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THE MULTIPLE INTER-RELATIONSHIPS AMONG HEALTH STATUS, EDUCATION, INCOME, AND LIFESTYLE FACTORS: EVIDENCE FROM AUSTRALIA

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TABLE OF CONTENTS

TABLE OF CONTENTS - (Continued)

LIST OF TABLES

LIST OF TABLES - (Continued)

LIST OF TABLES - (Continued)

LIST OF TABLES - (Continued)

LIST OF TABLES - (Continued)

LIST OF TABLES - (Continued)

LIST OF FIGURES

ABSTRACT

This dissertation examines the inter-relationships among health, education, income, and health-related behaviour as measured by alcohol consumption and smoking. The cross-section models are estimated using data from Australia's sixty-one statistical regions to analyse multiple causal relationships among factors taken as endogenous. Classifying health indicators as 'no recent illness', 'no chronic condition', and 'self-assessed good or excellent health', ten models are presented and econometrically evaluated. The first, second, third, fourth, and fifth models take the proportions of persons with no recent illness and no chronic conditions, the proportion of persons aged 18 years or over with self-assessed good or excellent health, the proportion of persons aged 15 years or over with post-school qualifications, and nominal gross annual median income of persons aged 15 years or over, respectively, as endogenous. The inter-relationships among the proportion of persons with no recent illness, the proportion of persons aged 18 years or over with self-assessed good or excellent health, and the proportion of persons aged 18 years or over with moderate alcohol consumption are specified in the sixth, seventh, and eighth models. The proportions of persons aged 18 years or over with cigarettes consumption and with excessive alcohol consumption are taken as endogenous in the ninth and tenth models.

Diagnostic checks are conducted to evaluate all the models. The tests include the non-nested tests, the tests of independence, the tests for endogeneity and exogeneity, the RESET tests for functional form misspecification, and the tests for heteroskedasticity. The parameter stability of the models is also tested and then (if any instability is apparent) parameter instability analysis is carried out. In addition, the direct, indirect, and total effects of variables exogenously determined in the individual models are manifested, since all the models are identified.

The empirical evidence is consistent with the hypotheses that there are multiple inter-relationships (a) among the proportion of persons with each of no recent illness and no chronic conditions, the proportion of persons aged 18 years or over with self-assessed good or excellent health, the proportion of persons aged 15 years or over with post-school

qualifications and nominal gross annual median income of persons aged 15 years or over, (b) among the proportion of persons with no recent illness, the proportion of persons aged 18 years or over with self-assessed good or excellent health and the proportion of persons aged 18 years or over with moderate alcohol consumption, and (c) between the proportions of persons aged 18 years or over with cigarettes consumption and with excessive alcohol consumption.