# The Diffusion of Television in India\*

Over the past eight years, the number of TV sets increased by 15 times in China and by 10 times in India. The authors discuss the factors contributing to the diffusion of television in India and its social effects. They state that if the potential development benefits of television are to be more fully realized in India, it must pursue educational objectives rather than promote consumerism and inequality.

> ARVIND SINGHAL J.K. Doshi EVERETT M. ROGERS S. Adnan Rahman

uring the 1980s, TV audiences rather suddenly expanded in such Third World nations as China, India, Mexico and Indonesia. The Third World countries' share of the world population of TV sets increased from five per cent in 1965 to 10 per cent in 1975, 14 per cent in 1980, 20 per cent in 1984 and 35 per cent in 1987. During the eight-year period from 1980 to 1987, the number of TV sets increased by 15 times in China, and 10 times in India. Television now reaches an audience of at least 550 million of China's 1.1 billion population (50 per cent), about 80 million of India's 800 million people (10 per cent), and about 70 million of Mexico's 80 million people (87 per cent).

The millions of new TV viewers in Third World countries provide tremendous potential for development communication. But television is not being utilized generally for purposes of promoting literacy, improving nutrition, limiting family size or increas-

ing productivity. Instead, TV content is dominated by entertainment programmes. The attractiveness of entertainment programmes for the public is one of the main reasons for the rapid world-wide diffusion of television during the 1980s.

The objective of this paper is to analyse the diffusion and social effects of television in India. After

- 1. Third World countries include all Middle Eastern countries, all African countries except South Africa, all Asian countries except Japan, and all countries in Latin America. In 1987, there were about 910 million television sets in the world, of which about 310 were located in Third World countries.
- 2. Data on world-wide diffusion of TV sets are compiled from BBC's World Radio And Television Receivers (1987). In 1987, there were about 90 million TV sets in China.

Arvind Singhal is a doctoral candidate and Everett M. Rogers is the Walter H. Annenberg Professor of Communications, both at the Annenberg School of Communications, University of Southern California. Dr. J.K. Doshi is Professor of Communications at G.B. Pant University in Pantnagar, India. Adnan Rahman was formerly a doctoral candidate at the Annenberg School of Communications, University of Southern California.

<sup>\*</sup>A version of this paper was presented at the International Communication Association, New Orleans, 29 May to 2 June, 1988 with research in India funded by the Rockefeller Foundation. Dr B.R. Patil and Dr V.B. Singh of the Survey Research Training Centre, New Delhi, collaborated with us in our data-gathering, and we acknowledge their considerable assistance. We thank Dr N. Bhaskara Rao, President, Operations Research Group, Baroda, for making available data on the diffusion of television in India. The present paper draws upon Singhal and Rogers (1988a), and Singhal and Rogers (1988b).

Table 1
Main events in the development of television in India

Year	Event			
1959	Television is introduced in Delhi as an experimental educational service under a grant from Unesco.			
1965	Television service is regularized in Delhi with daily broadcasts of entertainment and educational programmes.			
1969	The government of India signs an agreement with the United States' National Aeronautics and Space Administration (NASA) to launch the Satellite Instructional Television Experiment (SITE) in India.			
1972-1975	Regular television service begins in Bombay, Srinagar, Amritsar, Pune, Calcutta, Madras and Lucknow.			
1975–76	SITE broadcasts television programmes to 2,400 Indian villages from NASA's Applications Technology Satellite-6 (ATS-6) for one year.			
1976	The first TV commercial is aired on Indian television.			
1980	Doordarshan invites advertisers to sponsor TV programmes.			
1982	Indian National Satellite-IA (INSAT I-A) is launched by NASA, and broadcasts radio and television programmes for five months until it is de-activated due to technical problems.			
	Television goes from black-and-white to colour prior to the commencement of the Asian Games in Delhi.			
1983	INSAT-1B is launched by a US space shuttle, and begins TV broadcasting in India.			
1984–85	120 TV transmitters are installed in India to increase coverage; the transmitters are fed by the INSAT-1B communication satellite.			
1984–85	Indigenous soap operas become popular, starting with <i>Hum Log</i> (1984–85) and followed by <i>Buniyaad</i> (1986–87) and <i>Ramayana</i> (1987–88).			
1986	80 million people watch television regularly, and 460 million (62 per cent of the total population) live in areas covered by TV broadcasts. Advertising sales earn an estimated US\$130 million for Doordarshan in 1987.			

about 20 years of very slow diffusion of television in India, the rate of adoption began to take off during the mid-1980s because of: the role of communication satellites in extending access to TV signals, the introduction of soap operas and other interesting programmes which have attracted high audience ratings in India, and the increasing revenues to Doordarshan, the national television system, from commercial advertising (Contractor, Singhal, and Rogers, 1988).

Here we seek to answer the following questions:

- What factors explain the rate of diffusion of television in India?
- 2. What are the socio-demographic characteristics of the adopters of television in India?
- 3. What are the social effects of television in India?

Our present analysis is based upon data gathered from a 1987 survey of 1,170 adult respondents residing in three areas of India, and from various surveys of Indian households made available to us through the courtesy of Operations Research Group (ORG), a

market research company with headquarters in Baroda, India. Our 1987 survey of 1,170 respondents was conducted in three areas: in and around Delhi (where our sample numbered 599), a Hindi-speaking area in Northern India; in and around Pune (332), a Marathi-speaking area in Western India, near Bombay; and in and around Madras (239), a Tamil-speaking area in Southern India.<sup>3</sup>

About 83 per cent of our sample of 1,170 respondents resided in urban areas, and 17 per cent in rural areas (we oversampled in urban areas because about

<sup>3.</sup> Marathi is a close derivative of Hindi, and there are many cognates between the two languages. Tamil is a Dravidian language, quite removed from Hindi, with a completely different script and grammar. Our logic in selecting Delhi, Pune, and Madras as sample areas for our survey was to determine the effects of language differences on our respondents' viewing of Indian television.

75 per cent of television sets in India are presently located in urban areas). Our respondents were males and females between 15 to 50 years of age.

# The Rate of Diffusion of Television

What factors explain the rate of diffusion of television in India? We identified three main reasons for the rapid diffusion of television during the 1980s.

# Increased Access to Television Broadcasting

Television was introduced in India as an experimental educational service in Delhi in 1959, with regular daily broadcasts beginning in 1965 (See Table 1). Between 1972 and 1975, TV transmitters began broadcasting in Bombay, Srinagar, Amritsar, Pune, Calcutta, Madras and Lucknow.

India established a hybrid TV broadcasting system, which is supported by satellites as well as by terrestrial transmitters. In 1975–76, NASA loaned India the Application Technology Satellite-6 (ATS-6) to conduct the Satellite Instructional Television Experiment (SITE) in 2,400 Indian villages. Doordarshan gained valuable experience in the development of software, training of technical and production staff, and in broadcast management.

But television is not being utilized generally for purposes of promoting literacy, improving nutrition, limiting family size or increasing productivity. Instead, television content is dominated by entertainment. The attractiveness of entertainment programmes for the public is one of the main reasons for the rapid world-wide diffusion of television during the 1980s.

The first Indian national satellite, INSAT-1A, was launched in 1982 by NASA, but had to be de-activated after five months due to technical difficulties. In late 1982, the black-and-white TV system was changed to colour during the Asian Games in India. India's second communication satellite, INSAT-1B, was launched in October, 1983.

INSAT-1B led to a major expansion of TV services in India. At the beginning of 1984, there were only 42 TV transmitters in India. In 1985, there were 175 transmitters, and by the end of 1988, there will be about 220 transmitters. Most are low-power transmitters, which broadcast TV signals for a radius of 10 to 20 kilometres (7–14 miles). As a result, the number of people who could receive TV signals increased from 28 per cent of India's population at the begin-

ning of 1984, to 53 per cent by the end of 1985 and 62 per cent in 1987 (Figure 1). The number of TV viewers and the number of TV sets in India multiplied by about three times between 1983 and 1987. By the year 2000, India will have an estimated 63 million TV sets, and the number of viewers will increase to about 380 million (Srivastava, 1987).

The cost of a TV set is relatively higher in India than in industrialized countries such as the US. In India, a colour TV set costs between US\$500 and US\$700, roughly equivalent to six months' salary of an assembly worker in an Indian factory. A black-and-white TV set costs between US\$200 and US\$250. Over a thousand large and small companies manufacture TV sets in India today, making them easily available even on credit terms.

Top officials in the Indian national government believed in the expansion of Indian television, and committed large sums of money for the Indian national satellite (INSAT-1B alone cost US\$100 million), and for the large-scale ground-based transmitter network. Critics question such heavy investments in TV broadcasting, and argue that these funds could be better utilized to build more schools or to provide more blackboards and other equipment for existing schools.

# The Popularity of Soap Operas

The rapid expansion of TV hardware equipment in India during 1984–85 increased the need for developing more programme software to fill the broadcast time. Programme production, earlier a monopoly of Doordarshan, the government-run national TV system in India, was then opened by the Indian government to outside artistes, producers, directors and technicians (mostly connected with the Bombay film industry). Highly popular TV soap operas, beginning with *Hum Log* in 1984, caused a programming revolution at Doordarshan.

Hum Log (We People), the first TV soap opera on Doordarshan's national network, was patterned after previous experiences with pro-development soap operas in Mexico. A pro-development soap opera is a melodramatic serial that entertains while subtly conveying an educational-development theme (Singhal and Rogers, 1988a). During its 17-month run in 1984-85, Hum Log addressed such social issues as family harmony, women's status, small family size, national integration, dowry, and alcoholism. Hum Log commanded between 65 to 90 per cent of audiences in North India (a predominantly Hindi-speaking population), and from 20 to 45 per cent in the main cities of South India, where Hindi programmes are rejected by most non-Hindi-speaking TV viewers.

Mass media communication is usually characterized as one-way, from one source to many individuals. *Hum Log* was a striking case in which audience feedback helped write the story. Doordarshan received an average of 400 letters a day from

Population of India in the Year 1987 800 750 700 650 600 550 500 (470)450 Number in Millions 400 TV Access 350 300 250 210 200 TV Audience 150 127

Figure 1
Growth in the number of people who have access to television, the number of people who watch television, and the number of television sets in India

Source: Television in India (1986). New Delhi: Audience Research Unit, Doordarshan.

'69

'71

'73

Year

**'**75

77

Hum Log viewers during the 17 months of its broadcast and a total of about 200,000 letters in all (excluding another 200,000 received by the actors). Such an outpouring was unprecedented in the history of Indian television.

100

50

0

1959

'61

'63

'65

'67

Results from our 1987 survey of 1,170 Indian adults showed that 96 per cent of our respondents liked Hum Log. Ninety-four per cent thought it was entertaining, 83 per cent said it was educational, and 91 per cent said that it addressed social problems. In Madras, a Tamil-speaking area, only 48 per cent of our respondents had seen at least one episode of Hum Log, mainly because Hum Log was broadcast in Hindi.

However, the individuals who did view *Hum Log* in Madras liked it (93 per cent) about as much as the viewers in North India. Many of these Madras viewers had some degree of Hindi fluency from having lived in North India or from having studied Hindi.

'81

'83

12

**'**79

(80)

**'**87

6.8

'85

V Sets

The main lesson from the Hum Log experience was that indigenous soap operas in India could attract large audiences and big profits. Buniyaad (Foundation), a historical TV soap opera centred around the 1947 partition of India and Pakistan, followed Hum Log in 1986–87 (it was written by the same scriptwriter, Manohar Shyam Joshi, and featured several of the same actors). It overshadowed even

Table 2
Characteristics of TV adopters versus non-adopters in a survey of 1,170 households in India, 1987

Characteristics	Black-and- white TV adopters	Colour TV adopters	All TV adopters	Non-TV adopters	All respon- dents
	(Percentage)	(Percentage)	(Percentage)	(Percentage)	(Percentage)
1. Rural-urban					
Rural	46	6	52*	48	100
Urban	62	26	88*	12	100
2. Monthly household income					
Less than Rs. 1,500	17	8	25	75	100
Greater than Rs. 1,500	32	43	75	25	100

<sup>\*</sup>Nationally, much less than 52 per cent of rural households and 88 per cent of urban households own TV sets. We oversampled in Hindi-speaking areas, and in and around large metropolitan cities.

Hum Log in its popularity, attracting audiences of up to 95 per cent in North India. At any given time, at least one soap opera has reigned supreme on Indian television: first it was Hum Log, then Buniyaad, and starting in 1987, Ramayana, a Hindu religious epic. About 82 per cent of the respondents in our 1987 survey rated either Hum Log, Buniyaad, or Ramayana as the best Hindi serial (out of a total of 42 Hindi serials) broadcast on Indian television. Buniyaad was ranked as the best serial by 48 per cent of the respondents, Ramayana by 18 per cent, and Hum Log by 16 per cent.

Today, over 40 such domestically-produced serials, mostly produced in Bombay, are broadcast on Doordarshan: soap operas, sitcoms, detective dramas, educational and quiz shows, biographies, and news and current affairs. Indian serials are more popular than foreign serials. Our 1987 survey showed that 88 per cent of the 1,170 respondents said they liked Hindi serials, and 55 per cent of our respondents did not like foreign serials. Compared to other Third World nations, India broadcasts relatively less imported foreign programming (Singhal and Rogers, 1988b).

# Incomes From Advertising

Rapid commercialization of Doordarshan has occurred in the past decade. Since 1976, when the first commercial TV spots were aired, and 1980, when the first advertising sponsors were allowed, Doordarshan changed from being a revenue-guzzler, to a revenue-creator (Singhal and Rogers, 1988b). Hum Log helped launch commercially-sponsored programmes on

Doordarshan, in which an advertiser bears the production costs of the programmes, in return for a few minutes of spot announcements before, after, or during broadcast of a programme. Maggi 2-Minute Noodles, a Nestle product, was launched in a major way in 1984 via TV advertising in Hum Log. Previously, noodles were an unknown and alien product in India, as was the broader idea of quick-preparation convenience foods. Today, Maggi noddles are widely sold in India. The production of Maggi noodles increased from 1,600 tons in 1983 to 2,600 tons in 1984, 4,200 tons in 1985 and about 5,000 tons in 1986. The successful experience of the commercial sponsors of Hum Log with Maggi noodles convinced other advertisers that TV programme sponsorship was a promising investment.

Doordarshan had an almost 200-fold increase in its annual revenues through advertising spots since going commercial, from US\$640,000 in 1976 to US\$130 million in 1987. Doordarshan projects commercial revenues for 1990 to be over US\$300 million. Top advertisers on Doordarshan are such multinational firms (and their subsidiaries) as Colgate, Hindustan Lever, Brooke Bond, Godrej, Ponds and Food Specialities Ltd., each spending over US\$3 million in 1986 (Staff, 1987).

As commercial revenues grow, so too does the cost of operating Doordarshan. Doordarshan's yearly budget increased from US\$21 million in 1981 to US\$98 million in 1985 and an estimated US\$204 million in 1987 (Television in India, 1986). Doordarshan's budget expenditures have been much higher than incomes from commercial advertising in the past.

# **Characteristics of Television Adopters**

What are the socio-demographic characteristics of the adopters of television in India?

Table 2 shows the characteristics of TV adopters versus non-adopters in our 1987 survey of 1,170 respondents. Television adoption is higher in urban areas than rural, and is highly related to household income, which is not surprising considering the cost of TV sets in India. Colour TV adoption is also higher in urban areas than rural, and owners of colour TV sets have higher household incomes than owners of black-and-white TV sets.

# Social Effects of Indian Television

#### Consumerism

The commercialization of Indian television intensified the nation-wide policy debate about television's role. Commercialization is the production and supply of cultural and communication products within a market structure for profit (McQuail, 1986). Indian leaders favouring the commercialization of Indian television claim that programme sponsorship provides funds for improving the production of TV programmes. Detractors of the commercialization policy argue that such TV programme quality comes at a high price. Advertising of consumer products encourages consumerism which creates false expectations and unattainable needs especially among the socio-economically disadvantaged. Commercialization encourages competition among advertisers for larger audiences, especially when channel scarcity exists, as is the case in India today. Advertisers cater mainly to urban tastes, where TV sets and buying power (for advertised products) are concentrated. Thus the needs of poor and rural people are neglected. Commercialization upsets the previous balance between the socio-cultural development goals of the mass media versus mass consumer goals in India.

Data from ORG on television advertising in India for 1986–87 indicated that Doordarshan averaged about 3,000 advertising spots per month. Thirty per cent of these commercials were for food products, 22 per cent for toiletries, 10 per cent were for drugrelated products, 9 per cent for washing/cleaning materials, and the remaining 29 per cent for consumer durables, services, etc. What social impact do these frequent TV commercials have on viewers?

About 53 per cent of our 1987 survey respondents said that they had purchased commercial products after seeing them advertised on television. About 76 per cent of respondents are in favour of commercial advertising. Of the 84 per cent of respondents who had heard about Maggi noodles, half had consumed Maggi noodles at home. About 45 per cent of these noodle-eaters (31 per cent of our 1,170 respondents) started using Maggi noodles after viewing TV advertisements for this new product. We found that

younger people, heavy viewers, and those with higher levels of mass media exposure showed higher levels of consumerism.<sup>4</sup>

# Inequality

Is television reducing the gap between urban elites and rural masses? Of the 9 million TV sets in India in 1987, more than three-quarters were in the four metropolitan cities of Delhi, Calcutta, Madras and Bombay. Television programming decisions are influenced by the elite middle class, who want more entertainment and have less need for educational programmes than their rural and urban-poor counterparts. Advertising and entertainment programming is generally elitist, depicting urban life as attractive and desirable thereby encouraging migration to cities. This urban bias of commercial television widens rather than reduces the gap between the rich and the poor in India (Srivastava, 1987). Catering to urban-elite tastes detracts from the government's commitment to using television for development.

How adequately is television serving the Indian people? Our survey data indicated that:

- 1. 60 per cent of low-income households (earning less than Rs. 1,500 per month);
- 2. 75 per cent of viewers in lower castes, and
- 3. 60 per cent of non-Hindi-speaking viewers, feel that their problems and difficulties of daily life are **not** adequately projected on Indian television.

Detractors of the commercialization policy argue that such TV programme quality comes at a high price. Advertising of consumer products encourages consumerism which creates false expectations and unattainable needs especially among the socio-economically disadvantaged.

Over 90 per cent of artisans and labourers in our survey felt that Indian television did not adequately depict the knowledge and skill requirements of their

<sup>4.</sup> Consumerism is the degree to which an individual or a household is oriented towards the purchase of consumer products as a source of satisfaction. Consumerism was measured by an index of a respondent's attitude toward viewing television commercials, and the subsequent influence of the TV commercial on the respondent's purchasing behaviour.

Table 3
The pros and cons of the growth of television in India

	Pros	Cons		
1.	Political will to expand television services.	Use of television as a propaganda apparatus.		
2.	The government intention to use TV for educational development.	<ol><li>Lack of a local infrastructure to support TV messages.</li></ol>		
		<ol><li>Entertainment programmes get higher viewer ratings than educational shows.</li></ol>		
		<ol> <li>TV encourages socio-economic inequality</li> </ol>		
3.	High advertising incomes for Doordarshan.	<ol> <li>Propagation of consumerism, especially among socially- disadvantaged viewers.</li> </ol>		
4.	Satellite television can reach remote rural areas.	4a. Most TV sets are located in urban areas.		
		<ol> <li>Centralizing influence of TV, which disregards regional socio-cultural norms.</li> </ol>		
		4c. The use of Hindi and English on Indian TV network alienates speakers of other languages.		
5.	High government expenditure for TV broadcasting.	<ol><li>Opportunity costs to education, health, and other development programmes.</li></ol>		

occupations. Eighty-five per cent of lower caste TV viewers felt that the needs and aspirations of their socio-economic class were not adequately covered on Indian television. While 90 per cent of the Hindu respondents felt that Indian television adequately projected the customs and practices of the Hindu community, 90 per cent of the Muslims in our survey, and 92 per cent of the Sikhs, believed that Indian television did not adequately project their religion's customs and practices. Eighty-five per cent of our respondents said that government programmes and policies are adequately represented on Indian television, which is not surprising, since Indian television is government-controlled. However, 92 per cent of our respondents said that Indian television inadequately represents the views and opinions of opposition leaders and political parties.

# The Film Industry and Other Media Industries

The recent proliferation of sponsored TV programmes on Doordarshan were inputs from the Bombay film industry. Film moguls, once apprehensive about sponsored TV serials like Hum Log, have since rushed to Delhi to get their programmes approved or their storylines cleared by the Doordarshan authorities. India's film industry has been reeling in the mid-1980s from the effects of video piracy. Film-makers perceive there is less financial risk in producing TV serials than

films, as commercial sponsors are plentiful, and problems with box-office sales, film distribution, and piracy do not exist.

A 1986 ORG survey in Delhi, Calcutta, Bombay and Madras showed that the spread of television affected the cinema-going habits of viewers. Pre-TV, the average frequency of cinema-going per month was 1.8 for the ORG respondents; post-TV, this figure was halved to 0.9 films per month. Mehta's (1985) study on the impact of television on cinema indicated that in 1984–85, gross box office collections at Delhi cinema theatres declined by between 25 and 30 per cent. The average running time for a film declined from eight to 10 weeks to only three or four weeks. Mehta (1985) claimed that the major reason for this film slump was due to more attractive entertainment programming on television.

Television advertising has also hurt other mass media, particularly print. In 1983, all advertisers in India spent 84 per cent of their total budget on print media, and 5 or 6 per cent each on radio, television, and films. In 1987, advertisers spent about 74 per

Total advertising expenditures in India (for all media) doubled from 1983 to 1987, from Rs.290 million to Rs. 575 million. From 1983 to 1987, TV advertising expenditures increased by about 8 times, while advertising expenditures for print media nearly doubled.

cent of their total budget on print media, 20 per cent on television, and the remaining 6 per cent on radio and film (Nair, 1988).

# The Rise of India's TV Manufacturing Industry

The growth of satellite-based television in India, and the popularity of TV-viewing created a boom in India's TV manufacturing industry. The annual number of sets manufactured increased from 800,000 in 1983 to 1.5 million in 1984, 2 million in 1985 and an estimated 3 million in 1986. Roughly two-thirds of the manufacturing capacity is devoted to black-and-white sets, with the other one-third for colour TV sets. In 1970, there were only four licensed TV manufacturers in India; by 1986, there were several thousand.

# **VCR Diffusion**

India presently has an estimated 1.2 million VCRs (video cassette recorders), roughly one for every six television sets. VCRs started to diffuse rapidly in India after the Asian Games in 1982, when Doordarshan went from black-and-white to colour, and when the Indian government liberalized import duties on TV sets. India has about 40,000 video stores which rent video cassettes for about Rs.10 (less than US\$1) each. Households that cannot afford a VCR can rent video equipment (at an average of US\$4 per day) to watch videotaped films at home.

Our 1987 survey indicated that most VCR adopters had previously adopted colour TV sets. So the diffusion of TV in India is clearing the way for VCR diffusion.

### Discussion

We now answer the three questions of study posed at the beginning of this paper.

1. What factors explain the rate of diffusion of television in India?

Reasons for the take-off in the rate of diffusion of television in India in the 1980s (after 20 years of very slow growth) include: wider access to broadcast signals due to the applications of communication satellites, the popularity of new forms of television programmes (like soap operas), and TV advertising

incomes which have funded the improved production value of Indian TV programmes.

2. What are the socio-demographic characteristics of the adopters of television in India?

They are more likely to be urban than rural, and of higher income.

3. What are the social effects of television in India? Television seems to promote consumerism, widen gaps between urban-elites versus the poor, hurt the economic health of the film industry and the press, fuel the domestic TV manufacturing industry, and encourage diffusion of VCRs in India.

Television is rapidly diffusing in India in the 1980s. The policy debate intensifies about whether the social effects of television are predominantly positive or negative for the Indian society (Table 3). Is television a tool for development or for urban, elite-oriented entertainment? So the key policy question is television for whom, and for what purpose. Other key issues yet to be resolved in India include whether television will cause greater socio-economic inequality in the long run, to what degree television conveys values which encourage consumerism, and just how seriously Indian television is hurting other mass media industries.

# References

- British Broadcasting Corporation. World Radio & TV Receivers. London: International Broadcasting and Audience Research Library, 1987.
- Contractor, N.A. Singhal and E.M. Rogers. 'Meta-theoretical Perspectives On Satelite Television And Development In India', Journal of Broadcasting and Electronic Media (1988), in press.
- McQuail, D. Commercialization, in D. McQuail and K. Siune (Eds.), *New Media Politics*, London, Sage, 1986, pp.152-78.
- Mehta, L.M. The Impact of Television And Video on Cinema-going Habits of Film Viewers, New Delhi, Institute of Management Studies, 1985.
- Nair, P.P.N. 'TV Consumer Ads Hit Magazines,' The Economic Times, 4 February, 1988.
- Singhal, A. and E.M. Rogers. 'Television Soap Operas for Development in India,' Gazette, (1988a), in press.
- Singhal, A. and E.M. Rogers. The Emerging Information Revolution In India. New Delhi: Sage (1988b), (in press).
- Srivastava, U.K. 'National Cost of Television in India in the Year 2000,' *Media Asia*, 14 (1987): Pp.136-44.
- '25% TV Advertisements by Six Companies,' *The Economic Times*, 10 February 1988, Pp.3.
- 'Slump in TV Industry to Continue: Study,' Financial Express, 16 February, 1988, Pp.3.
- Television in India. New Delhi: Audience Research Group, Doordarshan, 1986.

From 1986 onwards, the Indian TV industry experienced a slump in TV sales due to several reasons including the high government duty on imported electronic components, and the cut-throat competition among the several thousand TV manufacturers in India (Staff, 1988).