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CHILE NATIONAL SAMPLE

The sample for this study was a stratified, multistage probability cluster sample of 3230 persons 18 years or older. A sample of this size and design normally produces results accurate to within plus or minus three percentage points.

Data on the population of interest was supplied by the December, 1987 report on voter registration issued by the Direccion de Registro Electoral, the most complete and current data available on the nation's voting age population.

The goal of this study was to represent all segments of the Chilean population in proportion to each segments contribution to total vote. An analysis of previous national samples suggested that voters living in the most rural and sparsely populated parts of the country frequently went unrepresented in studies of national opinion because of the costs in time and manpower required to collect interviews from these places. This sample was specifically designed to overcome that shortcoming.

The design of this sample identified four separate stages where probability sampling techniques guaranteed that all segments of the population were represented. First stage sampling selected those places where interviewing would be conducted. The sampling technique guaranteed that the major population centers of Santiago Metro, Antafogasta, Valpriso, Vina DelMar, Concepcion, Talcahuano and Temuco were represented in the sample. More importantly, it also guaranteed that more than 50

small towns and villages with less than 5,000 total population were also included in the sample -- perhaps for the first time representing the opinions of this important segment. Cities and towns of intermediate size made up the rest of the first stage sample. Second stage sampling randomly selected neighborhoods where interviewing was to take place. Third stage sampling chose the representative sample of households to be interviewed. Lastly, fourth stage sampling selected the eligible voter within each household who would be interviewed.

The following overview will provide the reader with a general understanding of the selection methods and procedures used at each stage of sampling.

FIRST STAGE SAMPLING. Selection of primary (first stage) sampling units or PSU's represented the most critical step in organizing this study. This step determined where interviews would be conducted.

The choice of a PSU was determined by the availability of population data. The most current data on voter registration and population size was reported by county. Therefore, counties were chosen as the PSU's for this sample since they provided the most consistent information with complete coverage of the population.

Counties were first stratified by size of population. Each county was placed into one of four stratum -- those with populations larger than 200,000 (Stratum A); those with populations between 100,000 to 200,000 (Stratum B); those with populations between 20,000 to 100,000 (Stratum C); and those with less than 20,000 population (Stratum D). The only exception to this procedure involved Santiago. Since Santiago represented a large and relatively homogeneous population, it was treated as a Mega county in Stratum A.

The second stratification applied to counties was based on geography. Three areas were defined as the geographic strata for this study--the North (Counties in National Regions I, II, III, IV), Central (Counties in National Regions V and VI plus Santiago) and the South (Counties in National Regions VII, VIII, IX, X, XI, XII).

Nearly half of the adult population lives in counties of more than 200,000 population. This stratum was dominated by Santiago Metro which contained 2.6 of the 3.0 million persons living in Stratum A of the Central geographic area. Stratum C was the next largest in size with approximately one in five adults residing in counties with 20,000 to 100,000 population. The smallest in size was Stratum D -- counties with less than 20,000 population -- which contained approximately 1.5 out of every 10 adults.

Geographically, nearly 6 out of 10 adults lived in the Central area while 1 in 3 lived in the South. Only 1 in 10 lived

in the North area.

Three hundred and twenty-three clusters of 10 interviews each were proportionately allocated to the stratified population matrix. Stratum A in the Central area dominated the allocation with 124 clusters or 1240 interviews. Santiago Metro accounted for nearly all of the allocation to this size/area stratum. In a very distant second place in the allocation of clusters and interviews was Stratum C in the South which received a total of 37 clusters or 370 interviews. No size/area stratum was represented by less than 4 clusters or 40 interviews (Stratum D in the North).

Selection of the representative counties within each stratum was accomplished using a probability proportionate to size (PPS) technique. The largest counties (Stratum A-- population >200,000) were chosen with a probability equal to one, that is with surety. These included: Antofagasta, Santiago, Valpariso, Vina DelMar, Concepcion, Talcahuano and Temuco.

The remaining counties were randomly chosen using the PPS technique that assured a selection probability proportionate to the size of each county's adult population. All counties within each stratum were first listed along with a measure of their size -- adult population 18 and older. Sampling within a stratum was completed by applying a fixed selection interval to a random starting point. The complete Chile National Sample First Stage is listed in Table A.

For most of the counties selected population was concentrated primarily in the city or town bearing the county

name. Hence, that city and its immediate environs became the target area for selecting secondary sampling units (neighborhoods). Where the county population was more disperse, additional small towns and villages within the county were chosen to represent the outlying population. A total of 20 counties out of the 73 sampled required more than one city or town to more completely represent the county population. In Table A these additional interviewing sites within split counties are listed in a separate column for additional places.

The selection of second, third and fourth stage sampling units namely, neighborhoods, households, and individuals, was the responsibility of Adimark, the field data collection vendor for this project. For purposes of providing an overview of the sample, a general discussion of those procedures follows.

SECOND STAGE SAMPLING. The second stage sampling units were neighborhoods within each of the primary sampling units(counties). These neighborhoods were selected using a random procedure that guaranteed each one a calculable probability for being included as part of the sample.

To begin the second stage sampling, maps of each primary sampling unit were obtained. These maps were provided by the Instituto Nacional de Estadisticas. Blocks in the target areas were numbered on the map. The total number of blocks in the target area was obtained. For purpose of this sample, each block

represented a neighborhood. The number of blocks needed for the sample was determined. If a target area had been assigned five clusters of ten interviews each then the number of neighborhoods (blocks) that were randomly selected from the total number of blocks available was five.

Using a table of random numbers, a series of random digits falling within the range of the total number of blocks and equal to the number of clusters needed were chosen. Applying the random digits to the numbered blocks produced the random selection of neighborhoods for inclusion in this sample.

THIRD STAGE SAMPLING. Selection of the households to be interviewed was also accomplished using a random procedure. Interviewers were instructed to proceed to the target block selected in the second stage of sampling. They were given a map which defined the target block as well as the four blocks immediately adjacent to the target block.

Upon arrival, interviewers were instructed to list all available households beginning at a specified location and proceeding clockwise around that block. Businesses, government buildings and other nonresidential structures were not listed.

The households finally chosen to represent the neighborhood were selected on a random basis from this list. A predetermined and randomly selected starting point for choosing a household was used to establish the first residence where an interview would be conducted. Remaining interviews to complete the cluster of ten

were conducted in households chosen by the application of a skip pattern that moved the interviewer around the block in a fashion that would allow each household on the block to have a calculable probability for being chosen.

FOURTH STAGE SAMPLING. Selection of the individual respondent within each household was the fourth stage of sample selection. To accomplish a random choice of eligible respondents, each member of the household 18 years of age or older was listed by the interviewer. Once a complete list was available the interviewer applied a random selection procedure to choose the one person in the household to complete the interview.

If that person was available at the time of initial contact the interview was conducted and the interviewer moved to the next randomly chosen household. If, however, that person was unavailable at the time of initial contact, arrangements were made for a follow-up visit to complete the interview. Up to two follow-up visits were made to each selected household in order to complete an interview with a randomly chosen respondent from that household. Replacements for incomplete interviews were made by supervisors of the field work.

Sample Accuracy. Given the size of this study -- 3230 interviews, the number of clusters -- 323, and the number of primary sampling units -- 73, a reasonable estimate of the error associated with this sample is +/- 3.0%.

TABLE A
CHILE NATIONAL SAMPLE
FIRST STAGE -- COUNTIES AND PLACES

I. AREA -- NORTH

	<u>Size Stratum</u>	<u>>18 Pop</u>	<u># of Clstrs</u>	<u>Add'l Places</u>
REGION I				
Arica	(B)	107,950	7	
Pica	(D)	1,158	1	
REGION II				
Antofagasta	(A)	127,759	6	
Calama	(B)	68,446	4	
REGION III				
Copiapo	(C)	49,674	5	
Alto Del Carmen	(D)	3, 127	1	Alta Del Carmen 1/2 La Marquesa 1/2
REGION IV				
Coquimbo	(B)	64,845	5	
Ovalle	(C)	48,329	4	Ovalle 3 Sotaqui 1
Combarbala	(D)	7,724	1	
Los Vilos	(D)	8,083	1	
			35	

AREA -- CENTRAL

	<u>Size Stratum</u>	<u>>18 Pop</u>	<u># of Clstrs</u>	<u>Add'l Places</u>
REGION V				
Valpariso	(A)	183,199	7	
Vina DelMar	(A)	196,874	9	
San Felipe	(C)	32,148	10	
Petorca	(D)	6,352	1	Petorca 1/2 Chincolco 1/2
San Esteban	(D)	7,963	1	
Santa Maria	(D)	6,881	1	
Catemu	(D)	7,183	1	
Hijuelas	(D)	9, 171	1	Hijuelas 1/2 Vista Hermosa 1/2
Puchuncavi	(D)	5,750	1	Puchuncavi 1/2 Las Ventanas 1/2

El Tabo (D) 2,385 1

METROPOLITAN REGION

Prov. Sntago (A) 2,676,894 108

Paine (C) 20,367 7

Pirque (D) 5,747 1

Santa Rita 1/2
El Principal 1/2

Curacau (D) 10,852 1

Isle of
Maipo (D) 11,866 1

REGION VI

Rancagua (B) 109,325 13

Rengo (C) 22,599 6

Rengo 5
Rosario 1

Mostazal (D) 10,589 1

Olivar (D) 5,603 1

Olivar 1/2
Gultro 1/2

Quinta
Tilcoco (D) 5,680 1

Coltauco (D) 8,703 1

Coltauco 1/2
Idahue 1/2

Las Cabras (D) 9,816 1

Chepica (D) 9,111 1

Pichilemu (D) 5,786 1

AREA -- SOUTH

	<u>Size Stratum</u>	<u>>18 Pop</u>	<u># of Clstrs</u>	<u>Add'l Places</u>	
REGION VII					
Curcio	(C)	59,157	8	Curcio 5 Villa Santa Elena 1	
Vichuquen	(D)	2,334	1	Vichuquen Uraco	1/2 1/2
Maule	(D)	7,280	1		
Colbun	(D)	11,427	1		
Chanco	(D)	5,397	1		
REGION VIII					
Concepcion	(A)	182,271	11		
Talcahuano	(C)	143,552	9		
Chillan	(B)	92,213	6		
Coihueco	(C)	14,698	6		
Coronel	(C)	46,105	10		
Niquen	(D)	8,017	1	Niquen San Antonio	1/2 1/2
El Carmen	(D)	8,830	1		
Coelemu	(D)	10,217	1		
San Nicolas	(D)	4,951	1	San Nicolas Vidico	1/2 1/2
Antuco	(D)	1,904	1		
San Rosendo	(D)	2,488	1		
Bulnes	(D)	12,104	1		
Los Alamos	(D)	9,458	1		
REGION IX					
Temuco	(A)	129,210	10		
Freire	(C)	13,221	7	Freire 3 Mallohue 1 Huilio 1 Chihyimpille 1	
Lonquima	(D)	5,930	1		
Lumaco	(D)	6,712	1	Lumaco Butarrincon	1/2 1/2
Vilcun	(D)	11,685	1		
Pucon	(D)	8,007	1		
Tedodoro Schmidt	(D)	8,028	1	Tedodoro Schmidt Gaulpin	1/2 1/2

REGION X

Osorno	(B)	75,635	6	
La Union	(C)	22,768	5	San Javier 1
				Los Chilcos 1
				La Union 3
Los Lagos	(D)	11,550	1	
Paillaco	(D)	12,201	1	
Entre Lagos	(D)	7,510	1	
Sn. Juan DeLa Costa	(D)	5,004	1	Sn. Juan DeLa Costa 1/2
				Guamputue 1/2
Fresia	(D)	7,647	1	
Quinchao	(D)	5,816	1	
Hualaihue	(D)	3,917	1	Contao 1/2
				Rolecha 1/2

REGION XI

REGION XII

Punta Arenas	(B)	75,592	8
Porvinir	(D)	5,085	1