# Implicit Contracts in the Urban Informal Sector: The Philippines

## Toru Nakanishi

### Introduction

This article intends to contribute to build the theory of the urban informal sector from the viewpoint of an implicit contracts model, referring to the participant observations of a certain slum area in Metro Manila (M. M.).

Urban underemployment is one of the serious socio-economic problems in the less developed countries (LDCs) today. Since urban employment has showed no fluctuation in spite of the high natural growth rate of population and the rural-urban migration within the process of industrialization, a large-scale urban surplus labor has been produced. With lack of supply of infrastructure, there have appeared various problems of *over-urbanization*, such as an expansion of slum areas which are predominant elements of social unrest in the LDCs. It is a common recognition among the economists that the concept of the urban informal sector is important to explain those problems. This concept intends to define huge disguised unemployment which is not absorbed by relatively large-scale enterprises (The urban formal sector).

It can be interpreted that the models of the urban informal sector

have developed as revised versions of the Lewis type two-sector models. While the urban formal sector is supposed to have a sticky price system due to the institutional factors, the urban informal sector is essentially considered as one in perfect competition out of official regulations. It can be said, therefore, that the urban informal sector has been analyzed only as a complimentary to the urban formal sector. We call these medels traditional.

By contrast, an implicit contracts model intends to analyze the urban informal market structure more substantially from a different point of view. We will evaluate the meanings of this approach, comparing with the traditional models of the urban informal sector.

We will try to develop this implicit contracts model by considering the results of the field researches. It is obvious that the analysis on this sector should be based on the characteristics extracted from its inside. The author conducted the participant observations for one year totally, nine times from 1985 to 1990 in a squatter area of M. M., to understand the economic activities of the urban informal sector.

The first section critically surveys the traditional models of the urban informal sector. After the second section reviews the actual socio-economic conditions in the urban informal sector in the Philippines, an implicit contracts theory will be reconsidered and revised in the third section.


## I. Traditional Models of the Urban Informal Sector

In this section, we will make clear the skeleton of the typical models of the urban informal sector, which are basically revised versions of the so-called dual economy model, and reconsider them

critically.

I-1. The Theory of Rural-Urban Migration

The root of the theoretical framework of the urban informal sector dates from the dual economy model, which consists of the subsistence sector and the advanced sector[1]. This model shows the mechanism of economic development by the advanced sector's continuous absorption of the surplus labor in the subsistence sector at the subsistence fixed wage level.

The poor economic performances in the LDCs, however, challenged this model. Todaro (1969) and Harris—Todaro (1970) explain urban poverty by rural-urban migration which is invited by the differential in the expected wage rates between the rural and urban areas. Under the assumption that the markets in the urban sector are regulated by the minimum wage law[2], when the new employment project is announced, an unexpected large scale of labor forces may migrate from the rural villages to the urban area, because of a change in the expected wage rate in the urban sector. In this case, the urban sector can not absorb the migrant labor completely. Once the wage rate in the rural sector is equal to the expected wage rate in the urban area (that is, at the equilibrium wage rate), the rural-urban migration will cease with urban unemloyment.

This rural-urban migration theory, however, can not elucidate the nature of the urban informal sector. Harris—Tadaro model neglects the existence of the urban informal sector. Even Todaro model, which mentions the urban traditional sector in the footnote, regards it as a transitory phenomenon in two-step migration. In this theory, the purpose of potential migrants to the urban area is to get a job in the urban formal sector, and the urban informal sector is prescribed as

that which the migrant surplus labor stays in temporarily. Indeed these arguments are persuasive from the viewpoint of long-run equilibrium, but they do not give us the reference frame for understanding the meanings of the urban informal sector in economic development.

I-2. The Models of the Urban Informal Sector

(1) The Real Sector

Fields (1975), Mazumdar (1976) and Piñera — Selowsky (1978) analysed the urban informal real sector by using mathematical models[3]. We reconsider the essence of the structure of the representative model, i.e. Fields model, which is a basis of the models proposed sequentially.

Fields model introduced the urban informal sector into Harris— Todaro framework by specifying behavior of the new migrants in the urban area. We assume a economy with three sectors, rural, urban formal and urban informal, represented by indices 1, 2 and 3, respectively. The new migrants are given two plans; (Plan A) devoting themselves to search job in the urban formal sector while they are unemployed but supported by their acquaintances, and (Plan B) job searching at the same time working in the urban informal sector. The possibility of getting job in the urban formal sector for the migrants at the first period who prefer Plan A($\pi_a$) is lower than $\pi_b$(that for those who prefer Plan B). The relation is supposed to be expressed as $\pi_b = h\pi_a$, where $0 < h < 1$.

In the real term, the number of the applicants for the urban formal sector is,

$$U + L_2 + hL_3$$

where $L_i$ is labor in each sector, and U is the unemployed.

The expected wage rates of Plan A and Plan B, namely $E(w_{ua})$ and $E(w_{ub})$ respectively, are given by

(1) $\quad E(w_{ua}) = \dfrac{L_2}{L_2 + U + hL_3}\overline{w_2}$

(2) $\quad E(w_{ub}) = \dfrac{hL_2}{L_2 + U + hL_3}\overline{w_2} + \left[1 - \dfrac{hL_2}{L_2 + U + hL_3}\right]w_3$

Given the wage rate in the rural sector $w_1$, we can get the equilibrium condition in the labor market,

$\qquad w_1 = E(w_{UA}) = E(w_{UB})$

From this condition, the wage rate in the urban informal sector can be expressed as,

(3) $\quad w_3 = \dfrac{w_1(1-h)}{1 - h(w_1/\overline{w_2})}$

When we define the average urban wage rate $w_u = (\overline{w_2}L_2 + w_3L_3)/(L_2 + L_3)$, we can get the following relation from equation (3),

(4) $\quad \dfrac{w_1}{w_u} = \dfrac{(L_2 + L_3)[(1-h)L_2 + U + hL_3]}{(L_2 + U + hL_3)[(1-h)L_2 + U + L_3]} < \dfrac{L_2 + L_3}{L_2 + U + L_3}$

This means that the wage deferential between rural and urban areas is smaller than the rate of urban employment[4].


(2) The Monetary Sector

On the monetary sector in the LDCs, McKinnon (1973) and Shaw (1973) pointed out that financial liberalization stimulated efficient mobilization of available fund from unproductive uses to productive ones, and asserted that such financial deepening would bring economic growth. They did not recognize, however, the role of the informal monetary market explicitly. Wijnbergen (1983) reconsiders the McKinnon—Shaw hypothesis by introducing the informal monetary sector.

Financial assets in economy (A) consist of currency (Cu), deposit

(TD) which is formal financial assets, and informal financial assets (U).

(5)    $A = Cu + TD + U$

The demand functions of three assets are supposed to be expressed as,

$$Cu = \phi_c(r - \hat{p}, \ i - \hat{p})A$$

(6)    $TD = \phi_d(r - \hat{p}, \ i - \hat{p})A$

(7)    $U = \phi_u(r - \hat{p}, \ i - \hat{p})A$

where $\hat{p}$ is inflation rate, and r and i are the interest rates in the formal sector and the informal sector, respectively. $\Sigma \phi_j = 1$, $\phi_{cr} < 0$, $\phi_{ci} < 0$, $\phi_{dr} > 0$, $\phi_{di} < 0$, $\phi_{ur} < 0$, and $\phi_{ui} > 0$.

The equilibrium condition of the formal financial market is given as

(8)    $L = (1 - \rho)TD$

The demand for working capital in the private sector is

(9)    $TD_f = TD_f(w, \ y)$

Hence, the equilibrium condition of the monetary market, which is L—M curve, is expressed as

(10)    $TD_f(w, \ y) = (1 - \rho)\phi_d(r - \hat{p}, \ i - \hat{p})A + \phi_u(r - \hat{p}, \ i - \hat{p})A$

This curve has a upward slope:

(11)    $$\left.\frac{di}{dy}\right|_{\substack{LM \\ r: \ const}} = \frac{TD_{fy}}{(1 - \rho)\phi_{di}A + \phi_{ui}A}$$

$$= \frac{TD_{fy}}{-(\phi_{ci} + \rho\phi_{di})A} > 0$$

On the other hand, the equilibrium in the real sector, which is the I—S curve is given as

(12)    $y = y(i - \hat{p}, \ y)$

where y is output and $y_i < 0$, $0 < y_y < 1$.

This curve has a downward slope:

(13)  $\dfrac{di}{dy}\bigg|_{\substack{IS \\ r:\ const}} = \dfrac{1-y_y}{y_i} < 0$

When the interest rate in the formal sector is raised as a first step of the financial liberalization policy, L—M curve must be shifted though the direction is ambiguous.

(14)  $\dfrac{di}{dy}\bigg|_{\substack{LM \\ y:\ const}} = -\dfrac{\phi_{ur}+(1-\phi)\phi_{dr}}{\phi_{ul}+(1-\rho)\phi_{dl}}$

$\qquad\qquad = \dfrac{\phi_{ur}+(1-\rho)\phi_{dr}}{\phi_{cl}+\rho\phi_{dl}} \gtreqless 0$

Since the denominator in (14) is positive,

(15)  $-\dfrac{\phi_{ur}}{\phi_{dr}} \gtreqless 1-\rho\ <=>\ \dfrac{di}{dy}\bigg|_{\substack{LM \\ y:\ const}} \gtreqless 0$

L—M curve will shift upwards (downwards), if the substitution between the productive assets is large (small) enough, or the reserve ratio is high (low) enough. The raise in the interest rate in the formal monetary market may cause the rise in the interest rate in the informal monetary market and the decrease of national income. This is because the rise in the interest rate in the informal monetary market discourages investment, while a financial leak occurs by substitution from informal assets to formal ones.


I-3. Critical Discussion on the Traditional Models

Firstly, in these models, the difference between the formal and informal sectors lies in that the factor markets in the former are regulated by the minimum wage law or the low interest rate policy, while those of the latter are competitive. Indeed this assumption is persuasive when the urban formal sector is mainly analyzed in the general equilibrium model, but the assumption of competitive market in the urban informal sector is not realistic, as often referred to

market segmentation. The labor in the urban informal sector generally consists of poor migrants from rural areas. Since even the Lewis' original model (1954) assumed the traditional community norm in the rural sector, it is natural to assume that the economic system in the urban informal sector is different from market mechanism.

Secondly, there are very few studies, which bring focus into resource allocation of labor and capital in the general equilibrium analysis[5]. It is a surprising fact because many studies assume that the urban informal sector is labor intensive or capital saving, compared with the urban formal sector[6]. In the Wijnbergen model, it is assumed that there is no difference in allocation efficiency between the urban formal and informal sectors.

Finally, we can imagine easily, from these two points above, that the traditional models can not explain the basic characteristics of the urban informal sector. From the assumptions of these models low productivity which prescribes this sector can not be deduced. Even the native scholars in the LDcs, however, often do not belong to the communities in the rural or urban poor areas. We should access the object by the participant researchs as possible as we can.

Now we stand in the stage to analyze the socio-economic conditions in the urban informal sector by the participant observations.

## II. A Squatters Ares as a Result of Rural-Urban Migration

The traditional discussion on the expansion of urban informal sector depends on urban surplus labor which rural-urban migration created. Some studies on squatters areas, where the workers in the urban informal sector are supposed to live, reported that most of the residents are migrant from the rural area. In this section, we will

survey the trend of rural-urban migration in the Philippines and describe the socio-economic situations in a certain squatters area in M. M. to make a basis for understanding the urban informal sector more substantially[7].

II-1. The Internal Migration and Metro Manila

(1) Survey of Internal Migration in the Philippines

Some studies on the internal migration in the Philippines have been published[8], based on Population Census (in 1948, 1960, 1970, 1975, and 1980). The trend of migration from 1948 to 1980 can be summarized in table 1.

From 1948 to 1960, the internal migration pattern shows diversification of movement. That is, [type 1] the migration to the frontier: from Ilocos to Cagayan Valley and from Eastern and Western Visayas to Northern and Southern Mindanao: [type 2] the migration to the Metropolitan area: from Eastern and Western Visayas or Biocl to Cebu City or M. M.; and [type 3] the migration to the sub-urban area; from City of Manila to Southern Tagalog. During this period, migration to City of Manila is not dominant. It can be guessed that the migration during the 1960's has the same trend.

During the 1970's this tendency of diversification of migration was supposed to cease and concentrated on migration to M. M.. We can observe only the migration from Central Visayas to Southern Mindanao (12,349) and to Northern Mindanao (13,902), as the type of migration to frontier. The social increase in population in Northern and Southern Mindanao was caused by migiration from Western and Cantral Mindanao, experiencing social unrest such as Muslim problems there. Migration from Eastern and Western Visayas to Cebu City in

[table 1]  Acceptance of Net Migrants by Region (1948~80)

|  | 1948-60 | 1960-70 | 1970-75 | 1975-80 |
|---|---|---|---|---|
| Metro Manila | 33,127 | n.a. | 155,087 | 180,318 |
| Ilocos | −161,321 | −110,208 | −57,212 | −53,007 |
| Cagayan Valley | 91,106 | 5,984 | −6,117 | −2,464 |
| Central Luzon | −257,373 | −74,025 | 1,243 | 10,656 |
| Southern Tagalog | 604,094 | 393,837 | 1,654 | 67,884 |
| Bicol | −104,337 | −79,776 | −41,605 | −63,602 |
| Western Visayas | −3,101,937 | −186,340 | −7,640 | −73,825 |
| Central Visayas | — | — | −49,668 | −64,757 |
| Eastern Visayas | 1,844,102 | −371,477 | −12,472 | −72,877 |
| Western Mindanao | — | — | −28,257 | −8,813 |
| Nothern Mindanao | 943,551 | 115,896 | 40,847 | 35,437 |
| Southern Mindanao | 108,943 | 257,652 | 30,451 | 27,165 |
| Central Mindanao | — | — | −26,311 | 17,885 |

[source]

(1)  Pascual. E., "International Migration in the Philippines", at The Population Institute First Conference on Population University of the Philippines, 1966.

(2)  Kim Yun (1972)

(3)  National Economic and Development Authority, National Census and Statistics Office, *Journal of Philippine Statistics*, Vol. 36 No. 4, 1985.

(note)  These original data are thought to contain several errors.

Central Visayas had decreased also during 1970's. On the other hand, migrants to M. M. from Ilocos, Bicol, Eastern and Western Visayas had increased. Especially net migration from Eastern Visayas had increased sharply not only because of an increase in gross migration, but also because of a decrease in return migrants from M. M. to Eastern Visayas. While the number of return migrants during 1970–75 was 18,231, it became 10,274 during 1975–1980. We can observe a similar situation in Western Visayas (from 17,280 to 11,701).

In conclusion, it is clear that the migration during the 1970's is characterized by the stream to M. M. from Easterm and Western Visayas, Bicol, and Ilocos.
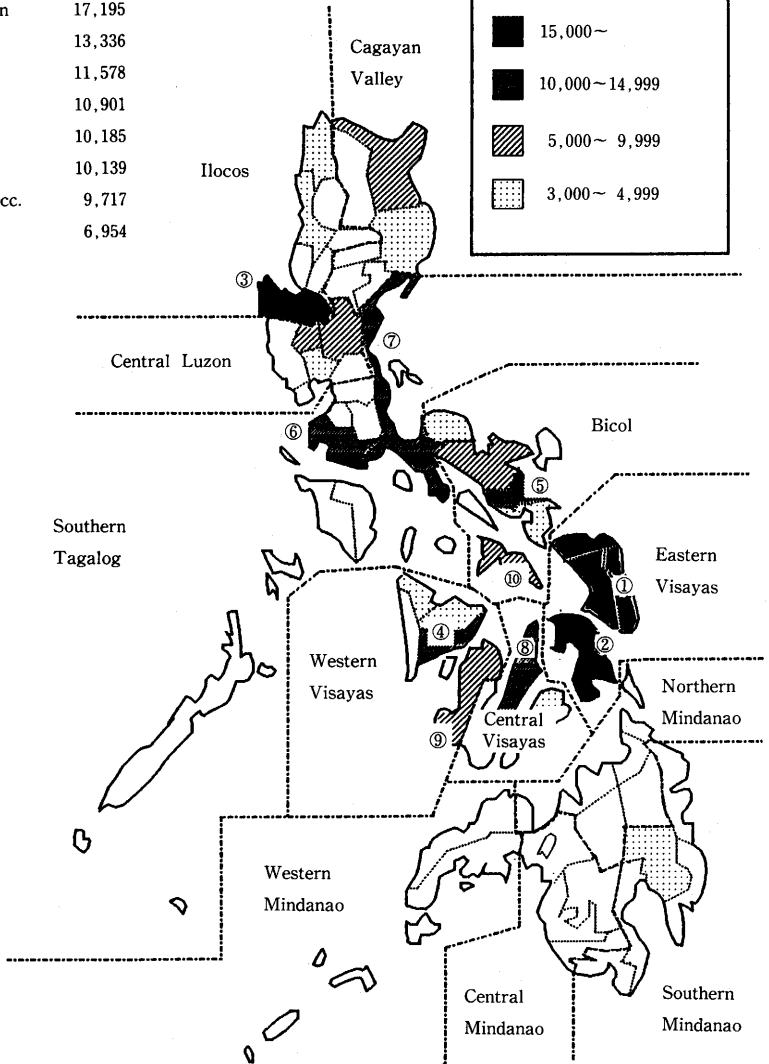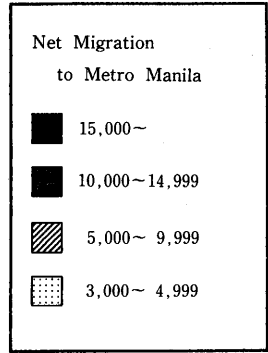
(2) Migration to Metro Manila

The data on migration to M. M. at province level is available only for the period for five years, from 1975 to 1980 (figure 1). The top ten provinces of gross migrants to M. M. are as follows: (1) Leyte (24,511 including South Leyte), (2) Western Samar (24,488 including Northern and Eastern Samar), (3) Pangasinan (17,195), (4) Iloilo (16,820), (5) Bulacan (15,883), (6) Albay (15,859), (7) Batangas (14,437), (8) Quezon (14,094), (9) Cebu (13,924) and (10) Rizal (12,424). On net migrants as follows: (1) Western Samar (20,654), (2) Leyte (18,785), (3) Pangasinan (17,195), (4) Illoilo (13,336), (5) Albay (11,185), (6) Batangas (10,901), (7) Quezon (10,185), (8) Cebu (10,139), (9) Negros Occidental (9,717) and (10) Masbate (6,954). Hence, we can classify Eastern Visayas as a typical source of migrants[9].

When internal migration is considered as one of the causes of formation of the low-income area and continuous expansin of the urban informal sector, the difference between gross migration and net migration is interesting. Return migration from M. M. to Central

[figure 1]　Net Migration to Metro Mananita (1975~80)

0　　　　　　　　　　　　　400km

| ① | Northern Samar | 20,654 |
| ② | Leyte | 18,785 |
| ③ | Pangasinan | 17,195 |
| ④ | Iloilo | 13,336 |
| ⑤ | Albay | 11,578 |
| ⑥ | Batangas | 10,901 |
| ⑦ | Queson | 10,185 |
| ⑧ | Cebu | 10,139 |
| ⑨ | Negros Occ. | 9,717 |
| ⑩ | Masbate | 6,954 |

Net Migration
to Metro Manila

■ 15,000~

▨ 10,000~14,999

▧ 5,000~ 9,999

░ 3,000~ 4,999

Cagayan
Valley

Ilocos

③

Central Luzon

⑦

Bicol

⑥

Southern
Tagalog

⑤

⑩

Eastern
Visayas

①

④

⑧

②

Western
Visayas

Central
Visayas

Northern
Mindanao

⑨

Western
Mindanao

Central
Mindanao

Southern
Mindanao

[source]　National Economic and Development Authority, *Journal of
Philippine Statistics*, Vol. 36 No. 4, 1985.

Luzon or Southern Tagalog has been pointed out in many studies on the rural areas. From 1975 to 1980, there were 51,246 return migrants to Central Luzon and 75,386 to Southern Tagalog. The net migration of Southern Tagalog is negative, minus 15,431 (that of Central Luzon is positive but only 8,858) in spite of being so many gross migrants in regional levels. Contrarily, Eastern Visayas is the lowest return migration rate region (16%), and Western Visayas (20%) and Bicol (24%) also show low rates.

These facts suggest that migrants from the regions near M. M. such as Central Luzon and Southern Tagalog are temporary, and that migrants from the far regions such as Eastern and Western Visayas tend to stay in M. M. for a long time.


(3) Backgrounds of Migration to Metro Manila after 1970

The conditons of the push and pull factors of rural-urban migration as a source of labor in the urban informal sector have been examined in several studies[10]. Here we will summarize the discussions on the land reform, the agricultural technical innovation and the labor absorption in the urban formal sector during the 1970's.

The macro economy in the Philippines shows a good performance under the export oriented policy during the enforcement of the Martial Law[11]. Even the first oil shock did not give serious damage to the Philippine's economy in spite of the deterioration of the balance of payments, compared with the other LDCs. It is necessary to inquire the urban formal sector's labor absorption, as one of the reasons why the urban informal sector has expanded during this period.

It can be pointed out that the employment growth rate of the industrial sector is low, except for textile and electrical machinery. The share of employed persons in the industrial sector to the total

employed persons has been around 15% constantly since the 1960's. While both of the shares of value added in the chemical and the petroleum industries to all industry exceeded 20%, those of the employed persons in the manufacturing had been below 1% and 5%, respectively[12]. However, in the labor intensive industry such as textile manufactures, footwear and wearing apparel, and wood and cork products, not much labor productivity improvement can be recognized. The labor productivity in the industrial sector increased at an annual average rate of 5.1% from 1971 to 1978, arising from the improvement of that, in the chemical and the petroleum industies. One of the reasons is that the rise in the real minimum wage rate, especially in the urban area in the late 1970's, discouraged the employers to hire the labor. Inflation in this period seems to be of the cost-push type which induced stagflation[13]. The non-agriculture real minimum wage rate in M. M. has risen sharply since 1975. It can be considered that the expansion of the real wage gap between the rural sector and the urban formal sector stimulated the rural-urban migration to M. M. in this period. This gap urged the urban formal sector to use the capital intensive technology at the same time.

Furthermore, the agricultural development policies during the 1970's have made clearer the contrasts between the less developed regions and the developed ones. And an aggravated unequal income distribution among labor by change of rural society has stimulated rural-urban migration even in the developed regions. Therefore, not only the increase in employment in the urban formal sector, but also the contents of the rural development programs have significant meanings to control the scale of the urban informal sector. This proposition can be logically verified by Bhagwati—Srinivasan (1974) using a modified Harris—Todaro model.

II-2. A Case Study: Sitio Paz

Here we look into one of squatters areas in Metro Manila, as a sample case of the expansion of slum areas caused by rural-urban migration[14].

(1) Socio-Economic Conditions of Sitio Paz

The research field called Sitio Paz[15] is a squatter area located in Malabon, M. M.. The sitio is divided into the north and the south by the Luna street. Most of the land belongs to the government while part of the south is private land. Fish ponds extend in three directions except west. This land was part of these ponds before. In the latter half of the 1950's, there lived already several families on the bank of the fish ponds. After the 1960's, the fish ponds were filled up with the thrown articles. People began to live here in earnest after 1968. On December 1985, there lived 1215 residents (643 males and 572 females). The population structure by sex and age shows the typical pyramid form in the LDCs. The population of those under 20 years old (628) is more than half of all. As regards the age structure of household heads, the average age is 39.4 years old and 150 household heads (59%) are under 40 years old. Only 61 families are the so-called extended families which are prominent in the rural area, while the nuclear families account for 187 (74%). The families with ten or more members are only five. The average number of family members is 4.8.

The average monthly income per family is 1463.9 pesos (329.5 pesos per person), but there exists a large difference in the standard of living between the northern and the southern parts of the sitio (1591.6 pesos in the north and 918.9 pesos in the south). The monthly cost of basic human needs for six persons family is 3344.5 pesos as of

July 1985[16]. That means the basic needs cannot be satisfied even in the northern part of the sitio. The average monthly income of the economic activity population is 1018.7 pesos in the north, 702.4 pesos in the south and 967.7 pesos in all. All of these data are below the minimum wage rate[17].

Forty families live in rented houses or rooms. Thirty two families pay 115 pesos monthly for the rental fee on the average. According to some informants, most of the new comers have lived in rented houses or rooms for the moment. One hundred seventy six houses are called *barong-barong*, which are made of garbage such as tin plate, corrugated cardboard and so on. Only 16 houses are made of concrete and the rest are made of wood. The number of families who can get electricity is 163 (64%) including 125 families using illegal extensions called a *kabit* system.

(2) Migration to Sitio Paz

Two thirds (167) of all of the household heads (253) are migrants. Their birth places correspond to the data in the national census already discussed. The top four birth regions of household head migrants are Eastern Visayas (43), Ilocos (32), Western Visayas (28), and Bicol (23). The total number of them is 126, which occupies 75% of all household head migrants. Migrants from Central Luzon are only 14. Only six household heads come from Mindanao island. At the province level, the top five provinces (totally 83 migrants) are Pangasinan (28), Leyte (19), Samar (12), Aklan (12) and Negros Occidental (12), which account for about 50% of all the birth provinces.

The number of migrants who were single when reaching M. M. (81) was larger than that of family migrants (45). Most of them

married in M. M. before reaching the sitio. They migrated to the sitio as independent families. More than half (91) of 167 housecold head migrants moved twice or three times before reaching the sitio. It does not mean, however, that there were many *step migrants* who passed through the local cities before migrating to M. M.. The number of them was only 27 (16%). Migration of the household heads to M. M. has began since 1955 and migration to the sitio started to increase since 1970. Especially after 1980 seventy three household heads (44%) reached the sitio. This fact shows the high turnover rate in the urban informal sector where the low income workers exhibit an excessive mobility within Metro Manila, and it gives the spill-over effects of the urban poor problems on M. M. out of City of Manila.

Since many migrants were dependent, seventy six household head migrants (46%) belonged to non-economic activity population before migration. Aside from them, about 40% of household head migrants belonged to the first industry in their home provinces, such as landless agricultural workers (17), self-employed fishermen (12) and tenants (10). It seems that whether they have the rights of tilling lands or not is significant for migration decision makings. They said they had migrated to M. M. because of difficulties in life. Seventy eight (64%) out of 122 independent migrants answered job seeking in M. M. was the main reason of migration. They mentioned the low income (58) and no job (20) in the rural area.

We can summarize the typical type of migrants to the sitio: a single man at 21 years old who had his kinship ties in M. M. left his province because of economic difficulties and migrated to M. M. for job seeking in 1964. He was not able to get any permanent job and moved within M. M. for ten years. After marriage, at 33 years old, he came to the sitio with his family in 1976.

The socio-economic inter-personal relations in the sitio seem to depend on the ties of blood or *kababayan* (town mate) relations though only 35 migrants (21%) had experiences in return to their birth places. For example, in migration process, migrants' relatives are considered as the main source of information about migration. Ninety four migrant household heads (56.3%) depended on their relatives in migrating to the sitio. Furthermore, the political conflicts in the sitio so often comes from the regional conflicts between Pangasinan group and Visayas group[18]. The residence distribution in the sitio also shows such segmentation[19]. Since they get daily information through gossip in the neighbourhood or *sari-sari* stores (grocery stores), the conflicts will give some distortions to the market in the urban informal sector.

Spoken language has no serious effects on the socio-economic relations and the economic activities of the urban informal sector in the sitio. Languages aside from Tagalog have been rarely spoken in daily life.

## III. An Analysis of the Urban Informal Sector in Sitio Paz

After an overview of the urban informal sector in the sitio, this section will describe a recycle business as a main busiess there. Then an implicit contracts model, which was proposed by Vijay Jagannathan (1987), is revised to explain various phenomenons peculiar to the urban informal sector[20].

III-1. An Overview: The Urban Informal Sector in Sitio Paz

Here, we will summarize the discussions in Nakanishi (1988, 1989b and 1990b) on the econmic activities of the urban informal sector in Sitio Paz.

(1) The Economically Active Population

The economically active population above 15 years old in the sitio was 514 out of total population (1215) in 1985. While the number of employed persons was 441 including the underemployed, that of the involuntarily unemployed was 73 (the unemployment rate was 14.2%). Most of workers in the urban informal sector can be thought to have been underemployed. Many employed persons who work more than eight hours a day intend to work more[21].

(2) Occupations and Income of Residents

The occupations of the residents are shown in table 2. Scavenger was the most numerous (total number was 110 belonging to 67 households). There were 54 hired workers in the small scale manufacturing and only fifteen workers could earn the minimum wage. The rest, more than seventy percent of hired workers, were classified as the workers in the urban informal sector. Most of the workers in the sitio, such as scavengers, vendors, self-employed fishermen, *labanderas* (laundress), construction workers or maids, are thought to be of the typical miscellaneous service sectors in the urban informal sector.

The occupations of the household heads are shown in table 3. Scavenging is, specially, the typical occupation for migrants. Ten (11.6%) out of 86 non-migrant household heads and thirty nine (23.4%) out of 167 migrant ones were scavengers. Most of the comparatively high productive occupations, such as tricycle drivers, *sari-sari* store owners or jeepney drivers, were of the non-migrants or the migrants who stayed in M. M. for a long time. Only two *sari-sari* store owners and three tricycle drivers migrated to M. M. after 1980.

[table 2]  Occupation of the Employed Persons in the Sitio Paz

| Occupation | | Number of Employed Persons | Monthly Income | Age | Educational Attainment |
|---|---|---|---|---|---|
| scavenger | | 110 | 513.12 | 28.46 | 3.39 |
| | (male) | ( 77) | ( 558.87) | (26.34) | ( 3.80) |
| | (female) | ( 33) | ( 411.59) | (33.16) | ( 2.47) |
| small-scale/cottage | | 54 | 1068.38 | 31.48 | 7.34 |
| firm worker | (male) | ( 38) | (1193.89) | (33.80) | ( 7.06) |
| | (female) | ( 16) | ( 775.53) | (26.07) | ( 8.00) |
| Metro Aide | | 30 | 946.97 | 36.27 | 4.80 |
| | (male) | ( 19) | ( 951.00) | (33.05) | ( 5.32) |
| | (female) | ( 11) | ( 940.00) | (41.82) | ( 3.91) |
| vendors | | 30 | 679.41 | 39.90 | 5.45 |
| | (male) | (  3) | ( 613.63) | (42.63) | ( 2.75) |
| | (female) | ( 22) | ( 704.48) | (38.86) | ( 6.48) |
| self-employed fisherman | | 30 | 573.73 | 41.58 | 5.22 |
| *labandera* | | 29 | 450.07 | 41.52 | 4.77 |
| construction worker | | 26 | 941.78 | 29.70 | 5.22 |
| tricycle driver | | 20 | 826.88 | 30.53 | 4.82 |
| *sari-sari* store owner | | 16 | 1354.21 | 36.57 | 6.29 |
| junkshop helper | | 14 | 461.38 | 28.63 | 5.63 |
| | (male) | ( 12) | ( 765.17) | (24.55) | ( 4.54) |
| | (female) | (  2) | ( 289.00) | (35.00) | ( 6.50) |
| jeepney driver | | 11 | 1465.60 | 35.20 | 4.20 |
| *kargador* | | 10 | 767.56 | 28.78 | 4.20 |
| maid | | 9 | 201.17 | 21.17 | 4.83 |
| carpenter | | 8 | 1210.83 | 35.50 | 6.00 |
| buy and seller | | 6 | 2367.50 | 38.17 | 7.67 |
| junkshop owner | | 5 | 2237.20 | 39.00 | 5.00 |
| painter | | 5 | 1340.40 | 38.00 | 6.00 |
| overseas worker | | 4 | 5000.00 | 39.25 | 9.00 |
| | (male) | (  3) | (6000.00) | (40.67) | ( 8.67) |
| | (female) | (  1) | (2000.00) | (35.00) | (10.00) |
| mechanician | | 4 | 1076.33 | 40.67 | 4.33 |
| electrician | | 4 | 1066.67 | 33.33 | 9.00 |
| waiter/waitress | | 4 | 1057.00 | 29.33 | 4.00 |
| janitor | | 4 | 1050.00 | 29.50 | 9.75 |
| house by | | 4 | 483.75 | 23.50 | 7.00 |
| penicurist | | 3 | 640.33 | 28.00 | 9.67 |
| battery man | | 3 | 568.00 | 26.50 | 7.50 |

others   38

[source]   Nakanishi (1988)

The average monthly income of the employed persons was 967.7 pesos (1120.2 pesos for male, 655.2 pesos for female and 1179.0 pesos for household heads). While the income level of migrant household heads (1217.2 pesos) was higher than that of non-migrant household heads (1099.3 pesos), that of the new migrants who arrived in M. M. after 1980 was lower than that of non-migrants. The average monthly income of 17 migrant household heads, who migrated to M. M. after 1980, was 919.6 pesos. This is because more than half of them (10) were scavengers. On the other hand, out of the new residents who arrived in the sitio after 1980, those who have stayed in M. M. for a long period enjoyed relatively higher incomes. The average monthly income level of 41 household heads, who migrated to M. M. before 1970 and reached the sitio after 1980, was 1155.6 pesos.

(3) Economic Activities of the Recycle Business in Sitio Paz

The recycle business, which is thought to be a main business of Sitio Paz, consists of scavengers, junkshop owners, *bodegeros* (medium-scale dealers), and large-scale firms which belong to the urban formal sector. The process of its economic activities is summarized as follows. A scavenger collects junk such as cans, paper, metals and so on, on the streets or in the dumping areas such as Smoky Mountain, in a cart (*kariton*) borrowed free of charge from a junkshop owner. He sells the collected junk to the owner and gets his proceeds on the spot.

There were 110 scavengers at least in the sitio in 1985. They worked 6.7 hours a day and 5 days a week on the average. Most of them complained they needed longer working time to satisfy their basic human needs. They were often new migrants. More than 40 percent of the scavengers (46) migrated to the sitio after 1980. A new

## [table 3] Occupation of Household Head (H. H.)

| Occupation | | Total | H. H. | non-Migrant | Migrant |
|---|---|---|---|---|---|
| scavenger | | 110 | 49 | 10 | 39 |
| | (male) | ( 77) | (42) | (10) | (32) |
| | (female) | ( 33) | ( 7) | ( 0) | ( 7) |
| small-scale/cottage | | 54 | 34 | 11 | 23 |
| firm worke | (male) | ( 38) | (33) | (10) | (23) |
| | (female) | ( 16) | ( 1) | ( 1) | ( 0) |
| *Metro Aide* | | 30 | 18 | 11 | 7 |
| | (male) | ( 19) | (18) | (11) | ( 7) |
| | (female) | ( 11) | ( 0) | ( 0) | ( 0) |
| vendors | | 30 | 13 | 5 | 8 |
| | (male) | ( 8) | ( 7) | ( 2) | ( 5) |
| | (female) | ( 22) | ( 6) | ( 3) | ( 3) |
| self-employed fisherman | | 30 | 25 | 12 | 13 |
| *labandera* | | 29 | 9 | 0 | 9 |
| construction worker | | 26 | 15 | 4 | 11 |
| tricycle driver | | 20 | 17 | 6 | 11 |
| *sari-sari* store owner | | 16 | 10 | 0 | 10 |
| junkshop helper | | 14 | 2 | 2 | 0 |
| jeepney driver | | 11 | 9 | 2 | 7 |
| *kargador* | | 10 | 5 | 1 | 4 |
| maid | | 9 | 0 | 0 | 0 |
| carpenter | | 8 | 5 | 2 | 3 |
| buy and seller | | 6 | 4 | 2 | 2 |
| junkshop owner | | 5 | 5 | 2 | 3 |
| painter | | 5 | 4 | 0 | 4 |
| overseas worker | | 4 | 3 | 1 | 2 |
| mchanician | | 4 | 3 | 1 | 2 |
| electrician | | 4 | 3 | 2 | 1 |
| waiter/waitress | | 4 | 0 | 0 | 0 |
| janitor | | 4 | 2 | 1 | 1 |
| house boy | | 4 | 1 | 0 | 1 |
| battery man | | 3 | 2 | 2 | 0 |
| others | | 37 | 21 | 9 | 12 |
| total | | 447 | 259 | 86 | 173 |

[source] Nakanishi (1988)

comer can be engaged in scavenging immediately if he has relatives or acquaintance there, while searching the other jobs. Or it can be thought that scavenging is a sideline for many to compensate for the instability of the other jobs such as construction workers or self-employed fishermen. Each scavenger agreed to make implicit contracts with one junkshop owner. No scavenger had contracts with two or more junkshops. There are five junkshop owners in the sitio, namely, Reymond Aguirre, Danilo Flores, Arthur Reyes, Rodolfo Monsod and Dionicio Esguerra. Their average monthly income (2237.2 pesos) was considerably high. Good inter-personal relations with scavengers and *bodega* are necessary for them to manage their shops, aside from initial investment.

It seems that the markets for junk collected by the scavengers are competitive in such a narrow area. There were, however, no small differences of the bidden junk prices among the junkshops (table 4). Since the scavengers have perfect information on junk prices system, it will be impossible for junkshop owners to maintain stable employment relations with them. We need to study their contracts to understand labor market in the recycle business.

### III-2. Jagannathan's Implicit Contracts Model

Now we will review an implicit contracts model which is developed by Jagannathan, referring to Sitio Paz. This model gives us a different point of view from the traditional models.

### (1) Horizontal Implicit Contracts Model

The horizontal rent-seeking informal group relations can be generally found in the self-employed urban informal sector. Jagannathan pointed out that street vendors who own territory could

[table 4]　Buying (P$_b$) and Selling (P$_s$) Prices of Junk per one kilo
gram Buying Prices (P$_b$), Selling Prices (P$_s$) and Profit
Rates (r=(P$_s$−P$_b$)/P$_b$)

| junk | | Reyes | Aguirre | Flores |
|---|---|---|---|---|
| *karton*<br>corrugated cardbord | P$_b$<br>P$_s$ | .25<br>.40 | .20<br>.40 | .20<br>.40 |
| | r | .60 | 1.00 | 1.00 |
| *late*<br>empty can | P$_b$<br>P$_s$ | .15<br>.20 | .15<br>.22 | .15<br>n.a. |
| | r | .33 | .47 | n.a. |
| *bakal*<br>scrap iron | P$_b$<br>P$_s$ | .50<br>.75 | .60<br>.90 | .50<br>.80 |
| | r | .50 | .50 | .60 |
| *yero*<br>galvanized iron | P$_b$<br>P$_s$ | .20<br>.25 | .20<br>.35 | .20<br>.40 |
| | r | .25 | .75 | 1.00 |
| *sako*<br>gunny sacks | P$_b$<br>P$_s$ | .30<br>.60 | .25<br>.35 | .20<br>.50 |
| | r | 1.00 | .40 | 1.50 |
| *plastic*<br>plastic scrap | P$_b$<br>P$_s$ | 2.50<br>3.50 | 2.50<br>3.50 | 2.50<br>3.50 |
| | r | .40 | .40 | .40 |
| *bubog*<br>scrap glass | P$_b$<br>P$_s$ | .15<br>.20 | .15<br>.30 | .20<br>.30 |
| | r | .33 | 1.00 | .50 |
| *bote*<br>empty bottle | P$_b$<br>P$_s$ | .20<br>.40 | .15<br>.32 | .15<br>.30 |
| | r | 1.00 | 1.13 | 1.00 |

[source]　Nakanishi (1988)

get rents by excluding potential competitors through implicit contracts with neighbouring vendors.

In Sitio Paz, the junkshop owners set entry preventing prices to the new comers in 1970's twice at least, and were able to prevent entry at least once. There is usually, however, no collusion among them about bidden junk prices. We can also find these horizontal implicit contracts in some subcontract workers. A construction worker, called *piyon*, can get a job under the contract with day-laborers' bosses outside the sitio. One of their serious problems is the seasonal cycle of employment due to labor market segmentation and imperfect information. Many construction workers who had been engaged in their jobs from October to December in 1985 were unemployed on March 1987. Here, they can minimize risk or uncertainty by horizontal implicit contracts. If they form informal labor gang, they can exclude potential competitors and enjoy monopolistic rents, by exchanging information on employment among them. Because these contracts are also convenient for day-laborers' bosses who can minimize search costs to find reliable workers, they will give priority to this group. In fact, there were at least two informal groups segmented by home provinces in the sitio.

## (2) Vertical Implicit Contracts Model

In the LDCs, vertical patron-client relations can be easily found. These relations intend to averse uncertainty, risk and imperfect information which come from vulnerabilities of the social systems in these countries. The parties concerned can appropriate tied rents because mutually beneficial contracts give stability to these relations.

In the case of the recycle business in Sitio Paz, the relations between a junkshop owner and a scavenger may be understood as

mutually beneficial patron-client relations. On the one hand, the scavenger has an incentive to depend upon a patron. The standard of living of the scavenger is the lowest even in the sitio. His family expenditure often exceeds his income. He needs a shelter for emergency, because he can not get a stable job under given conditions. On the other hand, the junkshop owner also has an incentive to accept such scavengers as clients. He finds difficulty in getting stable and reliable labor. It is often pointed out that the new migrants from provinces exhibit an excessive mobility within M. M.. The stable employment relations with scavengers are, therefore, indispensalbe for junkshop owers. Here, what junkshop owners do to get a stable supply of scavengers is lending money or paying "salary" in advance to them. In these situations, it is convenient for both of them to agree to inter-personal vertical implicit contracts which are in accordance with the traditional norm called *utang na loob* (debt of gratitude), peculiar to the Filipino people. A junkshop owner lends money to scavengers with no interest under the condition that they sell junk exclusively to him. For scavengers, being able to borrow from a junkshop owner in an emergency will cause them feelings of *utang na loob* which they can not repay in fact. They will not use the other junkshops even though some junk prices are bidden higher, and their families also use the same junkshop. They tolerate even dishonest practices by the junkshop owner such as use of a false balance.


A Sample Case:
 Leopoldo Sabiera, who is engaged in scavenging and driving a tricycle, was born in 1953 as an eldest son of a vendor in Albay. Because he was unemployed after leaving an elementary school, he left for Paite, Laguna in 1972, where he was engaged in cutting trees under a three-year contract. Then he returned to Albay, and he

married and worked a restaurant for eight years. Since the restaurant went bankrupt in 1983, he left for Calanba, Laguna, where his uncle lived. After he worked as a vendor for one year, he decided to go to Metro Manila because of his low income.

In 1984, he arrived at Sitio Paz, where his town mate Ernest Patola lived. He lives with his wife (31 years old as of 1985) and his only son (one year old) in the so-called *barong-barong*. The area is twenty four square meters. They can use electricity at only ten pesos a month by extending lines illegally from the Patolas (*kabit* system). They have no durable goods except a radio which Leopoldo found in a dumping area. They spend fifteen pesos on food everyday. They often borrow money from the neighbourhood *sari-sari* stores.

He drives Patola's tricycle. He can earn 30 to 50 pesos net of boundary fees (30 pesos). Since he shares a tricycle with another driver, he works only two days a week. He is engaged, therefore, in scavenging as a sidelne having contracts with Aguirre junkshop introduced by Patola. He scavenges seven hours, four to eleven in the morning and earn 300 pesos a month.

He said that although income fluctuation was large, he used his junkshop ower, Reymond Aguirre, because he lent money in emergency such as illness of his son. Scavenging seems relatively secure for him. He looks to the junkshop owner for help in daily life in spite of lower income and worse working conditions compared with those of tricycle driver.


According to interviews to forty five household heads whose family members were scavengers, thirty five answered that they were submissive to the junkshop owers because of enjoying privileges as clients. Seventeen household heads out of 45 answered "borrowing from junkshop" as a reason of decision making in selection of junkshop. In fact, all of the scavengers in Reymond Aguirre junkshop borrowed money from the owner. And Arthur Reyes reported that he lent to all of his scavengers.

In scavengers' selection of junkshop, the *kababayan* (town mate)

relations play an important role. It seems that the relations guarantee the junkshop owner the reliability of scavengers he patronizes. To verify this point, the interview was conducted on 52 families of scavengers selected randomly out of 67 families. These selected families belonged to junkshops as follows: 14 for Flores junkshop (born in Pangasinan), 25 for Aguirre junkshop (Metro Manila), 7 for Reyes junkshop (Negros Occidental), and 6 for Monsod junkshop (Masbate). In Flores junkshop, while there was no scavenger from the Visayas, half of them came from Ilocos and out of them 5 are from Pangasinan. There was nobody from Ilocos in the other junkshops. On the other hand, in Reyes junkshop, all the scavengers came from Western Visayas except one from M. M.. Aguirre junkshop, which was the biggest one in the sitio, had many scavengers who lived in the southern part of the sitio (12 out of 25 households). One third of its scavengers households (9) came from Eastern Visayas. Monsod junkshop had 3 households coming from Eastern Visayas, who lived in the southern part of the sitio. Flores junkshop, however, had no one coming from Eastern Visayas, notwithstanding that many of them lived in the southern part of the sitio.

We can conclude, therefore, that the labor market for scavengers in the sitio is segmented by the junkshop owners' home provinces, and that it is monopsonistic.


III-3. A Revised Theory of Implicit Contracts


(1) Rural-Urban Migration and Vicious Circle of Poverty

Jagannathan unfolded a migration theory by combining an implicit contracts model and the portfolio selection model[23]. Potential poor migrants such as tenants or landless agricultural workers can not have

access to the urban formal market which has high entry barriers like education attainment. Furthermore, if the migrant has no intangible assets, namely, no social behavioral relations based on implicit contracts, it is difficult for him to get a job even in the urban informal sector. A potential migrant's decision making is, therefore, determined by a comparison between his expected income and risk (variance of income) between the rural sector and the urban informal sector. Poor tenants or landless agricultural workers face alternatives only whether they stay in the rural area or they leave for the urban area and get a job in the urban informal sector. In this model, even if the wage rate of the urban formal sector is high enough, it has no effects on their decision makings. The crucial problem for them is whether employment in the urban informal sector is guaranteed or not, in other words, whether they do have or not social behavioral relations with their acquaintances in the urban area.

This theory basically seems to be persuasive and supported by interviews which the author conducted in some rural villages and Sitio Paz. We can find, however, several problems in this hypothesis. Firstly, it is not appropriate to analyze the urban informal sector as a single sector. Indeed potential poor migrants in the rural area do not intend to leave for the urban area to seek jobs in the urban formal sector, but they may have a two-step migration plan, namely, after working in the urban informal low productive sector such as scavengers or *labanderas*, getting job in the urban informal high productive sector such as jeepney drivers or shopkeepers (*sari-sari* store owners).

The second point is that Jagannathan indicated the vicious circle of poverty in the urban informal sector was caused by migrants who have no social behavioral relations[24]. His logic seems to contradict his

migration theory. In his discussion, since a potential migrant decides to leave his village when he has social behavioral relations in the urban informal sector, the migrants who have no social behavioral relations are not dominant. Poverty problems must be, therefore, not serious in the urban informal sector. This contradiction may be occurred because Jagannathan overestimates the social productivity of implicit contracts. The author regards vertical implicit contracts themselves as causes of the vicious circle. In Sitio Paz, the lowest income bracket consisted of scavengers who had patron-client relations with junkshop owners, as already mentioned. These vertical implicit contracts clearly become obstacles for market efficiency. A scavenger must obey junk prices bidden by his junkshop. He can not afford to meet basic human needs and thus he cannot help depending on his patron. In this way, the vicious circle of poverty in the urban informal sector is determined by the vertical implicit contracts.

## (2) Self-Expansion Mechanism of the Urban Informal Low-Productive Sector

In the previous section, the background of the rural-urban migration was mentioned, bringing focus into the rural sector and the urban formal sector. It is not enough, however, to elucidate an expansion mechanism of the urban informal sector by these explanations. In the traditional theoretical argument which is a revised version of the two-sector model, it is not pointed any necessity to investigate the specific mechanism inside the urban informal sector. A new reference frame should be proposed from the inside of the urban informal sector itself to understand its expansion mechanism.

Here, it is remarkable that the junkshop owner is willing to make vertical implicit contracts with scavengers because of their high

turnover rates. With these contracts, when his clients want to quit scavenging or when the junkshop owner needs more scavengers, he could make up easily for the lack of labor by help of his clients, that is, they may introduce him their town mates like Ernest Patola in the sample case of III-1-(2). We can understand, therefore, a self-expansion mechanism of the urban informal sector through the social behavioral relations based on vertical implicit contracts. And these contracts aggravate the segmentation of the economy in the low income bracket and inefficient resource allocation in the urban informal sector.

(3) Social Productivity of Implicit Contracts

Jagannathan emphasizes that intangible social assets, namely, social behavioral relations are productive. He insists that such assets should be protected as social wealth except the corruption system[25]. His arguments are supposed to be founded on the second best argument in welfare economics. If the conditions for optimal resource allocation, or the equivalences of prices and marginal costs for all economic actors, are not met by even one sector because of some reason, this economy can not enjoy the first best resource allocation. And in the other sectors, marginal cost pricing is not a necessary condition for the second best in general. That is to say, competitive market mechanism in the urban informal sector is not a second best solution. Jagannathan seems to regard social behavioral relations system based on implicit contracts as a solution.

Jagannathan does not, however, explicitly develop theoretical discussion on this matter. As it is beyond the author's ability to find a general solution, we reconsider his argument by observations in Sitio Paz.

In the sitio, on March 1989, a Christian cooperative began the

pushcart project for scavengers, supported by the barangay church. The church lends money to this cooperative with no interest and the members make pushcart for communal use. The users pay back little by little in the long-run and share maintenance cost. On September 1989 it had thirty members who were mostly new migrants. This project was based on the author's suggestion that scavengers had to use only one junkshop although bidden junk prices varied depending on junkshops, because of the implicit contracts with their junkshop owner.

Indeed this cooperative is not a voluntary association, but it shows that some scavengers prefer a competitive price mechanism to a system of vertical patron-client relations. We can not consider such vertical social relations as a second best solution for the urban informal market in this sample case.

We may assert that such vertical social behavioral relations based on implicit contracts should disappear and it is necessary for the low income bracket[26] to improve efficiency in the informal markets. This illustration shows, at least, that competitive market mechanism may be superior to the social system with vertical implicit contracts from the viewpoint of social welfare[27].

(4) Implications of the Revised Implicit Contracts Model

In this framework, the so-called basic human needs strategy will tend to eradicate the vicious circle of poverty in the urban informal sector. This kind of strategy may play an important role. The favorable policy to the urban poor, such as the improvement of water sanitation system that will protect them from epidemic diseases, will lead to increase in labor hours, and thereby increase in their income. It will strengthen their negotiation powers as sellers in the labor market. Hence, it will weaken the patron-client relations which bear

monopsonistic characteristics in the labor market.

In this context, however, when we neglect the rural sector in the analysis of the urban problems, the policy may be misleading. The basic human needs strategy will lead increase in income of the urban poor as mentioned above, and in search time for jobs in the high productive informal sector. This means increase in the expected wage rate in the urban informal sector. Under a revised Todaro-type migration function, when the rural-urban wage gap becomes larger, an unexpected huge rural-urban migration may occur. Such migration may worsen the urban poor conditions. It is plain that a humanistic policy only towards a certain sector is not always consistent with social walfare, and even not always humanistic ultimately. For the remedy for the vicious circle of poverty in the urban informal sector, the rural development programme such as land reform or technical innovation is necessary at the same time.

## Summary and Conclusion

In the survey of the traditional theoretical models on the urban informal sector, the author pointed out these models were not appropriate to explain the urban informal sector substantially because they assumed competitive markets only for the urban informal sector and neglected the actual situations in the urban informal sector.

The author reconsidered, therefore, Jagannathan's implicit contracts model as one of the alternative theoretical frameworks. His model could explain, with some modifications, the vicious circle of poverty in the urban informal sector, the rural-urban migration, or the expansion mechanism of the urban informal sector, which could not be explained by the traditional theory.

There were, however, some problems in the Jagannathan's implicit contracts model, which assumed implicit contracts were socially productive. It was pointed out that, according to the author's participant observations, the vertical implicit contracts or the patron-client relations can not become a second best solution with incentive compatibility, under the conditions that the markets in the urban formal sector were regulated by the government. The author showed that a competitive informal market was superior, from the viewpoint of social welfare, to implicit contracts system, in the recycle industry of the research field.

## NOTE

(1) See Lewis (1954), Jorgenson (1961), Fei and Ranis (1964).
(2) Leibenstein (1978) and Stiglitz (1974) analyze the wage rate which exceeds the competitive determined level as a endogenous variable in the models.
(3) Recently these models were extended by Chaudhuri (1989) and Hemmer and Mannel (1989).
(4) In Harris—Todaro framework, $w_1/w_2 = L_2/(L_2 + U)$.
(5) Nakanishi (1985) tackled on this problem.
(6) See Ohshima (1971).
(7) It is needless to say that slum areas or squatter areas are not equivalent to the urban informal sector. The author thinks, however, that a study of economy in these areas will give a good case study of this sector.
(8) See Kim Yun (1980) and Nguiagain (1986).
(9) (1) Northern Samar, (2) Romblon, (3) Camarines Norte, (4) Albay, (5) Catand uanes, (6) Western Mindro, (7) Marinduaque, (8) Aklan, (9) Masbate, and (10) Leyte are the highest ten provinces of the net migration rate (net migrants per 1,000

residents).

(10) See Nakanishi (1989b).

(11) The share of export to GNP exceeded 15% after 1973. The growth of export occurred, not due to increase in primary exports such as sugar, abaka, coconuts, and woods, but due to that of non-traditional exports such as electronic, textile, copper, wood and cork products.

(12) National Economic and Development Authority, *Philippine Statistical Yearbook*, 1978, 1980, and 1988.

(13) See Canlas et al. (1984).

(14) The description of the research field is found in detail in Nakanishi (1988), (1989a) and (1990b).

(15) A *sitio* is part of a barangay which is the smallest administrative unit.

(16) Ibon Databank Philippines, *IBON Facts & Figures*, 1985.

(17) The minimum wage rate in this period was 57.08 pesos a day. It amounted to 1223.1 to 1467.8 pesos a month.

(18) A group, informally aided by the church, was born after the Paz festival of January 1986, just before the presidential election. We can call it a new Christian party. They organized a group called *Samahang Lakas-Bisig* (SLB) under the leadership of Roland de Guia (comes from Negros Occidental) and began to support actively the presidential candidate Aquino (at that time). On the other hand, the backer of President Marcos was the group under the sitio leader whose members were mostly from Pangasinan. They say these two groups differed in opinion.

After the political change of February, part of the Pangasinan group joined the SLB and the year after they had an opportunity for their reconciliation in a general meeting of the SLB. Some people under the ex-leader's family, however, have not joined the SLB even now nor had negotiations with the SLB. From that time on, the SLB continues as a community organization to ask the medical services of Christian societies, to make a plan of a mutual financial association and so on. The number of its members as of April 1987 is 270, including non-residents of this sitio (residents' friends, persons concerned of the church).

(19) See Nakanishi (1988), pp. 32-33.

(20) See Nakanishi (1989c, 1990a).

(21) They call the invisible unemployment in the official statistics in the Philippines.

(22) The discussion here depends on Chapter 1 to 3 in Jagannathan (1987).

(23) Jagannathan (1987), pp. 57-78.

(24) Jagannathan (1987), p. 68.

(25) It seems that his theory gives a theoretical framework which supports the *raison d'êter* of the caste system in India.

(26) Even the horizontal informal contracts are not necessary thought to be productive. In the instances mentioned in III-2, the collusion among junkshop owners and the defensive horizontal relations among the construction workers may be inefficient.

(27) If there is no input-output relations between the urban formal and informal sectors, that is, the urban informal sector is completely closed, the competitive market in the informal sector is the second best.


## REFERENCES

(1) Bhagwati, J.M. and T.N. Srinivasan (1974), "On Reanalyzing the Harris—Todaro Model: Policy Rankings in the Case of Sector-Specific Sticky Wages," *American Economic Review* Vol. 64 No. 3, pp. 502-508.

(2) Canlas et al. (1984), *An Analysis of the Philippine Economic Crisis*, University of Philippine Press.

(3) Chaudhuri, T. (1989), "A Theoretical Analysis of the Urban Informal Sector," *World Development*, Vol.17 No. 3, pp. 351-55.

(4) Fei, J.C.H. and G. Ranis (1964), *Development of Labour Surplus Economy*, Homewood; Illinois.

(5) Fields, G.S. (1975), "Rural-Urban Migration, Urban Unemployment and Underemployment, and Job-Search Activities in L. D. Cs," *Journal of Economic Development* Vol. 12 No. 2, pp. 165-87.

(6) Harris, J.R. and M.P. Todaro (1970), "Migration, Unemployment and Development: A Two-Sector Analysis," *American Economic Review*, Vol. 60 No. 1, pp. 126-42.

(7) Hemmer, Hans-R and C. Mannel (1989), "On the Economic Analysis of the Urban Informal Sector," *World Development*, Vol. 17 No. 10, pp. 1543-52.

(8) Jagannathan, N. Vijay (1987), *Informal Markets in Developing Countries*, Oxford University Press.

(9) Jorgenson, D.W. (1961), "The Development of a Dual Economy," *Economic Journal*, Vol. 71 No. 282, pp. 309-34.

(10) Kim, Yun (1972), *Net Internal Migration in the Philippine: 1960 -70*, Technical Paper No. 2, Bureau of the Census and Statistics.

(11) Leibenstein, H. (1978), *General X—Efficiency Theory and Economic Development*, Oxford University Press.

(12) Lewis, W.A. (1954), "Economic Development with Unlimited Supplies of Labor," *Manchester School of Economics and Social Studies*, Vol. 22 No. 2, pp. 139-91.

(13) McKinnon, R.I. (1973), *Money and Capital in Economic Developent*, Brookings Institution.

(14) Mazumdar, Dipak (1976), "The Urban Informal Sector," *World Development*, Vol. 4 No. 8, pp. 655-679.

(15) Nakanishi, Toru (1985), "High Interest Rate Policy and Urban Traditional Sector." Itoh, Kazuhisa et al. eds., *Monetary and Fiscal Policies in Economic Development* (in Japanese), pp. 67-86, Institute of Developing Economies.

(16) _____ (1988), "The Urban Informal Sector in the Philippines: The Case of a Slum Area in Metro Manila," *Ajia keizai* (in Japanese), Vol. 29 No. 1, pp. 17-33, Vol. 29 No. 2, pp. 48-62, Institute of Developing Economies.

(17) _____ (1989a), "The Urban Informal Sector in the Philippines," *Doctoral Dissertation* (in Japanese), Faculty of Economics, University of Tokyo.

(18) _____ (1989b), "Rural-Urban Migration and the Urban Informal Sector in the Philippines," *Aziya Kenkyu* (in Japanese), Vol. 35 No. 4, pp. 1-46, Japan Association for Asian Political and Economic Studies.

(19) _____ (1989c), "Book Review: Jagannathan, *Informal Markets in Developing Countries*," *Ajia Keizai* (in Japanese), Vol. 30 No. 9, pp. 96-101, Institute of Developing Economies.

(20) _____ (1990a), "A Theory of the Urban Informal

Sector and Implicit Contracts," *The Journal of Social Science* (in Japanese), Vol. 28 No. 2, International Christian University, forthcoming.

(21) _____ (1990b), "The Labor Market in the Urban Informal Sector: The Case of the Philippines," *The Developing Economies*, Vol. 28, No. 3, Institute of Developing Economies, forthcoming.

(22) Nguiagain, Titus (1986), "Trends and Patterns of Internal Migration in the Philippines: 1970-1980," Discussion Paper No. 8606, School of Economics, University of the Philippines.

(23) Niitsu, Koichi ed. (1989), *Slum in the Contemporary Asia* (in Japanese), Akashi Shoten.

(24) Ohshima, Harry T. (1971), "Labor-Force 'Explosion' and the Labor-Intensive Sector in Asian Growth," *Economic Develoment and Cultural Change*, Vol. 19 No. 2, pp. 161-183.

(25) Piñera, S. and M. Selowsky (1978), "The Opportunity Cost of Labor and the Returns to Education under Unemployment and Labor Market Segmentation," *Quarterly Journal of Economics*, Vol. 92 No. 3, pp. 469-88.

(26) Sethuraman, S.V. ed. (1981), *The Urban Informal Sector in Developing Countries: Employment, Poverty and Environment*, International Labor Office.

(27) Shaw, E.S. (1973), *Financial Deepening in Economic Develoment*, Oxford University Press.

(28) Stiglitz, J. (1974), "Alternative Theories of Wage Determination and Unemployment in LDC'S: The Labor Turnover Model," *Quarterly Journal of Economics*, Vol. 88 No. 1, pp. 197-227.

(29) Todaro, M.P. (1969), "A Model of Labor Migration and Urban Unemployment in Less Developed Countries," *American Economic Review*, Vol. 59 No. 1, pp. 138-48.

(30) van Wijnbergen, S. (1983), "Interest Rate Management in LDCs," *Journal of Monetary Economics*, Vol. 12 No. 3, pp. 433-52.