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DEMOGRAPHIC CHANGE IN THE
WELLINGTON-HUTT URBAN AREA
1956 - 1966

A Contribution to the Population
Geography of New Zealand.

A Thesis Presented in Partial Fulfilment
of the Requirements for the Degree of
Master of Arts in Geography at
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by

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FIGURES

	Following page
1. Frontispiece - Census Sub-Divisions, Wellington-Hutt Urban Area.	5
2. Population Growth 1956 - 1966, Total and Non-Maori.	9
3. Population Growth 1961 - 1966, Total and Non-Maori.	10
4. Population Growth 1956 - 1966, Maori.	15
5. Total Population Net Migration Gains and Losses, 1961 - 1966.	20
6. Population Gradients.	24
7. Residential Density Patterns.	24
8. Dwelling Densities, 1956 and 1966.	26
9. European Non-European Ratio, 1956 and 1966.	33
10. Indian Residential Dissimilarity, 1961 and 1966.	37
11. Chinese Residential Dissimilarity, 1961 and 1966.	37
12. Polynesian Residential Dissimilarity, 1961 and 1966.	37
13. Maori Residential Dissimilarity, 1961 and 1966.	37
14, 14a, 14b. Maori Non-Maori Residential Dissimilarity 1966.	40
15. Comparison of Age Structures of Maori and Total Population, 1956 and 1966.	50
16. Total Population Age Structures, 1956.	54
17. Total Population Age Structures, 1966.	54
18. Maori Age Structures, 1956.	55
19. Maori Age Structures, 1966.	55

	Following page
20. Age Structures: Spatial Distribution, 1956.	56
21. Age Structures: Spatial Distribution, 1966.	56
22. Changing Age Structures, 1956-1966.	58
23, 23a. Age Specific Net Migration, 1961-1966.	59
24. Dependency Ratios, 1966.	66
25. Index of Ageing, 1966.	67
26. Sex Ratios, 1966.	68
27. Variation in Derived Age Sex Indices, 1966.	68
28. Total Population Fertility Patterns, 1956 and 1966.	78
29. Fertility and Marital Status, 1956-1966.	79
30. Non-Maori and Maori Fertility Patterns, 1966.	82
31. Non-Maori and Maori Fertility Differentials 1966.	84

TABLES

	Page	
I	Percentage Distribution of Population in Wellington-Hutt Urban Area, 1956 - 1966.	10
II	Percentage Distribution of Maori Population in Wellington-Hutt Urban Area 1956 - 1966.	14
III	Inner-City (Zone 1) Rates of Increase.	16
IV	Population Density Variation, Wellington-Hutt Urban Area, 1966.	23
V	Racial Composition of Population in Wellington-Hutt Urban Area 1956 - 1966.	34
VI	Racial Concentration in the Wellington-Hutt Urban Area, 1956 - 1966.	36
VII	Residential Dissimilarity of Non-European Racial Groups in the Wellington-Hutt Urban Area.	38
VIII	Maori/Non-Maori Index of Residential Dissimilarity in Selected Inner-City and Peripheral Sub-divisions, 1966.	41
IX	Residential Dissimilarity and Social Distance Scaling (Bogardus) of Selected Ethnic Groups.	45
X	Percentage Net Migration Gain by Sex in Selected Inner-City Sub-divisions, 1961 - 1966.	61
XI	Inner-City and Peripheral Age Specific Net Migration Gains, 1961 - 1966.	63
XII	Intra-Urban Migrants: Place of Origin by Sex.	65
XIII	Fertility Extremes, 1966.	77
XIV	Zonal, M.F.T. Means, 1956 and 1966.	79
XV	Total, Non-Maori and Maori Fertility, Wellington-Hutt Urban Area, 1966.	84
XVI	Peripheral Fertility Patterns, Wellington-Hutt Urban Area, 1966.	85
XVII	Factors Influencing Labour Shortages in the Hutt Valley.	93
XVIII	Othogonal Varimax Rotated Factor Loadings on Twenty Population Variables.	108

APPENDICIES

	Page
A. Concentric Zonation of Wellington-Hutt Urban Area.	111
B. Annual Rates of Population Increase, Wellington-Hutt Urban Area.	112
C. Total Estimated Net Migration, Wellington-Hutt Urban Area, 1961 - 1966.	115
D. Gross Population Densities, Wellington-Hutt Urban Area, 1956 - 1966.	117
E. Residential Densities, Wellington-Hutt Urban Area, 1966.	120
F. Dwelling Densities, Wellington-Hutt Urban Area, 1956 and 1966.	122
G. Estimated Net Migration, Wellington-Hutt Urban Area, 1961 - 1966.	124
H. Dependency Ratios, Wellington-Hutt Urban Area, 1956 - 1966	134
I. Index of Ageing, Wellington-Hutt Urban Area, 1956 - 1966.	136
J. Sex Ratios, Wellington-Hutt Urban Area 1956 - 1966.	139
K. Marital Fertility Index, Wellington-Hutt Urban Area, 1956 - 1966.	142
L. Occupation Characteristics, Wellington-Hutt Urban Area, 1966.	145

INTRODUCTION

Although a number of articles and theses dealing with specific aspects of population and population change in the Wellington-Hutt Urban Area have been written, very few comprehensive studies have been attempted. Among the latter are McGee's (1969) examination of the social-ecological forces operating in the greater Wellington area, and Neville's (1959) thesis which deals primarily with patterns of growth in the population between 1926 and 1956 but also examines changes which have taken place in age-sex structures. Generally speaking, the studies conducted to date have been of two types; (a) point in time, and (b) period studies, both types examining a particular feature of the population such as age-sex structures (Franklin, Gibson and Treeby, 1963), or racial residential patterns (Trlin, 1971a). As these studies have been conducted independently of each other, and their objectives and results unco-ordinated, it was felt that a comprehensive study examining a number of demographic features over a ten year period (1956 to 1966, the latest decade for which full population information is available) was warranted.

The aims of this thesis are thus threefold.

1. To describe and analyse the spatial distribution and inter-relationship of a number of demographic features in the Wellington-Hutt Urban Area.

2. To examine and, where possible, account for the variation which exists between the Maori population (as an example of a minority group) and the total population.
3. To examine the implications of a changing demographic base for planning.

The latter objective arises from the perennial and increasingly chronic 'problem' of planning for people living in New Zealand's urban areas. It cannot be emphasised too strongly that the demographic base and more particularly the spatial variation of demographic variables are the bases for urban planning, which has in the past tended to concentrate on the built environment at the expense of its creators and inhabitants.

To fulfil the above aims the following hypotheses will be examined.

1. That the Wellington-Hutt Urban Area has experienced patterns of demographic change over the decade 1956-66 comparable to those observed in other New Zealand Urban Areas.
2. That the patterns of demographic change observed in the Wellington-Hutt Urban Area can be attributed to the concurrent processes of family formation, suburbanisation and State planning and direction.
3. That patterns of demographic change are inter-related.
4. That minority groups (in this case the Maori) will be at variance with the demographic changes that have taken

place in the total population.

5. That minority group variance will be greatest in the inner urban area and will diminish toward the periphery, e.g. (a) the growth rate of the Maori population will be positive in many of the inner-city sub-divisions, while that for the total population will be negative, and (b) growth for the Maori population will be greatest at the periphery as it is for the total population.
6. That the spatial distribution of demographic phenomena and the variations which exist between the Maori and total population can be explained by the ecological forces operating within the urban environment.

The thesis is divided into six chapters. Chapter one examines the patterns of population growth, distribution and density changes over the period 1956 - 1966. Three population groups are examined - total, non-Maori and Maori - and an assessment is made of net internal migration as a factor contributing to the observed patterns. Chapter two is concerned with racial minority residential patterns. An examination is made of the concentration of non-Europeans in relation to Europeans and then a more detailed examination of each of the major non-European racial groups (Maori, Polynesian, Chinese and Indian) is undertaken in order to assess the extent of residential integration. Chapter three is concerned basically with the intra-urban distribution of age-sex structures and the changes which have taken place over the period under study. To show the variation

which exists between Maori and total population age structures at the sub-division level, tri-graph analysis of both population groups was carried out. A number of indices derived from the basic age-sex profile information are also plotted spatially to give a more accurate picture of the intra-urban variation which exists between the two groups. In Chapter four fertility patterns are examined for the total, non-Maori and Maori population. Spatial patterns are established for the total population in order that changes which occur over the period can be assessed and non-Maori/Maori differentials are presented (a) to illustrate the variation in fertility which exists between the two groups, and (b) to show what effect Maori fertility has on the total population fertility pattern. Chapter five draws on the findings of the previous chapters in that it illustrates the implications demographic change can have for planning in the community. Finally, in the concluding chapter, the results of the thesis are assessed in terms of the initial hypotheses proposed. In addition factor analysis is applied to ascertain the degree to which the variables discussed are inter-related, and to establish (or confirm) the factors underlying the variation in the demographic variables examined.

Given the nature of the study and the material being examined, special efforts have to be made to avoid presenting an indigestible mass of statistics. Accordingly, considerable use has been made of maps and other illustrations to present the results of data analysis as clearly and concisely as possible. Such visual aids, however, though facilitating easier reporting and comprehension, do have the disadvantage of requiring the

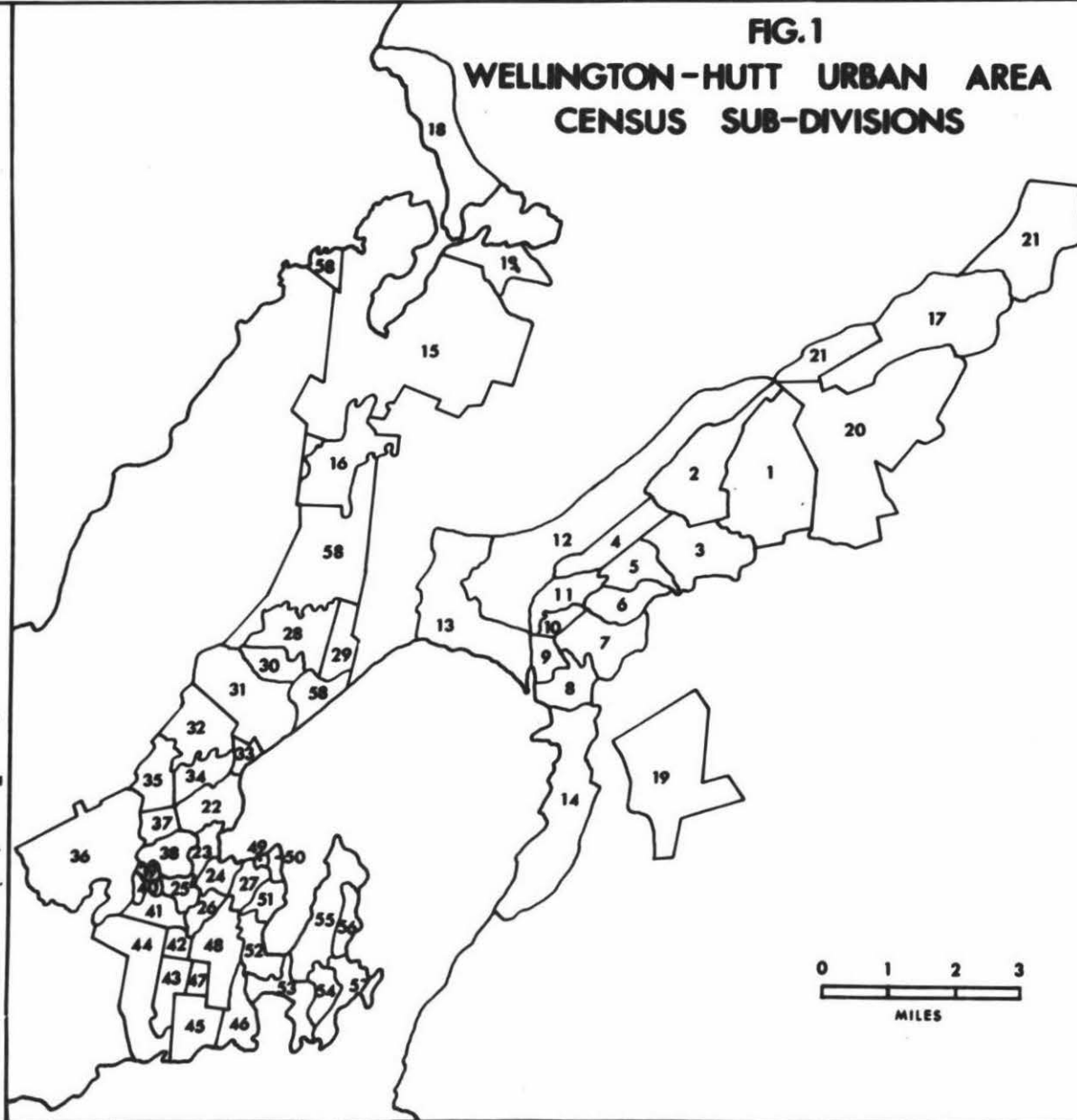
sacrifice of a degree of precision. To overcome this obstacle, to meet the rigorous needs of an academic study and specialist readers, detailed results of analysis are included in a set of statistical appendices which should be regarded as an integral part of the study.

Limitations imposed on a study such as this are those which are common to most studies dependent on census reports or other official statistics as the primary source of data. What this means in reality is that conclusions drawn are based primarily on the analysis of quantitative data not specifically designed for demographic research. To some extent the results obtained, and spatial patterns identified may reflect the nature or form of the information provided in the census reports. For example, information on the age structure of the population is often heaped artificially at five year intervals. While this practice may well be in the interests (and reflect the capabilities) of official data collection and publication, it nevertheless places restrictions on subsequent analyses, especially as individual census schedules are classed as confidential documents beyond the reach of research workers both inside and outside government departments. Similarly, variations in the size of census sub-divisions and the uneven distribution of the population within them will mean that patterns established are probably more generalised than those that would pertain had a smaller areal unit such as the mesh block been used. The above mentioned factors should therefore be kept in mind when reading the thesis.

FIG.1
WELLINGTON-HUTT URBAN AREA
CENSUS SUB-DIVISIONS

CENSUS SUB-DIVISIONS

- 1 STOKES VALLEY
- 2 TAITA
- 3 NAENAE
- 4 BOULCOTT AVALON
- 5 EPUNI
- 6 WATERLOO
- 7 WAIWHETU
- 8 SEAVIEW-GRACEFIELD
- 9 MOERA
- 10 WOBURN
- 11 HUTT CENTRAL
- 12 WESTERN HUTT
- 13 PETONE
- 14 EASTBOURNE
- 15 PORIRUA CITY
- 16 TAWA
- 17 UPPER HUTT CITY
- 18 PLIMMERTON-PAREMATA
- 19 WAINUIOMATA
- 20 HERETAUNGA-PINEHURVEN
- 21 HUTT COUNTY PART
- 22 THORNDON-TINAKORI RD.
- 23 LAMBTON QY.-WELL. TCE.
- 24 WILLIS ST.-CAMB. TCE
- 25 ARO ST.-NAIRN ST.
- 26 MT. COOK - WALLACE ST.
- 27 MT. VICTORIA WEST
- 28 JOHNSONVILLE
- 29 NEWLANDS



CENSUS SUB-DIVISIONS

- 30 RAROA
- 31 KHANDALLAH
- 32 NGAIO
- 33 KAIWHARAWHARA
- 34 WADESTOWN
- 35 WILTON - OTARI
- 36 KARORI
- 37 NORTHLAND
- 38 KELBURN
- 39 TAITVILLE
- 40 MITCHELLTOWN
- 41 BROOKLYN
- 42 VOGELTOWN
- 43 MORNINGTON
- 44 HAPPY VALLEY
- 45 ISLAND BAY
- 46 MELROSE
- 47 BERHAMPORE
- 48 NEWTOWN
- 49 ORIENTAL BAY
- 50 ROSENEATH
- 51 HAITAITAI
- 52 KILBERNIE
- 53 LYALL BAY
- 54 STRATHMORE
- 55 MIRIMAR
- 56 KARAKA-WORSER BAY
- 57 SEATOUN
- 58 HUTT COUNTY PART

