ASSESSING THE CAUSES OF THE PHYSICAL QUALITY OF LIFE:
A CROSS-NATIONAL ANALYSIS OF THREE THEORIES

by

ANGEL D. ILARRAZA

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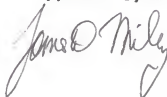
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INTRODUCTION

The Physical Quality of Life is defined as the extent to which basic human needs such as nutrition, health, and education are met (cf. Hicks and Streeten, 1979; Morris, 1979). Until recently, the cross-national variation in the Physical Quality of Life is a subject that appears to have been largely ignored. Within the last decade, however, this subject has attracted the attention and efforts of many cross-national researchers (e.g., Morris, 1979; Weatherby, 1983; Williamson, 1987; London and Williams, 1988). Three macro perspectives have been used to account for the cross-national variation in the Physical Quality of Life. These include the Marxian, Modernization and Dependency/World Systems theories. This thesis is an attempt to shed theoretical and empirical light, on these three perspectives. This chapter is organized into four sections: (1) statement of the problem; (2) statement of the purpose; (3) statement of significance; and (4) summary and overview.

STATEMENT THE PROBLEM

The three perspectives mentioned provide distinct explanations of the cross-national variation in the Physical Quality of Life. The Marxian theory approaches the issue through class analysis. The Modernization theory approaches the issue through a framework which emphasizes economic development. The Dependency/World Systems theory approaches the issue from a framework that emphasizes the dependent relations between nations in a world economic system.

Most of the previous cross-national research on the Physical Quality of Life examines the issue from the point of view of either the Marxian perspective (Myles, 1983; Stephens, 1979), the Modernization perspective (Wilensky and Lebeaux, 1965; Kerr et al., 1960), or the Dependency/World Systems perspective (London and Williams, 1988; Jackman, 1975). With the exception of Williamson (1987), no one has attempted to simultaneously test these three theories.

Williamson (1987) finds support for Modernization theory, limited support for Marxian theory, and mixed support for Dependency/World Systems theory. While this study is certainly important, it is characterized by two shortcomings. First, he only looks at developing nations. Thus the results cannot be extended to underdeveloped and

developed nations. Second, the analysis is confined to the
1970-1975 time period.

STATEMENT OF PURPOSE

The purpose of this study is to broaden the perspectives
of the previous research by empirically assessing the
validity of the three theories simultaneously. This will
entail regressing percent change in several indicators of
Quality of Life on a series of independent variables.

The method of analysis used is OLS regression. This
analysis is based on data collected for three time periods:
circa 1965 or circa 1970, and 1980. The first equation
regresses percent change in an index from 1970-1980 on the
independent variables. The remaining five equations regress
percent change in the five individual indicators from
1965-1980 on the independent variables. The sample
consists of 52 countries. The dependent variables include
percent change in the following measures of the Physical
Quality of Life: Morris Physical Quality of Life Index,
life expectancy, caloric consumption, child mortality,
infant mortality and secondary school enrollment ratio. The
independent variables are income distribution; GNP/capita;
and multinational corporate penetration. Total population
size is used as a control variable.

STATEMENT OF SIGNIFICANCE

The significance of this thesis is twofold. First, it will provide insight into the validity of each of the theories mentioned, as they pertain to the Quality of Life. This will be done by simultaneously testing the three theories. This approach will allow for a comparative assessment of their validity.

Second, it has important policy implications. These three theories are reflected in several different political ideologies. Thus, the findings of this study can be potentially used by political leaders in their attempt to develop or implement strategies which attempt to provide/improve the Quality of Life. This study will ultimately provide insight into the effectiveness of the developmental strategies which have been implemented in an effort to improve the Quality of Life.

SUMMARY AND OVERVIEW

This chapter began with a discussion of the Quality of Life and existing theories. Next, the shortcomings of previous research were briefly outlined and the purpose of the thesis was presented. Finally, the significance of this thesis was discussed.

This thesis consists of four additional chapters. Chapter Two discusses the theoretical formulations as they

pertain to the Quality of Life. Chapter Three discusses the data and methods used, and Chapter Four reports the results. Chapter Five consists of a summary and major conclusions.

CHAPTER TWO

THEORETICAL FORMULATIONS AND PREVIOUS RESEARCH

INTRODUCTION

As noted in Chapter One, three separate macro social
change theories have implications for the Physical Quality
of Life. This chapter examines each of these theoretical
frameworks as they pertain to the Physical Quality of Life,
as well as relevant cross national research. Specifically,
this chapter consists of four sections: (1) the Marxist
model; (2) the Modernization model; (3) Dependency/ World
Systems model; and (4) summary and conclusions.

THE MARXIST MODEL

Central to the Marxist model is the focus on the role of
differentiated social classes in society and the power
relations that exist between these social classes. Marxian
theory implies that power relations existing between social
classes will influence how the resources affecting the
Quality of Life will be distributed. Theoretical literature
on class theory includes a broad range of material ranging
from the original works of Karl Marx (1967) and Max Weber
(1968) to the recent works of contemporary Marxists such as
Ernest Mandel (1977) and Thomas Bottomore (1966), as well

as neo-Marxists such as Paul Baran, Paul Sweezy (1966) and
Eric Olin Wright (1978).

It is because of the postulation concerning the
variation in the degree of class that the issue of class
needs to be addressed here. The Marxian perspective
approaches Quality of Life through class analysis. That is,
it approaches this issue while emphasizing the existence of
stratified social classes characterized by the unequal
distribution of power and needed resources in the society.
The inference derived from this approach is that class
relations ultimately influence the distribution of the
resources in the society. Clearly, it is important to
measure the degree of economic inequality present in a
society because this will indicate the degree of class or
classlessness present in a society. Thus, it is proposed
here that societies with a high degree of class inequality
will have a low Physical Quality of Life. Conversely,
societies with less class distinction will have a high
Physical Quality of Life. It is this hypothesis which will
be tested.

Past research from the Marxian perspective as it
pertains to the Quality of Life includes Stephens (1979),
Myles (1986), Cereseto and Waitzkin (1986), and Williamson
(1987). All of these studies find empirical support for the
Marxian perspective. However, in the light of what is being

attempted here they are characterized by several problems.
The studies by Stephens (1979) and Myles (1986) are
problematic in the sense that they use inadequate measures
of the Physical Quality of Life. Other problems include the
fact that they only focus on advanced countries while
ignoring 'developing' nations, and that they fail to
control for alternative explanations. Unlike Stephens
(1979) and Myles (1986), Cereseto and Waitzkin (1986) and
Williamson (1987) explicitly address the PQL issue in its
entirety without ignoring vital indicators. Cereseto and
Waitzkin (1986 p.664) conclude that "in the aggregate, the
socialist countries have achieved more favorable PQL
outcomes than capitalist countries at equivalent levels of
economic development." The problem of this study is that it
fails to recognize and control for alternative
explanations. It also uses a cross-sectional design. Thus,
it does not permit comparative analysis over time.
Williamson's (1987) article while also finding empirical
support for the Marxian class theory is characterized by
the use of a restricted sample; that is, it only looks at
developing countries while excluding 'developed' countries.
Clearly the findings of this study are restricted to less
developed countries.

Ihe MODERNIZATION MODEL

The Modernization model is representative of structural functionalist thought as well as contemporary capitalist ideology. In many respects they are viewed as being identical. The theoretical literature concerning this perspective can be found in the works of Eisenstadt (1964), Smelser (1964), and Parsons (1964). This model suggests that societies can become 'modern' through the process of industrialization. The implicit suggestion found in this perspective is that traditional societies or societies with a low Quality of Life can become modern through the adaptation of industrial technology, along with the traditions, values, and social institutions of those societies which are already modernized. Kerr et al. (1960) argue that "the growth of industrial technology is the engine of social change that transforms traditional societies into modern societies" (cited in Williamson, 1987 p. 206).

Proponents of this model can be seen as essentially falling into two categories. On the one hand, there are those that argue that industrialization itself is the thrust of societal change (Kerr et al. 1960). On the other hand, there are those that argue that while industrialization is certainly linked to societal transformation, other factors, such as the emergence of

particular societal institutions, are inevitably involved (Pampel and williamson, 1985; Entwisle and winegarden, 1984).

The logic of this argument is as follows: If the economy of a country is stimulated through the process of industrialization, opportunities such as education, health and housing will emerge. Furthermore, the members of society will then have the financial means to pay for such opportunities. The Physical Quality of Life, while not a direct goal of development, can be considered a product or effect of such. From the point of view of this model the Physical Quality of Life is dependent upon the degree of economic development of a nation. The higher the economic development the higher the Physical Quality of Life.

Results of a study performed by Jackman (1975) support Modernization theory as it pertains to the Quality of Life. williamson's (1987) study also finds support for this theory. However, both of these studies have used what is now old data; thus, there is a need to assess the validity of this model with more recent data. This is important because the long term effects of modernization may be significantly different from its short term effects.

DEPENDENCY/WORLD SYSTEMS THEORY

We can find the roots of the Dependency/world Systems

theory embedded in the Marxian theory of class struggle. In a real sense world Systems theory is a global extension with significant modification of the Marxian theory. The central idea put forth by world Systems theorists is the existence of a world economy and certain predictable effects of such an economy. The theoretical literature concerning this model can be found in the work of Frank (1972) and wallerstein (1974). According to this theory the "world economy" can be defined as a formal structure as well as a particular mode of production. "As a formal structure a world economy is defined as a single division of labor within which are located multiple cultures. Hence, it is a world system" (wallerstein 1976, p.46). It is important to note that this world system has no overarching political structure to redistribute the appropriated surplus. Instead, such surplus is redistributed by the market. That is, all production is executed solely for the purpose of exchange. Thus, "As a mode of production this world system is clearly capitalist" (wallerstein 1976, p.46).

Quality of Life from this perspective is viewed as an effect of the degree of dependency that a nation has on other nation(s) for various forms of economic stimulation. Specifically, "dependency" refers to the penetration of Third World economies by private investments made by core entities. These core entities include transnational

corporations and financial institutions such as the World
Bank and the International Monetary Fund. In some cases
core states directly intervene in the economies of Third
World countries via military aid as well as nonmilitary
aid. In effect, these entities own and manage, but do not
operate business enterprises in Third World countries. The
result is foreign control of domestic production. This
type of situation leaves Third World countries literally at
the mercy of foreign policies and decisions concerning the
fluctuation in production levels, employment rates, plant
closings and ultimately profit appropriation/expatriation.
While the argument can be made that most profit remains in
the host country, this assertion in most cases is false.
Profit hungry transnational corporations have more loyalty
to their stockholders than they do to the host country.
Thus, their allegiance is ultimately with their
stockholders and not with the host country. Most decisions
if not all are made with one objective in mind: Profit
maximization.

Aside from the vulnerability issue concerning policies
explained above, another facet of dependency is the actual
draining of labor, natural resources and particularly
economic surplus from the Third World countries by the
industrial powers. In terms of the Physical Quality of
Life, it is the extraction of such resources which creates
and sustains the dependency relation between the Third

world and the global industrial powers. This is because the very resources which are extracted as 'profit' could be used to increase the Physical Quality of Life. Thus, the proposition implied by this model is that countries with a high degree of dependency will have a low Physical Quality of Life. It is this hypothesis which will be tested here.

It should be noted that degree of dependency is a major determinant of the position which a society holds in the world division of labor. The world division of labor is divided into three categories: the core, periphery and semiperiphery. The core consists of countries that are strong and stable. They possess internal cultural homogeneity, modern technology, an internal division of labor, and high levels of skilled labor. The periphery consists of countries which are weak, unstable and less advanced in the sense that they have underdeveloped technology, little division of labor, a high degree of unskilled labor and less cultural homogeneity (Wallerstein, 1974). It should be clear that peripheral countries depend upon core countries for economic stimulation via corporate penetration, foreign investment and marketable products which create jobs. The same is true but to a much lesser degree if we switch the roles. Core countries depend on peripheral countries for cheap labor, raw materials, markets for their goods and profits.

The semiperiphery is characterized by countries in which facets of both the core and periphery countries can be found. Wallerstein argues that semiperipheral countries play an important part in this world division of labor because of the fact that they serve the purpose of diffusing tensions coming from peripheral countries that otherwise might be directed at the core countries.

Studies from this perspective which explicitly look at the Physical Quality of Life are limited. A study done by Jackman (1975) concludes that the degree of dependency has no effect on the Physical Quality of Life. Jackman's (1975) study was based on old data and his sample consisted of only 40 nations. London and Williams (1987) found that "the general effect of dependency on basic needs provision is strong and negative" (London and Williams 1987, p.768). This study, however, only looks at less-developed countries; thus, comparison is not possible. Williamson's study (1987) concludes that "the findings offer modest support for dependency theory" (Williamson, 1987 p.220).

SUMMARY

This chapter has discussed the three theoretical formulations to be tested in this study. Recent empirical research was also discussed. Previous research is characterized by several shortcomings. Most important is the fact that all of these studies except Williamsons'

(1987) fail to simultaneously test the three theoretical formulations. These studies are also largely characterized by the use of what is now old data, as well as the fact that their samples are restricted to developing or noncore nations. This thesis will contribute to this body of research by addressing the identified shortcomings. Specifically, this thesis will simultaneously test the three formulations while using recent data for a sample consisting of developed and developing nations.

CHAPTER THREE

DATA AND METHODS

INTRODUCTION

This chapter summarizes the data and method used in the empirical analysis of the three theoretical formulations. It is organized into four sections: (1) discussion of the sample; (2) examination of the variables; (3) discussion of the method of analysis; and (4) summary.

SAMPLE

The sample used in this study consists of 52 nations for which complete data were available for all variables used in the analysis. Although a relatively small number of countries are used, this sample represents both developed and developing nations. This sample is a nonprobability sample; thus, the generalizability of the findings are potentially hinderd. present in the world. The nations included in the sample are presented in Table 1.

Table 1. Nations Included in the Sample (n=52).

Argentina	Malawi
Australia	Malaysia
Benin	Mexico
Brazil	Netherlands
Canada	New Zealand
Chad	Norway
Chile	Pakistan
Colombia	Panama
Costa Rica	Peru
Denmark	Philippines
Ecuador	Senegal
Egypt	South Africa
El Salvador	Spain
Finland	Sri Lanka
France	Sweden
Honduras	Tanzania
India	Thailand
Indonesia	Tunisia
Iraq	Turkey
Italy	Uganda
Ivory Coast	United Kingdom
Jamaica	United States
Japan	Venenzuela
Kenya	Yugoslavia
Korea, South	Zambia
Madagascar	Zimbabwe

VARIABLES Dependent

Most if not all of the recent research has used the
Morris Physical Quality of Life Index or an index of
similar composition as the dependent variable (e.g., London
and Williamson, 1987; Williamson, (1987). The Morris PQL
index is composed of three indicators: (1) literacy rate,
(2) life expectancy at age one, and (3) infant mortality
(cf. Morris 1979 pp.41,126-127). The dependent variable is
the percent change in the Morris Physical Quality of Life
Index between the years circa 1970 and 1980. Data for circa
1970 were taken from Morris (1979) and data to construct
the 1980 index were extracted from the World Bank Tables
(World Bank 1982) as well as the World Development Report
(World Bank 1980).

Although the index developed by Morris (1979) has been
widely used, it is open to a number of criticisms. The
Morris Quality of Life Index is only based on three
indicators and fails to consider other important measures.
It is for this reason that this study uses several
alternative measures of the PQL. These alternative measures
will insure that the findings are not the specific result
of how the PQL was measured. The percent change for the
alternative measures is for the years 1965 and 1980. They
are percent change in the average number of years of life;

percent change in the daily caloric consumption per capita; percent change in the annual deaths per 1,000 children in the 1-4 year age group; percent change in the annual number of deaths of infants less than 1 year old per 1,000 live births; and percent change in the enrollment of all ages in secondary schools as a percentage of the population of secondary school age. Data were obtained from the World Bank (1982, 1985).

Independent

Three separate independent variables were used. The degree of economic inequality represents the Marxian perspective. Specifically, this measure reflects the percent of total income received by the top ten percent of households for the year 1965. The data for income distribution were taken from Taylor and Jodice (1983).

The variable representing the Modernization perspective is the Gross National Product per capita for the year 1965. Data were obtained from the World Bank (1985). This variable was logged in order to control for skewness. Bornschier and Chase-Dunn's (1985: 59-61) measure of multinational corporate penetration in 1967 was used to measure the penetration of a nations economy by multinational corporations. The computation of this variable involves dividing the stock of capital controlled by foreign direct investment into both, the total capital

stock of a country and also the total population of a country. These figures are then multiplied and the square root taken. This measure estimates the degree of foreign corporate control over the local economy. This variable was logged to correct for skewness.

It is imperative to control for spurious and confounding variables. One such variable is the population size. Population size can potentially have the effect of altering the meaning of the Physical Quality of Life. That is, without taking into account the population size of a society one could be misled when analyzing and interpreting the final results. In an attempt to assess and minimize the possible spurious or confounding effects of population size a measure of total population size 1965 has been included. This variable was logged to correct for skewness.

METHOD OF ANALYSIS

Ordinary least squares regression was used to analyze the data. The hypothesized effects of each individual independent variable on the Physical Quality of Life are summarized in the following regression equation:

$$Y = a - b_1x_1 + b_2x_2 - b_3x_3 + b_4x_4 + e$$

where,

Y= Physical Quality of Life;

a= intercept;

b= coefficient to be estimated;

$x1$ = Degree of multinational penetration, 1967;

$x2$ = GNP/Capita, 1965;

$x3$ = Percent of total national income received by the top
10% households circa 1965;

$x4$ = Total population, 1965;

e= residual term.

   In an effort to assess the robustness of the findings,
several diagnostics were performed. The problem of
multicollinearity was checked by regressing each
independent variable on all of the other independent
variables. The standardized residuals were also examined in
an effort to identify extreme outliers.

SUMMARY

   This chapter outlined the data and method used. This
discussion consisted of three specific sections. First, the
sample was examined. Second, the dependent, independent and
control variables were discussed. The last section
described the method of analysis and other diagnostics that
were carried out during the analysis.

CHAPTER FOUR

RESULTS OF THE ANALYSIS

INTRODUCTION

This chapter presents the results of the analysis of the
Quality of Life as it is viewed by three theoretical
perspectives. This chapter is divided into 3 major
sections: (1) discussion of the bivariate correlations and
multicollinearity diagnostics; (2) examination of the OLS
regression estimates; and (3) summary and conclusions.

BIVARIATE RESULTS AND TESTS FOR MULTICOLLINEARITY

Table 2 contains the zero-order correlations between all
of the variables used in the analysis. The correlations
between the independent variables are all less than .53,
implying that multicollinearity is not a problem. In order
to further assess for the presence of multicollinearity,
the technique suggested by Lewis-Beck (1980) was used. This
technique involves regressing each independent variable on
all other independent variables. The R-squares are then
checked. An R-square approaching 1.00 implies serious
problems of multicollinearity. Results indicate R-squares
between .05 and .45, suggesting that multicollinearity is
not a major problem.

TABLE 2. CORRELATION COEFFICIENTS

VAR'S	1	2	3	4	5	6	7	8	9	10
1	1.00									
2	-.50	1.00								
3	.01	.32	1.00							
4	.81	-.53	.13	1.00						
5	-.17	.19	-.00	-.21	1.00					
6	.07	-.59	-.17	.79	-.15	1.00				
7	-.89	.38	-.04	-.69	.17	-.58	1.00			
8	-.93	.50	-.03	-.80	.19	-.69	.94	1.00		
9	.85	-.64	-.12	.81	-.13	.81	-.79	-.86	1.00	
10	.96	-.55	-.00	.86	-.14	.77	-.88	-.93	.89	1.0

1-- MORRIS PHYSICAL QUALITY OF LIFE INDEX
2-- INCOME DISTRIBUTION
3-- TRANSNATIONAL CORPORATE PENETRATION
4-- GNP65
5-- TOTAL POPULATION
6-- PERCENT CHANGE IN CALORIC CONSUMPTION 1965-1980
7-- PERCENT CHANGE IN CHILD MORTALITY 1965-1980
8-- PERCENT CHANGE IN INFANT MORTALITY 1965-1980
9-- PERCENT CHANGE IN SCHOOL ENROLLMENT RATIO 1965-1980
10-- PERCENT CHANGE IN TOTAL LIFE EXPECTANCY 1965-1980

The zero-order correlation coefficients suggest strong support for the Marxian hypothesis, as well as the Modernization hypothesis. In both cases all six relationships between PQL measures and independent variables are in the expected direction. The Dependency/World Systems hypothesis, however, is characterized by mixed support. That is, coefficients for child mortality and infant mortality, are not in the expected direction and suggest no support for the hypothesized relationship. While these results offer some support for the three models being tested, they do not provide the basis for formally testing the hypothesis. In order to accurately test a hypothesis the effects of all possible explanatory variables must be assessed simultaneously. Regression analysis allows this to be done while also controlling for any alternative explanations.

REGRESSION RESULTS

Table 3 reports the results of regressing the percent change in the six PQL measures on income inequality 1965, corporate penetration 1965, GNP 1965, and total population 1965. This table presents the regression results for the full sample. An additional analysis based on 40 nations with GNP per capita 1965 no greater than $1103 was performed. The findings of this analysis are not reported because they are not significantly different from those presented in Table 3. Columns 1, 2, 3, 4, 5, and 6 respectively contain the

results of percent change in the Morris PQl index 1970-1980,
percent change in caloric consumption 1965-1980, percent
change in the child mortality rate 1965-1980, percent change
in the infant mortality rate 1965-1980, percent change in
the school enrollment ratio 1965-1980, and percent change in
the total life expectancy 1965-1980.

MPQL Index. The Gross National Product 1965 has the
expected positive effect on the MPQL index (Beta =.79). The
unstandardized coefficient (31.32) is more than twice the
size of its standard error, indicating that GNP has a
significant effect. Both income distribution (Beta = -.06)
and corporate penetration (Beta = -.07) have the expected
negative effect, but neither one of the unstandardized
coefficients for these variables is the twice size of its
standard error. This suggests nonsignificance. Total
population size (Beta = .002) does not have a major effect
on percent change in the MPQL index.

While the findings suggest some support for the theories
being tested, they are open to alternative explanations. For
instance, the Morris PQL index is a very crude PQL pmeasure
since it consists of only three indicators. This index
clearly fails to acknowledge the importance of other vital
indicators which should be included. In an effort to correct
for this deficiency, five alternative measures of the PQL
were used in the analysis.

TABLE 3. RESULTS OF REGRESSIONS OF CHANGE IN QUALITY OF LIFE
MEASURES ON CLASS INEQUALITY 1965, CORPORATE PENETRATION
1965, GNP PER CAPITA 1965, AND TOTAL POPULATION 1965.

	1.	2.	3.	4.	5.	6.
	CHMPQLI	CALOCONS	CHIMORT	INFMORT	SCHENRCH	LIFEEXP
INCOME	-.06	-.10	-.01	.07	-.22	-.08
DIST.	-.29	-6.62	-.01	.39	-.70*	-.09
	(.54)	(6.34)	(.15)	(.57)	(.31)	(.10)
CORP.	-.07	-.24	.06	.03	-.14	-.08
PEN.	-2.23	-93.43*	.41	1.19	-3.03*	-.62
	(2.96)	(34.27)	(.82)	(3.12)	(1.70)	(.56)
GNP	.79	.77	-.71	-.76	.73	.84
	31.32*	383.38*	-6.24*	-30.65*	18.99*	7.47*
	(4.25)	(49.18)	(1.17)	(4.48)	(2.44)	(.81)
POP.	.002	.02	.02	.01	.06	.05
	0.04	5.64	.08	.28	.62	.19
	(1.34)	(15.52)	(.37)	(1.41)	(.77)	(.25)
CONST.	-59.0	1362.10	41.22	215.9	-20.38	24.18
R SQ	.67	.72	.49	.65	.75	.76
ADJ. RSQ	.64	.69	.44	.62	.72	.74

Results appear in the following order 1.Standardized
coefficient, 2. Unstandardized coefficient and 3. Standard
error of the unstandardized coefficient. * Unstandardized
Coefficient twice the size of standard error. () indicates
standard error

CHMPQLI= PERCENT CHANGE IN MORRIS PQL INDEX 1970-1980
CALOCONS= PERCENT CHANGE IN CALORIC CONSUMPTION 1965-1980
CHIMORT= PERCENT CHANGE IN CHILD MORTALITY 1965-1980
INFMORT= PERCENT CHANGE IN INFANT MORTALITY 1965-1980
SCHENRCH= PERCENT CHANGE IN SCHOOL ENROLLMENT RATIO
1965-1980
LIFEEXP= PERCENT CHANGE IN TOTAL LIFE EXPECTANCY 1965-1980

Caloric Consumption. The effects of corporate penetration (Beta = -.24) and GNP (Beta = .77) on caloric consumption are in the expected direction. Their respective unstandardized coefficients (-93.43 and 383.38) are both more than twice the size of their standard errors, implying significance. The relationship between the income distribution variable and caloric consumption (Beta = -.10) is in the predicted direction; however, the unstandardized coefficient is barely the size of its standard error. Population size (Beta = .02) has a small and nonsignificant effect on caloric consumption.

Child Mortality. GNP (Beta = -.71) has a strong and negative effect on child mortality. This relationship is significant, for its unstandardized coefficient is over twice the size of its standard error. The effect of corporate penetration on child mortality (Beta = .06) is in the expected direction, but not significant. Surprisingly, the effect of income distribution on child mortality (Beta = -.01) is neither in the expected direction nor is it significant. Population size (Beta = .02) has a positive but nonsignificant effect on child mortality.

Infant Mortality. Income distribution has the expected effect (Beta = .07), but the unstandardized coefficient is less than twice as large as its standard error. Corporate penetration (Beta = .03) and GNP (Beta = -.76) have the

expected effects. GNP has a significant effect with an unstandardized coefficient (-30.65) over four times as large as its standard error. Penetration, however, is not significant. The total population variable (Beta = .01) appears to have a weak but positive effect on infant mortality.

School Enrollment. The findings for the school enrollment ratio variable are all in the expected direction. The effects of income distribution (Beta = -.22), Corporate penetration (Beta = -.14), and GNP (Beta = .73) are all significant. The respective unstandardized coefficients are substantially larger than their standard errors. Population also has a positive effect (Beta = .06), but the unstandardized coefficient is less than its standard error.

Total Life Expectancy. The effects of the independent variables on total life expectancy are as predicted. Income distribution has a negative effect (Beta = -.08). Its unstandardized coefficient is less than the standard error. Penetration (Beta = -.08) has the expected effect, but its unstandardized coefficient is not twice the size of the standard error. GNP (Beta = .84) has the expected positive effect. Total population (Beta = .05) has the expected effect, but it is not significant.

In an effort to test the stability of the regression estimates, a residual analysis was performed. This analysis

suggested the existence of several outliers. These cases
were deleted from the sample and the model was reestimated.
The results of the analysis were not substantially different
from estimates based on the full sample.

DISCUSSION

The overall results of the analysis can be summarized in
the following manner:

A) GNP has the expected effect on all six measures of
the PQL. These effects are all are significant at the .05
level. These results suggest strong support for the
Modernization hypothesis that the higher the GNP the higher
the PQL.

B) With the exception of its effect on Child Mortality,
income distribution has the expected effect on PQL measures.
However, it only has a significant effect on school
enrollment. These findings offer limited support for the
Marxian hypothesis that the greater the income inequality
the lower the PQL.

C) Corporate penetration had the expected effect on all
the dependent variables. However, penetration only had a
significant effect on caloric consumption and school
enrollment. These findings suggest limited support for the
Dependency/World Systems hypothesis that the higher
dependency the lower the PQL.

D) The control variable total population had a positive nonsignificant effect on all dependent variables.

SUMMARY AND CONCLUSIONS

The results of the empirical tests of three theoretical models as they pertain to the PQL were presented in this chapter. Change in the PQL, measured in six different ways, was regressed on indicators of the three theories, while controlling for the effect of total population size. Regression estimates were made using a full sample and a sample with sdeveral outliers deleted. Results of both analyses show strong support for the Modernization model and limited support for the Dependency/World Systems and Marxian models. In sum, this study suggests that the Gross National Product per capita of a society has a greater effect on the PQL than either the degree of class present or the degree of corporate penetration present.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

INTRODUCTION

This chapter provides a general overview of the thesis. First, a summary is presented. Second, implications of the thesis are discussed. Thirdly, suggestions for future research are examined.

SUMMARY

The cross-national variation in the Physical Quality of Life has recently attracted the efforts of many researchers interested in its characteristics, its nature and its causes (e.g. Williamson 1987; London and Williams 1988). Previous research is problematic because: (1) with few exceptions, studies attempt to explain the PQL from one of three theoretical models; (2) Many studies use restricted samples in the sense that they exclusively focus either on developing nations or developed nations; (3) The data used by previous researchers are old; and (4) Many studies use cross-sectional designs.

This thesis attempted to remedy the limitations of previous research while contributing to the body of

knowledge concerning the cross-national variation in the PQL. This thesis simultaneously assessed the explanatory power of three theoretical formulations. This thesis is also different from previous research in the sense that it uses recent data and the sample of nations used includes both developed and developing nations. In addition, six separate indicators of the Quality of Life were used in order to insure the robustness of the findings.

The results of regressing change in six PQL measures on three indicators of respective theoretical models are generally consistent with the results of previous research. While the findings suggest support for all three theoretical models, they only strongly support the Modernization model. The findings offer limited support for both the Marxian model and the Dependency/World Systems model.

IMPLICATIONS

Upon an initial observation of the findings in this study, one could conclude that they simply encourage the rapid modernization (via industrial growth) in an effort to increase the PQL of peripheral societies. This rapid industrialization would stimulate the economy and potentially increase the GNP, thus eventually increasing the PQL. Using the same logic one could also conclude that the Marxian and/or the Dependency/World Systems perspectives really have very little to offer in explaining the cross-

national variation in the PQL. Although the findings of this study could be interpreted as supportive of such conclusions, such conclusions would be erroneous. To arrive at such conclusions would be an inaccurate interpretation of the findings because it would be negating the fact that neither the Marxian perspective nor the Dependency/World Systems perspective deny the importance of GNP in PQL provision. Fundamentally, they would agree that the higher the GNP the higher, the PQL. However, to this they would add the provision that within a capitalist economy the apparent positive relationship between GNP and PQL is distorted. The Marxists would argue that the distortion of the relationship between GNP and PQL would be due to the class polarization caused by a capitalist system. Dependency/World Systems theorists would see the draining of capital via corporate appropriation to be the distorting factor.

A more logical conclusion would be to recognize that all three theories certainly have something beneficial to offer in the explanation of the PQL. The results of this study show that although GNP ranks higher in importance we cannot simply ignore income distribution or corporate penetration. These findings suggest that an accurate understanding of the Quality of Life would require a theory incorporating components of all three theories.

SUGGESTIONS FOR FUTURE RESEARCH

Clearly, additional research is needed. Based on the shortcomings of this thesis, future studies should include: a larger sample; additional indicators of the PQL; and a longer time span between the periods studied. A longer time span between the periods studied would be beneficial because it would increase the strength of the findings. The effects of such things as corporate penetration may be cumulative over time or they may be lagged in the sense that their full effect takes some time to be manifested. If this is the case expanding the time span would help reveal the true effects. The indicator for corporate penetration in 1967 provided by Bornschier and Chase-Dunn (1985) should also be updated. More than likely, the degree of penetration has drastically changed over the last twenty years. Thus, the argument could be made that the degree of peripheral penetration by the core has increased over the years and this increase may significantly alter the effect of this variable on the PQL.

Finally, I would encourage future researchers not to concentrate their efforts on disproving current explanations of the PQL, but to focus on the their articulation instead. We know that GNP appears to be most important in explaining PQL levels. We also know that although not as important, degree of class as well as degree of penetration are

important factors in the explanation of the PQL. We should take advantage of the knowledge available to us and put it work in the creation of a new more accurate theory which could explain the variation in the PQL.

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ASSESSING THE CAUSES OF THE PHYSICAL QUALITY OF LIFE:
A CROSS-NATIONAL ANALYSIS OF THREE THEORIES

by

ANGEL D. ILARRAZA

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ABSTRACT

This thesis simultaneously examines the Marxian, Modernization, and Dependency/world systems models as they pertain to the Physical Quality of Life. Specifically, the effects of income distribution, GNP per capita, and transnational corporate penetration on the physical quality of life were examined while controling for the population size. The physical quality of life was represented by six indicators: the Morris physical quality of life index, Caloric consumption per capita, child mortality, infant mortality, school enrollment ratio and total life expectancy. Using a cross-national sample of 52 countries, regression analysis was used to asses the relationships. The findings suggest support for all three models and indicate that GNP has the strongest effect on physical quality of life.