

CHAPTER 3

RESEARCH METHODOLOGY

In order to formulate recommendations regarding the attractiveness of the market from an economic perspective, it is crucial to assess how profitable it is for service provider to be in this market segment. It was also important to identify whether there was a pressing need for fast deployment of telephone service in rural areas in order to build a case for wireless technology as a superior alternative to additional landline deployment. In addition to direct revenue and cost factors, we hoped to accumulate information with regard to another strong argument for wireless - its advantage over landline with respect to maintenance investigate these and other issues.

Selection of Measures

The pilot survey was designed to target households and businesses in administrative districts which satisfied the following criteria:

- A rural population of at least 50% of the total administrative district population according to population census data.
- Nonexistent, or inadequate coverage by landlines/ cellular services.
- Stated plans for service expansion by local telecommunications industry officials.
- High priority plans for economics growth by the Malaysian government.

Published telecommunications policy guidelines, reports from the Jabatan Perangkaan Malaysia, government development plans, and expert opinion from the Ministry of Energy, Telecommunications and Posts, Jabatan Telekom Malaysia, Telekom Malaysia, Celcom, Sime Darby, and MIMOS in its determination of which administrative districts satisfy the

aforementioned criteria.

Within the selected measures, we included the following three sub-populations: residential telephone users, business users, and non-users. The non-users sub-population were further divided into non-users who want a telephone installed in their home, and non-users who do not want telephone service.

Research Design

The direct-structured personal interview with the 141 rural folks was designed to measure the following aspects of the rural telecommunications segment:

Current Users:

- Average monthly revenues from rural subscribers.
- Usage distribution by traffic type: Local within state, state to state within Malaysia, and international.
- Level of satisfaction with service.
- Reliability of service.
- Average time to restore service when it breaks down.
- Users perception of the service cost.

Potential Users:

- Willingness to pay for installation.
- Willingness to pay an additional premium for immediate installation.
- Average wait time for service installation (if they have already applied).
- Projected revenues, based on willingness to pay each month after installation.
- Projected traffic type: Local within state, state to state within Malaysia, and international.

Non Users:

- Reason for not desiring telephone service.

Sampling Method

In order to determine where to administer the pilot survey, the following steps were taken:

- A complete list of all Malaysian administrative districts was compiled including the population division between rural and urban. The source of this information is the "Preliminary Count Report for Urban and Rural Areas" published by the Malaysian Department of Statistics. The report defines

urban areas as gazetted areas with a population threshold of 10,000 persons or more. That is rural areas have a population of less than 10,000 persons.

- The original list was reduced to a short list of administrative districts which satisfy the more than 50% rural criterion within the following states:

Kelantan, Terengganu, Sabah and Sarawak were chosen from the thirteen Malaysian states based on the remaining criteria, that is, inadequate coverage, planned expansion, and high priority for development. Sabah and Sarawak are two states which have been given a high priority in the Malaysia governments plans for economic development. The government is keen on accelerating the pace of economic development to match that of other states in peninsular Malaysia. Terengganu is an east coast state which is strongly promoted by the government to attract investments.

Kelantan is a state which represents inland states characterized by jungle terrain, and the timber industry. No states were chosen from the west coast states for the survey since experts agreed that the telecommunications infrastructure is well established throughout the West coast

region.

- Within the chosen four states, the following administrative area(s) were selected:

| State | Administrative Area(s) |
|------------|------------------------|
| Terengganu | Dungun |
| Kelantan | Gua Musang, Jeli |
| Sabah | Kudat |
| Sarawak | Samarahan |

- In Kelantan, Gua Musang and Jeli are centers for development due to the timber industry. Both are not currently adequately covered by land line service. Batu Papan is a village in Gua Musang that has recently collectively applied for installing new telephone service. The village is accessible by dirt road only. It provided a perspective of the current expansion of service process. Jeli is a rapidly developing area, with close proximity to the timber industry.

- In Sabah, Kudat was chosen because of the high priority for development, and the diversity of the economic activities which include farming, fishing, and plantations. Kudat also comprises a large mix of ethnic groups.

- In Sarawak, Samarahan a concentration of development, was

chosen. Within the administrative area, Tebedu and Asajaya were selected. Tebedu is a border area with Indonesia, which is accessible by dirt road only. The area is currently agricultural, however, the government plans on developing it into an industrial zone. Asajaya is an area of plantations, and a developing polystyrene industry. The rivers in the area dictate significant capital investment to establish a land line communications infrastructure.

- In Terengganu, Dungun an agricultural area designated for government development. In particular, Al Muktafi Billah Shah (AMBS), a newly redeveloped village was selected to include a model of a village redeveloped by the government.

Limitations

The pilot survey had to be conducted under the following constraints:

- Time constraint, the survey had to be administered within a short period of time particularly in East Malaysia and east coast of Peninsular Malaysia.
- Limited resources, both human and financial.