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The Impact Of Broadcast Satellites On Regional Development
In The Philippines

By

Jose R Lacson
THE IMPACT OF BROADCAST SATELLITES ON REGIONAL DEVELOPMENT IN THE PHILIPPINES

By

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I. INTRODUCTION

The history of broadcast satellite communication in the Philippines started in 1967 when the Philippine Communications Satellite Corporation (PhilComSat) put up its first satellite facility (Pinugay I) in Taqiuq, Rizal province, Philippines. This earth station connected the Philippines to a global communications network operated by INTELSAT.

The creation of the Domestic Satellite Corporation (DOMSAT) in 1978 opened up the country to nationwide broadcasting via satellite. With the establishment of eleven (11) earth stations located...
in the various regional centers of the country, the DOMSAT system enabled Manila-based television network to reach a substantial portion of the country's land area.

In 1990, these two corporations were joined by the ABS-CBN network, with the establishment of one uplink earth station in the ABS-CBN network headquarters and four TVROs in four regional centers of the Visayas and Mindanao island groups.

The impact of these events, particularly on regional development, is the topic of this paper.

The Broadcast Industry in the Philippines

The 7,107 islands comprising the Philippine archipelago are served by a broadcast network spread out in the three major island groups of Luzon, Visayas and Mindanao.

A survey conducted by the government's Philippine Information Agency (PIA) in 1986 revealed the following statistics about this network:
On a regional breakdown, the study showed a high concentration of radio stations in the Luzon island group, to include Metro-Manila. Region I (Ilocos) had the most number (40) of radio stations, equalling the number (27) of AM stations in NCR (Metro Manila) and also having the second largest number of FM stations (13) in the country. The least number of radio stations was found to be in Region XII (Central Mindanao) numbering 10.

For television, the biggest number of TV stations were found in Region VI (Western Visayas) followed by Region XI (Western Mindanao) which had 9 stations. Region II had only one TV station. The Far East Network (FEN) of the US Armed Forces, based in Clark Air Force Base in Pampanga Province (Region III), was the only UHF TV station operating in the country, serving American servicemen and their families residing in Clark Air Base, Subic Naval Base (Region III) and John Hay Air Station in Baguio (Region I).

The country has five national television networks as follows: ABS-CBN, People's Network (government-owned), GMA, RPN and IBC. These
networks were the exclusive TV organizations with headquarters in Metro Manila, with the regional/provincial TV stations being affiliates, relays or replay stations.

The same Pinoy study also showed data on media ownership which placed 70% of Philippine households as owning radio sets while only 30% had TV sets. A significant finding was the 144.66% increase in TV ownership in the period 1960 to 1989, with radio ownership growth rate being at 22% for the same period.

The urban areas were found to have higher ownership rates than the rural areas but the study cited the trend of a higher acquisition rate for TV and radio sets in the rural households.

For regional figures, the Metro Manila (NCR) region showed the highest TV and radio ownership. The Central Luzon (III) Region and Southern Mindanao (XII) had a high radio ownership at 76% while Cagayan Valley (III) and Eastern Visayas (IVL) registered radio ownership rates of 61% and 67% respectively. For TV ownership, Region III
(52%) was second to NCR followed by Region I (32%) and Region IV (37%). The region with the lowest TV ownership was Region XII (5%).

A study on people's media behaviour was conducted by the Philippine Information Agency in 1988 and the findings are quoted as is, to wit:

1. Survey results showed that, of the various media, radio was the most popular with majority of the respondents (89%) being exposed to it. This holds true for all the regions covered by the sample. Comics and television followed with 54% readership and 53% viewership, respectively.

2. A high exposure to radio was noted in all 14 regions, the highest (97%) in Regions XII and V, Regions VI (96%), XI (95%), I (94%) and VII (94%) likewise reported high exposures to radio, while the lowest listenerhip were reported in Regions III (86%) and IV (81%).

3. Television viewership was highest in the NCR (98%). This was followed by Region III, with 95% viewership, and Regions VI and XII, 69% viewership. Regions I-A, the newly formed Cordillera Region (25%) and VIII (19%) registered the lowest exposures.

4. Radio was the most frequently mentioned source of information on peace and order (67%), education (67%), health (65%), employment (62%) and housing (54%).

5. Television was a poor second source of information on Peace and Order (27%), education (24%), housing (23%), and health (22%). It ranked third for information on employment.
6. Radio was the most preferred medium for disseminating information on current issues (79%). This was followed by television and newspaper (33% each), with barangay meetings ranking fourth (26%).

7. Radio was the most preferred medium by household heads and housewives (79%), youth (77%), fishermen (76%) and farmers (84%) for disseminating information on current issues.

The 1986 PIA study also looked into the program origins and uses/functions of the radio and television programs of the stations. The findings were as follows:

**Program Origin**

Most radio programs were locally produced by the stations themselves. Voice clips for news programs, musical and some religious programs originated from the networks.

For television, it was found out there were more domestic programs than foreign programs at a ratio of 60:40. The local stations produced very few programs on their own.
Program uses/functions

Radio was used primarily for entertainment programming. This includes music, soap operas, sports, etc. News, information and public affairs were also part of the programming, not to mention advertising.

For television, entertainment was also dominant, primarily dealing with musicals, variety shows, situation comedies, foreign canned shows and sports coverages. News programs were found in all station programming, as well as talk shows and public affairs. Advertising on TV was pervasive in all time slots.
II. BROADCAST SATELLITE COMMUNICATION IN THE PHILIPPINES

The existence of DOMSAT, PHILOMSAI and ABS-CBN as the forerunners of broadcast satellite communications in the Philippines has provided the opportunity to test the viability of the technology in a developing country.

Among the three entities using satellite technology for broadcasting, only PHILCOMSAT has shown viability, to date. DOMSAT has suffered losses in its twelve years of operations and is now under sequestration by the national government. ABS-CBN has just started operations with its own earth stations this March 1979, thus having no return on investment as of the moment.

A brief history of operations of the three satellite users is in order to provide an understanding of the situation that these three entities are in.

A. DOMSAT

DOMSAT was established in 1976 as a private corporation engaged in the business of satellite communication, primarily geared to be a carrier, so to speak.
DOMSAI provides the link between the satellite and the local telecommunications networks in the country. It set up its earth stations in eleven locations throughout the country. The uplink station is located in Antipolo, Rizal province. The downlink stations are located in the following areas:

- Region I  - Laoag City
- Region II - Tuqueparan, Cagayan
- Region III  - Puerto Princesa City
- Region IV  - Iriñga City
- Region V  - Bacolod City
- Region VI  - Legazpi City
- Region VII  - Davao City
- Region VIII  - Tacloban City
- Region IX  - Zamboanga City
- Region X  - Cagayan de Oro City
- Region XI  - Davao City
- Region XII  - Cotabato City
- Iligan City

The Iligan City earth station was an investment of the National Steel Corporation for its telecommunications needs while the Cotabato City installation was designed for the Ministry of Education's experimental project on distance education.
Equipment and facilities

The 11 B-type earth stations of DOMSAT comprised the initial and final complement of infrastructure investments of the corporation. The transmission, receiving and auxiliary equipment were supplied by a Japanese company.

DOMSAT leases one and a half transponders of the PALAPA A-2 satellite from PERUMTEL of Indonesia. One transponder is allocated for television relay while the one-half capacity transponder is for telecommunications services.

Networking with local carriers

Designed as a carrier's carrier, DOMSAT relies on local carriers, primarily the Philippine Long Distance Company (PLDT), for retailing and distribution of its broadcasting and telecommunications services. Accordingly, DOMSAT's services depend highly on the quality of the local carriers' equipment and resources.

Services

Broadcast and telecommunications services were offered by DOMSAT to users in 1978. The
RPN television network was the first to avail of the broadcast service, from 1978 to 1986. With respect to telecom services, DOMSAT has 87 duplex channels for data, telex and telephone, most of which are leased to PLDT as a back-up for its terrestrial communications system.

Air time for satellite broadcast is noon time (12:00-1:30 p.m.) and 6:00-10:00 p.m. Channel 9 aired lunch time entertainment shows for the noontime slot and news, foreign and local canned shows during night time slots.

**Issues and problems**

In its 12 years of operations, DOMSAT has still to reach its viability. Acceptance of its services by various types of users is there but a lot of problems have plagued the corporation.

An interview conducted last June 21, 1990, with DOMSAT Vice President Juan Lauengco, revealed the following issues and problems, to wit:

1. DOMSAT had a projected three year period from initial operations to reach full utilization of its facilities. This did not happen. It
took 12 years to reach full utilization. This was not due to a slow response of customers/users, but due to a problem with the local carriers (primarily PLDT) which provided the connecting link to users. The local carriers had no facilities at the local end or at the Manila end. Facilities available were not of the level of quality necessary for satellite transmission and reception.

2. A conflict of interest plagued the relationship between DUMSAT and PLDT. PLDT had poured in a lot of investments in the development of its terrestrial-based telecommunications system during the same period of development of DUMSAT. As the main retailer and distributor of DUMSAT's services, PLDT was in a conflict of interest position — whether to use its own system or DUMSAT's. For one, DUMSAT offered lower rates in ten points of service areas (about 10-15% lower) than PLDT. It has been proven by DUMSAT that the farther the distance from the Luzon area, the better the competitiveness of DUMSAT with respect to PLDT as far as distance costing is concerned.

3. A failure to reach viability within the project time frame due to underutilization caused DUMSAT a lot of financial problems and also a consequent failure to upgrade its equipment and facilities (the corporation is still using its original equipment).

4. DUMSAT is presently under sequestration by the national government due to its huge debts, both to the government and PERUTTEL (about $5 million).
PHILCOMSAT

PHILCOMSAT was organized in 1966 to serve the Philippines' international communication requirements, using satellite technology. It became a member of INTELSAT in 1966 and INMARSAT in 1981.

Equipment and facilities

PHILCOMSAT installed three earth stations with 30-meter diameter antenna structures in Pinugay, Rizal province. Pinugay-1 was designed to serve as the Pacific Ocean region antenna while Pinugay-2 was set up to serve as the Indian Ocean region antenna. Pinugay-3 serves as a back-up antenna to handle contingency and other service requirements of PHILCOMSAT. These stations serve as the gateway of the Philippines for international communications. PHILCOMSAT also installed a TVRO facility in Clark Air Base at the request of FEN for direct reception of US programs in the American installations.
Networking with international carriers

PHILCOMSAT leases circuits to four international record carriers for data transmission and voice circuits to PLDT for overseas telephone calls. Live television coverages via satellite feed from other countries are also part of the services given by the corporation to the five international carriers.

Viability

The viability of PHILCOMSAT is indicated by the overall financial performance since the start of its operations from 1966 to 1987. Its initial capitalization of ₱4,262,600.00 has reached the level of ₱585,762.00 as of 1987. Capital expenditures in 1967 amounted to ₱23,461,131.00. Twenty years later, capital expenditures have reached ₱304,722,646.00.

ABS-CBN

ABS-CBN network started broadcast satellite programming in 1984, using the facilities of DOMSAT and PLDT. In March 1990,
ABS-CBN installed its own uplink earth station in its main compound in Metro Manila and four TVROs in Cebu, Davao, Bacolod and Zamboanga (owned by a network affiliate). This enabled the network to break away from DUMSAT and PLDT arrangements and deal directly with PERUMTEL for the use of a transponder of the PALAPA satellite.

An interview with Mr. N.J. Umöö, the electronics and communications engineer of ABS-CBN, on July 3, 1990, elicited the following information:

**Equipment and facilities**

The uplink earth station and the TVROs were purchased from Scientific Atlanta (an American firm) as well as the transmitting and receiving equipment and other auxiliary facilities. The antenna structure of the uplink station was of the 20 feet diameter type while the TVROs were of the 18 feet wiremesh type. The uplink station has a rated transmitting power of 3 kilowatts but is at present only using 1 kilowatt for its needs.
Networking with local carriers

Prior to the setting up of its own facilities, ABS-CBN relied on PLDT to get its signals from its broadcast center to the DOMSAT uplink station and from DOMSAT downlink stations to its local (regional) broadcast stations. With its own facilities, ABS-CBN did not have to pass thru DOMSAT and PLDT for its satellite communications.

Services

ABS-CBN's satellite broadcasts start at 12:00 noon and end at 1:30 p.m., airing a noontime entertainment variety show. It starts broadcasting again at 6:00 p.m. for national news, followed by mostly local shows (drama, situation comedies, television documentaries) and ends up at 10:45 p.m. with its world news program. Advertisements are aired during the programs. Special coverages are also aired even outside these regular broadcast slots when necessary. As of the moment, only one-way broadcast services are available (from Manila to the regions).
Issues and problems

1. In using DOMSAT and PLDT facilities, ABS-CBN encountered several problems, to wit:

   a. For the broadcast signal to reach DOMSAT's uplink facility in Antipolo, Rizal (about 20 kilometers away), ABS-CBN had to pass thru PLDT. PLDT's arrangement was to use a receiver in its Sampaloc tower in Manila to access audio and video signals of ABS-CBN and transmit these signals to DOMSAT Antipolo thru its telephone facilities. This arrangement caused a degradation of broadcast signals which was traced to the receiver of PLDT in Sampaloc. A further degradation of signals was also noted between the downlink end in Mandaue City and the ABS-CBN station in Cebu City (approximately 10 kilometers apart).

   b. The airing of special coverages outside regular satellite broadcast times by ABS-CBN presented a coordination problem.
among the three agencies. There were times when the DOMSAT and PLDT personnel were not ready to broadcast during special times that ABS-CBN was ready to do so.

c. DOMSAT was not ready to provide two-way broadcast services to ABS-CBN in regions where the network wanted these services.

2. ABS-CBN was paying DOMSAT a premium rate for its satellite services. A part of this rate (15%) was paid by DOMSAT to PLDT as administrative charges. It was noted that ABS-CBN could directly feed its signals to Antipolo uplink station without passing thru PLDT (thus reducing the degradation of signals problem) but PLDT would not accede to this even if the 15% administrative charge was still paid for.

1. The decision to buy its own uplink equipment and transponders was made by ABS-CBN when computations showed that the amount to be
paid to DOMSAT and PLDT in six months time was equivalent to the cost of buying its own equipment.

4. As of the moment, the satellite equipment of ABS-CBN is still underutilized but plans to reach full utilization are underway.
III. IMPACT ON REGIONAL DEVELOPMENT

Broadcast satellite communication has brought the reality of a global village to the country. Where before, news from other countries and even within other parts of the country was slow in diffusion, the broadcast satellite made news dissemination rapid and effortless.

The boost broadcast media gets from satellite utilization is tremendous, in the light of inadequate telecommunication facilities, poor postal services and the limited access to print media in the regions. Added to this is the dependence on broadcast media among the urban and rural populations for information and entertainment. Although radio enjoys a strong following from the people, television is slowly gaining adherents as seen by the higher acquisition of TV sets in rural areas over radio.

Despite all these developments, the TV broadcast industry, particularly with reference to the use of broadcast satellites, still has to contend with the limited reach of the existing broadcast infrastructure in the regions. Apart from
the Luzon island group which can be considered adequately covered by the powerful transmitters and relay stations of the Manila-based networks, there is limited coverage of other regions for TV. The power of the regional broadcast stations and their limited number is still inadequate as far as reach is concerned.

Considering the inactive status of DOMSAT's network and the small number of earth stations of ABS-CBN, domestic satellite broadcasting can be said to have suffered a setback at this point in time. Obviously, there is a need to rehabilitate DOMSAT and add more earth stations (both uplink and downlink) in many other regional points of the country. The use of the PLDT terrestrial network for TV broadcasting feeds to the regions is now on trial by RPN to selected regions, including a Cebu to Manila news link.

To date, there are no radio services using broadcast satellites. All radio stations nationwide are stand-alone units using materials from their mother networks or producing their own material, although hook-ups with other stations is a common practice.
Programming

A review of present-day programming of ABS-CBN network TV broadcast satellite service showed a preponderance of entertainment fare, largely consisting of local soap opera dramas, local situation comedies and local variety shows. Some foreign canned shows and movies are shown during Fridays and Sunday nights. News programs are shown in the beginning (6:00 p.m.) and end of primetime (10:45 p.m.) slots. Said programming is therefore more of locally produced shows than foreign.

All locally produced programs shown by ABS-CBN via satellite are Manila in origin. Except for the news programs where some parts of the country are given coverage, all programs reflect the culture, social, political, religious and economic facets/conditions of the Metro Manila area. Accordingly, the urban setting is given more prominence than the countryside in this kind of programming.

The advantage of using broadcast satellites for TV aficionados is up-to-date programming. A case in point attesting to this is the FMM (American military network) programming. Before FMM was
relocated to the UHF band (Channel 17), it was broadcasting in Channel 8 of the VHF band. Its updated and no ads programming attracted Central Luzon and Metro Manila viewers which caused Manila networks to protest to the National Telecommunications Commission. The consequence was the relocation of FEN to UHF. Viewers who could afford UHF equipment followed FEN programming. Among the favorite programs in FEN are NBA basketball games, foreign news, soap operas and sitcoms.

The need for better programming (with the offering of a variety of programs and updated, current material) makes a good case for broadcast satellite use among the networks. Regional stations of networks and their affiliates are given more prestige and a higher competitive status by the satellite feeds when it comes to news and entertainment fare. Broadcast satellite feeds are main fare to regional local programming which are basically replays (1-2 weeks delay) of Metro Manila programs. Local news programs leave much to be desired in terms of quality so they get a boost from national news via satellite which is higher in...
quality. Advertising is also given more exposure when aired via satellite, thus providing more business opportunities to concerned networks. For the local networks stations, advertising from local business is also enhanced by satellite programming.

**The demand for more services**

Despite the present underutilization of broadcast satellite facilities, there is an unfilled demand for broadcast services as attested by a waiting list of potential users for TV and radio services. Media practitioners, broadcast managers and advertisers are well aware of the growing dependence of the public on the media, not to mention the lowering cost of media technology which eases the public's access to media channels.

The local folk in the regions, particularly business people, get to validate their information first hand thru satellite news feeds. This first hand confirmation makes a whole lot of difference for the businessmen who, due to inadequate telecommunication facilities, depend on news for their stock market reports, foreign/local business developments, new products, etc. Decision-making is
thus enhanced by information from media. Print and broadcast media support each other in this regard although broadcast is relatively cheaper in terms of access and has farther reach with the advantage of fast diffusion.

Cable TV networks, although still in their infancy, are sure beneficiaries of the technology of broadcast satellites. The Mindanao cable TV companies operating in Mindanao which are using ABS-CBN programs accessed thru TVROs, are a case in point.
IV. PROSPECTS FOR REGIONAL DEVELOPMENT

Broadcast satellite communication has proven its worth in many countries. The Philippines has had its experience in the use of the technology in these past 22 years. Learning from such experience should provide the impetus for a full-blown utilization of broadcast satellites in the widest perspective possible. The prospects are good, not only for the country as a whole but also for enhancing progress and development in the regions.

The decreasing cost of satellite communication technology over time due to technology advancement and competition among equipment suppliers bodes well for the broadcast satellite industry. More powerful satellites will usher in the use of smaller reception antennas which in turn would lend to a better accession among users.

The regions will definitely benefit from these developments. It can be foreseen in the near future that TVROs will be a common sight in hotels, business establishments, cable networks and homes in every island and community of the country. With
the advent of ASIASAT, direct reception of a variety of TV programs would be possible, offering a wide choice to regional viewers.

It is expected that more broadcast networks would opt for the use of broadcast satellites in their expansion plans. The implications would be an achievement of economies of scale of operations in transponder, earth station and equipment utilization, increased traffic for local carriers networks and a move to improve programming, among others.

The prospects for broadcast news services in the regions are limitless. Wire and news agencies (local and foreign) can feed their material to regional networks on a full-time or time-sharing arrangement. This may resolve the problem of equipment/facility underutilization. Information videotexes could also be a potential revenue earner for satellite networks as far as regional users are concerned. The transport of national events and sports from points of origin to main studios for transmission nationwide is a scenario which only satellite communication can make possible.
Government has a crucial role to play in the development of broadcast satellite communication for regional development. Through a national telecommunication policy, it could provide the proper environment for the development of a telecommunications infrastructure which is countryside oriented and decentralized from urban centers like Manila. This would include: a) the strengthening of local carriers capabilities; b) the establishment of cable networks in viable areas and Very Small Aperture Terminals (VSATs) in non-viable areas (thru direct operation or subsidy); and c) the rehabilitation of DOWSATs either as a government corporation or a subsidized entity which could be sold to the private sector when viable.

For the programming perspective, government could also subsidize programs aired via satellite during prime and non-prime time. These programs could deal with topics on education, environmental concerns, government programs and projects, sports, issues of national interest and regional events/places/people.

What may really be beneficial to the regions is the establishment of a 2-way broadcast satellite infrastructure (radio and TV) which would
enable interaction between Manila and the regional centers of the country. Perceived effects would be the decentralization of information generation/origination and the refocusing of the public’s attention from the seat of government to the countryside.

In conclusion, it may be said that the impact of broadcast satellites lies in the way they are used. People are often mesmerized by the technology and forget that it is only a means to achieve an end — that is, to further the improvement of the lot of man.

The mass media, with the aid of broadcast satellites, can enhance the one-voice — one country concept thru the judicious application of relevant messages and information to the population in a manner designed to allow people’s participation in the democratic processes. Using it for the vested interests of a privileged few would not be worth the expense and the effort.
REFERENCES


