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Change in direction of trade in Agricultural commodities during post reform period.

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Introduction

At the world level, India is regarded as an agriculture-based economy. From the recent past to the ancient era, any state or province that was in agriculture was thought to be the most powerful among others. Exports are a type of International trade in which items produced in one country are shipped to another for sale or trade in the future. In International trade, an export is a product that is shipped from one country to another a good or service produced in one nation and purchased by another someone from a different country. As a large source of foreign exchange earnings, a crucial factor in crop diversification and a major contributor to higher farm income, agricultural export performance has long caught the attention of policy makers. India's agricultural exports of rice, sugar, spices, and marine items are on the rise in 2019-2020. Since the start of the economic reforms in 1991, India has been a net exporter of agri-related goods.

Selection of the Commodities

For a thorough investigation, the main agricultural exports from India between 1990-1991 and 2019-2020 were chosen. The value-based export trends were examined based on the top 20 commodities exported from India, i.e, Basmati Rice, Non Basmati Rice, Sugar, Gruound nut, Cashew, Tobacco, Oil Meals, Fruits, Vegetable Seeds, Pulses, Wheat, Tea, Spices, Castor oil, Marine Products, Shellac, Sesamum Seeds, Cotton (including raw materials), Guargram, Cashew nut liquid,Coffee and others.

Change in direction of trade

The pattern of India's exports to various parts of the world revealed that the direction of trade significantly shifted over time. To analyze the change, percentage of Net shift (P_i) formula *(Huff and Sherr)* is used.

$$\% \text{ Net Shift } (P_i) = N_i/S$$

$$N_i \text{ is the net shift} = \text{Actual change} - \text{Expected Change}$$

$$\text{Actual change} = \text{Period II} - \text{Period I}$$

$$\text{Excepted change} = \text{Growth rate} * \text{Period I}$$

$$S = \sum N_i/2$$

$$P_i = N_i/S \ (100\%)$$

The expected value of the growth is the product of growth rate of all items and the value at the initial time period.

The expected change of the value of a growth variable for a particular item in a given time period is the difference between the expected value and the actual value for the item at the end of the initial time period.

The difference between the actual change and the expected change is the net shift.

$$N_i = \text{Actual change} - \text{Expected change}$$

Now the sum of positive net shifts and sum of negative net shifts S represents the total absolute net shift.

$$S = \sum N_i/2$$

The relative gain or loss in the value of a growth variable for a particular product in a given time period is defined as the percentage net shift (P_i). So,

$$P_i = N_i/S \ (100\%).$$

Table represents diversification of exports was more among the three decades of each commodity because of high remunerative prices of that particular decade.

1. Basmati rice

In 1991-2000, the diversification of exports was 1.27 per cent, in 2001-2010 was 15.27 per cent, 2011-2020 was 0.05 per cent. It was more during 2001-2010.

2. Non basmati rice

In 1991-2000, the diversification of exports was 5.27 per cent, in 2001-2010 was 4.3 per cent, and in 2011-2020 was 1.49 per cent. It was more at 1991-2000

3. Sugar

In 1991-2020, the diversification of exports was 12.8 per cent, in 2001-2010 was 9.94 per cent, and in 2011-2020 was 0.09 per cent .It was more at 1991-2000.

4. Ground nut

In 1991-2000, the diversification of exports was 6.14 per cent, in 2001-2010 was 19.3 per cent, in 2011-2020 was 0.07 per cent. It was more at 2001-2010.

5. Cashew kernel

In 1991-2000, the diversification of exports was 14.0 per cent, in 2001-2010 was 15.6 per cent, and in 2011-2020 was 0.09 per cent .It was more at 2001-2010.

6. Tobacco

In 1991-2000, the diversification of exports was 15.8 per cent, in 2001-2010 was 13.4 per cent, and in 2011-2020 was 20.08 per cent. It was more at 2011-2020.

7. Oil meals

In the 1991-2000, the diversification of exports was 12.79 per cent. In 2001-2010 was 10.87 per cent; in 2011-2020 was 23.34 per cent. It was more at 2011-2020.

8. Fruits/vegetable seeds

In the 1991-2000, the diversification of exports was 12.45 per cent, in 2001-2010 was 23.75 per cent, and in 2011-2020 was 4.31 per cent. It was more at 2001-2010.

9. Pulses

In 1991-2000, the diversification of exports was 5.33 per cent, in 2001-2010 was 23.50 per cent, and in 2011-2020 was 0.11 per cent. It was more at 2001-2010

10. Wheat

In 1991-2000, the diversification of exports was 10.23 per cent, in 2001-2010 was 11.60 per cent, and in 2011-2020 was 0.03 per cent. It was more at 2001-2010 .Wheat registered least diversification among all commodities at decade III.

11. Tea

In 1991-2000, the diversification of exports was 22.27 per cent, in 2001-2010 was 20.02 per cent, and in 2011-2020 was 18.73 per cent. It was more at 1991-2000.

12. Spices

In 1991-2000, the diversification of exports was 11.10 per cent, in 2001-2010 was 11.57 per cent, and in 2011-2020 was 6.53 per cent. It was more at 2001-2010.

13. Castor oil

In 1991-2000, the diversification of exports was 4.19 per cent, in 2001-2010 is 19.51 per cent, and in 2011-2020 was 4.72 per cent. It was more at 2001-2010.

14. Marine products

In 1991-2000, the diversification of exports was 10.70 per cent, in 2001-2010 was 19.25 per cent, and in 2011-2020 was 5.87 per cent .It was more at 2001-2010.

15. Shellac

In 1991-2000, the diversification of exports was 18.62 per cent, in 2001-2010 was 14.90 per cent, and in 2011-2020 was 2.45 per cent. It was more at 1991-2000.

16. Sesame seeds

In 1991-2000, the diversification of exports was 14.88 per cent, in 2001-2010 was 20.25 per cent, and in 2011-2020 was 22.11 per cent. It was more at 2011-2020.

17. Cotton

In 1991-2000, the diversification of exports was 61.27 per cent, in 2001-2010 was 2.75 per cent, and in 2011-2020 was 0.11 per cent. It was more at 1991-2000. Cotton registered high diversification among all commodities at decade I.

18. Guar gum

In 1991-2000, the diversification of exports was 24.84 per cent, in 2001-2010 was 15.11 per cent, and in 2011-2020 was 0.10 per cent. It was more at 1991-2000.

19. Cashew nutshell liquid

In 1991-2000, the diversification of exports was 34.14 per cent, in 2001-2010 was 6.35 per cent, and in 2011-2020 was 15.96 per cent. It was more at 1991-2000.

20. Coffee

In 1991-2000, the diversification of exports was 5.53 per cent; in 2001-2010 was 20.51 per cent. In 2011-2020 was 16.06 per cent. It was more at 2001-2010.

21. Others

In 1991-2000, the diversification of exports was 16.89 per cent, in 2001-2010 was 11.37 per cent, and in 2011-2020 was 14.75 per cent. It was more at 1991-2000.

Change in direction of trade in Agricultural commodities during post reform period 1991-2020.

Commodities	Year	Diversification of exports in percentage
Basmati rice	1991-2000	1.27
	2001-2010	**15.26**
	2011-2020	0.05
Non basmati rice	1991-2000	**5.27**
	2001-2010	4.30
	2011-2020	1.49
Sugar	1991-2000	**12.88**
	2001-2010	9.94
	2011-2020	0.09
Ground nut	1991-2000	6.14
	2001-2010	**19.31**
	2011-2020	0.07
Cashew kernel	1991-2000	14.03
	2001-2010	**15.67**
	2011-2020	0.09
Tobacco	1991-2000	15.83
	2001-2010	13.41
	2011-2020	**20.81**
Oil meals	1991-2000	12.79
	2001-2010	10.87
	2011-2020	**23.34**
Fruits/vegetable seeds	1991-2000	12.45
	2001-2010	**23.75**
	2011-2020	4.31
Pulses	1991-2000	5.33
	2001-2010	**23.50**
	2011-2020	0.11
Wheat	1991-2000	10.23
	2001-2010	**11.60**
	2011-2020	0.03
Tea	1991-2000	**22.27**
	2001-2010	20.02
	2011-2020	18.73
Spices	1991-2000	11.10
	2001-2010	**11.57**
	2011-2020	6.53
Castor oil	1991-2000	4.19
	2001-2010	**19.51**
	2011-2020	4.72
	1991-2000	10.70

Marine products	2001-2010	**19.25**
	2011-2020	5.87
Shellac	1991-2000	**18.62**
	2001-2010	14.90
	2011-2020	2.45
Sesame seeds	1991-2000	14.88
	2001-2010	20.25
	2011-2020	**22.11**
Cotton	1991-2000	**61.27**
	2001-2010	2.75
	2011-2020	0.11
Guar gum	1991-2000	**24.84**
	2001-2010	15.11
	2011-2020	0.10
Cashew nut shell liquid	1991-2000	**34.14**
	2001-2010	6.35
	2011-2020	15.96
Coffee	1991-2000	5.53
	2001-2010	**20.51**
	2011-2020	16.06
Livestock products	1991-2000	**16.89**
	2001-2010	11.37
	2011-2020	14.75

Conclusion

On the basis of the discussion above, it can be concluded that Change in direction of trade is identified with net shift. Diversification was more in non basmati rice, sugar, tea, shellac, cotton, guar gum, cashew nut shell liquid, others and no commodity was observed with maintaining stability at decade I. Diversification was more in basmati rice, ground nut, cashew kernel, fruits/vegetables, pulses, wheat, spices, castor oil, marine products, and coffee and no commodity is maintaining stability at decade II. Diversification was more in tobacco, oil meals, sesame seeds, and least diversification was registered in wheat at decade III. High diversification was because of high remunerative prices.

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