

Food habits and food inflation in the US and India; An experience in Covid-19 pandemic

S.N. Saha

Abstract:- The US and India are different in various socioeconomic aspects. Still the inflation rates between them showed moderately correlated in respected in respect of food prices 2022. Both countries adopted necessary measures to supply food and beverages in the lockdown and related bottlenecks in order to check the rapidly rising commodity prices. But still the food prices increased continuously almost in the whole year,2022.

Food and fuel have been said the drivers of inflation during the Covid-19 pandemic period (Philip Barrett Sep,12,2022). The world itself was partially a closed economy as foreign trade dwindled to a large extent. So countries had to depend mostly on indigenous production and market supply network. But as the food and beverage demand, it is dependent on economic factors like tastes, habits and preference of the households. These factors played important role in the head line inflation in different countries during Covid-19 pandemic.

The present study is an attempt to highlight the complex factors such as food habits ,tastes and preferences in the US and India. This shows how the said factors impacted upon the food inflation in them.

Keywords:- Rank Correlation, Standard Deviation, Headline Inflation, Habits, Tastes and Preferences, Food and Beverages, Indigenous Production, Lock Down, Supply Chain, Inventory, Stakeholders, Administrative Follow Up, Foreign Trade, Tolerance Limits of Inflation.

I. INTRODUCTION

The severity of Covid-19 pandemic created a panic all over the world since, it broke out in December,2019, Wuhan, China, Susceptibilities to the pneumonia Virus was the cause of large scale physical distancing and movement restriction lockdown came into effect [1][2] people of the affected countries were mostly stuck at home (excepting emergencies) within a short notice. The critical features of these measures were barter to traffic, trade (internal and external) normal

supply chain [3][4], labor movements followed by absenteeism in industries, low capacity utilization and the like. These caused the dismantling of supply chain of goods and services in daily living. So, on the demand side the adverse effects like increasing pent up demand, in come in equality, loans, buying, For domestic stocks, safe heaven demand etc. appeared inflationary rise in prices of daily needs took shape in large part of the world and irrespective of developed and developing countries[5].

➤ The Crisis

Earlier studies on this subject are multi dimensional including the measures all around to combat the critical situation in this contest [6][7][8]. The urgent measures included medical facilities, normalcy in supply chain of domestic needs, fund allocation and loans, internet facilities and administrative follow up. These do not, however, represent all aspects of global crisis management. Since inflation is factor specific, it may differ among the countries. But the world economy at present time is largely dependent on foreign trade, primarily import and export of food grains, fruits, processing chemicals affected countries had to depend solely on indigenous food output (production and stocks) and more effort to channelize that for the public. This was somehow a difficult task because of the dominant adverse forces in the domestic supply chain. The impact of inadequate supply chain[9] impacted upon the price rise rapidly, and even to face an inflationary rate beyond the maximum tolerance limit in both of them.

II. FOOD INFLATION

Both the US and India inherited food price inflation from 2019 or earlier but at a low level and within their maximum tolerance limits(US 2%, while India 6% as given by the Fed[10][11] and RBI respectively). However, food inflation rate was 1.8% in the US(Bureau of Labor statistics) while it was 2.9% in April, 2019(union Budget). The food prices, however, for exceeded the maximum inflation tolerance limits in these countries as given below(based on monthly changes).

Table-1 Food Inflation in the US and India : 2022 (Monthly Changes)%

	US	India
Jan	7.50	5.43
Feb	7.90	5.85
March	8.50	7.68
April	8.30	8.38
May	8.60	7.84
June	9.10	7.75
July	8.50	6.75
August	8.30	7.62
Sep	8.20	8.60
Oct	7.70	7.01
Nov	7.10	4.67
Dec	6.50	4.90

Source : Statista, BLS

The Co-efficient of Rank correction (Spearman method) shows 0.59 which indicates a moderate linear relationship in the movements of food price inflation in the two countries. However, the averages and the standard deviations show differences. Both average and the SD in the US were higher than these in India. This indicates the fluctuation rates higher in the former than the latter country. Both countries have exceeded the tolerance limits of inflation in respect of food inflation alone. Pertinently, food inflation remains outside the scope of calculating core sector prices in both the countries become food prices are highly volatile. [Investopedia]. But it is included in headline inflation factors, because of its possible high impacts on socio-economic sustainability of a country

Food security as perhaps the greatest challenge next to medical facilities during the pandemic. Supply of food was subject to broadly field production, part of manufacturing sector and the transport network. In the inventory [12] was a hurdle, because nearly 70% food and beverages are dependent on manufacturing sector. And 73% of food is ultra-processed [14], 60% of calorie intake originates from the ultra-processed ones [15]. Study shows sush food is greater among less educated, younger and lower income-specially black and non-hispanic white people (meyer and taillie, august 10, 2021, UNC). People are mostly dependent food supply out side of home (over 90% of Americans cook a meal at home once a week). Food production is adequate in the US and only 12.7% of food is imported. People live mostly in urban sector (83%) and the rural people are only 17%. The major stakeholders for food are the different big and small processing plants ; bakery products, beverages, brewed like beer, ale, food acids, citric etc. include the list of their production. In 2021-2022 the us basic food production (corn, wheat, barley, oats, soybean etc) was sufficient (except a slight decline in harvesting of oats) [16]. In fact, the output showed a surplus over and above the domestic needs including feed for animals and industrial uses.

III. INVENTORY AND SUPPLY CHAIN

Major part of inventory included suspension of production in many plants, unwillingness of workers as fear for infection broke out around. Result was empty rank in mills, decline in park production (25% from a year ago in June 2020) [17]. At least 54,036 workers including 39,905 in meat processing, 8,343 in food processing and 5,788 farmers were identified as Covid-19 positive [18]. Work force reduced by 2.6% in 2022 [19] and that also adversely affected the food processing plants of the US. Still, however 89.8% of country's people were food secure while 10.2% faced the trajectories of food insecurity in 2021 [21]. And 49 million people 'turned to banes and community for help putting food on the table' (Hunger in America) in 2022.

It is clear that the US food supply depended on the intermediary sectors industries engaged in that processing. Because people are habituated in processed foods.

India. On the other hand is mostly rural, only 35% of its population belong to urban areas. Dependency on processed foods like biscuits, bakery food and beverages and restaurant or hotels is low and casual (less than 10% while 90% food is home cooked. This the traditional habit of home priority for food. As for the customary food items rice (over 50%) [23] wheat (atta), gram, pulses, vegetables, fish, meat, eggs, milk and sweets are in top of their tastes, habits and preferences, in vegetarian families (20% to 40%, Investopedia) even do not consume non-veg. items (fish or meat). So unlike the US, India did not depend much on inventory for food and beverages supply. Here lies the comparative advantage of India crude-food supply during the pandemic and that was at par with the food habits of majority of population of the country.

India introduced free ration supply under Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) for 80.5 crore people [24] during the lockdown period. As a result the food prices were mostly within control in the open market. However, food inflation increased because of high dependency on imports of palm oil [25].

IV. CONCLUDING REMARKS

In an attempt to find the reasons behind the food price inflation during early years of Covid-19 Pandemic in the USA and India, it was revealed that food habits, tastes and preferences had important bearing upon the both countries concerned. Apart from the breaking the maximum tolerance limits of inflation within the short run, the so called food habits have impacted upon directly on the food security measures adopted in them in lockdown conditions. Based on the data support, there is perhaps no doubt that food habits etc. appeared as the guiding force for the success of the food security measures in these two countries concerned.

As for the USA, the crude food production was adequate and this was true also for India. But processed food supply was dwindling in the USA because of the then crisis in inventory out - lets/farms. Thus, market availability of habituated food items declined sharply. As a result, price index for food items moved upward sharply (Table-1) in that country.

India's experience was largely different. People here mostly live on 'semi-processed' food items (rice, atta etc.) and depend on domestic cooking as the major activity of daily living. This is the usual food habit of the majority of Indian people. As there was no intermediary factor (such as inventory out-lets in the USA), semi-processed foods were successfully supplied as food security measures in India. Price rose but at a lower rate than that in the USA.

In fine, it appears that food habits (via inventories) as in case of the USA, can largely be attributed to the rapidly rising prices of food items. While in India the food habits (traditionally established) also brought about price rise but at a lower rate compared to the country's maximum tolerance limit. Further, the food security measure in the USA was adversely affected because of the then inventory problem while India was actually safe from similar situation during the Covid-19 pandemic.

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