets abroad, effectively sending it into exile."

[47] Table A, IMF (Oct 2018), p. 131.

[48] WTO (2008), p. 74.

[49] 'Figure 1.6. Contribution to Global Growth by Region', IMF (May 2018), p. 4.

[50] Table A, IMF (Oct 2018), p. 131.

[51] Table A4, WTO (2018), p. 122. EU(28) merchandise exports share 34.3% included here the intra-EU(28) exports too. If intra-EU(28) exports are excluded, China's share goes up to 16.2% and extra-EU(28) becomes 15.2%, and USA 11.1%, Japan 5%, Canada 3% (see Table A7, p. 125).

[52] Chart 2.3, WTO (2018), p. 11.

[53] WTO (2018), p. 44.

[54] If only Extra-EU(28) exports were considered, this was $1.72 trillion, and share in the world's exports became second with 14.3%. Table A17, WTO (2018), p. 138.

[55] WTO (2018), p. 44.

[56] Table A17, WTO (2018), p. 138.

($2.13 trillion[57] of $2.22 trillion[58]).[59] Regarding trade surplus nations in the world, China had the highest trade surplus of $421.4 billion in 2017, Germany's trade surplus was $281.3 billion, The Netherlands' $77.7 billion and Japan's $26.2 billion in 2017; whereas the USA has a trade deficit of $862.8 billion.[60] As a world trader (exports plus imports of merchandise goods) again, China stood first in 2017, followed by the US, Germany, Japan, whereas Canada was in the 11th position.[61] On commercial services' exports front, the USA remained the world's leader with a 14.4 % world share in 2017, followed by the UK (2nd, 6.6%), Germany (3rd, 5.7%), France (4th, 4.7%), China (5th, 4.3%), and Japan stands at the 9th rank with 3.4% share whereas Canada stands at 18th rank with a 1.6% world share.[62]

Inflation targeting might have worked differently if the Canadian economy had increased its competitiveness. The USA, Germany, and Japan have maintained their manufacturing prowess even in competition with low-wage China and other East Asian nations. Competitiveness could have saved Canada from the vicious cycle of lack of real economy investment opportunities, low investment, low growth rate, joblessness, deflationary fears, deindustrialization, over-financialization, and manufacturing import dependency. The status quo in economic management is not an ideal choice in the face of fierce global competition. Perhaps Canada's resource economy has provided a leeway to maintain that status quo for that long. Also, low and stable prices, with the help of imports under the inflation-targeting, have avoided the urgency to create competitiveness in the economy. Visionary macroeconomic management would require not only dynamic international strategy but also hard domestic actions. This is what market-based system demands, especially in a fast-changing global economy. Complacency and illusionary comfort zone for a trading nation can not be an option in a mercantilist world.

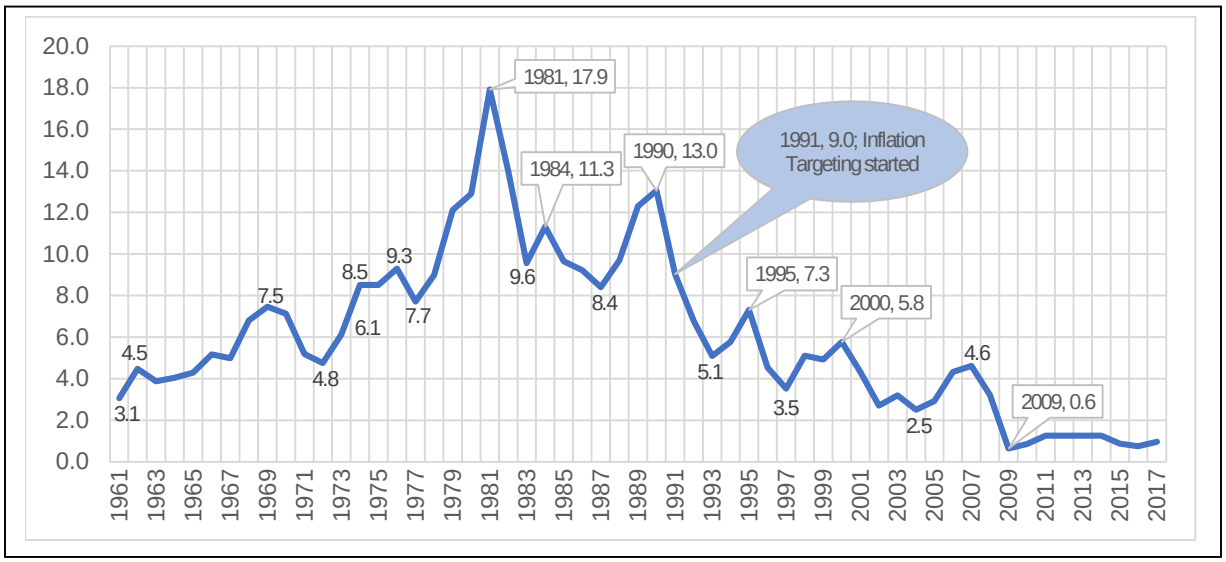
[57] WTO (2018), p. 44.
[58] WTO (2018), p. 69.
[59] WTO (2017), p. 48.
[60] WTO (2018), p. 69.
[61] Countries are ranked according to the total merchandise trade (exports plus imports, values in US$): 1. China ($4.105 tn), 2. The US ($3.957 tn), 3. Germany ($2.615 tn), 4. Japan ($1.370 tn), 5. Netherlands ($1.226 tn), 6. France ($1.160 tn), 7. Hong Kong ($1.140 tn), 8. The UK (1.089 tn), 9. South Korea ($1.052 tn), 10. Italy ($959 bn), 11. Canada ($863 bn), 12. Mexico ($841 bn). Calculated from Table A6, WTO (2018), p. 124.
[62] Table A8, WTO (2018), p. 126.

2B. Domestic Factors and Inflation Targeting in Canada

2B-I. Low Rate of Interest

Graph 10 presents the annual average policy rate from 1961 to 2017 in Canada, and it demonstrates clearly an increasing trend of the policy rate before the inflation-targeting and decreasing after it. The annual average rate has gone down tremendously after the inflation-targeting. It has actually become ultra low after the great recession. In fact, current rates have hardly anything to do with the inflation; these are kept low to fight the ongoing slowdown in the economy.

Graph 10: Bank Rate (Annual Average %), 1961-2017



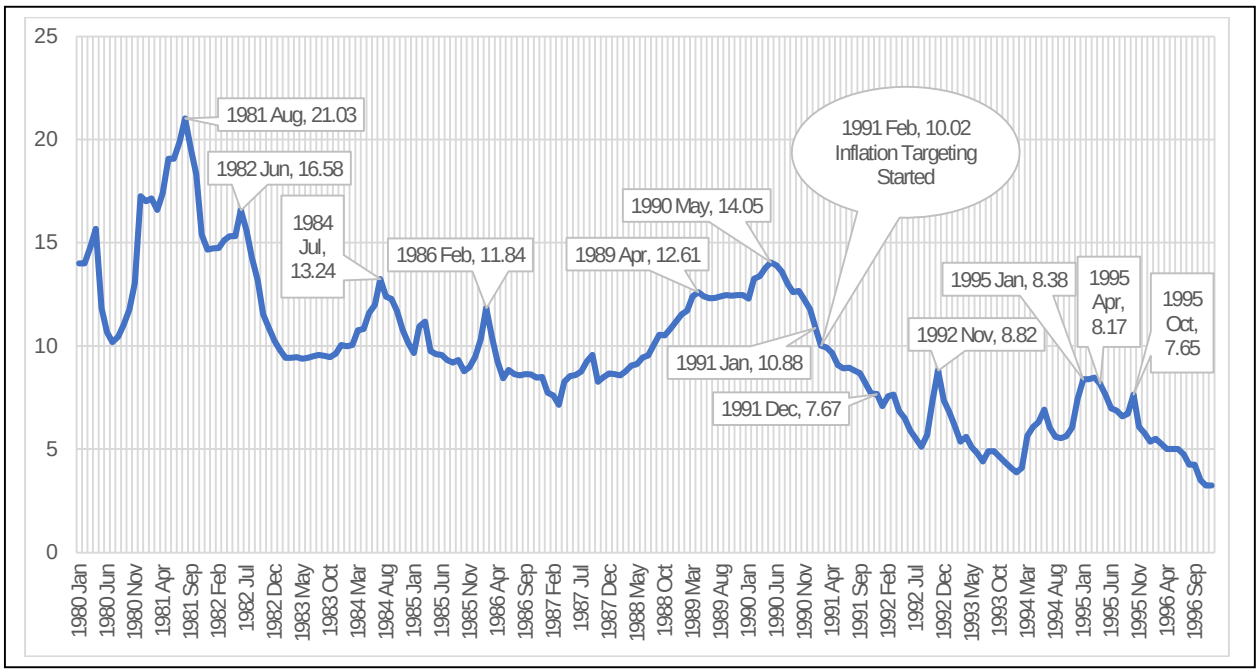
Source: Calculated from the monthly rates (reference same as for the Graph 11).

It is worth mentioning that the policy rate went through several twists and turns before starting the declining trend since the inflation-targeting. The major turn was a historic paradigm shift in the policy management from fiscalism to monetarism during the 1970s; it has continued to dominate the economic policy landscape to date. Initially, the Bank of Canada tried with the M1 (a narrow monetary aggregate) growth targets in 1975 to control inflation, which were later abandoned in 1982; because the monetary targets were met, but inflation could not be contained.[63] Since then, the short-term policy rate has been used as a preferred monetary tool to control inflation. After the second oil price hike of 1979, interest rates were raised in the 1980s to the level never seen before in order to control the inflation. Graph 11 shows the monthly bank rate during 1980-1996 to show how high actually were the policy rates during that particular time. Controlling inflation was the top priority, so was the compulsion of high interest rate trajectory. The annual rate of inflation reached an all-time high of 12.5% in 1981 (Graph 2), so as the policy rate

[63] Powell (2005), p. 74.

at 21.03% in Aug 1981 (Graph 11). Graph 10 shows three double-digit historical peaks of average annual bank rates[64] of 1981, 1984, and 1990, which unfortunately resulted in two recessions, one each in the early 1980s and the early 1990s, and one slowdown in the mid-1980s[65]. Then came the inflation-targeting in Feb 1991 and an era of low rate of interest with it, as seen in Graph 11. In fact, Feb 1991 was the historical last month to see a double-digit rate (10.02 percent); even rate touched digit of eight only five times[66] after inflation targeting – once in Nov 1992 and then during Jan-April 1995[67].

Graph 11: Monthly Bank Rate (percent), 1980-1996



Source: Bank of Canada. Selected Historical Canadian Dollar Interest Rates.

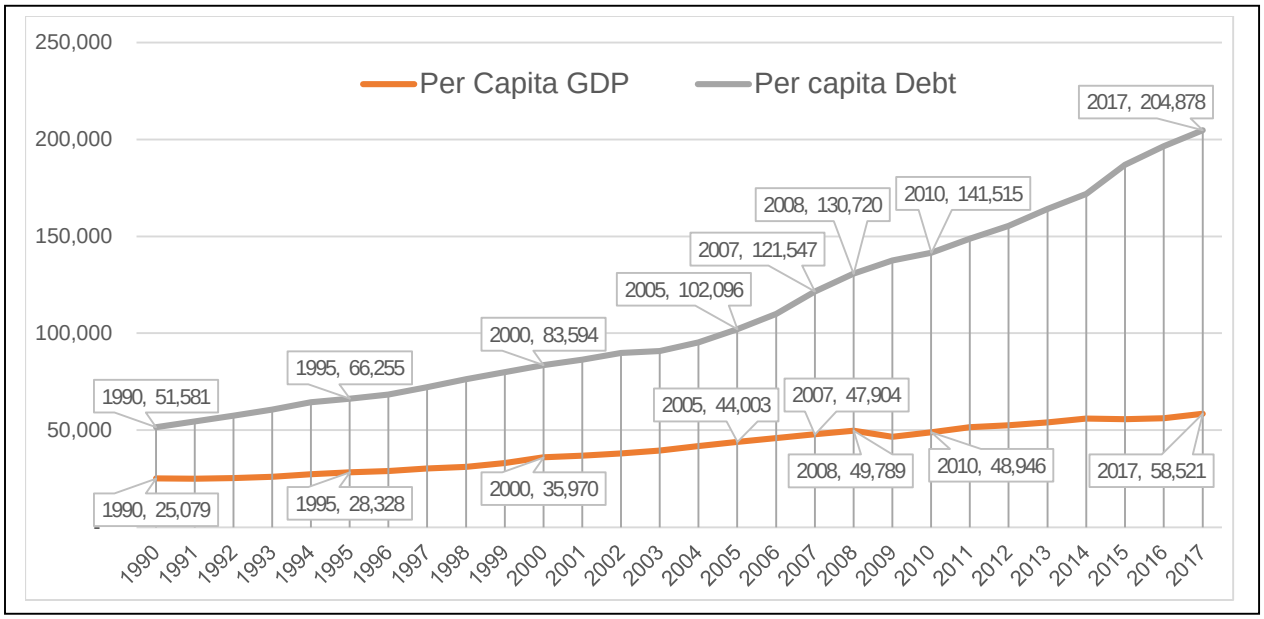
The low-interest regime seems to have become a necessity when there is no general inflationary pressure, instead, deflationary fears have become a new normal alongside relatively higher unemployment and lower investment rates after the inflation-targeting. Despite knowing the side effects of the low-interest rate in terms of increasing the risk of financial instability, policy rates have to be kept low helplessly because otherwise, macroeconomy might be destabilized. Bank of Canada seems to be stuck in a vicious

[64] Actually, the rate was in double-digit last in Jan and Feb 1991 at 10.88% and 10.02%, respectively, and after that, it has never reached that high to date. However, when the average annual rate for the year 1991 is calculated from monthly rates, it becomes a single-digit rate.
[65] In 1986, a combination of higher interest rates and lower energy prices led to a marked economic slowdown in Canada. Cross and Bergevin (2012), p. 10.
[66] 8.82% in Nov 1992, 8.38% in Jan-Feb, 8.47% in March, 8.17% April. Same source as Graph 11.
[67] The Canadian dollar came under strong downward pressure, and interest rates rose sharply across all maturities as investors demanded even larger risk premiums. (Thiessen, 2001). This is because Canada's fundamentals were perceived weak, especially its large fiscal and current account deficits, especially in the backdrop of the Mexican Peso crisis in 1994 and early 1995 (Powell, 2005, p.80).

cycle of the low-interest rate. If macroeconomy needs to be running, it needs to carry on accumulating financial instabilities, amid ballooning debt and booming real estate market, to fuel the debt-financed effective demand.

2B-II. Debt-fueled Economy

Graph 12: Canada's Per Capita GDP and Debt During 1990-2017



Note: Debt represents total debt outstanding held by households (consumer credit, non-mortgage loans, and mortgages), non-profit institutions serving households, non-financial private corporations, non-financial government enterprises, federal general government, other levels of general government, non-residents, and domestic financial institutions.

Sources: Following three Statistics Canada Tables were used to calculate per capita GDP and per capita Total debt – Table: 36-10-0104-01: Gross domestic product, expenditure-based, Canada, quarterly (x 1,000,000); Table 38-10-0234-01: Credit market summary table at book value, national balance sheet accounts (x 1,000,000); and Table 17-10-0009-01: Population estimates, quarterly.

Canada's per capita debt, which was about two times the per capita income in 1990 (before the inflation-targeting), became almost four times in 2017 (Graph 12). This is because the per capita GDP has slightly more than doubled from $25,079 to $58,521 during 1990-2017, but per capita debt has grown almost four times from $51,581 to $204,878 during the same period. The stable and low inflation has allowed not only the present rate of interest to be low; this has created certainty about future rates too. Low-interest rate means low cost of borrowings and low rewards for savers. The consequence is the higher preference for spending on consumption and investment out of the borrowed funds, particularly in light expectations of the low rate in the foreseeable future. As mentioned in the above section, the low-interest rate (accommodative policy stance) has become a necessity in the backdrop of Canada's stagnant economic growth. This is logical when income is stagnant for whatever reasons, the only possible way to finance

(the required) more expenditure (excess over income) is the debt. In other words, debt has been working as an engine of higher effective demand to fuel the stagnant economy.

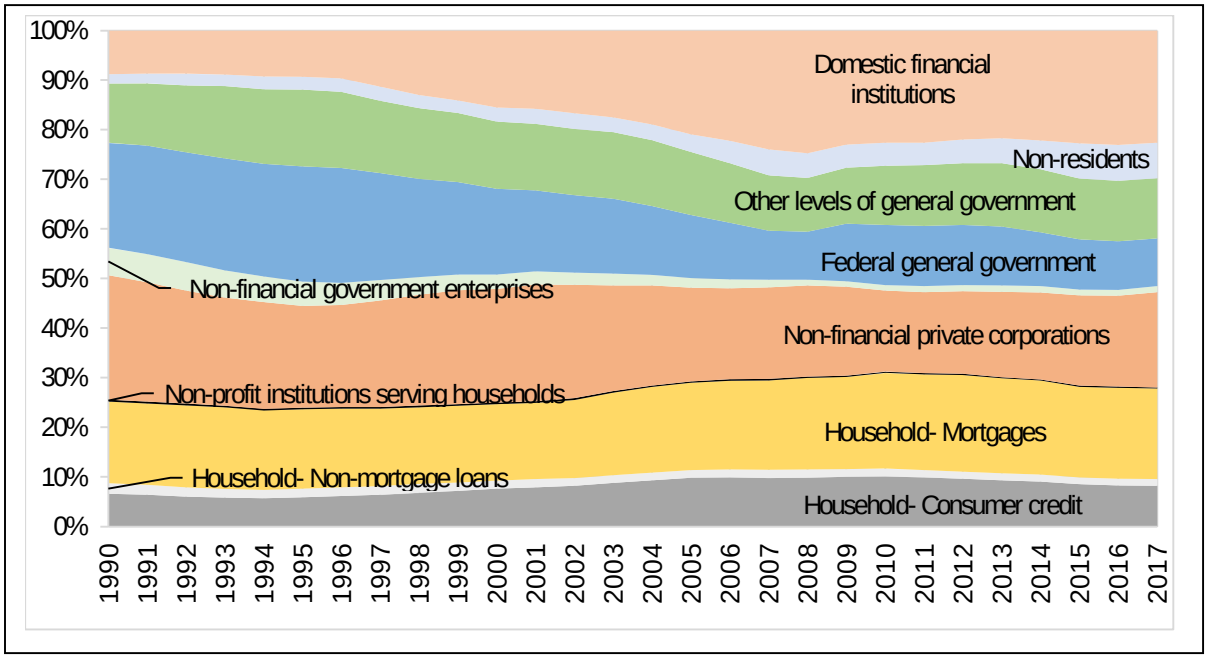
However, this is also a hard fact that this debt has to be repaid out of income (GDP in the case of a nation). If income is not increasing as fast as borrowings are, debt will increase at an increasing rate; since debt is incurred not only to finance spending but also to cover repayments. Not to forget, debt has a maturity date and additional interest cost on the actual borrowed (principal) amount. Debt-financed higher effective demand, especially the non-productive ones which do not increase the simultaneous debt-repay-capacity (interest plus principal), is a recipe for debt-trap. Investments in the economic activities, particularly which stimulate the speculation, like real estate, can make the economy look great; however, it can break the entire system just like a castle of cards with no time and even no prior (inflation) signal. A highly leveraged economy, along with a low inflation rate, is instead more dangerous as it creates an illusory comfort zone for the policymakers. Low and stable inflation lets the economy build up assets bubbles without any warning signals, nevertheless putting the entire system into instability at the end. The Asian crisis of 1997[68], the stock crisis of the early 2000s, and the financial crisis of 2008 had hardly any signs of trouble, in terms of high inflation[69].

It is vital to investigate the composition of the Canadian total outstanding debt to see where significant vulnerabilities have been accumulating in recent years. Although when a crisis hits, it hardly leaves any part of the economy unaffected and wipes out years' prosperity along with it. Some major trends are observed from the Graph 13 that presents the percentage distribution of debt by different sectors of the Canadian economy over the years from 1990 to 2017. The share of public sector debt (owed by federal, other levels of general government, and non-financial government enterprises) has declined enormously, primarily because of the reduced share of federal debt. However, consistently substantial debt by the 'other level of general government' may not be a healthy sign considering a mismatch between increasing needs (social and infrastructural) and shrinking revenue generation capacity of the sector. The private corporate sector (non-financial), which saw its share shrunk during the 2000s (from the level of the 1990s), has been showing signs of a resurgence of late. Household sector debt (comprising mortgage, consumer credit, and non-mortgages) holds the largest share and has increased over time too. Although mortgages make the most significant portion

[68] "For the three decades before Asia's financial crisis, Indonesia, Korea, Malaysia, and Thailand had an impressive record of economic performance—fast growth, low inflation, macroeconomic stability and strong fiscal positions, high saving rates, open economies, and thriving export sectors. It is therefore not too surprising that no one predicted the Asian crisis." Aghevli (1999).
See part 3.6 on "Inflation" (pp. 18-19, and also Table 14) of NBER working paper by Corsetti et al. (1998), where authors mentioned: "Table 14 presents the data on inflation in our sample of Asian countries in the 1990s. The overall picture is quite clear: in all countries, inflation rates were relatively low in the 1990s." (p.18)
[69] Kumari (2019), p.10.

of it; consumer credit share has also increased over time, that has retreated recently, however. The sharp rise in the share of household debt that happened during almost a decade since the mid-2000s to the first half of 2010s seemed to have halted since 2014. Share of non-residents' debt (i.e., external debt) has also increased. The most noticeable increase is seen in the share of the domestic financial sector debt, which ballooned from less than 10 percent in 1990 to much more than 20 percent in 2017; the most increase took place between the mid-1990s and the financial crisis, and post-crisis it has stabilized but at higher levels. The increasing debt of the financial sector is worrisome because of the systemic nature (and higher social cost), and higher financial leverage (and lower buffer) of the financial corporations than the ones in the non-financial sector in case of adverse shocks[70].

Graph 13: Percentage Distribution of Total Debt by Different Sectors of Canada, 1990 to 2017



Source: Statistics Canada. Table 38-10-0234-01: Credit market summary table at book value, national balance sheet accounts (x 1,000,000).

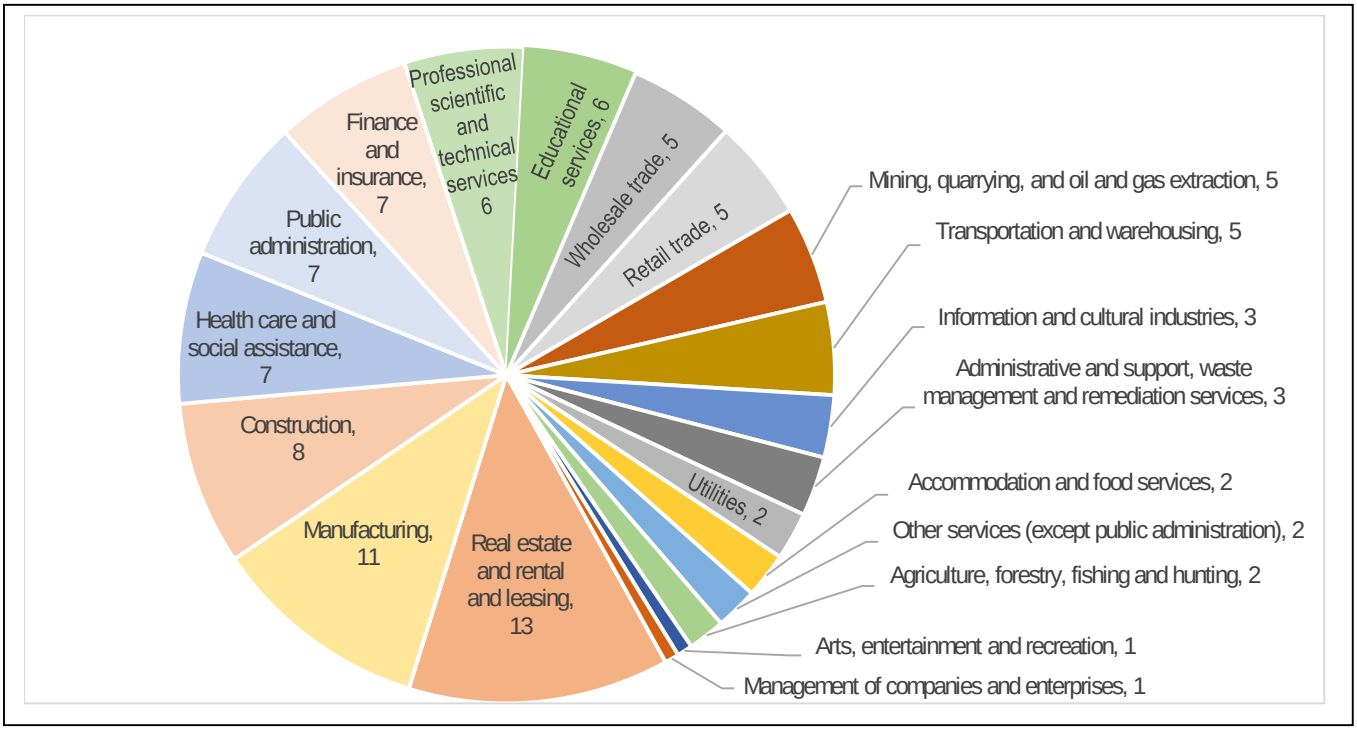
2B-III. Asset-dominated Economy (Real Estate & Financial Activities as the Main Source of Economic Growth)

Before getting into a discussion over the issue, it is rational to view the percentage distribution of GDP by industry in 2015 (Graph 14). To note, the discussion here is also closely related to the subject matter in the 1C part of the present study. The largest industry in 2015 was real estate and rental and leasing accounting at 13 percent of the total GDP. The second industry was manufacturing with an 11 percent share. Third was

[70] Luca and Tieman (2016), p.3.

construction with 8 percent and fourth finance and insurance with 7 percent. Other two industries (public administration, and health care & social assistance) with 7 percent each fall under the purview of the public sector; when educational services' 6 percent share is also added, total public sector makes total 20 percent of the economy (by definition, these three industries make the public sector). Therefore, except manufacturing, the other three leading industries – real estate, construction, and financial – make-up 28 percent of the total economy. Or if only the private sector (total 80 percent of the economy) is considered, these three industries make-up 35 percent, i.e., over one-third of the entire private sector of the economy.

Graph 14: Percentage Shares of All Industries in GDP at Basic Prices (By North American Industry Classification System), 2015



Source: Same as for the Graph 3.

Absence of sufficient real sector investment opportunities (in light of deindustrialization and cheap imports) and abundant credit at low-interest rates (facilitated by the liberalized and deregulated financial sector) have encouraged the speculators to take increased risk in assets' markets. The rate-of-return misalignment might have reinforced the reverse cycle of investment-activity from the real economy with relatively low-profitability towards the pro-cyclical and self-propelling (i.e., rising prices-profitability-activity) financial and property markets. As a result, Canada has developed an asset-dominated economy, where assets and financial activities have become a leading contributor to the nation's economic growth.

Reflections and Recommendations

From the complete analysis in the main parts of the study, it is established that the low-&-stable inflation has been achieved in Canada after the inflation-targeting strategy, whereas during this period real economy has under-performed, and financial economy has out-performed to the extent of accumulating vulnerabilities. Given the above finding, this part summarizes the reflections and recommendations of the present study.

Reflections

Actual Outcomes

- Inflation targets are achieved but with the aids of cheap imported goods and services.
- The real economy has been facing de-industrialization, investment stagnation, lowered (quantitively as well as qualitatively) employment outcomes, and anemic growth. Canadian economy seems to have stuck in a low investment-trap, as a result of which the real economy is facing challenges.
- The financial economy has been overblowing with an ever-increasing real estate and other assets' values owing to the low-interest rate and abundant finance. On the other hand, debt has been piling up at unmanageable levels.
- The financial sector has been one of the main drivers of the economy while at the same time accumulating vulnerabilities with the debt-asset duo.
- Internal and external imbalances have been constraining the macroeconomic management by limiting the policy-choices.
- Social outcomes have suffered from deteriorating employment opportunities/quality, present/future insecurities, increased income/asset inequality, rising home prices/rentals, high debt, etc.

How Inflation Targeting Has Played its Role in the Actual Outcomes

- The compulsion of keeping inflation low under the inflation-targeting strategy has led the policy-makers to make compromising quick-fix policy choices.
- Inflation targets are primarily achieved by imported prices rather than by creating domestic price competitiveness.
- Low and stable consumer prices during post-inflation-targeting have released the pressure from the polity-policy conductors to make concrete structural changes.
- Price indexes are beautiful concepts in the economic theory, provided these cover the majority of domestic economic activities in practice. These signal the undercurrent supply/demand/background conditions to be addressed efficiently by the policy-makers. These become almost unrepresentative of the domestic economic conditions if these include mostly the cheaper foreign prices and

excludes the higher domestic prices. As a typical consumer basket (the basis of the consumer price index) in Canada includes low priced imported goods (especially semi-durable and durables) and services (tradable) which has nothing to do with Canadian economic activity but excludes the high and rising domestic assets' prices which makes the most of the Canadian economy and also affects the majority of the Canadians severely. This has caused illusory price stability and economic well-being in Canada.

- Highly leveraged economy along with the low inflation is instead more dangerous as it creates an illusory comfort zone for the policymakers. Low and stable inflation lets the economy build up assets' bubbles without any warning signals, however, putting the entire system into instability at the end.
- Manufacturing imports should be used to buy the transition time in an economy given the benefits of the manufacturing sector and not to make it a permanent economic feature as it lets ultimately the domestic industry/economy suffer. Unfortunately, this is the latter what Canadian policy-makers have chosen.
- Suppressing inflationary pressure with foreign-bought solution (imports) has led to the foregone domestic solution (competitiveness) and then the loss of economic opportunities (investment, employment, income) to the foreign competition (globalization).
- Too much emphasis on only one economic objective (price-stability) has been traded-off with almost all other objectives. For example, macroeconomic, financial, exchange rate, employment, industrial stability, and social well-being seem to have almost forgotten in a race to achieve mere price stability.
- Economic stagnation has necessitated on the one hand, whereas current and expected low inflation have facilitated on the other the low-interest rate regime (accommodative monetary policy) for a sustained period; the very regime has stimulated the borrowers and speculators amidst evaporating the real economy investment opportunities.
- To keep the momentum of the economic activity, the financialization of the economy has been depended on. In the process, the debt-asset duo has increased the financial vulnerabilities besides the lower social outcomes broadly.

Recommendations

Let inflation stability be one component of the monetary policy. Other components – financial stability, real economy performance, and exchange rate stability (managing cycles) – need to be incorporated in it. Monetary policy has a bigger role to play in the economy than just allowed under the inflation-targeting monetary framework (especially when fiscal policy has its own constraints practically). In the current economic circumstances, owing to the globalization and technological challenges, it is urgent to consider the real economy targets (investment, industrial sector, employment, income,

etc.), the way inflation targets have been considered all these recent decades. Such targets are significantly more critical in the present era when economies are going through the deflationary tendencies and low inflation.

A visionary central bank has a responsibility in emphasizing the targets and policy-mix considering the contemporary needs and requirements of the economy in the context of dynamic domestic and international circumstances for a consistent macroeconomic performance. Sticking with inflation targeting, come what may, is not less than an act of policy-vandalism, particularly when it has become a root cause in building instabilities in the financial economy, stagnating the real economy, and costing the welfare of the society in Canada. Forgoing all other goals to achieve merely the inflation goal is not reasonable in any way; achieving all other goals alongside stable prices is actually a responsible way. Whether price stability is above all other economic objectives, e.g., economic prosperity, financial stability, exchange rate stability (as exchange-cycles damage other sectors), investment potential, and employment opportunities? To repeat it: aren't macroeconomic, financial, exchange rate, employment, industrial, or social stability as necessary as price stability? This is what the central bank of Canada needs to give a serious thought to.

To summarize: monetary policy has a much bigger role to play in achieving the socio-economic goals than merely the inflation goal in the Canadian economy. Bank of Canada needs to re-evaluate its inflation-targeting monetary framework in the broader macroeconomic perspective. Otherwise, history might re-evaluate the role of the Bank of Canada in the macroeconomic management critically.

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