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Luis Posas

Minnesota State University, Mankato

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Revisiting the Overurbanization Theses: A Test of a Theoretically Inclusive Model Using Path Modeling with LISREL

Luis Posas*

Abstract This study tests the structural linkages of well-known theoretical determinants of overurbanization in low-income nations. It represents a general call to advance theoretically inclusive analysis using standard methodological tools in the current literature. The proposed theoretically inclusive model tests the effects of international and intra-national forces on overurbanization. Using data from low income countries for the period late-1960s-to-mid-1980s, the study presents the results of path models estimated by Generalized Least Square (GLS) with LISREL. The results show that foreign investment exacerbates overurbanization through its short-term positive effect on economic development, confirming assumptions of World Systems and Modernization theories. In addition, foreign investment seems to expand rural-urban disparity but not enough to aggravate overurbanization, providing only partial support for World Systems and Urban Bias theories. Most importantly, this study lends support to the position that overurbanization can be explained using models that consider the system of structural association among basic elements of the most important theories of urban change.

INTRODUCTION

The United Nations Commission on Environment and Development reported in 1987 that the world's population was becoming increasingly urban. The report indicated that urban growth was no longer only a feature of the developed world because low-income nations were also becoming noticeably urban. Unlike the developed world, however, urban change in low income nations was not accompanied by similar economic growth rates, a pattern that became known as overurbanization (Bairoch 1988; Guggler 1988). Overurbanization studies flourished

*Luis Posas, Ph.D., Department of Sociology and Corrections, Armstrong Hall 113, Minnesota State University, Mankato, Mankato MN 56001; e-mail: luis.posas@mnsu.edu

in the late 1980s and early 1990s (Bradshaw 1987; Firebaugh 1979; Kasarda and Crenshaw 1991; London 1987; Timberlake and Kentor 1983), declined in the later half of the 1990s and resurfaced again at the start of this decade (Bergesen and Bartley 2000; Crenshaw and Oakey 1998; Jorgenson 2003; Shandra, London and Williamson 2003).

Once identified as a problem, many scholars sought to explain how overurbanization fit into their respective views on urban change. Using Modernization theory, some scholars argued that overurbanization resulted from technological improvements associated with growth in the industrial sector, increased commercial activities, and change in other aspects of the development process in general (Crenshaw and Oakey 1998; Firebaugh 1979; Kasarda and Crenshaw 1991). Others used the Urban Bias approach to argue that the tendency of state policies to benefit the urban sectors over rural areas in low income nations contributed to the growth of overurbanization (Gilbert and Gugler 1992; Gugler 1988; Gugler 1996). A third explanation was advanced by Dependency and World Systems scholars indicating that overurbanization was the consequence of the negative influence that foreign capital exerted on low income nations (Smith and Timberlake 1993). A review of these studies reveals a tendency to focus on the predictive power of the factors emphasized by one theoretical tradition rather than integrating the advances in each field into a comprehensive understanding of the causal forces of overurbanization.

The main purpose of the present study is to provide an empirical examination of the major determinants of overurbanization by testing a comprehensive theoretically inclusive model. In 1987, Bruce London proposed that an inclusive approach to the study of overurbanization was possible by considering the effects that international forces exert on national processes throughout low income nations, but the literature does not show evidence of an empirical test of this idea. In line with London's proposition, this study presents a model that

includes the most important determinants of overurbanization advocated by various theories of urban change. To test the systemic association of the main components, the model is assessed with path analysis, estimated by Generalized Least Square using LISREL, as a sound analytical technique. In addition, the model is tested using data for the period late-1960s-to-mid-1980s to maintain the social context that London (1987) considered to make his proposition. In sum, the present study contributes to the existing literature by using a theoretically inclusive approach and structural relations modeling in the study of overurbanization (Bergesen and Bartley 2000; Crenshaw and Oakey 1998; Jorgenson 2003; Shandra et.al. 2003).

THE EXTENT OF OVERURBANIZATION IN LOW INCOME NATIONS

Global demographic data indicate that the urbanization process of low-income nations has not followed the same pattern of urbanization observed in high-income nations. In low income nations, the urban population increased from 786.8 million to 1.5 billion people between 1975 and 1990 and will grow to 4.4 billion people by 2025. High-income nations only had .9 billion urban dwellers by 1990 and will grow to 1.1 billion people by 2025 (United Nations 1992). There has also been a notable difference in the levels of urbanization between the two world regions. In low income nations, the proportion of the population living in urban regions was 26.4 percent in 1975, 37.1 percent in 1990 and is projected to reach 61.2 percent by 2025. In high income countries, the proportion of the population living in urban areas had reached 73 percent by 1990 and is expected to reach 83 percent by 2025. These trends are particularly important in low-income nations where urban population growth forces national and city governments to expand urban social services and infrastructure (Satterthwaite 1993; World Commission on Environment and Development 1987).

By the late 1980s, scholars of urban change had openly acknowledged the mismatch between economic and urban levels in the post 1950s period. However, Bairoch (1988)

indicated that this problem had been present in low income nations since the period 1920-1950, when GNP per capita had increased by ten percent and urban levels had grown by 50 percent. This observed mismatch between urban and economic levels became a distinctive feature of the concept of "overurbanization," defined as the excess number of urban dwellers relative to economic levels (Timberlake 1985, 1987, 1994). In previous empirical studies, the phenomenon of overurbanization has been measured in two different ways when used as the dependent variable. Initially, overurbanization was measured as the simple ratio of percent urban over GNP per capita, but it was found problematic in models that used GNP per capita as the independent variable (Bradshaw 1987; Crenshaw and Oakey 1998; Timberlake and Kentor 1983). To avoid this problem, other studies measured overurbanization as regression residuals of percent urban on GNP per capita (Bradshaw 1987; Shandra et.al. 2003; Smith 1996). The present study will use this second measure of overurbanization for 1975 and 1985.

To illustrate the extent of overurbanization in low income nations in 1985, Table 1 shows regression residuals calculated using the formula:

$$\text{Residual} = \text{Level of urbanization 1985} - [a + B (\log \text{GNP per capita 1985})]$$

Positive scores indicate higher than expected levels of urbanization while negative scores indicate lower than expected levels (Bradshaw 1987). Available data, obtained from the Resource Institute (1996), Smith Morris (1990) and the World Bank (1995b), restricted the number of countries used in the analysis to 86 which is a sample large enough to assess the relative importance of urban and economic levels in low income nations. Table 1 below shows the regression residuals for the year 1985.

Table 1 Regression residuals of percent urban population on GNP per capita and percent urban by region and country for 1985

World Region	Res.*	% Urban	World Region	Res.*	% Urban
Africa**			Latin America and the Caribbean		
Zambia	21.29	48	Uruguay	34.31	88
Somalia	18.98	34	Chile	34.21	83
Central Africa	16.21		Argentina	31.58	85
Chad	12.98	27	Venezuela	24.01	85
Zaire	12.92	39	Ecuador	05.17	52
Egypt	09.14	46	Costa Rica	01.72	45
Mozambique	02.74	19	El Salvador	01.26	43
Ghana	02.44	32	Haiti	-00.32	26
South Africa	01.06	56	Honduras	-01.38	38
Cameroon	00.44	42	Suriname	-12.05	46
Sierra Leon	-00.26	28	Barbados	-24.57	43
Guinea-Bissau	-01.91	22	Asia		
Togo	-02.08	23	Jordan	09.95	74
Comoros	-02.32	25	South Korea	08.36	59
Tanzania	-02.83	14	Turkey	00.35	46
Mauritius	-03.79	41	Pakistan	00.03	29
Algeria	-15.05	43	India	-00.32	25
Burundi	-18.08	02	Syria	-02.33	48
Rwanda	-19.79	05	Saudi Arabia	-02.53	72
Swaziland	-20.10	22	Bangladesh	-05.26	18
Gabon	-22.92		Nepal	-10.20	07
Botswana	-26.09	19	Malaysia	-16.20	38
Europe			Thailand	-21.74	18
Bulgaria	12.21		Papua New Guinea	-26.03	14
Greece	-02.95				

*Unstandardized Residuals

Other countries in **Africa include Morocco (7.61), Tunisia (6.29), Senegal (5.63), Mauritania (4.25), Ivory Coast (3.91), Cape Verde (3.44), Mali (2.82), Gambia (-4.08), Madagascar (-4.32), Congo (-5.09), Malawi (-6.20), Niger (-6.82), Kenya (-7.32), Sudan (-8.97), Uganda (-9.20), Seychelles (-12.99), Zimbabwe (-12.86), Nigeria (-13.06), Lesotho (-13.37); in **Latin America** include Peru (23.73), Brazil (21.56), Colombia (19.07), Nicaragua (16.18), Dominican Republic (15.18), Bolivia (15.12), Mexico (13.88), Jamaica (5.25), Guyana (-2.45), Paraguay (-2.58), Panama (-4.83), Guatemala (-6.83), Trinidad and Tobago (-7.15); in **Asia** include Philippine (4.69), China (-8.56), Sri Lanka (-9.37), Fiji (-10.81), Indonesia (-10.31), Iran (-10.66).

Consistent with previous studies, Table 1 shows that Latin America is among the most overurbanized areas relative to Africa and Asia. Countries like Uruguay, Argentina, and Venezuela show the highest levels of overurbanization as indicated by high levels of urbanization of 88%, 85% and 85% respectively and relatively lower levels of yearly per capita incomes in the amounts of \$1,500, \$3,050 and \$3,750, respectively. The table also shows that many countries were experiencing under-urbanization in Africa and Asia. It should be noted that some countries showing negative residuals in these regions also show relatively lower levels of urbanization as demonstrated in the column "percent urban." Therefore, negative results do not necessarily mean that these countries are better off since they also have experienced low levels of per capita income. For example, Burundi, Rwanda and Nepal have urban levels of 2%, 5%, and 7%, respectively, but their yearly per capita incomes amount to \$240, \$290, and \$150 respectively.

FORCES OF OVERURBANIZATION: THE THEORETICAL CONTEXT

There are certain factors like natural increase (Lindstrom 2003) and rural-to-urban migration (Bhattacharya 2002) that are generally accepted as intermediate demographic factors influencing overurbanization no matter what theory of urban change is considered. However, by the late 1970s and early 1980s various independent views were being used to explain the causal forces found beyond these demographic factors. Adopting Modernization theory, some scholars argued that socio-economic and cultural forces that accompanied the process of modernization positively influenced overurbanization (Inglehart and Baker 2000). They argued that improvements in health services had reduced mortality levels leading to population growth in urban areas and increased population density in rural areas. Similarly, they suggested that improvements in transportation and communication systems accelerated the use of mechanized production systems reducing the need for large labor pools in rural areas (McKey 1994). The

displaced rural laborers, they concluded, moved to urban areas where a substantial proportion was absorbed in emerging industrial sectors. These internal changes were said to have produced a temporary stage of urban agglomeration that Modernization scholars often referred to as “hyperurbanization,” considered a normal stage of the development process (Crenshaw and Oakey 1998; Firebaugh 1979; Kasarda and Crenshaw 1991; McGee 1998).

Empirical studies confirm some of the premises of Modernization theory. Glenn Firebaugh (1979) found support for the contention that higher agricultural density exerted positive effects on urbanization. Similarly, Bradshaw (1987) and London (1987) concluded that economic growth exerted positive effects on overurbanization. In another study, Crenshaw and Oakey (1998) documented that rapid population growth tended to influence “moribund” agrarian economies, which was said to accelerate rural-to-urban migration. Also, they found that large scale urbanization had positive and significant effects on economic growth, especially when mediated by investment rates. These results prompted Crenshaw and Oakey to conclude that:

Hyperurbanization may not constitute growing pains or a symptom of exploitation, but rather a form of “jump-starting” the national economy, an emergent adaptation that allows certain nations to make up for severe development disadvantages in terms of technological development, agricultural productivity and capital formation (1998:336).

Embracing Dependency and World Systems theories, other scholars argued that overurbanization was the product of capitalist expansion into low-income nations (Jorgenson 2003; Smith and Timberlake 1993). Smith (1996) explained that dependency on foreign capital influenced overurbanization by inflating tertiary and informal economic sectors in urban areas. Supporters of this view hypothesized that this perceived growth prompted rural workers to move into cities (Timberlake and Kentor 1983). Although participation in the informal economy

was not necessarily viewed as something negative, Portes and his supporters (1997) argued that the urban informal sector was not sufficient to absorb displaced rural labor.

The effects of capitalist expansion on overurbanization have been well documented. Shandra and his collaborators (2003) found that multinational corporate penetration exerted significant positive effects on overurbanization. Earlier, Timberlake and Kentor (1983) had found support for the contention that foreign investment increased overurbanization by altering the tertiary sector of the economy. Another study conducted by Bradshaw (1987) concluded that foreign investment in specific sectors, such as manufacturing, had significant positive effects on overurbanization. Finally, Smith (1996) documented how capitalist penetration distorted urban development in West Africa and Portes and his supporters documented its effects in Latin America where it is said to have been responsible for emerging shanty towns and squatter settlements (Portes, Itzigsohn, and Dore-Cabral 1997; Satterthwaite 1993).

Adopting Urban Bias theory, other scholars argued that state machinery tipped the distribution of resources in favor of urban areas (Gilbert and Gugler 1992; Gugler 1988, 1996; Karshenas 2004). Michael Lipton (1977, 1988) argued that national elites favored urban residential locations converting them into centers of "articulatness, organization and power." National governments also favored these regions through subsidies for transportation, housing, education and other services (See also Smith 2001:45). Lipton's supporters hypothesized that these opportunities served to attract the bright, young, and most enterprising people into cities (Gugler 1988, 1996). Bradshaw (1987) provided empirical support for the theory when he found that rural-urban disparity exerted strong significant positive effects on overurbanization.

In sum, the studies described above have produced multiple findings demonstrating significant interest in the understanding of the determining factors of overurbanization. These

studies also demonstrate the theoretical competition characteristic of inquiries into the causes of overurbanization.

THE PROPOSED THEORETICALLY INCLUSIVE MODEL

The present study provides a test of a comprehensive model that includes the most important indicators advocated by the theories discussed above and that are known to influence the phenomenon of overurbanization. In the proposed model, the main theoretical indicators are arranged into a coherent system in which the relationship amongst them is assessed through the use of structural equation modeling using LISREL (Linear Structural Relations).

The model introduced in Figure 1 meets LISREL's condition that model specifications must be informed by theory and rooted in previous empirical analyses (Hayduk 1987; Jöreskog and Sörbom 1993). In addition, the structural relationships between the conceptual elements of the model do not contain reciprocal relations (Land 1969) because they follow a specific timeline. For example, the main indicator of World Systems theory was measured in 1967 and the indicators of Modernization and Urban Bias theories were measured in the 1970s. The dependent variable or overurbanization was measured in mid-1970s and in 1985 as demonstrated in Figure 1.

Figure 1 shows the hypothesized direction of the relationships among the various elements in the study. These hypotheses are linked to the corresponding theories as follows:

World Systems Theory:

H1: Foreign investment exerts direct and indirect positive effects on overurbanization.

Dependency Theory:

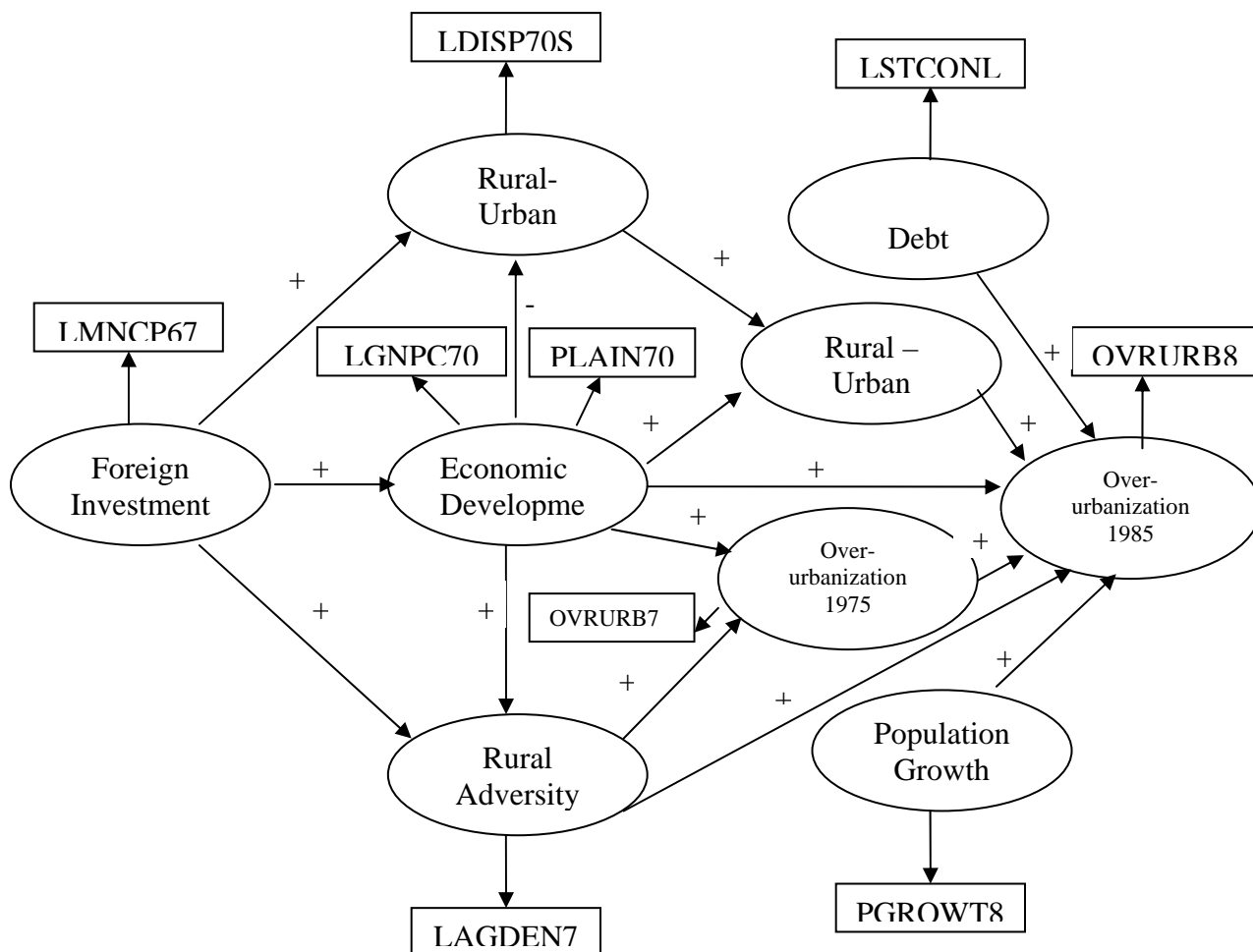
H2: There is a direct and positive association between foreign debt and overurbanization.

Urban Bias Theory:

H3: Rural-urban disparity exerts a direct and positive effect on overurbanization.

Modernization Theory:

H4: There is a direct and positive association between rural adversity and overurbanization.

Figure 1 Theoretically inclusive model of overurbanization

H5: Economic development exerts a direct positive effect on overurbanization.

H6: There is a direct and positive association between population growth and overurbanization.

These hypotheses have been obtained from a body of literature that has amply demonstrated their empirical relevance. For example, the hypothesized indirect effects of foreign investment on overurbanization correspond to Smith and London (1990) suggestions that the World Systems indicator influences overurbanization through its effect on

modernization indicators. Also, when economic development is used as the intermediate variable, its association with foreign capital is expected to be positive only in the short run (Borsnschier and Chase-Dunn 1985; Firebaugh 1992). In general, the strength and the direction of the hypotheses are based on theoretical propositions provided in the last three decades. This theoretical context is explained in the next section.

METHODOLOGY

Units of Analysis and Sample

Like many other cross-national studies using countries as the main unit of analysis, the number of countries and other aspects of the study have been limited by various factors. First, the study included only low-income nations because their urban growth differs from that of high-income nations (Smith 2000; Smith and London 1990). Second, China has been excluded from the analysis because its government established specific policies that influenced voluntary migration during the period of interest (Sit and Yang 1997; Song and Timberlake 1996). Hong Kong and Singapore were excluded because they were city-states (Bradshaw 1987). Third, most World Systems analysis in the past three decades has used a compendium of data that measures transnational corporate penetration for the years 1967 and 1973 as a measure of foreign investment (Ballmer-Cao and Sheideger 1979). Fourth, data for the 1970s was used to measure welfare differences between urban and rural areas representing the conceptual element of rural-urban disparity. Some scholars have argued that this measure declined in importance after the 1970s (McMichael 2004; Riddell 1997). For example, McMichael (2004) has indicated that debt rescheduling associated with structural adjustment in the 1980s changed the priorities in many countries including reducing the subsidies given to urban constituencies. Finally, to provide effective tests of the short and long term influence of the

indicators described above this analysis measures overurbanization using data for mid-1970s and mid-1980s respectively.

To maximize the number of countries included in the sample, this study defines low-income countries as countries that had per capita incomes less than \$4,990 in 1985. Given these considerations the basic models were assessed using the maximum number of countries possible, based on data availability, after applying a procedure of stepwise deletion to obtain covariance matrices that are essential in path analyses with LISREL. The final list is formed by countries the World Bank classifies as less developed (for example Brazil) and Least developed (for example Nicaragua) countries.

Measurements and Data

Structural equation modeling can help make sense of the conceptual elements in the theoretical framework. In the language of LISREL each conceptual element, measured by one or more indicators, is considered an unobserved concept and can be either exogenous or endogenous (Hayduk 1987; Long 1983). According to Hayduk (1987:96) the relationship between the conceptual element and its indicator(s) is one in which "the values of the [unobserved] concepts, which we do not know, are the corresponding true scores for [each case] - that is, the scores [each case] would have had if no [measurement] errors had been introduced..." For this reason, when two or more indicators are used to measure one underlying concept, these have to be moderately correlated indicating that they have certain elements in common (Hayduk 1987). Table 2 below shows the description of the conceptual and empirical elements of the theoretically inclusive model depicted in Figure 1 above.

Table 2 Description of the conceptual and empirical indicators of the theoretically inclusive model

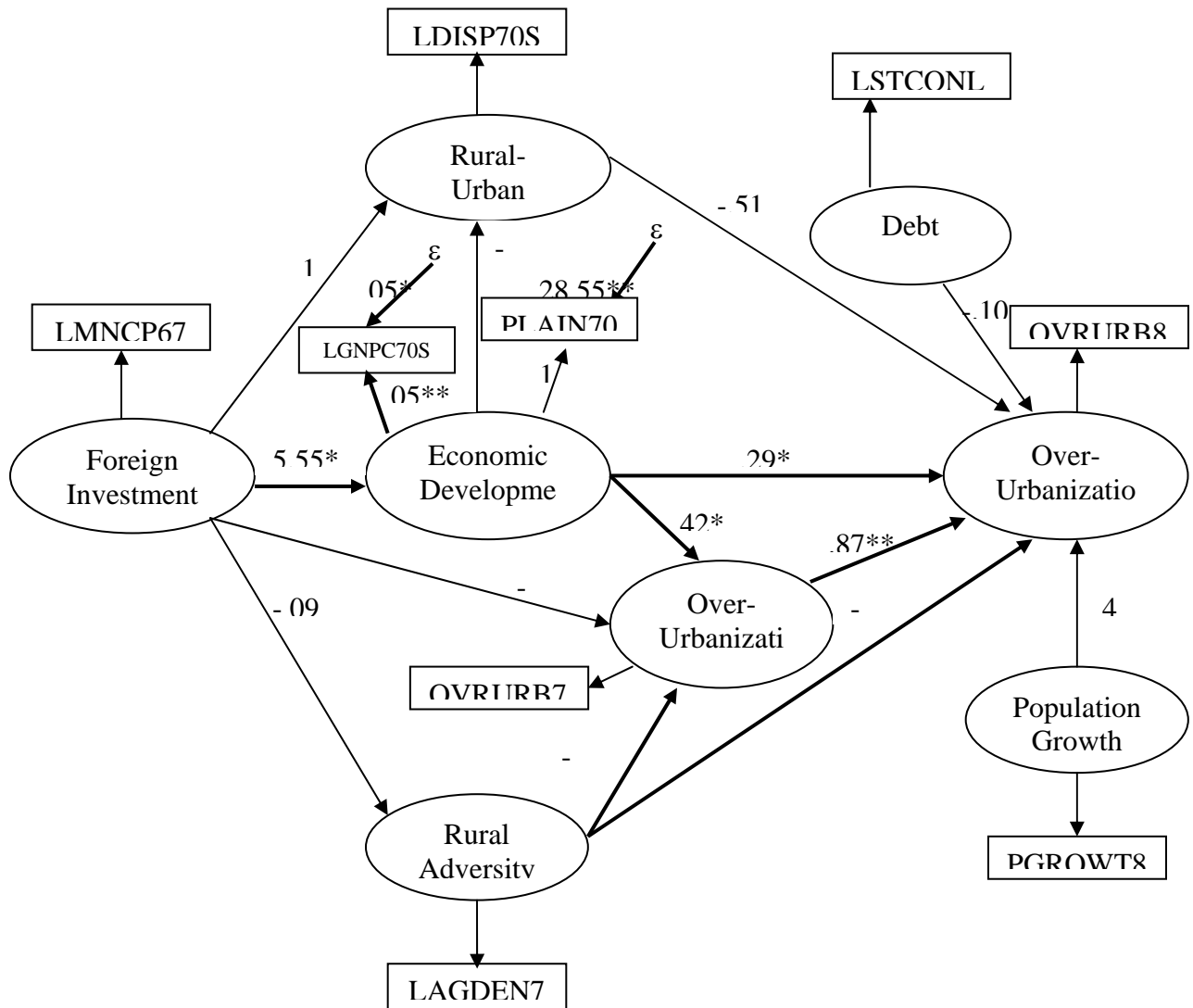
Conceptual Element	Variable Name	Description	Data Source
Overurbanization	OVRURB85 OVRURB75	Regression residuals of level of urbanization on per capita income in 1975 and 1985	World Resource Institute(1996); Smith Morris (1990) and the World Bank (1995b)
Foreign Investment	LMNCP67 (logged)	Multinational corporate penetration in 1967 and 1973	Ballmer-Cao and Scheideger (1979)
Debt	LSTCONLO (logged)	Debt from accumulated stocks of concessional loans in 1975 and 1985	OECD (1984)
Rural-Urban disparity	LDISP70S (logged)	Welfare differences between urban and rural areas circa 1977	World Tables (World Bank 1989, 1988, 1980)
Rural Adversity	LAGDEN70 (logged)	Agricultural density in 1970	Taylor and Jodice (1983)
Economic Development	LGNPC70S (logged)	Per capita income in 1975	World Bank (1995a, 1995b, 1988)
	PLAIN70S	Percent labor force in industry in 1975	Muller and Bornschieer (1988); ILO (1980).
Population growth	PGROWT85	Annual population growth 1980-1985	World Bank (1995b).

RESULTS

Path Analysis

In the current study, path analysis with LISREL provides an enhanced technique to assess the systemic interactions among the conceptual elements in the model. Figures 2 and 3 provide the results of the path models estimated by Generalized Least Square with LISREL.

Figure 2 Presentation of results of a structural equation model of overurbanization



N = 64 Chi-Square = 22.59 d.f. = 18 Prob. = .21 AGFI = .80

*Indicates significance at .05(.10) level for one (two) tailed test.

** Indicates significance at .025 (.05) level for one (two) tailed test.

All Coefficients were estimated by GLS (Generalized Least Square). Estimates were computed with LISREL 8.

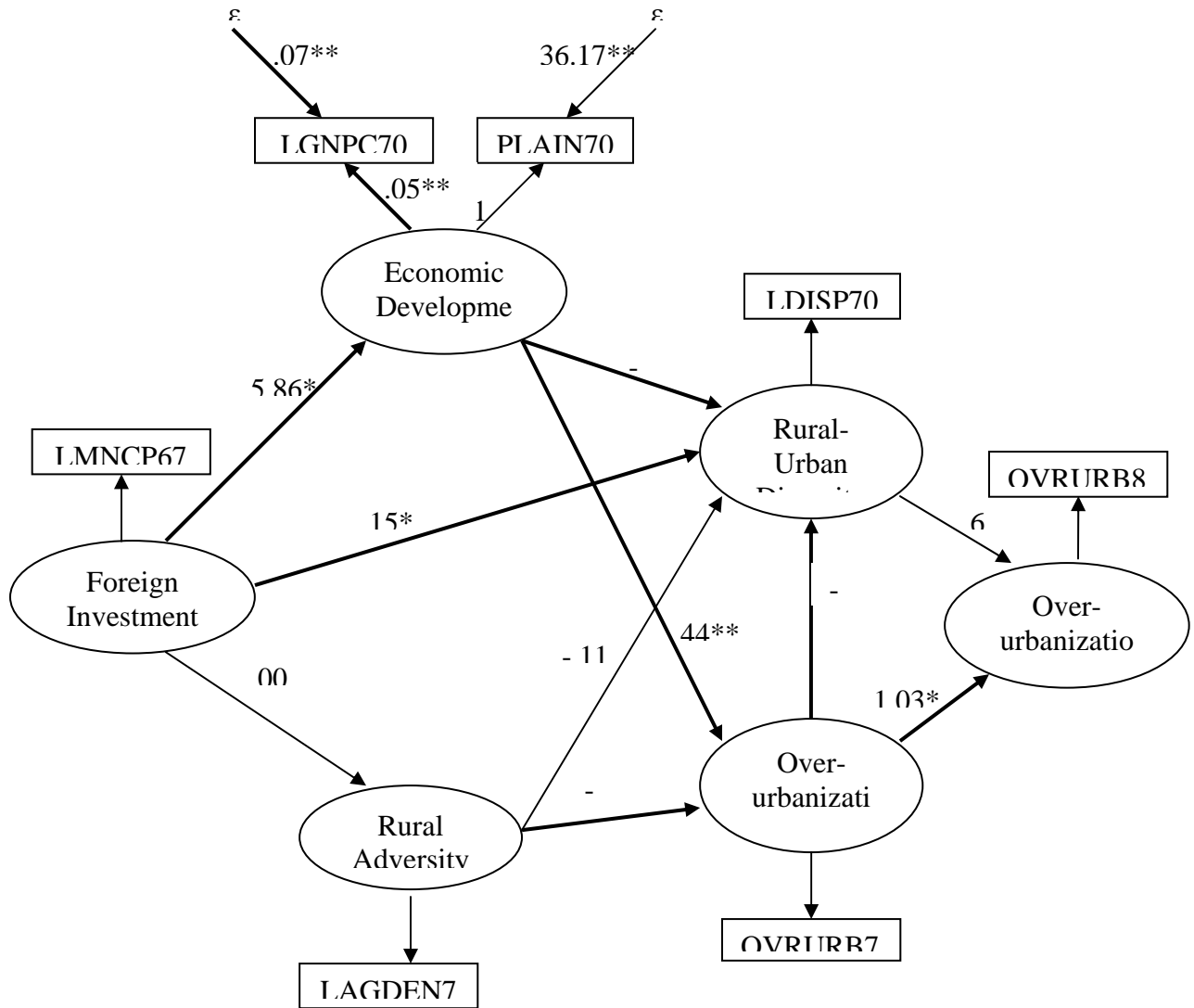
The results indicate that not all of the hypotheses of World Systems theory are confirmed as demonstrated in Figure 2. The first hypothesis is only partly confirmed. On the one hand, the hypothesized direct and positive influence of foreign investment on overurbanization is not confirmed. Instead, the relationship appears to be negative although not significant. On the other hand, the hypothesized indirect effect of foreign investment on overurbanization shows mixed results. The analysis confirms hypothesis 1 that economic development mediates the effects of foreign investment on overurbanization. Foreign investment seems to have positive and significant short term effects on economic development, which supports the findings in previous studies (Bornschier 1984; Firebaugh 1992). Similarly, economic development appears to have a positive and significant effect on overurbanization. However, the influence of foreign investment on overurbanization through its effect on rural-urban disparity is not confirmed. Foreign investment appears to exert a positive effect on rural-urban disparity but the effect of rural-urban disparity on overurbanization seems negative, although the effect is not significant in either case. The second hypothesis is not confirmed since foreign debt does not seem to significantly influence overurbanization.

In relation to the hypotheses of Urban Bias and Modernization theories, Figure 2 shows some mixed results. Hypotheses 3 and 4 are not confirmed. Hypothesis 3 of the Urban Bias theory that rural-urban disparity exerts positive and a significant effect on overurbanization is not confirmed. Instead the effect appears negative although not significant. Similarly, contrary to Modernization theory (Hypothesis 4), rural adversity exerts negative and significant effects on overurbanization. In this regard, this analysis confirms the findings of a previous study that also found this association to be negative (Sharma et. al. 2003). Hypothesis 5 is strongly supported. As expected, economic development exerts positive (and significant) effects on overurbanization (Bradshaw 1987; London 1987; Shandra et.al. 2003). It appears that the

urban industrial labor market forces tend to pull workers into cities. Finally, hypothesis 6 turned out to be inconsequential since population growth shows a positive but weak effect on overurbanization. In sum, a chi-square of 22.59 ($P = .21$), 18 degrees of freedom, and an Adjusted Goodness of Fit Index of 0.80 indicate that the model cannot be dismissed on account that the difference between the implied and observed model was due to sampling functions.

Due to unexpected results showing lack of support for the contention that rural-urban disparity significantly and positively influence overurbanization, the results of a new test of the model are displayed in Figure 3. The major change in the model is that rural-urban disparity adopts a central role. That is, rural-urban disparity is expected to be directly influenced by foreign investment, economic development and rural adversity and, at the same time, having an effect on overurbanization. One significant change in the analysis is that hypothesis 1 that rural-urban disparity mediates the effects of foreign investment on overurbanization is partly confirmed. It seems that foreign investment exerts a positive, significant, and direct effect on rural-urban disparity. Similarly, rural-to-urban disparity shows a positive, but not significant, effect on overurbanization in agreement with the dictums of Urban Bias theory (Hypothesis 3). However, foreign investment shows a negative indirect influence on rural-urban disparity through its positive influence on economic development. It is possible that foreign investment might produce an increase in the levels of economic development and, in turn, economic growth might contribute to reduce the disparity between urban and rural areas. That is, the indirect negative influence of foreign investment on rural-urban disparity may work to undermine the direct positive link. Overall, the model attained a chi-square of 19.05 ($P = .025$) with nine degrees of freedom, and an Adjusted Goodness of Fit Index of 0.75 indicating a degree of caution when interpreting the results of this second model.

Figure 3 A test of the central role of rural-urban disparity in explaining overurbanization



N = 70 Chi-Square = 19.05 d.f. = 09 Prob. = .025 AGFI = 0.75

*Indicates significance at .05(.10) level for one (two) tailed test.

** Indicates significance at .025 (.05) level for one (two) tailed test.

All Coefficients were estimated by GLS (Generalized Least Square). Estimates were computed with LISREL 8.

DISCUSSION AND CONCLUSIONS

This study advances earlier attempts to identify determinants of overurbanization in a system of interactions using a theoretically inclusive model. It builds on Bruce London's (1987; Smith and London 1990) argument that efforts to understand overurbanization must consider the influence of external forces on the internal conditions. In the present study, the inclusive discourse is advanced by introducing path analysis as a methodological technique that can help explain a system of theoretically meaningful factors. The results presented in Figures 2 and 3 demonstrate that a consideration of the system of structural relations among the major predictors helps explain their unique and combined influence on overurbanization. For example, the direct relationship of foreign investment on overurbanization ceases to be crucial when it is structurally related to internal factors like economic development and rural-urban disparity.

In general, the analysis presented in this study advances our understanding of overurbanization for the period late-1960s-to-mid-1980s in a way that has not been considered in previous studies. From the perspective of the system of structural associations, it seems that foreign investment produced short term growth in economic levels which, in turn, increased the levels of overurbanization. Also, foreign investment exacerbated the imbalances between rural and urban sectors, but economic development reduces the gap. These neutralizing forces may limit the importance of rural-urban disparity as a determinant of overurbanization. In addition, the strong negative association between adverse rural conditions and overurbanization does not seem to be explained by international factors like foreign investment. These results are consistent with the view that overurbanization can be more effectively explained by assessing the effects that international forces, like foreign investment, have on internal processes such as economic development and rural-urban disparity.

Michael Burawoy (1991) suggests that unexpected empirical results, far from indicating failure, can help recast the theoretical model under consideration. For example, Urban Bias dictums did not fully adjust to the specifications of the model because of the weak empirical link between rural-urban disparity and overurbanization. It is possible that assumptions of Urban Bias theory can best be interpreted as case studies at the national level, especially when assessing the nature of the relationship between the state and national urban elites and the effects of urban policies on internal migration (Griffin, Azizur and Ickowitz 2002; Karshenas 2004). Similarly, Modernization theory's assumption that agricultural density enhances overurbanization was not sustained because the effects appear to be negative.

In the spirit of Burawoy's recommendations, some of the limitations of this study can help guide future research on overurbanization. First, the present study tests a theoretically inclusive model using data during the period late-1960s to mid-1980s based on the position that the economic adjustment programs that influenced low income nations in the years after the 1980s worked to neutralize policies that favored urban areas. The results in the present study indicate that once this claim has been amply and empirically demonstrated, a comparative analysis can be carried out using more recent data to test the model before and after the 1980s. Second, the model can be modified to include other factors like environmental forces (deforestation), political (protests), IMF conditionality and others. Finally, the model may need changes in the specification of additional linkages among important theoretical elements already included or the use of alternative indicators that measure specific conceptual elements.

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