

Estimation of Tourism Employment through Tourism Satellite Account – Indian Experience

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Importance of Tourism Employment

- Job Generation has been one of the most important priority in India
- Tourism Sector provides significant proportion of jobs in informal sector and also for unskilled manpower.
- Unlike the manufacturing Industries, spread of tourism jobs is much wider, even some of the backward regions of the country have important tourist spots - Tourism jobs at such places helps in decreasing the poverty and regional disparities.

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Sources of Employment Data

- Population Census and Quinquennial surveys conducted by the National Sample Survey Organisation (NSSO) are the main sources of employment data in the country.
- NSSO provides extensive data on different aspects of employment and unemployment. However, data are generally published at 3 digit of National Industrial Classification (NIC)

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Sources of Employment Data

- As the tourism related services overlap different NIC codes, it has not been possible to generate estimates of tourism employment from NSSO surveys
- Even some of the NIC codes such as for Hotel and Restaurants, employment is available but all the employment in this sector are not tourism related

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Sources of Employment Data

- Therefore, Tourism Satellite Account (TSA) framework has been found to be the best alternative for getting the tourism employment data.

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TSA's Journey in india

- Work started with a Feasibility Study on TSA in 2001
- This study identified the data gaps in the existing system vis-à-vis the requirements for TSA
- This study, inter-alia, recommended taking up surveys to assess tourist expenditure and development of 7 Tables of TSA

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TSA's Journey in India (2)

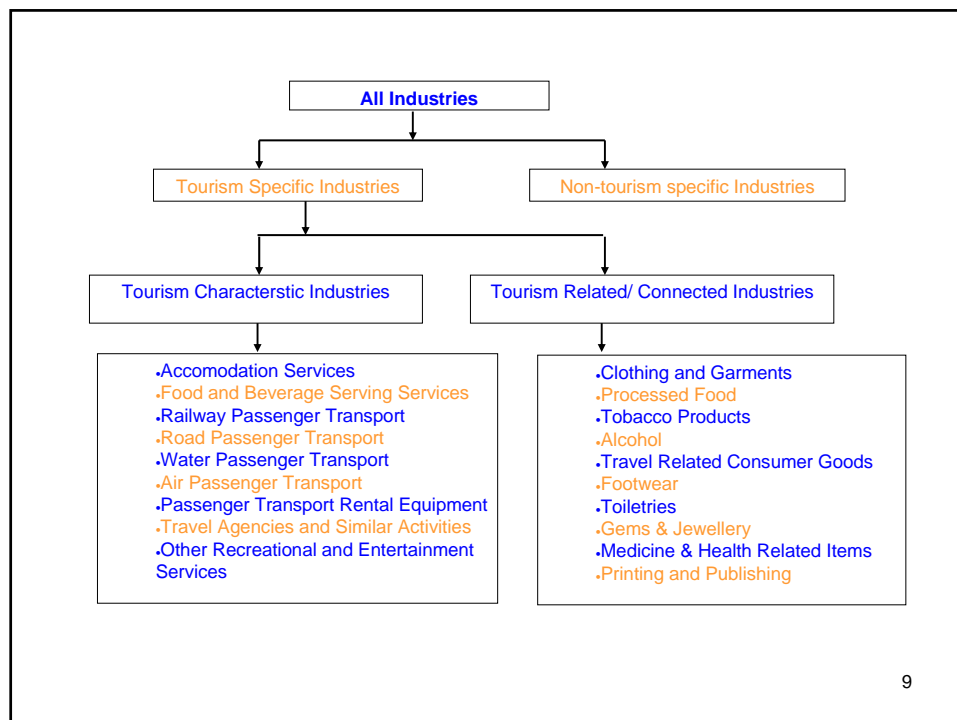
- Following the Feasibility Study, Ministry of Tourism commissioned following surveys/ studies:
 - Domestic Tourism Survey during 2002
 - International Passengers Survey during 2003
 - TSA Report for Reference Year 2002-03 was released in 2006

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TSA 2002-03 for India

- Guided by an Advisory Committee
 - Chaired by Secretary (Tourism), with representatives of National Statistical Office (CSO), M/o Labour, Planning Commission, Central Bank (RBI)
- Active Involvement of National Statistical Office in the Technical Work of TSA

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Data Source from Demand Side

- All items of expenditure of tourists, as obtained from the Domestic Passenger Survey and International Passenger Survey, were mapped to the different tourism specific industries identified.
- Domestic Tourism Survey: Sample size-64580 hhs in rural and urban areas -2002-03
- International Passenger Survey: Sample size- 18000 foreign tourists, 10000 Indians and 2000 transit passengers

Data Source from Supply side

From supply side, value of output and value added for each of the tourism industries are obtained from the following sources:

- CSO's published and unpublished estimates of National Accounts Statistics
- Ratio of value added and output from the Input-Output tables of 1998-99
- NSSO's 2001-02 survey on Unorganized Service Sector

(Industry-wise sources are given in following table.)

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Data Sources for Supply Side Tables

Tourism Characteristic Industries		
	Source of Data	
	Value Added	Value of Output
Hotels and Restaurants	NAS	
Accommodation Services	NSSO 2001-02 ratios	CSO 2001-02 VA/Q ratio
Food and Beverage Serving Services	NSSO 2001-02 ratios	NSSO 2001-02 VA/Q ratio
Passenger Transport Services		
Railway	NAS	VA/Q ratio of I/O 1998-99
Road		
Buses	CSO Unpublished	VA/Q ratio of I/O 1998-99
Other mech vehicles*	CSO Unpublished	VA/Q ratio of I/O 1998-99
Non Mechanised Road Transport	CSO Unpublished	VA/Q ratio of I/O 1998-99
Water	CSO Unpublished	VA/Q ratio of I/O 1998-99
Air	CSO Unpublished	VA/Q ratio of I/O 1998-99
Transport Equipment Rental*		VA/Q ratio of I/O 1998-99
Travel Agencies and similar	NAS	VA/Q ratio of I/O 1998-99
Other Services (Recreational and Entertainment)	CSO	VA/Q ratio of I/O 1998-99

* Other mechanised road transport includes transport equipment rental also, for which data is not separately available. Ratios from NSSO 2001-02 survey are used to get the breakup.

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Data Sources for Supply Side Tables

Tourism Related Industries	
Clothing and Garments	Value added estimates at 2-digit level are available from the CSO. But the industries producing the listed products are only a part of industries identified at NIC 2-digit level. So the proportions of value added of these industries and the corresponding ones at 2-digit level as available from the data of Annual Survey of Industries and NSSO 2000-01 survey are used. Also VA/Q ratios from these sources are applied on the valued added estimates to get the value of output of these industries.
Processed food	
Tobacco products	
Alcohol	
Durable goods	
Footwear	
Toiletries	
Gems and Jewellery	
Medicines and Health Related items	
Printing & Publishing	

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Estimating Tourism Employment

- Measurement of employment in TSA exercise in India has been limited to estimating the number of jobs.
- The principal as well as subsidiary status of workers, is taken into account, as done by CSO for estimating the total employment.

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Estimating Tourism Employment (2)

- Total employment (jobs) in the economy in 2002-03 was obtained by using the data of NSS surveys of 1993-94 and 1999-2000.
- The employment estimates were worked out separately for Tourism characteristic industries and Tourism related industries.

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Estimating Tourism Employment (3)

- For Tourism characteristic industries, labour to output ratio of 57th Round of NSSO survey on Unorganised Service Sector, conducted in 2001-02, was used. ($E/O = r$)
- The ratio obtained from this survey was applied to the output of these industries obtained on the basis of NAS and other data sources to get the total jobs in these industries. ($O * r = E$)
- The same ratios were also applied on the Tourism Demand obtained from the Domestic Tourism and International Passenger Surveys to get the tourism specific jobs in these industries. ($O_{DE} * r = E_{TS}$)

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Estimating Tourism Employment (4)

- For tourism related industries, employment estimates prepared by CSO for the year 1999-2000 were used.
- The total jobs in 2002-03 in the economy was apportioned for the tourism related industries in the same ratio as observed in 1999-2000.
- To get the tourism specific jobs in each of these industries, the respective tourism industry ratios (TIR) were applied to the total jobs in each industry.
 - TIR for an industry is the ratio of tourism demand and value of output of that industry.

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Estimating Tourism Employment (5)

- The total of jobs in tourism characteristic industries and tourism related industries gives the total jobs, as well as tourism specific jobs in these industries.

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Estimating Tourism Employment (6) – Direct and Indirect Contribution

- As done for value added, multiplier analysis was done for employment also to get the direct and indirect impact of tourism in employment.
- Employment coefficient, which is the labour to output ratio, was computed for each of the 115 sectors included in the Input Output Table.

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Tourism Employment (Number of jobs in Lakh)		
Industry	No. of Jobs	Tourism Specific Jobs
(A) Tourism Characteristic Industry		
Accommodation services	6.22	5.71
Food and beverage serving services	74.14	13.65
Passenger transport services		
- Railway	10.24	3.01
- Road		
Buses	55.87	34.98
Other mechanised vehicles	118.31	3.11
Non-mechanised road transport	38.03	34.15
- Water	92.90	2.04
- Air	15.78	14.80
Transport equipment rental	2.72	2.04
Travel agencies and similar	77.39	74.01
Other recreational and entertainment activities	12.38	6.06
Sub-total (A)	503.99	193.57
(B) Tourism Related Industry		
Clothing and garments	49.87	11.07
Processed food	21.40	0.61
Tobacco products	45.03	0.94
Alcohol	4.35	0.01
Travel related consumer goods	8.35	1.29
Footwear	6.74	0.52
Toiletries	4.50	0.17
Gems and jewellery	15.27	2.31
Medicines and health related items	3.59	0.36
Printing and publishing	7.85	0.22
Sub-total (B)	166.95	17.49
Total (A+B)	670.94	215.4

Contribution of Tourism to Employment (No. of Jobs)

Total Employment (Million)	468.7
Total Tourism Employment (Million)	21.5
Tourism Employment Multiplier	1.8
Share of Tourism in Employment	
Direct	4.59 %
Direct and Indirect	8.27 %

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Impact of Same-Day Visits

- The WTO recommends TSA exercise to include the expenditure by same-day visitors.
- But in the TSA exercise for India, such expenditure has been excluded.
 - As Same-day visitor estimates are available only for one month from Domestic Tourism Survey.
- Estimating the contribution of same-day tourism, based on some liberal assumptions and a fairly small sample canvassed in only one month of the year, the share of tourism in GDP as well as employment goes up by about 1%.

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Limitations of the Exercise

- For proper employment policy formulations, details such as age, sex, education, full/part time, wages, etc are also required – Unfortunately TSA does not provide such details
- In estimating the total number of jobs, only one subsidiary activities of an individual was taken – this may result in marginal underestimation of total number of jobs.

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Limitations of the Exercise

- Data for the supply side of the TSA was taken from National Accounts Statistics (NAS). For most of the industries, data were not readily available at the desired disaggregated level.
- Desired data was compiled using the ratios available from different surveys conducted by NSSO, which may have influenced the quality of results to some extent. E.g. Hotel & Res. Aggregate output in NAS but in TSA, Accommodation and Food Services separate
- Some operational issues relating to the Domestic and International Passenger Survey

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Way Forward

- Activities for preparation of 2nd TSA already started
 - Domestic Tourism Survey being conducted during July 2008 to June 2009
 - International Passenger Survey likely to start from April, 2009 will be over in March 2009

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Thank You

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**Adjustment Factors for Tourism demand obtained from
Domestic Tourism Survey**

Industries	Adjustment Factors using 1999-00 NAS PFCE and NSSO consumption expenditure estimates
Tourism characteristic industries	
Accommodation Services	2.3000
Food and Beverage Serving Services	1.6000
Passenger Transport Services	
• Railway	For these industries, the expenditures are taken from the Input-Output Absorption Matrix
• Road	
Buses	
Other mech vehicles	
Non Mechanised Road Transport	
• Water	
• Air	9.5000
• Transport Equipment Rental	1.0000
• Travel Agencies and similar	8.0000
Other Recreational and Entertainment activities	0.5462
Tourism Related industries	
Clothing and Garments	1.0000
Processed food	1.4165
Tobacco products	3.7000
Alcohol	0.8735
Travel Related Consumer Goods	3.5400
Footwear	1.1113
Toiletries	1.1000
Gems and Jewellery	5.3000
Medicines and Health Related items	2.3025
Printing and Publishing	0.8097

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Tourism Value Added (Direct)

Industries	Inbound Tourism	Domestic Tourism	Outbound Tourism	(Rs. crore)
				Total Tourism Value Added
(A) Tourism Characteristic Industries				
Accommodation services	2,455	2,173	-	4,629
Food and beverage serving services	1,202	2,091	-	3,294
Passenger transport services				
- Railway	213	6,129	-	6,342
- Road				
Buses	123	13,891	-	14,014
Other mechanised vehicles	36	560	-	596
Non-mechanised road transport	14	5,892	-	5,906
- Water	120	213	-	334
- Air	2,143	2,471	-	4,614
Transport equipment rental	670	193	-	863
Travel agencies and similar	2,824	5,062	7	7,893
Other recreational and entertainment activities	546	42	-	588
(B) Tourism Related Industries				
Clothing and garments	467	1,785	860	3,112
Processed food	-	251	85	336
Tobacco products	-	334	44	377
Alcohol	-	17	9	27
Travel related consumer goods	424	742	101	1,267
Footwear	-	138	60	198
Toiletries	-	116	51	167
Gems and jewellery	394	1,188	108	1,690
Medicines and health related items	-	1,066	223	1,290
Printing and publishing	50	46	28	124

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Contribution of Tourism to GDP

GDP (Rs. Crores)	2,249,493
Tourism Value Added (Rs. Crores)	62,436
Tourism Output Multiplier	2.1
Share of Tourism in GDP	
Direct	2.78 %
Direct and Indirect	5.83 %

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