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Does Inflation have any association with sales?

Global economy has been witnessing upheavals due to uncertainty posed by factors such as the Russia-Ukraine conflict which resulted in supply constraints thus hampering global value chains. These have in turn pushed global prices to a new high in CY22. India has not been unaffected to these waves. Some products faced the brunt of high inflation with people restricting the purchase. However for others, the pent up demand phenomenon helped to retain growth in production. The study attempts to understand if inflation has any association with lower consumption (production as proxy where data no available) levels or it insulated from it completely.

IMF defines inflation as a sustained increase in the price level; it measures how expensive a set of goods and services have turned over a period of time (usually a year). One of the concerns of inflation is its power to render a declining standard of living for consumers. Since the onset of the Covid-19 pandemic, the inflation levels dipped sharply in CY20. Post the Russia-Ukraine conflict and other challenges, inflation has turned the other way. Different demand and supply factors have contributed in elevated inflation in CY22 pushing the global prices on an upswing. The implications of the same has been seen with global central banks on a rate hike spree in order to tame inflation. This study aims to analyse the impact of rising inflation on both the consumption and production side and understand if there is an association between the two.

India Story: Consumption side

The impact of global inflation was seen on the domestic front too with WPI print accelerating to as high as 16.6% in May'22 (all time high in the current series). It has moderated since then to 8.4% in Oct'22 (5.8% in Nov'22) led by factors such as RBI's rate hike cycle, dip in vegetable inflation amongst others. Different categories of products have been used to see if their growth was evenly impacted during the Apr-Oct'22 period vis- a- vis inflation.

Consumption/Production story

To study the impact of inflation on durable and non-durable goods, a proxy indicator for consumption i.e. production is used. It is observed that some products do respond with higher or lower production level in response to uptick or moderation in inflation. However, a blanket response across categories cannot be suggested. IIP growth for consumer durables is down by 6.6% for Apr-Oct'22 period compared with a growth of 30.4% last year. For consumer non-durables the growth has contracted down to (-) 4.2% for the same period against an increase of 7.2% in Apr-Oct'21.

Higher Inflation effects growth (Table1)

- Under consumption, higher inflation for fertilizer did have an impact on sales. Elevated global prices pushed fertilizer prices higher. This was on the back of economic sanctions imposed earlier in the year and disruptions caused under the route of Black Sea. Furthermore, supply constraints from China (suspension of exports) all pushed the prices higher. Fertilizer sales have fallen as a result of the same down by (-) 5.5% from 3.3% last year.

- Steel prices have registered a moderation, nevertheless they continue to remain elevated with double digit (at 15.8% for Apr-Oct'22). Furthermore, Government of India in May'22 had also imposed export duty, the same has been lifted off in Nov'22.
- Under production, for goods under the consumer non-durable categories such as butter, ghee, cakes, butter and chocolates the production level registered a moderation with uptick in inflation. A similar scenario is witnessed with, tea and coffee production too.
- For consumer durable products such as linen, carpets, towels, footwear and jewellery have all seen lower production level this year compared with last year on account of much high inflation during the same period.
- Apart from these goods, production of cement have also eased with acceleration in inflation. The cement sector this year was negatively impacted by elevated commodity prices. As a result, inflation for cement products edged up by 9.6% in Apr-Oct'22 from 3.1% in Apr-Oct'21, thus pulling down cement production to 8.8% from 34.9% in Apr-Oct'21.

Table 1: Higher inflation effects growth

Products	Sales Growth (YoY%)		Inflation (YoY%)	
	2021	2022	2021	2022
<i>Consumption</i>				
Fertilizer Sales	3.3	(5.5)	3.2	12.1
Steel consumption	28.0	11.7	39.5	15.8
<i>Production</i>				
Butter	5.0	(20.5)	2.0	8.7
Ghee	4.2	(0.3)	(0.1)	10.6
Cakes	(7.0)	(18.5)	5.0	8.0
Biscuits	(5.5)	(9.7)	4.2	13.1
Chocolate	27.8	13.9	3.3	5.8
Tea	8.3	(0.3)	1.1	6.0
Coffee	10.7	7.5	(2.2)	12.5
Linen	45.9	(52.3)	3.4	6.2
Wines	6.4	11.7	1.7	3.8
Towels	26.3	(36.5)	4.3	14.3
Carpet	7.6	(13.2)	0.8	9.3
Footwear	3.3	(12.6)	0.4	3.7
Tyres	44.7	6.1	4.2	7.2
Jewelry	98.1	23.5	4.7	6.4
Cement	34.9	8.8	3.1	9.6

Source: CEIC, CMIE, Bank of Baroda Research. Note: WPI is used as inflation indicator

Higher Inflation doesn't affect growth (Table 2)

Based on Table2, that throws light on whether sales of certain product has any association with high inflation

- Under consumption, certain components of fertilizer such as Urea and DAP has no such association with higher inflation.
- For production, categories such as detergent, ice cream, Mobile and even toothpaste, the production level across these products have grown from last year, despite increase in prices thereby suggesting there is no such association of these products with inflation.

Table 2: Higher inflation doesn't effect growth

Products	Sales Growth (YoY%)		Inflation (YoY%)	
	2021	2022	2021	2022
<i>Consumption</i>				
Urea	(12.2)	16.7	(0.5)	2.1
DAP	(32.8)	43.7	5.3	16.1
<i>Production</i>				
Ice cream	120.1	55.8	7.7	5.9
Detergent	(4.1)	5.6	7	12.1
Toothpaste	(5.0)	(4.7)	1.6	12.3
Mobiles	(12.7)	26.5	3.9	8.3

Source: CEIC, CMIE, Bank of Baroda Research. Note: WPI is used as inflation indicator

Inflation may or may not have any effect on growth (Table 3)

- The auto sector had been struggling due to chip shortage for the last few year. This was reflected with lower and delayed production. The supply constraint had pushed the prices higher. With gradual easing of supply constraints and on the back of the festive surge, Passenger vehicles sales have grown during the Apr-Oct'22 period compared with last year. Inflation during this period has remained steady thus signalling that inflation itself has no association with sales and there are other factors impacting the sales.
- A similar scenario is noted with two-wheeler and tractor sales. Rural demand continues to be robust and higher inflation will not derail the pace of growth of this sector.
- Computer production has surged this year (Apr-Oct'22) even as inflation has inched up. Inflation may hence not have any direct association with the production.

Table 3: Inflation association with growth is unsure

Products	Sales Growth (YoY%)		Inflation (YoY%)	
	2021	2022	2021	2022
<i>Consumption</i>				
PV Sales	35.6	38.0	1.5	1.5
Tractors sales	12.8	9.4	3.0	5.4
2 wheeler/3 wheeler sales	0.2	21.8	5.2	5.0
<i>Production</i>				
Computers	71.0	119.5	(0.3)	0.2

Source: CEIC, CMIE, Bank of Baroda Research. Note: WPI is used as inflation indicator

Conclusion

For FY22 (Apr-Oct'21), across categories both production and sales growth has been higher on the back of higher base along with pent up demand. As a result, this year both production and consumption growth was expected to dip. However for certain products, high inflation did have some impact on growth. In addition to higher inflation rate, other factors such as incessant rains and falling consumer sentiment especially towards certain categories of consumer durable goods also had some association with moderation in sales growth. Also evidently, some of the slowdown was visible across the discretionary products with higher priced items sometimes facing the brunt of the same. However, other products remain insulated despite higher inflation.

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