(4)

Page 408-416

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DRIVERS OF HIGH ECONOMIC GROWTH

- Energy Consumption
- Gross Capital Formation
- Remittance Inflow
- International Trade
- Foreign Direct Investment
- Government Final Consumption Expenditure
- Total Factor Productivity
- Demographic Dividend
- Human Capital Development
- Research & Development, Technology & Know-how
- Automation and Digital Connectivity
- Urbanisation
- Efficient Use of Resources
- Trade Surplus

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Consumption of Food and Data: A driving force behind economic growth

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Abstract

India is the youngest country in the world and its economy is driven by the consumption. Consumption at household level contribute 59.7% to GDP. The consumption of goods and services depends upon the various factors like income, caste, class, culture, education, geography and connectivity etc. The factors which affect the consumption of food are also affect the economic growth of the country. However, the consumption of non-food items may independent to above factors. Here data consumption, as a non-food intangible commodity, along with food consumption, as tangible commodity, taken as a subject matter of research. How data and food consumption deriving force of economic growth? Availability, accessibility and affordability are three common challenges for both type of consumption and impediment to economic growth apart from the above factors. Food consumption as a matter of choice has always determined by the socio-economic factors like caste, class, culture, capability (income) and connectivity (5C). Bhopal in Madhya Pradesh and Shillong in Meghalaya wherein the primary survey on food and data consumption carried out have a cross-culture study, targeted age groups were same, Shillong is more homogenous in terms of caste, class and income as compare to Bhopal. The reports of Telecom Regularity Authority of India, National Family Health Survey-5 and Dashboard of Department of Telecommunications has shown the demand of data consumption is inelastic and it has become an essential commodity which greatly contributed to sustained growth of Indian economy. On the other hand, demand food consumption is elastic. Apart from responsive to price change, pattern of food consumption is determined by 5C. The way data consumption has become an enabler tool to remove all the barriers that still persist with food consumption has surprised me. Information Communications Technologies (ICTs) has the potential to overcome all the barriers and minimises the effect of 5C constraints in the determination of the pattern of food consumption. Food as an essential commodity for survival as well as a matter of choice which is a very fundamental human right. Right to Food and Right to data are going to be very fundamental rights for overall well-being of nation. For the overall growth of economy of the youngest India we must ensure consumption smoothing in respect of data as well as food.

Key Words: Information Communications Technologies (ICTs), Consumption smoothing, International Telecommunications Union (ITU), Telecom Regularity Authority of India (TRAI), National Family Health Survey (NFHS), Subjective Well-Being (SWB).

Introduction:

Historically, Indian economy based on reciprocal exchange system, the people of country living at subsistence level. On arrival of Britisher into India with a royal Farman/permission for the period of 20 years to trade in Indian sub-continent. East India company disturbed Indian system of reciprocal exchange and the entity of market came into existence. The market is profit driven entity. For that Britisher had exploited the Indian economy. After the independence of India in 1947, we followed close model of economy as we had witnessed the dark face of British era. Entropy of a system increases when it is closed and isolated.

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The increased entropy destroyed the system of Indian economy due to policy of isolation. India a hugely debt-ridden country prior to 1990 and finally we opened its economy by liberalizing its policies, privatization its economic sectors and move towards the globalization.

India is a young country and its economy is consumption driven. Household consumption contribute 59.7%, government consumption contributes 11.7%. Total consumption contributes 71.4% in India's Gross Domestic Product (GDP). Consumption here means all kinds like food, non-food including service consumption and data consumption etc. So far many study and research have been done on food consumption. Food and non-food studies have also been done. In the 21st century, data consumption is shaping various governance schemes and policies. Therefore, through this paper, I am attempting to find linkages food and data consumption and planned our study as below.

In this paper, main focus on the consumption of food and data as in 21st century, a new trend has been observing in respect of these two goods / commodities namely food and data, though the both are essential in life. Food is elastic commodity while data is nearly inelastic one.

Section one of the paper deals with the factors which affects the food consumption, second and third section deals with telecom connectivity and factors affecting the consumption of data. fourth section deal with the relationship between both tangible (food) and intangible (data) consumption and in last the section is conclusion and way forward.

I. What factors affect food consumption?

The pattern of food consumption has been influenced by socioeconomic inequality since the dawn of human history. Caste, class, culture, are main factors which have been determined our consumption need but now new factor that is technology in general while digital connectivity in particular shaping composition of our thali (food plate)? What role does technology play in promoting smoother consumption? As long as the aforementioned factors are balanced across all facets of life, the need for food consumption typically remains unaffected.

In India, food and caste are intertwined in such a way that pollution and purity are characterized by food type and food production, with vegetarian and pucca food symbolizing purity and non-vegetarian and kutcha food polluting, which is meant for lower caste people. Furthermore, food choices reflect one's caste, with Brahmin and Vaisya Verna typically eating vegetarian fare while the other two Verna may indulge in meat (Staples, 2014). Consuming the right food is therefore a crucial component of maintaining their reputation as members of the so-called upper caste.

After the 1990s, when India's economy began to open up, a new class emerged, known as the "new middle class". The upper castes reaped the greatest benefits from economic liberalization, and thus the class and caste distinctions are once again becoming increasingly blurred. Weberian Approach considers the relationship between lifestyle and status group differentiation to be more useful than a 'Marxian' view in which class is more firmly tied to differences in access to and control over the means of production (Klein, 2014). As a result, the industrialization of food has had a homogenizing effect on both caste and class. India still has a "culinary diglossia" difficulty in addition to homogenization (Klein, 2014).

Another impediment factor that affects consumption patterns, is culture. For example, in a patriarchal society, when a woman shifts from her parental home to her in-law's place, she notices a change in food consumption due to the social pressure of rituals or the prevailing culture of family. Another example is when a person migrates from his or her hometown to a new place for a job, he or she experiences a decrease in the amount of food consumption. We all prefer homemade food because we have been eating it since childhood and have developed a particular food preference or habit.

...rbanization and globalization have increased the level of mass consumption as a result of rapid overall ...velopment, particularly connectivity, which includes rail-road-telecom and food chains. Because the ...iddle class consumes more fast food than local foods, global food or fast food chains undoubtedly ...ntribute to cultural losses, but fostering consumption smoothing.

Telecom Connectivity.

...hree decades ago less than ten million internet users which now is more than five million internet ...rs. According to ITU global connectivity report 2022, one third humanity i.e., 2.9 billion people ...hain offline globally and covid-19 has demonstrated the cost of digital exclusion (Bogdan-Martin, ...2). Absence of connectivity hit individually at different level or grades differently, like students ...sed their classes due to poor or no connectivity, patients with non-covid-19 disease could not get ...tment and poor household have had strived for food because they have no connectivity to convey ...r hunger during lockdown. Telecom connectivity is enabler for subjective well-being (SWB) through ...ch everything is available on a single click. In Meghalaya. Women in Madhya Pradesh and ...halaya owned mobile phone 38.5% and 68% respectively and out of which 35% of women in ...halaya uses internet services while in MP its only 26.9% as per National Family and Health Survey- ...FHS-5:2019-20) (welfare, 2019-21). The national average data consumption per subscriber per ...h is 15.8GB in the quarter-4 of 2021-22 (Q4:2021-22) as per department of telecommunications ...board. The tariff per GB data is Rs.10.47/- in the same quarter (Telecommunications, 2022).

Factors affecting the data consumption.

...e data consumption, there are three factors viz. availability, accessibility and affordability. ...ding to TRAI report as on June,2022 India has 85% tele density that is 1.17billion out of total 1.38 ...population has connectivity that means still 20 crore people are off-line. In terms of meaningful ...ctivity, wherein the possibility for everyone to enjoy a safe, satisfying, enriching, productive and ...able online experience, only 800.94 million (0.8 billion) subscribers (INDIA, 2022). Accessibility ...itself has affordability dimension apart from infrastructure, device, skill or digital literacy, safety ...curity are sub-factors which affects the data consumption.

...elationship between food and data consumption.

..., Education and Geography are three independent variables on which consumption depends ...keeping other factors ceteris paribus. Disposable income has direct relationship with the ...ption which is expressed by to consider is household wealth. Cc+[Cf/(1+r)]=Yc+[Yf/(1+r)] is an ...on for the intertemporal budget constraint of the household, Cc=current consumption; Cf=future ...otion; r=interest rate; Yf=future income or wealth. Similarly, Education has impact on ...otion on both data and food as education enhance the productivity and efficiency due to that ...and livelihood opportunities increases (Michael, 1974). An educated person consume data for ...ility online learnings, gathering useful information etc and quality use of data improves the ...well-being. Geography is a major factor which has impacted both data and food consumption ...In Hilly terrain creating digital infrastructure is much more expensive and the quality of digital ...vity is poor as compare to plain areas. Similarly, production of food is very expensive as in hilly ...farming and limited slash-burn farming which is labour intensive activity makes this whole ...food production chain is an expensive affair.

...analysis

...evious sections we have explained about food and data consumption theoretically in ...nt manner based on past research and other secondary sources. We also discussed in about the ...ich affecting food as well as data consumption separately. In this section some empirical ...ased on the primary data collected through survey on both the capital cities of Madhya

Pradesh and Meghalaya that is Bhopal and Shillong respectively. In this survey total 24 questions were asked and all the 24 questions are not open ended. We targeted total 500 responses but get only 466 responses whose breakup by using spreadsheet filter is 266 responses from Bhopal and 200 responses from Shillong.

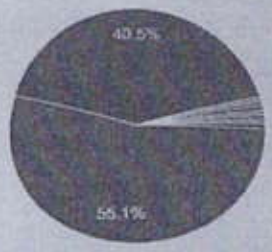
(A)Personal Details

Name and Place					
Age (Years)		**Gender**		**Education**	
(i) 15-25		(i) Male		(i) 10+2 or Equivalent	
(ii) 25-35		(ii) Female		(ii) Graduation	
(iii) 35-45				(iii) Other	
(iv) 45 and Above					
(B) Data Consumption					
Type of Mobile Phone		**Data use per day**		**Recharge Pattern**	
(i) Smart Phone		(i) less than 1 GB		(i) less than Rs. 300	
(ii) Other		(ii) 1GB to 2GB		(ii) Rs. 300 per month	
		(iii) 2GB and more		(iii) Rs. 500 and more	
(C) Non-Data Consumption					
Textile or Footwear per month		**Saloon Expenses per month**		**Alcohol consumption per month**	
(i) Rs. 1000		(i) less than Rs. 300		(i) less than Rs. 500	
(ii) Rs. 2000		(ii) Rs. 300 to Rs. 600		(ii) Rs. 500 to Rs. 1000	
(iii) Rs. 3000		(iii) Rs. 600 and Above		(iii) Rs. 1000 to Rs. 2000	
(iv) Rs. 4000				(iii) Rs. 2000 and Above	
(v) more than Rs. 4000				(iv) Nil	
Tea and Coffee Consumption per day		**Juice intake per day**		**Milk intake per day**	
(i) 2 cups		(i) 1 glass		(i) 1 glass	
(ii) 3 cups		(ii) 2 glass		(ii) 2 glass	
(iii) 4 cups and Above		(iii) Nil		(iii) more than 2 glass	
(iv) Nil				(iv) Nil	
Pan masala, Tobacco, Cigarette per month		**Number of meals per day**		**Thali Composition**	
				(i) Daal	

(ii) Rs. 500 to Rs. 1000		(ii) 3		(ii) Rice	
(iii) Rs. 1000 to Rs. 2000		(iii) more than 3		(iii) Roti	
(iv) Rs. 2000 and Above				(iv) Vegetable	
(v) None				(v) Non Vegetable	
Electricity bill per month		**Public transport per month**		**Diesel/ Petrol expenses per month**	
(i) less than 500		(i) less than 500		(i) Rs. 1000	
(ii) more than 500		(ii) Rs. 500 to Rs. 1000		(ii) Rs. 1000 to Rs. 2000	
		(iii) more than Rs. 1000		(iii) Rs. 2000 to Rs. 3000	
		(iv) None		(iv) More than Rs. 3000	
				(v) Nil	
School fee per year		**Books and stationary expenses per year**		**No. of family members**	
(i) In Rupees		(i) Rs 2000/-		(i) 3	
(ii) Nil		(ii) Rs. 5000/-		(ii) 4	
		(iii) more than Rs. 5000/-		(iii) 5	
				(iv) 6	
				(v)7 and above	

No. of earning members in a family	
(i) 3	
(ii) 4	
(iii) 5	
(iv) 6	
(v)All	

The questionnaire has three segments one is related personal information of respondent like name, place, age, education, gender. This segment is focus on the parameter of geography and education. In the next segment of questionnaire, respondents were asked about the family size, number of working members in family, expenditure on food and non-food items. From this segment I tried to assess indirectly the information about household income as asking direct information on income, respondent may hesitate to disclose their accurate income. Regarding data consumption, we have put direct question about the mobile device like smart phone or other, monthly package or yearly package / plan and per day how much data you consume in Giga Byte (GB). This study is an attempt to validate null-hypothesis as Bhopal is mix of all the caste while in Shillong is primarily a tribal capital.



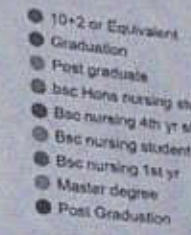
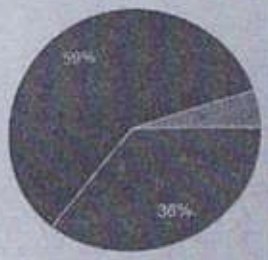


Fig-1: Education



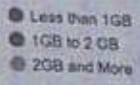
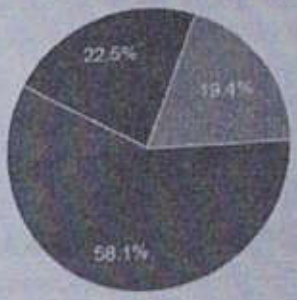


Fig-2: Data Consumption



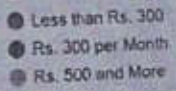


Fig-3: Recharge Pattern

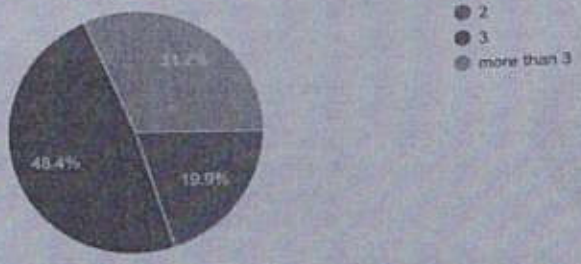


Fig-4: No. of meals per day

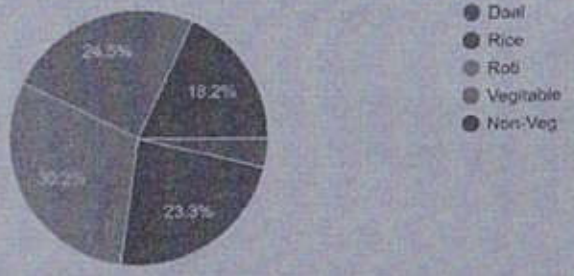


Fig-5: Thali composition

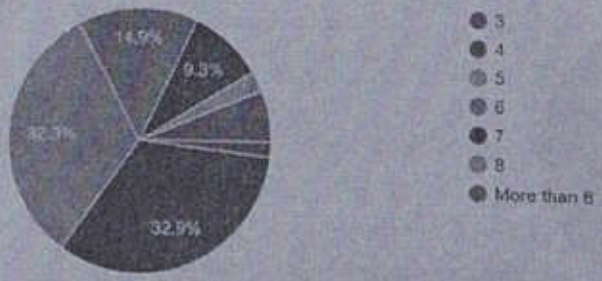
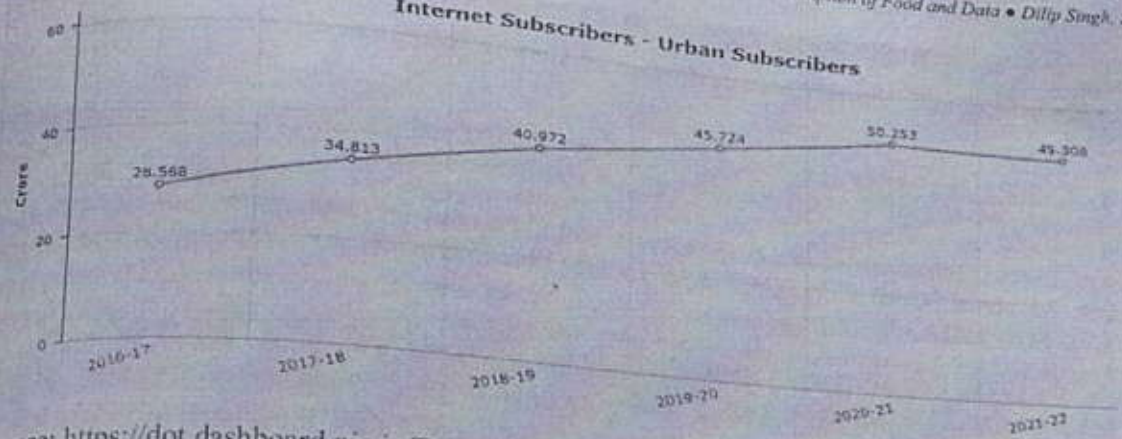


Fig-6: Household size



Source: https://dot.dashboard.nic.in/DashboardF.aspx

Table-1

Sl.no	Duration	Per Subscriber Per Month- Current (GB)	Tariff per GB-Current (Rs.)	Total Revenue Per Subscriber Per Month
1	Qtr-3 (2020-21)	12.130	11.01	134
2	Qtr-4 (2020-21)	12.330	10.77	133
3	Qtr-1 (2021-22)	14.100	9.8	138
4	Qtr-2 (2021-22)	14.730	9.53	140
5	Qtr-3 (2022-22)	14.970	9.91	148
6	Qtr-4 (2021-22)	15.800	10.47	165

Source: https://dot.dashboard.nic.in/DashboardF.aspx

In the above table, which shows that the demand of data consumption is inelastic as per subscriber data consumption is steady growing while the tariff per GB go up and down. The calculated elasticity for the Qtr-3 to Qtr-4 for the year 2021-22 is 0.98 that means data consumption is unresponsive to tariff or income and now has becomes an essential commodity like food is essential for survival (Telecommunications, 2022).

VI. Conclusion

Estimated disposable income is calculated by adding all the expenditures including durable and non-durable goods, services, data consumption plus information gathered from primary survey and the average income per capita comes about Rs.10390/- per month in respect of Bhopal while Rs.7530/- for Shillong. The demand of food consumption is elastic while for the data it is inelastic. That means the consumption of data is independent to caste, culture income and geography while food consumption depends on all viz. caste, class, culture, education, income and geography. The way data consumption has become an enabler tool to remove all the barriers that still persist with food consumption has surprised me. Apart from that the national average per subscriber per month data expenditure is around Rs135 -165/- if we sum it for 1.17 billion subscribers than how much it contributes to the economy in absolute term. While for Shillong it is between Rs 400/- to Rs 500/- per subscriber per month, which is more or less same for Bhopal. Internet data consumption further fuel our knowledge driven economy, as per Indian Council for Research on International Economic Relations (ICRIER), 10% growth in Internet [illegible] of growth in State per capita GDP. Data consumption not

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(416)