

ECONOMIC IMPLICATIONS
OF THE SIZE OF NATIONS
WITH SPECIAL REFERENCE TO LEBANON

ECONOMIC IMPLICATIONS OF THE SIZE OF NATIONS

WITH SPECIAL REFERENCE TO LEBANON

BY

NADIM G. KHALAF

American University of Beirut



LEIDEN
E. J. BRILL
1971

Copyright 1971 by E. J. Brill, Leiden, Netherlands
All rights reserved. No part of this book may be reproduced or
translated in any form, by print, photoprint, microfilm, microfiche
or any other means without written permission from the publisher

PRINTED IN THE NETHERLANDS

TO MY FATHER

TABLE OF CONTENTS

LIST OF TABLES	xi
LIST OF FIGURES	xiv
PREFACE	xv

I. INTRODUCTION	1
---------------------------	---

PART ONE

II. ECONOMIC STABILITY AND SIZE	9
1. Two-Variable Analysis: Patterns and Correlations	11
A. Instability of National Income and Size	12
B. Instability of Export Proceeds and Size	15
C. Instability of Imports and Size	20
D. Instability of Capital Movements and Size	22
E. Fluctuations of Foreign Exchange Reserves and Size.	26
F. Fluctuations of the Terms of Trade and Size	30
2. Three-Variable Analysis: Cross-Classifications and Correlations	33
A. Income Instability and Size	36
1. Income Instability, Development, and Size	36
2. Income Instability, Growth, and Size	38
3. Income Instability, Dependence on Trade, and Size	39
4. Income Instability, Commodity Export Con- centration, and Size	42
5. Income Instability, Geographic Export Con- centration, and Size	43
6. Conclusions	45
B. Export Instability and Size.	47
1. Export Instability, Development, and size	47

2. Export Instability, Economic Growth, and Size	49
3. Export Instability, Commodity Export Concentration, and Size	51
4. Export Instability, Geographic Export Concentration, and Size	53
5. Conclusions	55
C. Import Instability and Size	57
1. Import Instability, Development, and Size	57
2. Import Instability, Economic Growth, and Size	59
3. Import Instability, Dependence on Trade, and Size	61
4. Conclusions	63
III. CONCENTRATION IN TRADE AND SIZE	65
1. Two-Variable Analysis: Patterns and Correlations	67
A. Commodity Concentration of Exports and Size	68
B. Commodity Concentration of Imports and Size	73
C. Geographic Concentration of Exports and Size	79
2. Three-Variable Analysis: Cross-Classifications and Correlations	88
A. Export Concentration, Development, and Size	90
B. Export Concentration, Dependence on Trade, and Size	95
IV. DEPENDENCE ON TRADE AND SIZE	99
1. Two-Variable Analysis: Patterns and Correlations	102
A. Foreign Trade Proportions and Size	102
B. Export Proportions and Size	109
C. Foreign Capital Proportions and Size	113
2. Three-Variable Analysis: Cross-Classifications and Correlations	119
A. Dependence on Trade, Economic Development, and Size	120
B. Dependence on Trade, Economic Growth, and Size	123

V. ECONOMIC GROWTH, DEVELOPMENT, AND SIZE	126
1. Two-Variable Analysis: Patterns and Correlations	128
A. Economic Growth Rates and Size	128
B. Levels of Economic Development and Size	136
2. Three-Variable Analysis: Cross-Classifications and Correlations	140
A. Economic Development and Size	141
1. Economic Development, Dependence on Trade, and Size	141
2. Economic Development, Commodity Export Concentration, and Size	142
3. Economic Development, Geographic Export Concentration, and Size	144
4. Conclusions	146
B. Economic Growth and Size	147
1. Economic Growth, Dependence on Trade, and Size	147
2. Economic Growth, Commodity Export Con- centration, and Size	149
3. Economic Growth, Geographic Export Con- centration, and Size	151
4. Conclusions	152

PART TWO

VI. SIZE AND GROWTH OF THE LEBANESE ECONOMY	157
1. Lopsided Structure	157
2. Increasing Lopsidedness	161
3. Disparity in Growth Rates	163
4. Capital Formation & Disparity in Capital/Output Ra- tios	165
5. Maldistribution of Income	169
6. Market Limitation and Diseconomies of Scale	171
VII. DIVERSITY OF THE LEBANESE ECONOMY	180
1. Diversity of Production	181

2. Commodity Concentration of Trade	183
3. Geographic Concentration of Trade	192
VIII. LEBANON'S DEPENDENCE ON FOREIGN TRADE	198
1. Large Merchandise Trade Deficit	199
2. High Propensity to Import	202
3. High Dependence on Services and Foreign Capital	205
IX. SIZE AND STABILITY OF THE LEBANESE ECONOMY	212
1. Dependence on Trade and Stability	213
A. Importance of Trade and Stability	213
B. Propensity to Import and Stability	214
C. Services, Foreign Capital and Stability	219
2. Diversity of the Economy and Stability	222
X. CONCLUSION	228
APPENDICES	
A. Statistical Tables	237
B. Description of the Indices Used in Analyzing the Implications of Size	241
C. Summary of Regression Lines and Correlation Coefficients	247
BIBLIOGRAPHY	254
INDEX	258

LIST OF TABLES

1. Relation Between Size of Country (Population, GNP) and Instability of National Income (Y_1)	14
2. Relation Between Size of Country (Population, GNP) and Instability of Export Proceeds (Y_2, Y_3)	19
3. Relation Between Size of Country (Population, GNP) and Instability of Imports (Y_4)	22
4. Relation Between Size of Country (Population, GNP) and Instability of Capital Movements (Y_5, Y_6)	27
5. Relation Between Size of Country (Population, GNP) and Fluctuations of Foreign Exchange Reserves (Y_7)	30
6. Relation Between Size of Country (Population, GNP) and Fluctuations of the Terms of Trade (Y_8)	33
7. Income Instability Medians (Y_1) by Size and by Degree of Development (Y_{23})	37
8. Income Instability Medians (Y_1) by Size and by Economic Growth (Y_{21})	38
9. Income Instability Medians (Y_1) by Size and by Dependence on Trade (Y_{16})	40
10. Income Instability Medians (Y_1) by Size and by Commodity-Export Concentration (Y_9)	42
11. Income Instability Medians (Y_1) by Size and by Country-Export Concentration (Y_{10})	44
12. Export Instability Medians (Y_2) by Size and by Degree of Development (Y_{23})	48
13. Export Instability Medians (Y_2) by Size and by Economic Growth (Y_{21})	50
14. Export Instability Medians (Y_2) by Size and by Commodity-Export Concentration (Y_9)	52
15. Export Instability Medians (Y_2) by Size and by Country-Export Concentration (Y_{10})	55
16. Import Instability Medians (Y_4) by Size and by Degree of Development (Y_{23})	58
17. Import Instability Medians (Y_4) by Size and by Economic Growth (Y_{21})	60
18. Import Instability Medians (Y_4) by Size and by Dependence on Trade (Y_{16})	62
19. Relation Between Size of Country (Population, GNP) and Commodity-Group Export Concentration (Y_9)	72
20. Relation Between Size of Country (Population, GNP) and Commodity Concentration of Exports (Y_{13})	73
21. Relation Between Size of Country (Population, GNP) and Commodity Concentration of Imports (Y_{14})	76
22. Relation Between Size of Country (Population, GNP) and Ratio of Commodity Concentration of Exports to Imports (Y_{15})	78

23. Relation Between Size of Country (Population, GNP) and Country Export Concentration (Y_{10})	82
24. Relation Between Size of Country (Population, GNP) and Regional Export Concentration (Y_{11}).	85
25. Relation Between Size of Country (Population, GNP) and % of Exports to Region Receiving Most of Country's Exports (Y_{12})	87
26. Commodity Export Concentration Medians (Y_9) by Size and by Degree of Development (Y_{23})	91
27. Country-Export Concentration Medians (Y_{10}) by Size and by Degree of Development (Y_{23})	93
28. Commodity-Export Concentration Medians (Y_9) by Size and by Dependence on Trade (Y_{16})	94
29. Country-Export Concentration Medians (Y_{10}) By Size and by Dependence on Trade (Y_{16})	97
30. Relation Between Size of Country (Population, GNP) and Foreign Trade as % of GNP (Y_{16})	105
31. Relation Between Size of Country (Population, GNP) and Foreign Trade Per Capita (Y_{17})	107
32. Relation Between Size of Country (Population) and Foreign Trade Proportions (Y_{16} , Y_{17})	108
33. Relation Between Size of Country (Population, GNP) and Exports of Goods and Services as % of GNP (Y_{18})	112
34. Relation Between Size of Country (Population, GNP) and Foreign Capital as % of GNP (Y_{19})	115
35. Relation Between Size of Country (Population, GNP) and Foreign Capital and Donations as % of GNP (Y_{20})	118
36. Dependence on Trade Medians (Y_{16}), by Size and by Degree of Development (Y_{23})	120
37. Dependence on Trade Medians (Y_{16}), by Size and by Economic Growth (Y_{21})	123
38. Relation Between Size of Country (Population, GNP) and % Increase in GNP Per Year, 1951-1957 (Y_{21})	131
39. Relation Between Size of Country (Population, GNP) and Increase in Per Capita GNP, 1951-1957 (Y_{22})	133
40. Relation Between Size of Country (Population, GNP) and Growth of Exports: Log (Y_{25})	136
41. Relation Between Size of Country (Population) and Per Capita GNP, 1951-1957 (Y_{23})	138
42. Relation Between Size of Country (Population) and GNP Per Capita, 1957 (Y_{24})	140
43. Degree of Development Medians (Y_{23}) by Size and by Dependence on Trade (Y_{16})	141
44. Degree of Development Medians (Y_{23}) by Size and by Commodity Export Concentration (Y_9)	143
45. Degree of Development Medians (Y_{23}) by Size and by Country-Export Concentration (Y_{10})	145
46. Economic Growth Medians (Y_{21}) by Size and by Dependence on Trade (Y_{16})	148

47. Economic Growth Medians (Y_{21}) by Size and by Commodity-Export Concentration (Y_9)	150
48. Economic Growth Medians (Y_{21}) by Size and by Country-Export Concentration (Y_{10})	152
49. Net National Product, by Sector: 1950-1966 (at current factor cost) (in percentages)	158
50. Origins of Net National Product, 1950-1966 (at current factor cost).	161
51. Growth of Net National Product, 1950-1966 (at current factor cost).	163
52. Growth of Net National Product, 1950-1966 (at current factor cost).	164
53. Private Capital Formation, by Sector (1948-1957)	166
54. Capital/Output Ratios, by Sector (1950-1957)	168
55. Income Distribution per Family	169
56. National Income and Employment by Sector (1957)	170
57. Growth of Manufacturing Industry, 1955-1964	175
58. Number of Establishments, Number of Persons Employed, Cash Receipts, and Value Added by Size of Establishment	176
59. Occupational Structure in Lebanon, Switzerland, The United States, and Western Germany, Labor Force %	182
60. Diversity of Industrial Production in Lebanon	184
61. Lebanese Exports to the Twelve Largest Markets (1951-1966)	193
62. Regional Concentration of the Exports of Selected Countries, 1954.	194
63. Lebanese Imports from the Twelve Largest Markets (1951-1966)	195
64. Lebanese Merchandise Trade with Immediate Neighbouring Countries, 1951-1966	196
65. Trade and Finance Sectors as % of Net National Product 1950-1966 (in percentages)	199
66. Ratio of Merchandise Imports (M) to Exports (X), and Merchandise Trade Deficit (M-X), 1951-1966 (LL million)	200
67. Growth in Merchandise Imports, 1953-1961	200
68. Ratios of Merchandise Exports (X), Imports (M) and Foreign Trade (X+M) to Net National Product, 1951-1966 (Percentages)	201
69. Foreign Exchange Expenditure, by Source, 1951-1966	205
70. Foreign Exchange Receipts, by Source, 1951-1966	206
71. Exports of Goods and Services, 1951-1966 (LL million)	208
72. Financing the Merchandise Trade Deficit, 1951-1966	210
73. Medians of Ratios of Money to Income (Mo/Y), Imports to Income (M/Y), and Money to Imports (Mo/M), of Lebanon and POLAK's Groups of Countries	215
74. Lebanon's Ratios of Money to Income (Mo/Y), Imports to Income (M/Y), and Money to Imports (Mo/M) (1952-1966)	216
75. Lebanon's Net National Product, Money Supply, and Quasi-Money, 1950-1966	217

LIST OF FIGURES

1. Scatter Diagrams: Instability of National Income and Size
2. Scatter Diagrams: Instability of Export Proceeds and Size
3. Scatter Diagrams: Instability of Exports Proceeds and Size
4. Scatter Diagrams: Instability of Imports and Size
5. Scatter Diagrams: Instability of Capital Movements and Size
6. Scatter Diagrams: Instability of Capital Movements and Size
7. Scatter Diagrams: Fluctuations of Foreign Reserves and Size
8. Scatter Diagrams: Fluctuations of the Terms of Trade and Size
9. Scatter Diagrams: Commodity-Group Export Concentration and Size
10. Scatter Diagrams: Commodity Export Concentration and Size
11. Scatter Diagrams: Commodity Import Concentration and Size
12. Scatter Diagrams: Commodity Concentration of Exports to Imports
and Size
13. Scatter Diagrams: Country Export Concentration and Size
14. Scatter Diagrams: Regional Export Concentration and Size
15. Scatter Diagrams: Exports to Region Receiving Most Exports and
Size
16. Scatter Diagrams: Foreign Trade Proportions and Size
17. Scatter Diagrams: Foreign Trade per Capita and Size
18. Scatter Diagrams: Export Proportions and Size
19. Scatter Diagrams: Foreign Capital Proportions and Size
20. Scatter Diagrams: Foreign Capital and Donations Proportions and
Size
21. Scatter Diagrams: Increase in GNP and Size
22. Scatter Diagrams: Increase in Per Capita GNP and Size
23. Scatter Diagrams: Growth of Exports and Size
24. Scatter Diagrams: Per Capita GNP and Size
25. Scatter Diagrams: GNP per Capita and Size

PREFACE

This is a modest attempt to evaluate the economic implications of the size of nations, for a sample of eighty countries, on (1) economic stability, (2) concentration in trade, (3) dependence on trade, and (4) economic growth and economic development. Only simple and multiple correlations, and a cross-classificatory scheme interpreted as crude partial correlations, are used to analyze the nature of the relationships between 'size' and the mentioned four aspects. The uneven quality of the data does not, perhaps, justify the use of more rigorous statistical techniques. Lebanon is also singled out as an example of a small country in an attempt to assess the impact of the size of the Lebanese economy on each of these aspects.

There are several acknowledgements that I owe and must make to those who have helped in the preparation of this study. I am indebted to the Economics Department and the Economic Research Institute of the American University of Beirut for making available to me their research facilities. My very sincere thanks are due to the Publication Committee of the American University of Beirut, without whose support this study would not have been published. A grant from the Rockefeller Foundation, through the Arts and Sciences Research Committee of the American University of Beirut, was of assistance in facilitating the work on the statistical part. I am deeply indebted to Professor Joseph D. Coppock who gave me freely of his time during his two years as Visiting Professor of Economics at the American University of Beirut. Since an earlier version of this was my Ph. D. thesis at Princeton University, my very sincere thanks are due to the members of my thesis committee, Professor Oskar Morgenstern, Chairman, and Professor Benjamin J. Cohen who suggested numerous improvements. My thanks are also due to Professors F. H. Harbison, R. E. Quandt, and H. G. Georgiadis who had read earlier drafts of the manuscript. I must admit that not all their good advice was heeded and, therefore, all remaining faults and shortcomings are solely mine.

Finally my sincere thanks are due to Miss Lamia Awad, Mr. Ilyas Barudi, Miss Mariana Khouri Makdisi and Mr. Walid Sulayman who

helped prepare the statistical tables and scatter diagrams, and to Miss Suzie Baghachejian and Mrs. Soumaya Jebara who typed the manuscript.

Beirut, Lebanon
December, 1970

NADIM G. KHALAF