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**Working Paper**

## Local Governance in the Midst of Economic Dependency: A Case Study of Olongapo City

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Philippine Institute for Development Studies  
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## Local Governance in the Midst of Economic Dependency: A Case Study of Olongapo City

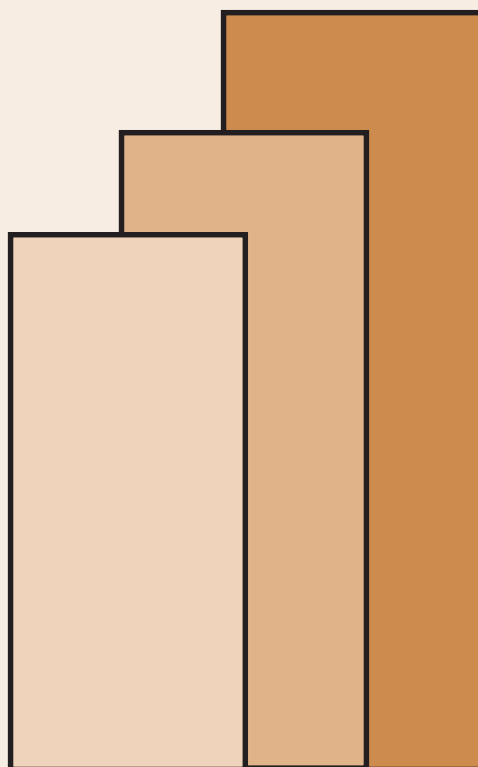
*John Michael Ian S. Salas*

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LOCAL GOVERNANCE IN THE MIDST  
OF ECONOMIC DEPENDENCY:  
A CASE STUDY OF OLONGAPO CITY

John Michael Ian S. Salas

Undertaken under the POPCOM-PIDS  
Population, Urbanization, and Local Governance Project,  
with funding from the  
United Nations Population Fund (UNFPA)

## **Local Governance in the Midst of Economic Dependency: A Case Study of Olongapo City**

### **Abstract**

The experience of Olongapo City in managing economic distress due to the loss of its economic anchor, the Subic Bay Naval Base, offers a rich lesson in local governance on how critical it is to plan ahead. The risk of a severe downturn, primarily due to economic dependency, can be successfully shunned if the groundwork for recovery is immediately put in place. While population movements may exacerbate the situation and imperil finances, it is still possible to maintain a high quality of service delivery given the correct priorities.

**Keywords:** Economic dependency, Olongapo City, Subic Bay Naval Base, Subic Bay Freeport, local government, feminization of migration, population management, revenue generation, economic enterprises

Undertaken under the POPCOM-PIDS Population, Urbanization, and Local Governance Project, with funding from the United Nations Population Fund (UNFPA).

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## **Executive Summary**

It is an accepted truism that urban cities flourish where economic opportunities can be found in abundance. In the same vein, it is expected that the loss of economic livelihood is a sufficient impetus to cause a city's decline. This was very much evident in the case of Olongapo City, whose urbanization and economic performance was closely linked to the presence and volume of activities in the area adjacent to it.

The Subic Bay Naval Base served as the city's economic anchor ever since its establishment as a military facility in the 1900s. Although its direct impact was felt by hired employees and establishments that catered to the services and support needs of the American navy, the local economy benefited immensely through a strong multiplier effect. This encouraged migrants, mostly from the provinces, to troop to the city, in numbers that overwhelmed native residents. This resulted in a population structure that was dominantly young and that had an unusually high concentration of females of child-bearing age, mainly due to the thriving R&R business.

The economic primacy of the military base resulted in a heavily reliant local economy that had no fallback to speak of. The city's sloping topography effectively discouraged agricultural activities, while industrial production was limited to a few cottage businesses. The services sector, while fully developed, exhibited fluctuating activity, hinged on the times when American servicemen were granted overnight passes. Nonetheless, urbanization continued apace with the burgeoning importance of the military facility to the United States' geopolitical interests.

The largely unexpected non-renewal of the bases lease agreement in late 1991 and the consequent closure of the military facility the following year thus threatened to run down the city's economy and strip it of its highly-urbanized status, a classification it earned in 1983. It didn't help that this happened at a time when the city was still recovering from the ash fall generated by Mt. Pinatubo in mid-1991 that damaged vital infrastructure.

This led to widespread apprehension and anxiety among residents about the future of Olongapo City. Businesses closed down, employment declined, and the bustling nightlife ground to a halt. Many residents decided to leave the city, reflected in a first-ever decline in the censal population count in 1995, while those who chose to stay shifted away from the consumption of private services. With lower income and higher demand for public services, the city government faced a difficult task ahead.

But the city government was poised to meet this challenge head on, turning to the development plan it had the good sense to prepare as early as 1981 for its frame of action. This tackled the scenario of the US military vacating the naval base for any reason at all, and called for the immediate development of the base area into a commercial seaport and trade and commerce hub. The city government led the residents in actively lobbying for an enabling legislation and for a participatory role in the conversion efforts. Thus, the Subic Bay Metropolitan Authority (SBMA) had the city mayor as its first administrator.

The residents demonstrated their civic mindedness by voluntarily protecting and maintaining the assets left in the facility, which later on proved crucial for its swift turnaround.

The development of the Subic Bay Freeport Zone addressed the loss of economic opportunities and resulted in a revival of the city's economy. Employment in the city rose with the increase in manufacturing and production-related jobs in the special economic zone. Although these jobs paid lower relative to previous jobs available at the base, the type of offerings were much broader. Eventually, the employment record was exceeded and even doubled.

The fact that significant out-migration set in immediately and that new jobs were soon created in the freeport eased the strain on service delivery. Moreover, the city was capable of turning to the considerable savings it was able to generate from previous years. It also benefited from substantial assistance from the freeport authority.

These moves, however, did not change the orientation of the city towards economic dependency. This was brought to the fore anew with the change in leadership at SBMA in 1998, when the city has found itself in a contradictory role with the freeport. Assistance dried up and development funds were directed to other localities adjacent to the freeport. Service establishments that directly competed with what the city offered were allowed entry inside the freeport.

To address this, the city government accelerated its programs towards self-reliance, primarily its infrastructure initiative that aims to complement existing tourism facilities and promote the city as an all-year-round services and leisure center, similarly outlined in the 1981 development plan. On the fiscal side, enhanced revenue generation measures were implemented, together with more rationalized operations for its economic enterprises. While the latter approach has already borne fruit, the newly established tourism enterprises have yet to positively contribute to the city government's bottom-line. The remaining challenge is to prove the worthiness of this development track.

It is not a small achievement, however, that with all these changes, the delivery of basic services has not been compromised. Through the years, the city government has consistently reaped honors for its innovative approaches and consistency in high quality service delivery. Distinctions have been given to its solid waste management program, its color-coded transport system, its safe streets and healthy public market, its responsive police force, and its efficient city administration. More than just adequately providing for its local schools and barangay centers, the city has also invested in a city college and a continuous upgrade of its tertiary hospital.

Hence, Olongapo's experience is a good example of how an urban city can effectively steer its way to safety in the event of its economic anchor's loss or decline. The key is to have a workable development framework in place that would guide the way in any eventuality, however unforeseen. While one can never be too sure of the odds, it pays to plan ahead, especially if survival is at stake.

# Local Governance in the Midst of Economic Dependency: A Case Study of Olongapo City

John Michael Ian S. Salas<sup>1</sup>

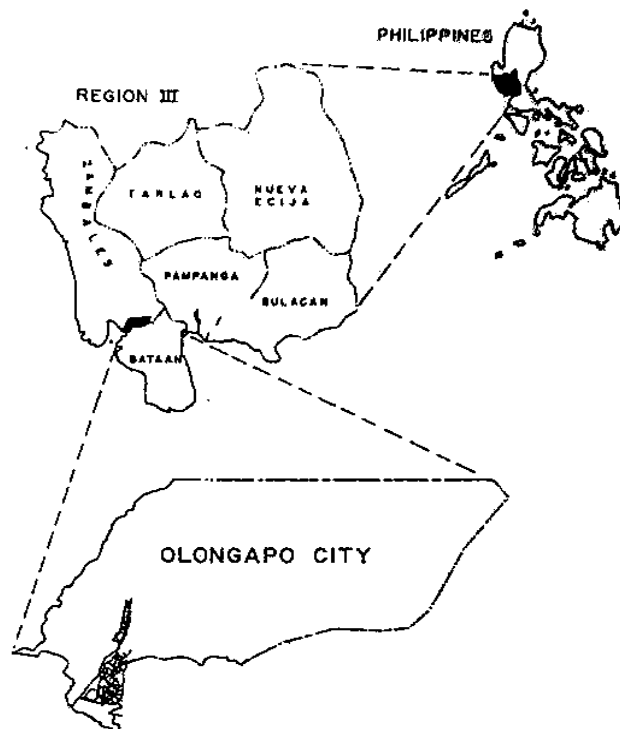
## A. Introduction

It is an accepted truism that urban cities flourish where economic opportunities can be found in abundance. In the same vein, it is expected that with the loss of economic livelihood comes a city's decline.

Population movements basically reflect such rise and fall in economic activity. For the most part, migration patterns drive the tempo of urbanization, absent high and erratic natural increases.

Local governments play a pivotal role in ensuring that service delivery keeps pace with the urbanization process. A planning framework that is in tune with urban realities and at the same time forward-looking and proactive will spell the difference when confronted with abrupt and unexpected developments.

Figure 1. Olongapo City in Zambales, in Central Luzon, and in the Philippines\*



\*Copied from the 1981 DAP study

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## **B. Historical Background**

We first look at the history of the subject city and how its . Drawing largely from the 1981 development plan commissioned by the Development Academy of the Philippines (DAP).

The strategic value of Olongapo and the Subic Bay area was first appreciated by the Spaniards over a century ago in 1868. Even at that time, with its uniform depth and calm waters protected from strong winds by mountains on three sides, the bay area offered itself as a natural haven for shipping—with Olongapo serving as an ideal terminus to and from the hinterlands of Central Luzon as well as Manila.

So it was that in 1884 King Alfonso II decreed the Subic Bay area to be Spain's stronghold in the Far East. Olongapo was fortified as a garrison to protect the colony of Spanish soldiers and settlers. To connect the bay with the inland areas, a railway was installed.

Years later, in 1898, Subic Bay and Olongapo fell to the Americans when Admiral Dewey handily dislodged the Spanish defenders. No less than the US president Theodore Roosevelt recognized the natural harbor as "having no equal in the Philippine Islands"; whereupon he declared the Subic Bay and 70,000 hectares of adjacent land as an American Military Reservation.

Soon after, Olongapo's population grew to 5,000 with utilities and infrastructure including electricity, sewerage and storm drainage, education and health services, and fire protection. By 1925, a highway to Manila was built over Zig-Zag Pass, further giving impetus to Olongapo's progress.

During World War II, Olongapo was destroyed; but it was rehabilitated and developed more fully after 1947 under the US Military Base Agreement. With the outbreak of the Korean War in 1951, the US spent \$170 million for the conversion of the base into the home port of the Seventh Fleet. This brought unprecedented growth and prosperity to Olongapo, swelling its population of 14,000 in 1940 to 39,000 in 1956.

The next year, the US Navy undertook the first comprehensive community development plan for Olongapo. When it was completed, Olongapo could boast of the most modern convenience including water and telecommunications systems, a hospital, public market, slaughterhouse and restaurants. The plan, however, was flawed; it assumed only a population of 40,000 people. It did not foresee the quantum increases that were to take place in the 1950s and 1960s.

Under the Naval Reservation Administration, Olongapo was originally a barrio of the Subic community. On December 7, 1959, when Olongapo was turned over to the Philippine government, it was promptly converted into a municipality by an Executive Order of then President Carlos P. Garcia. Six years later, on June 1, 1966, President Ferdinand E. Marcos signed R.A. No. 4645, converting Olongapo into a chartered city.

The Vietnam War in the 1960s and early 1970s played a crucial role in the development of Olongapo. The city was turned into a virtual boom town, becoming the number one rest and recreation center of American servicemen in the Far East. Military activities generated employment. Business activities attracted migrants from all over the country.

People exploited the lack of zoning ordinances, and houses and makeshift structures began to sprout without any strategic planning. Public utilities intended for a few residents were strained by the use of the unchecked number of migrants. Overnight, Olongapo turned into a bustling, prosperous but unplanned, overcrowded urban community.

### C. Account of Population Movements and Urbanization

Official government census places the population of Olongapo at 14,090 in 1948, forty years since the establishment of an American military administration for town affairs in the adjacent locality of the Subic Bay Naval Reservation. In the next censal year in 1960, just months after Olongapo was converted into a municipality, population more than tripled to 45,330, registering an annual growth rate of 10.23%. This was nine years since the development of the Cubi Naval Air Station in Subic as the homeport of the U.S. Navy's Seventh Fleet and three years into the improvement of town amenities under the Bartholomew plan. Interestingly, the plan intended to support a community of just forty thousand people, a limit that was immediately breached.

Table 1. Censal population counts, annual growth rate, and density, 1948-2000

Censal Year	Population Count	Annual Growth Rate	Density (persons/km <sup>2</sup> )
*1948	14,090		135
**1960	45,330	10.23%	439
1970	107,785	9.05%	583
1975	147,109	6.42%	795
1980	156,430	1.24%	846
1990	193,327	2.14%	1,045
1995	179,754	-1.45%	972
2000	194,260	1.56%	1,050

Source: NSO

\* Olongapo was still a part of the municipality of Subic.

\*\* Olongapo was still a municipality.

Note: Total land area was 103 km<sup>2</sup> until 1966 and 185 km<sup>2</sup> thereafter.

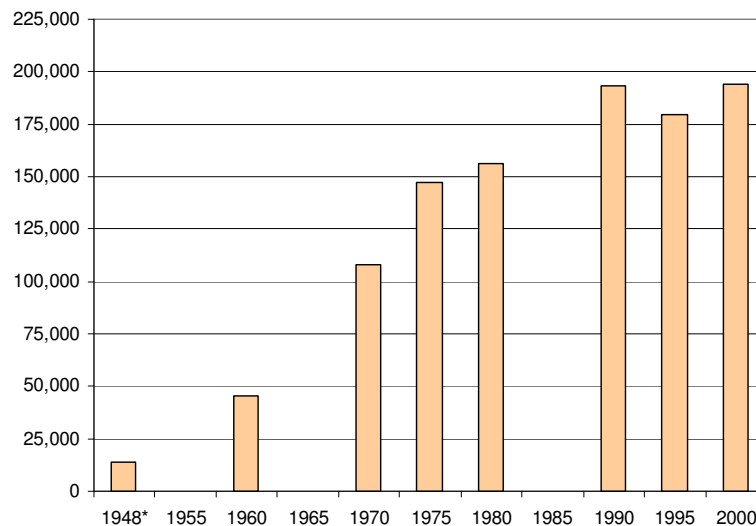
Source: NSO Census Report, various years

Despite the ensuing congestion, population continued to grow. This resulted in the conversion of Olongapo into a chartered city on June 1, 1966. 107,785 residents were registered in the 1970 census, more than double the previous figure, indicating an annual

growth rate of 9.05% over the ten-year period. A significant event during this time was the escalation of activities in the naval base with the advent of the Vietnam War in late 1964. Anderson's (199?) account of the history of Subic Bay mentions that from 98 ship visits a month in 1964, the naval base saw 215 ship visits a month in 1967, with about 30 ships on port in any given day.

In the 1975 census, 147,109 residents were enumerated, showing a slowdown in the official annual population growth rate from 1971 to 1975 to 6.42%. It is noteworthy that the Vietnam ceasefire agreement was signed during this period, specifically in early 1973, suggesting a subsequent decrease in activity in the naval base (after navy ships have been stationed somewhere else) and consequently in the local economy. The hunch that there was net out-migration during the abrupt end of the Vietnam War is bolstered by a city government-commissioned census in May 1974 showing a barangay population count of 193,539 persons. Granting that this figure is correct and comparable to official censuses, it would appear that the actual annual population growth rate from 1970 to 1974 was even faster at an unprecedented 15.76%, which then fell to -24% the following year. This shows how responsive population movements are to developments in the military base and the extent of the latter's economic contribution to Olongapo City.

Figure 2. Censal population counts



Source: NSO Census Report, various years

Five years later, the 1980 population census showed a slight increase to 156,430 for an annual growth rate of 1.24%. Since this is below the national average rate, it is believed that net out-migration continued on until 1980. In the next censal year in 1990, population grew by an annual rate of 2.14% to 193,327 persons, suggesting that migration movements abated (with hints of a slight net out-migration). Although Olongapo achieved its highly-urbanized status in 1983, it can be said that Olongapo City has ceased to be a favored destination of migrants during this time.

The mid-decade census of 1995 recorded a first-ever decline in population,

contracting by 1.45% annually starting in 1991 to 179,754. The apparent cause for the drop can be easily traced to the eruption of Mt. Pinatubo in 1991 that damaged the city's infrastructure and worsened its flooding problem and the consequent pull-out of American troops from the Subic Naval Base in 1992 that crippled the local economy.

Reminded by the events of the mid-70s, the immediate conversion of the military facility into an industrial complex and commercial seaport prevented a massive exodus of residents, native and migrants alike, with the most recent 2000 population count recorded at 194,260, effectively reversing the previous decline.

Table 2. Comparative population count and density, 1970-2000

	1970	1975	1980	1990	1995	2000
<i>Population Count</i>						
Olongapo City	107,785	147,109	156,430	193,327	179,754	194,260
Angeles City	134,544	151,164	188,834	236,686	234,011	263,971
Annual growth rate		2.36%	4.55%	2.28%	-0.23%	2.73%
<i>Population Density (persons per square kilometer)</i>						
Olongapo City	583	795	846	1,045	972	1,050
Angeles City	2,231	2,507	3,132	3,925	3,881	4,378
Olongapo City, adjusted	4,146	5,658	6,017	7,436	6,914	7,472
Angeles City, adjusted	5,175	5,814	7,263	9,103	9,000	10,153

Notes: Total land area is 185 km<sup>2</sup> for Olongapo City and 60.3 km<sup>2</sup> for Angeles City.

Adjustment is based on built-up area in 1995, roughly 26 km<sup>2</sup> for both cities.

Source: National Statistics Office

Looking now at population densities, we observe a similar trend, although cursory inspection suggests that congestion has not been as severe as previously thought given the relatively large land area of the city compared to, say, Angeles City, its nearest and most appropriate comparator, sharing the distinction of being host/adjacent to an American military facility of similar size. However, the topography spells the difference in this case, with Olongapo City being enclosed by mountains on all sides, save for the side fronting the bay area, while Angeles City is situated in a plain. Indeed, 80% of Olongapo City's land area is classified as rolling to steep, with the remainder mainly deltic and facing the coast. If we use the built-up area in 1995 as a proxy measure of immediately usable land, we come up with adjusted population density measures that are much higher for Olongapo City and which are not much behind that of Angeles City.

Moving along with the comparison, we note that the annual population growth rates of the two cities are largely dissimilar, with Angeles City recording faster rates than Olongapo City except for 1971-1975. We might attribute this difference to the fact that Angeles City is better situated than Olongapo City, being in the center of Central Luzon and near the intersection of two major highways linking the whole of the region, while the latter is essentially geographically isolated and linked by a lone highway traversing the mountainsides (and famous for its difficult zigzag path). Since both cities are dominated by their service industries, Angeles City has effectively a bigger market owing to its accessibility, and keeping all things equal, the economic opportunities it offers are more naturally abundant. As previously mentioned, the rapid population growth in

Olongapo City from 1971 to 1975 can be traced to the extensive utilization of the naval base during that time. Since ships by their very nature carry more personnel who stay longer on-base during maintenance, repair and stocking, the total local spending of American sailors/marines on liberty dwarfed those of American pilots in Clark.

From the population snapshots provided by the censuses alone, it could be safely concluded that in-migration drove population growth until 1975 inasmuch as annual growth rates were way above national averages. This was coincident with intense activity in the Subic military base due to various American war efforts, such as the Korean and Vietnam wars. Subsequently, it would appear that migration movements abated, with the possibility of negative net migration not to be discounted, as population growth rates significantly leveled off. This happened during a time when there was a relative decline in military activity in the naval base. This trend would culminate in a period of undeniable out-migration from 1991 to 1995 with the non-renewal of the military base lease agreement and the devastation caused by the eruption of Mt. Pinatubo. The immediate conversion of the facility to an industrial complex and the favorable take-up of foreign investors later on reversed this population contraction, although not as strongly as was anticipated.

A timeline of urbanization processes can thus be gleaned from the foregoing discussion (note that Olongapo has been entirely urban ever since its establishment). The 1950s up to 1974 was a period of rapid urbanization that accompanied the city's establishment. This was succeeded by a general slowdown in urbanization from 1975 to 1990, which was followed by "de-urbanization" from 1991 to 1995, in the sense of declining population and density. "Re-urbanization" took place in 1996 and is ongoing until the present.

#### **D. A Deeper Look into Population Processes**

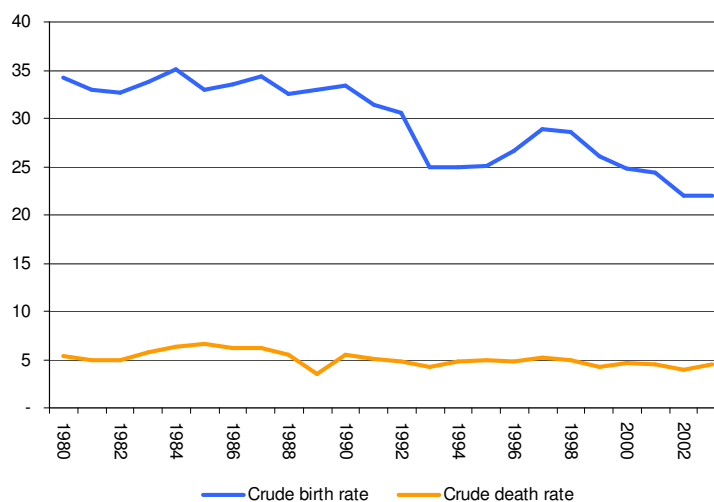
To further understand the population dynamics in the city, we decompose population movements into natural increase and net migration. We first look into separate measures for each, noting constraints on data availability. We then try to compute for migration in a manner consistent with official population counts and registered natural increases, utilizing what is called the fundamental demographic equation. We complete the discussion with the computation of census survival ratios, a tool which will allow us to simulate cohort movements.

##### Natural Increase

Natural increase is simply the difference between the number of live births and deaths. Crude rates are the numbers of such records per 1,000 persons. We compute this from records of the NSO and the city registry, with intercensal population figures that are consistent with average annual growth rates (the 1996-2000 growth rate applied to 2001 onwards). We note here that the figures are based on actual registrations, and hence are not exhaustive.

We see that from 1980 to 2003, the crude death rate has not seen much deviation at an average rate of 5 per 1,000 persons. This suggests that no major calamities or epidemics that would have caused increased number of deaths have visited the city during this period. With regard to the crude birth rate, we see rates above 30 until 1992 and a noticeable drop to 25 in 1993. It picked up to 29 in 1997, only to fall two years after. It has been on the downtrend ever since. This suggests a shock somewhere around 1993, especially acute since population has been falling during this time, which may have led to a change in fertility preferences. Considering the rebound just years later, however, another possibility (not mutually exclusive with the previous reason) is that this reflects the movement out of the city of a certain segment of the population that may be responsible for the high birth rates of the past. We will be able to say more about this later when we tackle census survival ratios. What is certain is that there is a general downward trend in the crude birth rate that became more pronounced after 1999.

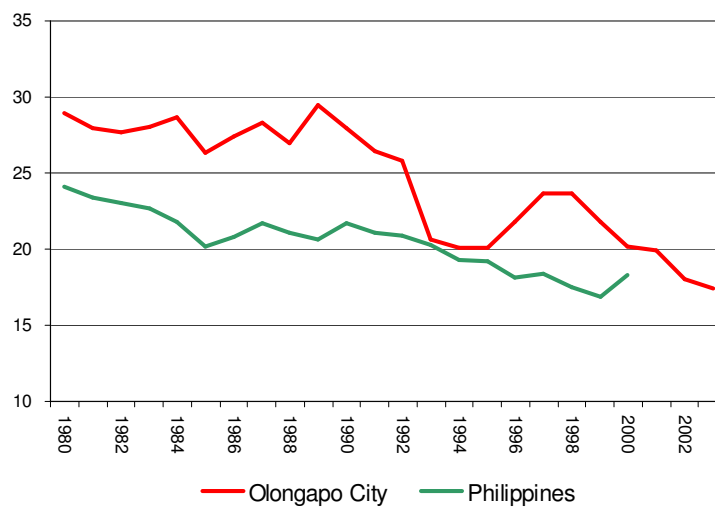
Figure 3. Crude birth and death rates, 1980-2003  
(in number of births/deaths per 1,000 population)



Source of basic data: NSO and Olongapo City Health Office

The rate of natural increase is presented together with the national average in Figure 4. Since we had a rather consistent crude death rate, the rate of natural increase moved in step with the crude birth rate. We note that Olongapo has had a rate of natural increase that was always higher than the national average, although the difference significantly narrowed from 1993 to 1995 (this might also be true for the most recent years; we weren't able to obtain an update for the national series). This reinforces the conjecture of a shock sometime around 1993 and which was local in character. The huge differential prior to 1993 points to the continued validity until that time of an observation made as early as 1974 (Socioeconomic Profile of Olongapo City) about the city's unusually high rate of natural birth and the presence of a sizeable number of illegitimate births.

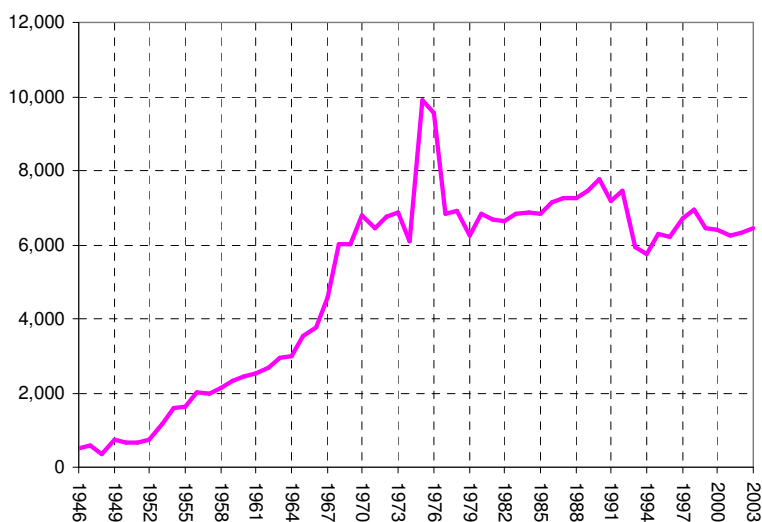
Figure 4. Rate of natural increase, 1980-2003  
(in number of natural increases per 1,000 population)



Source of basic data: NSO and Olongapo City Health Office

We present the number of births registered with the local civil registrar in Figure 5 to aid with the analysis, noting that this does not discriminate whether the births were by mothers with usual residence in Olongapo City or not. On the downside however, it does not capture unregistered cases.

Figure 5. Number of registered births, 1946-2003



Source: Local Civil Registrar, Olongapo City

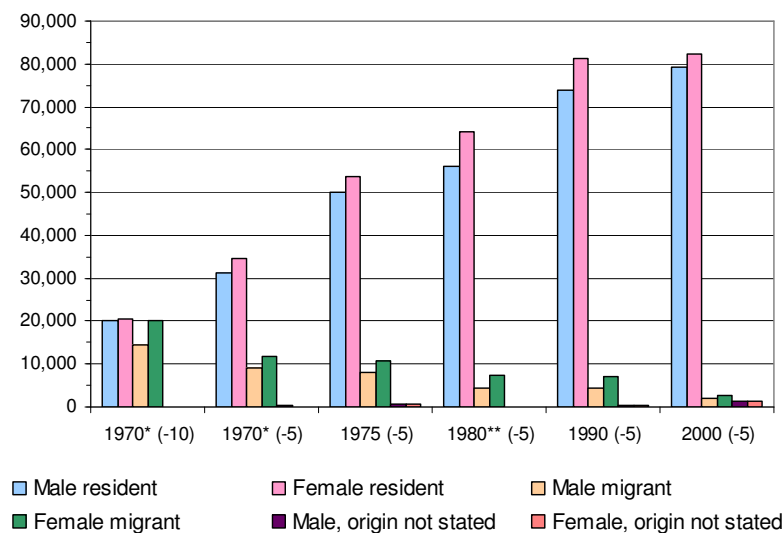
The story that is gleaned from these figures is that natural increases were likewise in tune with developments in the local economy. The increase in births starting in the late 1960s and the spike in the mid-1970s can be traced to the increased activity in the naval base that coincided with the Vietnam war. The dip in 1993 was two years after the non-

renewal of the lease agreement on the U.S. military bases and a year after the whole U.S. contingent left the naval base. Likewise, the resurgence in 1996 can be traced to the promising developments happening in the Subic Bay Freeport, a special banner year because of its hosting of the APEC Leaders' Summit. Economic growth region-wide slumped the following year and thereafter with the onslaught of the Asian financial crisis. The story that is emerging here is that periods with relatively higher rates of natural increase are the same periods when Olongapo City received migrants. To foreshadow later discussion, these migrants are mostly female and of child-bearing age.

### Migration

Moving on to migration, we have census data on residence 5 years ago of present residents of the city 5 years old and over (we also have figures for residence 10 years ago in the case of 1970). This measure of in-migration is invaluable because this is a direct count of persons who migrated to the city in the intervening period (estimates based on a 5% sample for 1970 and a 20% sample for 1980). While the proper measure should be net migration (which we'll try to estimate later on), unfortunately, data for out-migration is not published and readily available. We see the magnitudes in Figure 6 and the percentage to total population in Figure 7, segregated by gender.

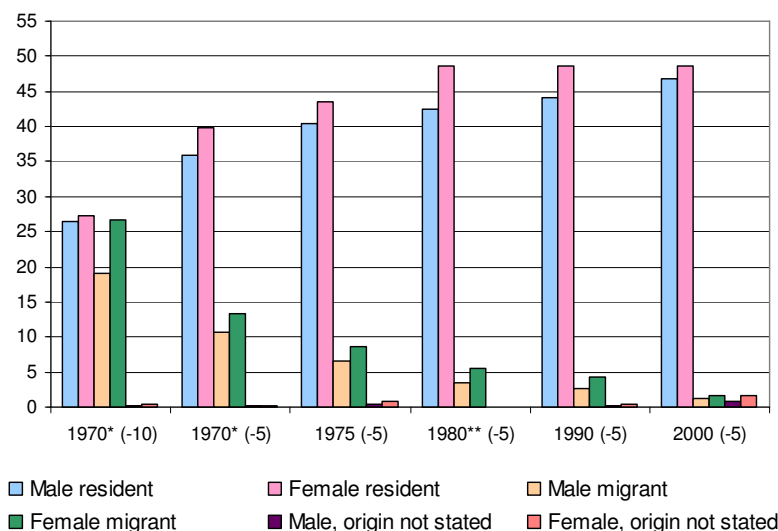
Figure 6. Migrant status relative to the previous (x) years, 1970-2000



Source: NSO Census Report, various years



Figure 7. Distribution by migrant status relative to the previous (x) years, 1970-2000 (in percent)



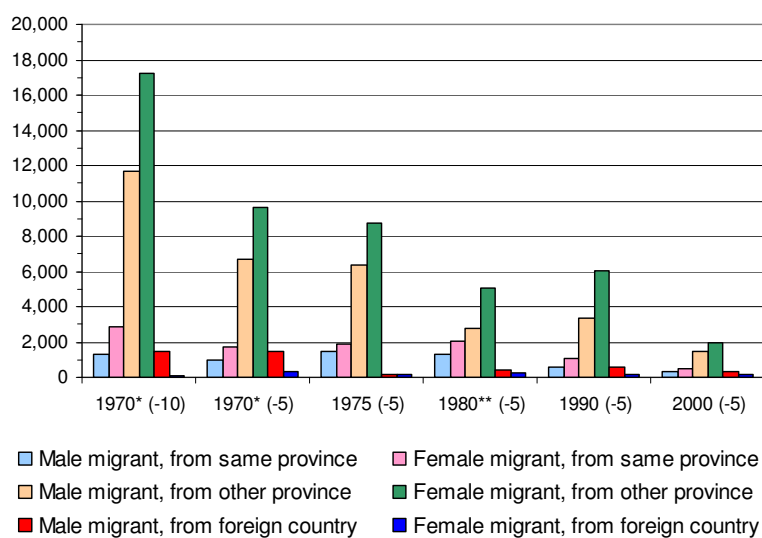
Source: NSO Census Report, various years

We first note that in absolute numbers and in percentage to total, migrants have been undeniably declining. Migrants during 1960-1970 accounted for 45.9% of the population 10 years old and over in 1970 while migrants during 1965-1970 constituted 24% of the population 5 years old and over in 1970. This declined to 15.2% in 1975, 9% in 1980, 7% in 1990, and finally 2.9% in 2000.

These figures validate the hypothesis that the period of rapid urbanization was precipitated by the influx of migrants to the city. In a similar manner, the slowdown in migrant entry was also coincident with the slowdown in urbanization from 1975 to 1990. We see that females outnumbered males in each category, which is also the case for the whole population. We find that female residents comprised 48% of the population 5 years old and over in 1980, 1990, and 2000, with male residents consistently catching up.

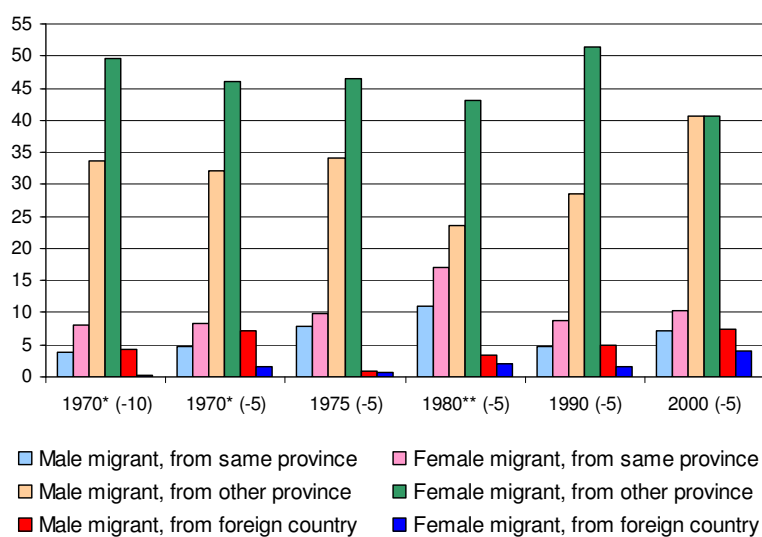
Turning now to the distribution of migrants by previous residence, we find that most migrants come from other provinces, followed by those from Zambales and then those from foreign countries. Females still outnumber males in each category except for those migrants from other countries who are mostly men.

Figure 8. Origin of migrants, 1970-2000



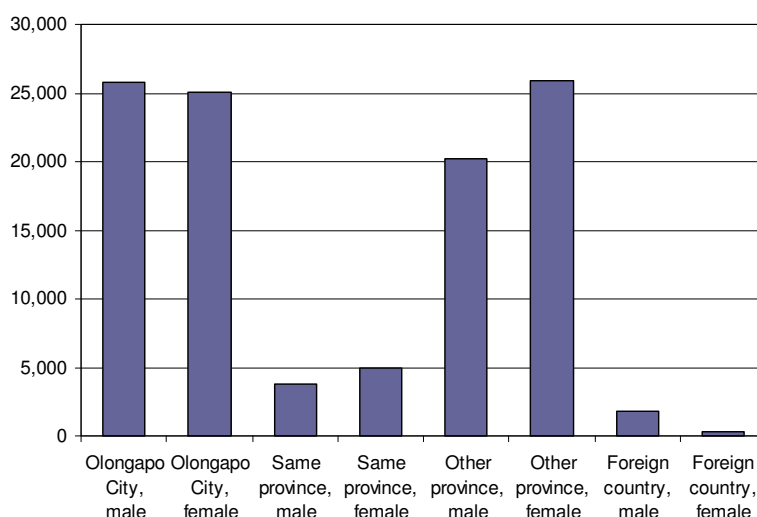
Source: NSO Census Report, various years

Figure 9. Distribution of migrants by origin, 1970-2000 (in percent)



Source: NSO Census Report, various years

Figure 10. Residents in 1970 by place of birth



Source: 1974 Socioeconomic Profile of Olongapo City

The 1974 city profile characterized the group of migrants as consisting of mostly businessmen, job seekers and their dependents from near and far away provinces. To see the extent of mobility prevalent during those times, we take a look into the composition of Olongapo City's residents in 1970 by place of birth (estimated from a 5% sample) in Figure 10. We notice that native residents accounted for 47.2% of the populace, while those born in other provinces comprised a huge 42.7%. Those born in Zambales and outside the country contribute 8.1% and 1.9%, respectively, to the total. Note that males dominate the females among the native residents and among those born outside the country. This differential is more than compensated by the gender distribution of those born within the country but outside of Olongapo City.

We now turn to estimating net migration for Olongapo City. Basically, we attribute the growth in the population between two censal years to natural increase and treat the residual as the number of net migrants to the city during that period. We take note of the month the census was taken and assume that live births and deaths are uniformly distributed within years. The data indicates that net migration was negative during 1980-1990, 1990-1995, and 1995-2000. Considering the fact that not all births are registered (will have to verify if this also holds true for deaths), the figures may even be biased upwards. Thus, the picture we see here is that while in-migration was prevalent and indeed massive prior to 1975, the succeeding years saw out-migration rise and eventually keep up with migrant entry. This is contrary to the commonly-held view that the events of 1991 and 1992 were definitive in that only then did net migration become negative, although it is correct to say that it only became noticeable then, with an average annual rate from 1991 to 1995 that covered 4% of the population compared to 0.66% from 1981 to 1990. This improved from 1996 to 2000 but not enough for a reversal; indeed, the annual figures are only slightly less than the values for 1981-1990. We will have more to say regarding this as we go along.

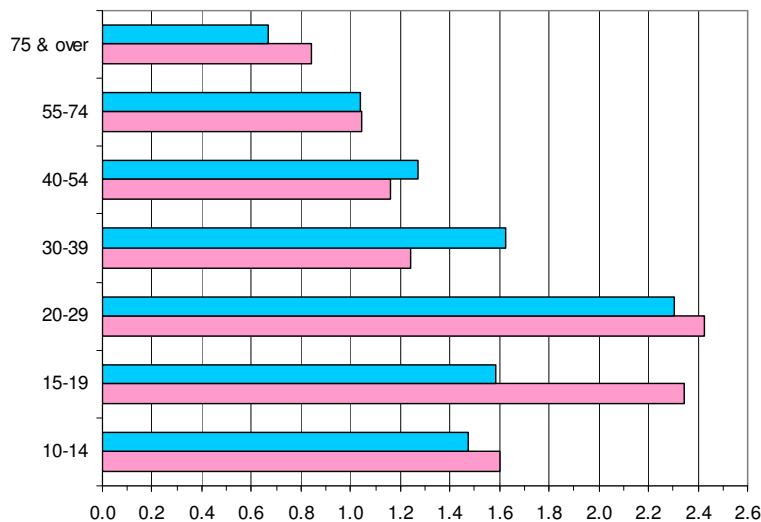
Table 3. Population change, natural increase and net migration, 1980-2000

Period	Population Change	Natural increase	Ave. annual nat. increase	Net migration	Annual net migration
1980-1990	36897	48512	4851	-11615	-1162
1990-1995	-13573	23375	4675	-36948	-7390
1995-2000	14506	19494	3899	-4988	-998

Source: NSO reports (1980-1989), NSO website (1990-1998), City Health office (1999-2000)

We now employ census survival ratios for censuses beginning in 1960. This measure is simply the ratio of the population aged  $x+n$  at the second census to that aged  $x$  at the first census, where the censuses are taken  $n$  years apart. Absent epidemics, wars, and the like, the ratios are expected to be nearly equal to one for the young and to decrease monotonically as we go up the age ladder. A ratio less than one can be attributed to deaths and out-migration, while values greater than unity indicate in-migration. Coverage and age reporting errors are expected to contaminate the ratios, although we try to minimize the effect of the latter by considering five-year age groups. We do such by gender, noting that population and development processes may affect male and female residents differently. Since there is simply no assurance that we're tracking the same set of individuals, we are merely looking into movements of *simulated* cohorts. We start with decadal intervals and then fine tune the analysis by looking into shorter five-year periods. We use blue bars for males and pink bars for females all throughout.

Figure 11. Census survival rates, 1960-70



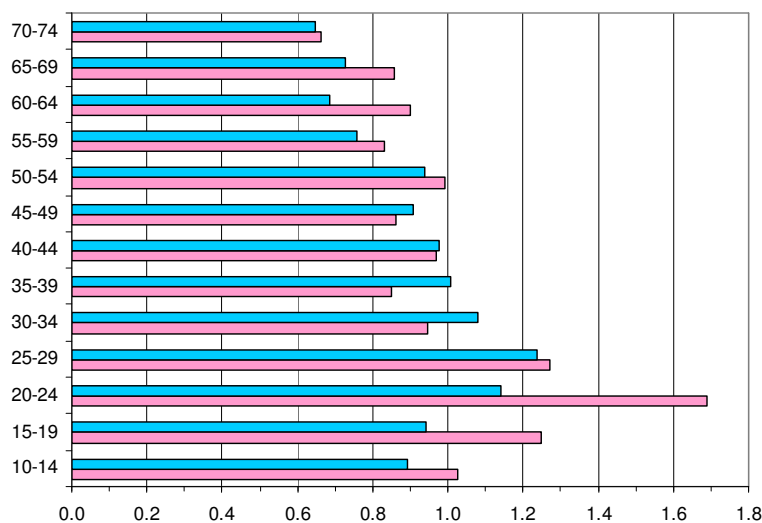
Source of basic data: NSO Census Report, various years

Since we have irregular cohort sizes available for 1960, we adjust the 1970 cohort sizes accordingly. We see in Figure 11 that all age groups, with the understandable exception of those 75 years old and over, had ratios greater than one. Although this indicates that in-migration occurred across-the-board, it is noteworthy that young migrants were trooping to the city: ratios were above 1.4 for individuals 10-29 years old

in 1970 and even above 2.2 for individuals 20-29 years old and females 15-19 years old. Population movements of young people are primarily driven by the existence of attractive economic opportunities in a locality, which in Olongapo's case directly points to the attendant support and services needs of the U.S. military facility. Recall that military activity was burgeoning during this time due to the Vietnam war.

Turning to gender dynamics, this ratio was significantly greater for females until age 29 and overwhelmingly so in the 15-19 age group. We note that this is the typical age range for hostesses and club workers. Meanwhile, male survival ratios dominated those of females for individuals 30-54 years old, likely reflecting the movement of male laborers and contractors involved in projects in the military base.

Figure 12. Census survival rates, 1970-80



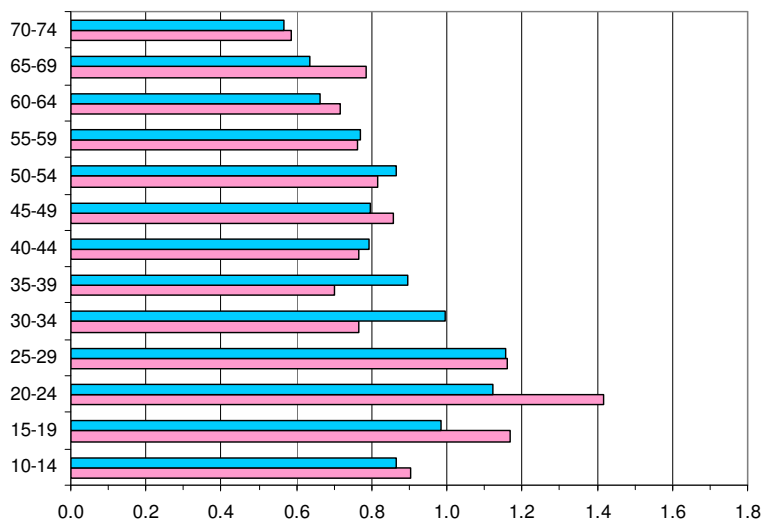
Source of basic data: NSO Census Report, various years

Moving on to the 1970-1980 interval, we see a marked decrease in ratios that are only significantly greater than unity for individuals in the 20-29 age group and also with females 15-19 years old and males 30-34 years old. It appears that the other age groups moved out of the city, finding the close of the war in 1973 and the resulting decline in military activity unfavorable to their continued stay. We cannot say this for the mentioned cohorts who continued to be attracted to the city, most probably due to the same underlying economic reasons. Using a threshold of 0.8 for unmistakable out-migration (not applicable to older cohorts who are expectedly smaller in number due to natural deaths), we find that on the whole there was no noticeable indication of such, although females 30-39 years old had an early dip in their ratios. We'll check on this later using five-year intervals.

For the period between 1980 and 1990, we see the emergence of out-migration in further diminishing ratios. This was most evident in females 30-44 years old and males 40-49 years old, even as individuals 20-29 years old and females 15-19 years old continued to exhibit ratios above unity. The continued decline of military activity in the

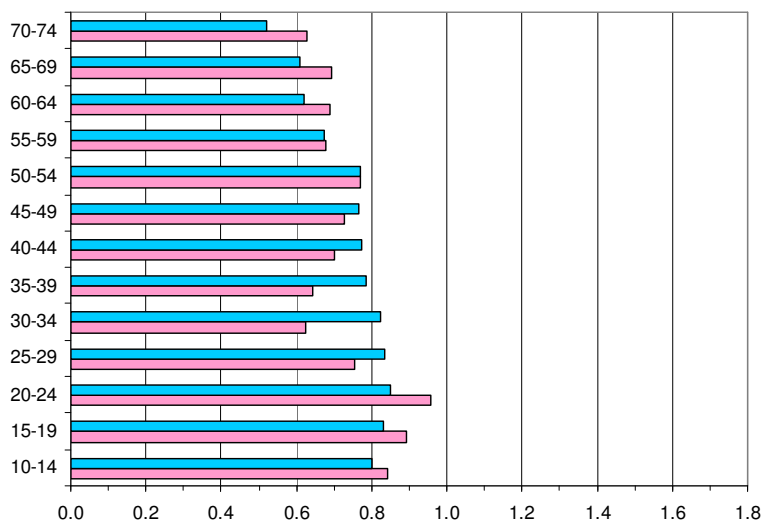
naval base (and shrinking U.S. defense budget?) is a possible explanation, although not so much as to clip the continued entry of the young. Remember that net migration estimates were already negative during this period.

Figure 13. Census survival rates, 1980-90



Source of basic data: NSO Census Report, various years

Figure 14. Census survival rates, 1990-2000



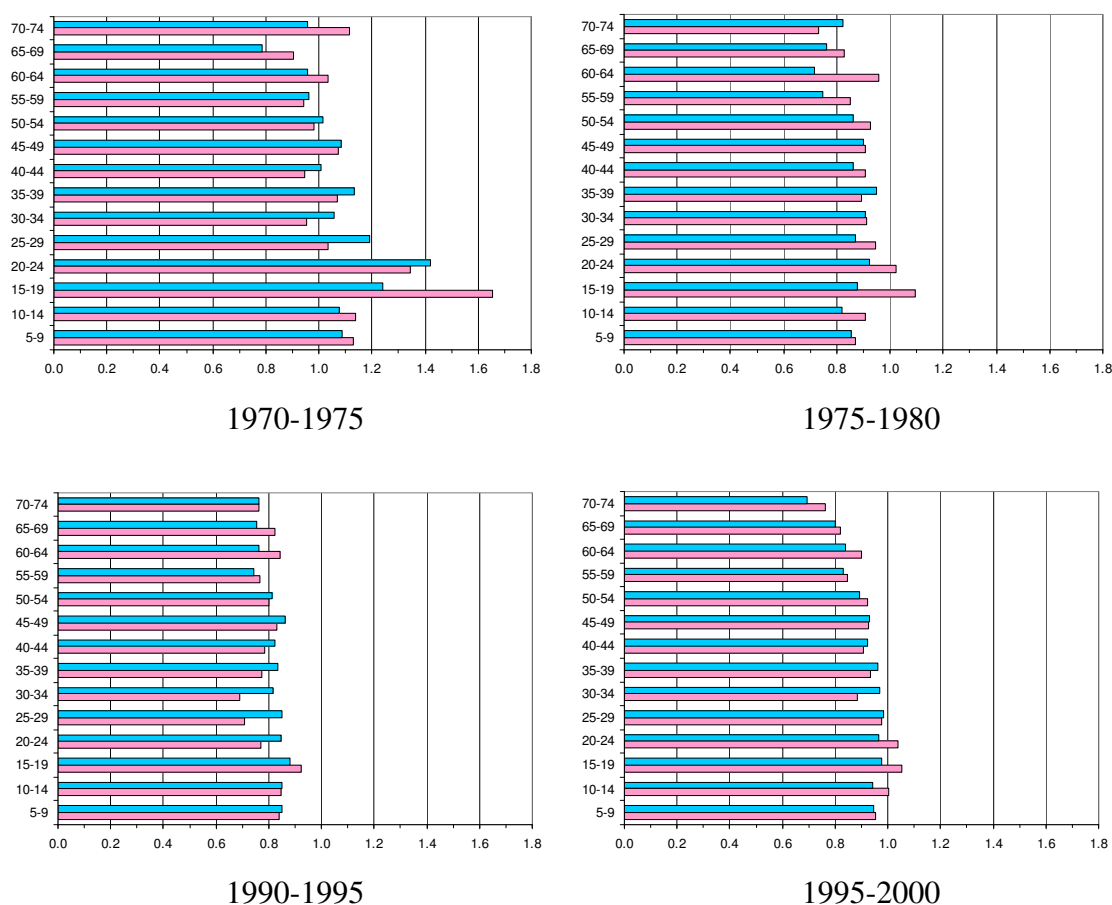
Source of basic data: NSO Census Report, various years

The migration picture gleaned from the census survival ratios in 1990-2000 collaborates our previous finding that out-migration set in. Note that even if the population counts showed an effective rebound to 1990 figures in 2000 after a drop in 1995, all cohorts saw a significant reduction in number during this period. The least affected were females 10-24 years old while females belonging to the 30-49 age group

were the most affected. Male cohorts until 54 years old were uniformly in the vicinity of the exit threshold.

Turning to five-year intervals, we see that the 1970-1975 ratios point to distinctive in-migration by individuals 15-24 years old and steady, if not positive, ratios for all the other cohorts. This suggests that generally, Olongapo City attracted migrants, with those who resided in the city in 1970, new and old (native) residents alike, staying on during the interval. This does not carry on to the next five-year interval, which explains the decadal picture we saw earlier. From 1975 to 1980, all the ratios were below unity, except for females 15-24 years old in 1980. Although these numbers were above the exit threshold, most hovered closely. Nonetheless, we note that 0.8 is a rather conservative threshold especially for younger cohorts.

Figure 15. Census survival rates, 1970-75 to 1995-2000



Source of basic data: NSO Census Report, various years

The next available five-year interval includes the tumultuous years of natural disaster and economic uncertainty. We observe that between 1990 and 1995, not a single cohort registered a census survival ratio above unity; all ratios clustered around the exit threshold. The lowest ratios, all below 0.8, were accounted for by females 20-44 years old. Interestingly, males appear to have been affected less severely, in the sense that all the corresponding ratios were higher than those of females with the single exception of

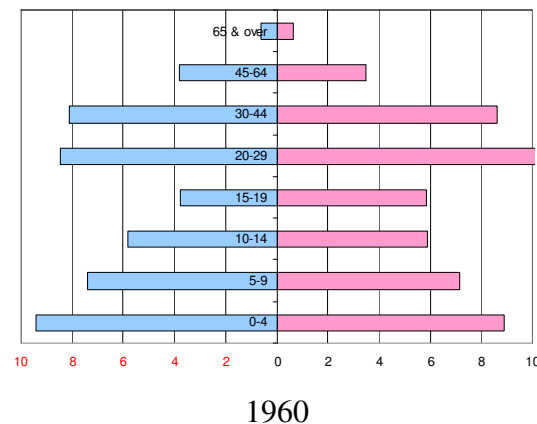
the 15-19 age group. The 1995-2000 interval shows higher census survival ratios, in tune with newfound economic opportunities brought by the conversion of the Subic military base into a freeport, but were short of reaching unity, except for females 10-24 years old. This illustrates a rather weak economic rebound and, to a large extent, points to the severity of the dislocation resulting from the closure of the U.S. naval base.

From all of the foregoing, the striking pattern that emerges is the feminization of migration. It appears that females aged 15-29 years old continued to troop to the city until the closure of the military base even as those belonging to the 30-44 age group showed signs of out-migration. This mirrors the prominent feature of the hospitality business: it thrives on the continuous supply of young women, with older batches replaced by fresh ones. This relationship was consistent all throughout the presence of the military facility.

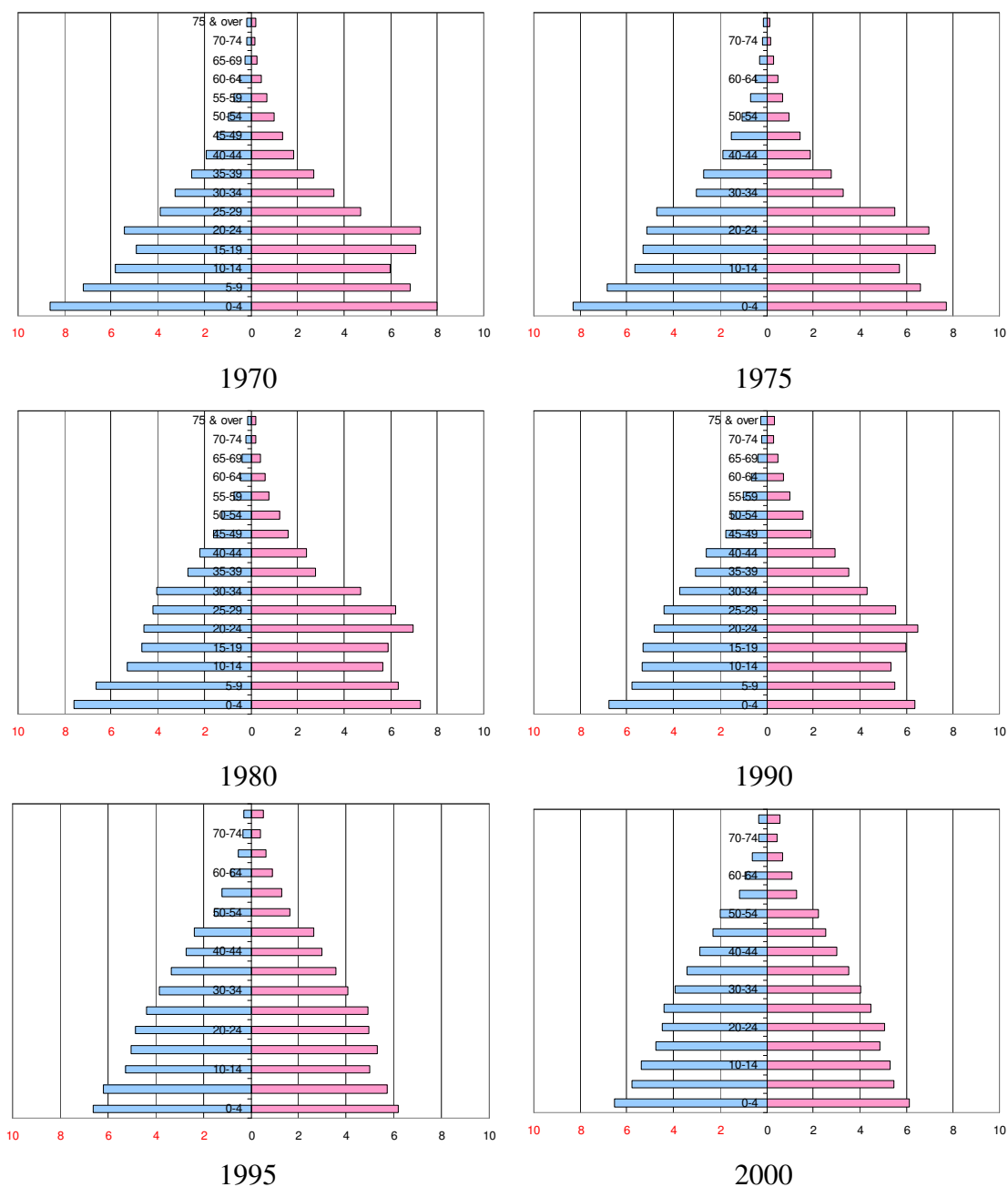
### Population Structure

After examining the components of population growth, we look into the resulting demographic structure of the population. We construct population pyramids showing the distribution of the different age groups segregated by gender. Normally, such graphs would indeed take on a triangular shape; we do not observe such for Olongapo City until 1995. There is a conspicuous bulge in the middle of the “pyramid” corresponding to the 15-19, 20-24, 25-29, and 30-34 age groups, especially for females. We already noted that migrant entry largely covered these age groups. As time progressed, the distribution appears to have been less and less aberrant even with the bulge; the base was receding at the same time that the top was expanding, so that the girth of the “pyramid” appeared to move uniformly upward. This picture was finally transformed in 1995 with the thinning out of the bulge, coincident with the previously discussed out-migration, which continued on in 2000.

Figure 16. Age and sex pyramid, 1960-2000



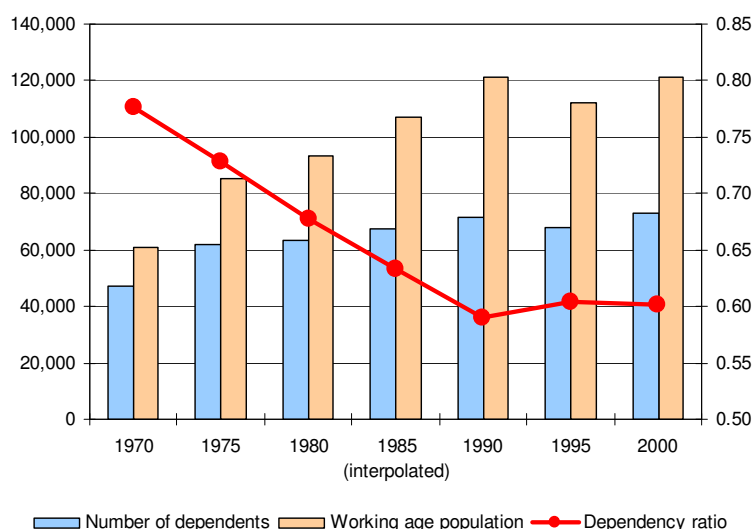




Source of basic data: NSO Census Report, various years

This upward movement in the girth of the population pyramid shows an underlying demographic transition which has lowered dependency ratios from 0.77 in 1970 to 0.6 starting in 1990. We see in Figure 17 that the share of dependents in the total population has been declining at the same time that the working-age population has been increasing. This points to an improvement in the prospects for economic security of the residents in the city inasmuch as existing breadwinners support less family members. Note that this improvement was experienced even before the onset of substantial out-migration captured in the 1995 census.

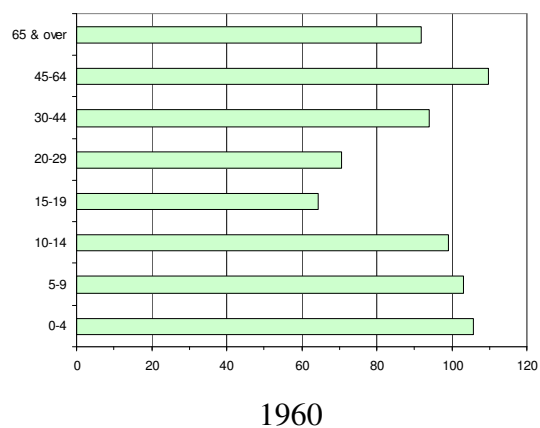
Figure 17. Demographic developments, 1970-2000

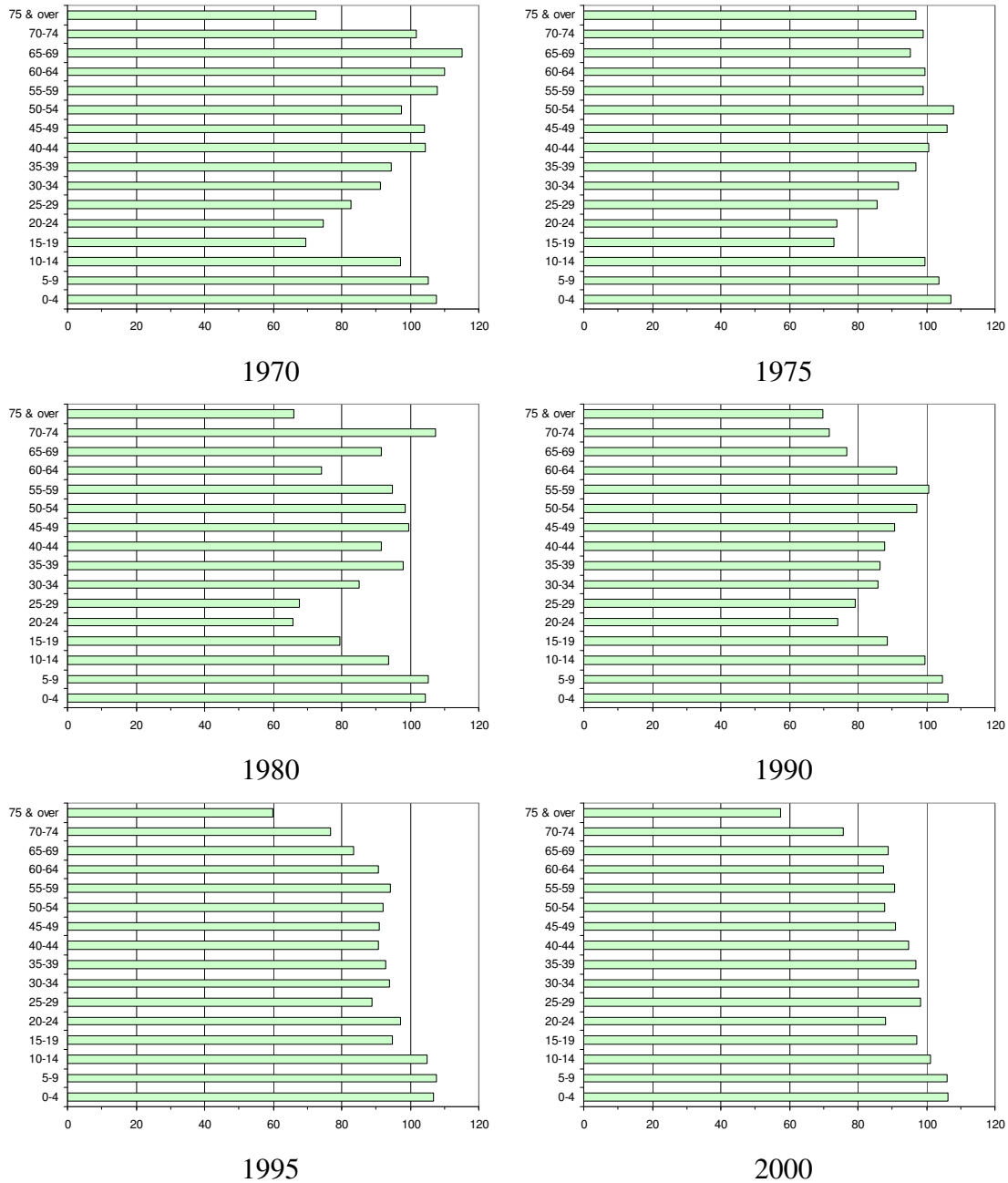


Source of basic data: NSO Census Report, various years

Turning to sex ratios, we see that the age groups that mostly contribute to migrant entry are the same ones where females dominate males in number. Generally, the expected pattern of sex ratios shows a ratio around 106 in the early childhood ages that gradually fall below 100 at age 40 and older given that females have longer life expectancies than males. The feminization of the earliest age groups (15-24) is reflected in abnormally low sex ratios of less than 80. This gradually returns to 100 as we go up the age ladder until it naturally falls. We see the more usual pattern in 1995 and 2000 with the out-migration of the young female entertainers.

Figure 18. Sex ratio, 1960-2000



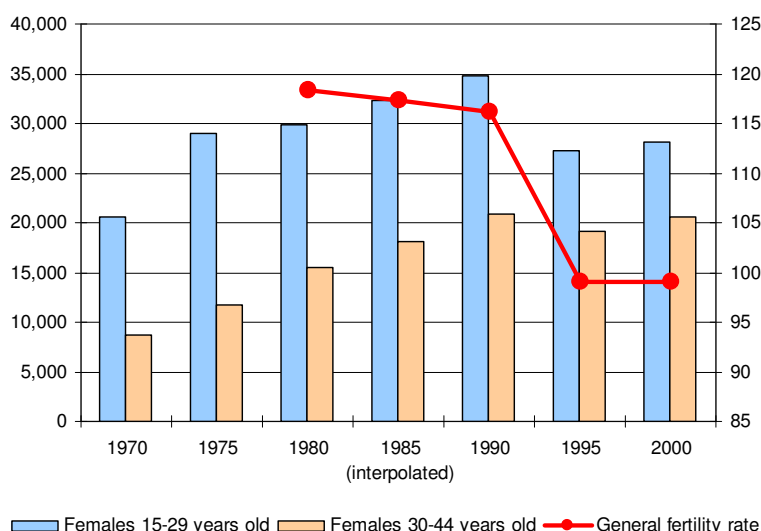


Source of basic data: NSO Census Report, various years

Regarding the general fertility rate, we see that from a rate above 115 per 1,000 females of child-bearing age (15-44 years old) in 1980 and 1990, this plunged to barely 100 in 1995 and 2000. We observe that if we split the relevant age group into two, the younger half would show a bigger decline in number from 1990 to 1995. Since we earlier noted that female migrants were mostly of this age, and because we know that fertility levels are empirically higher for this group, then we can say that the drop in the general fertility rate and the dip in the rate of natural increase we saw in 1993, as discussed earlier, can be attributed to the exit of female migrant residents of the city. This is consistent with the out-migration of young female entertainers after the closure of the

American naval base.

Figure 19. Females of child-bearing age and the fertility rate, 1970-2000



Source of basic data: NSO Census Report, various years.

## E. Dependence on the Military Base and the Freeport

We glean from the foregoing the large impact of the military base and the freeport on migration movements in Olongapo City. We now look at how activities in this area affected employment opportunities and various socioeconomic outcomes.

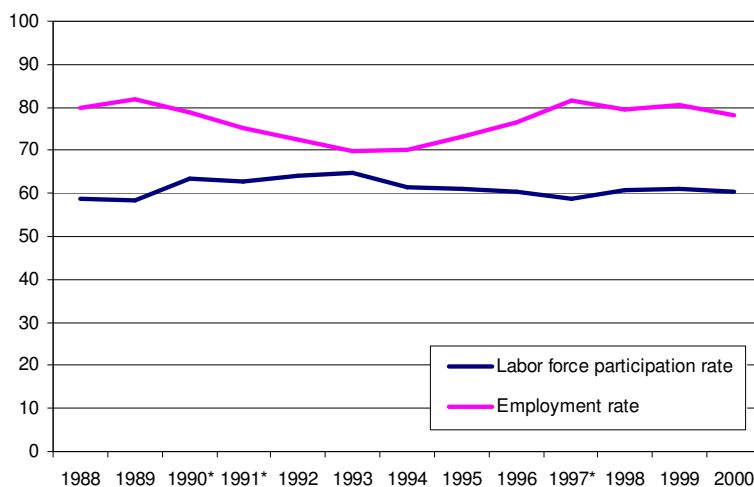
We make use of the quarterly Labor Force Survey (LFS) to look at the composition of employed workers by major industry, major occupation, class of worker, and nature of employment. We do this by gender to better situate our previous hypothesis of feminization of migration. We then present results of the triennial Family Income and Expenditures Survey (FIES) on household characteristics to show the extent of its effect on the city's residents.

It should be understood that we take the figures as given and basically assume uniformity in sampling procedures and representativeness of survey results.

### Employment

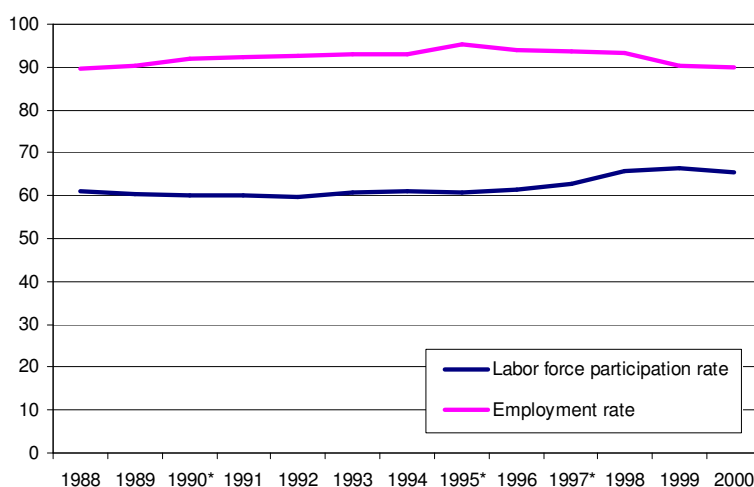
We first take a look at the labor force participation rate (LFPR) and the employment rate in Olongapo City and its closest comparator, Angeles City, from 1988 to 2000. We use the average annual rates to abstract from seasonal effects. (Note that there was no LFS survey for April 1990 and we weren't able to use the July 1997 results. There was no survey for Zambales and Olongapo City in July 1991 owing to the eruption of Mt. Pinatubo, and we have missing results for Pampanga and Angeles City in Oct 1995.)

Figure 20. Olongapo City's labor force participation and employment rate, 1988-2000



Source of basic data: LFS, various years and quarters

Figure 21. Angeles City's labor force participation and employment rate, 1988-2000



Source of basic data: LFS, various years and quarters

It is clear from the graphs that while Olongapo City and Angeles City had the same LFPR at roughly 60%, the former had invariably lower employment rates all throughout. Olongapo City's employment rate breached 80% only in 1998 while Angeles City's was never lower than 85%. Both cities' LFPR dipped significantly in 1993 and 1994, right after the closure of the U.S. military bases. While Olongapo City's LFPR was relatively stable in all the other years, we see that Angeles City's LFPR exhibited more variations, with the 1997 Asian crisis showing a notable effect.

We observe that the closure of the Subic Naval Base and the Clark Air Base resulted in lower employment rates. With the immediate conversion of both military

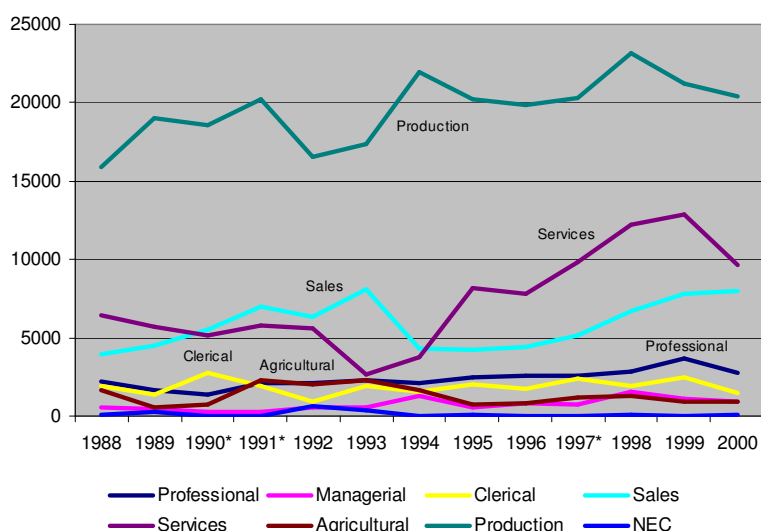
facilities into industrial estates, we see improvements in the employment rate in Angeles City as early as 1995 and in Olongapo City by 1996. While the onset of the Asian financial crisis adversely affected the employment rate in Angeles City, it appears to have had little effect on the employment picture in Olongapo City. In fact, we see sharp improvements until 1999 and then a minimal decline in 2000. The explanation we offer at this point is that the extent of dependence on the military base was bigger and broader in Olongapo City's case, not mainly in terms of direct military base-generated employment but through employment in various support services. This is why the expanded and more varied economic activity in the base area after conversion benefited Olongapo City more than it did Angeles City and resulted in a more pronounced effect.

Looking now at employment by major occupation group in Olongapo City, we note that men were predominantly production and related workers, transport, equipment operators, and laborers. The next two major occupation groups were in services and sales. Significant dips were experienced by production workers in 1992, service workers in 1993, and sales workers in 1994. The sequence is understandable given that the lease agreement on the bases was not renewed in 1991 and the pullout happened in November 1992: production workers not involved in maintenance operations in the military base faced immediate termination, workers involved in providing services to sailors on liberty halved in number as soon as the American contingent left, and a significant number of sales workers lost their jobs two years after separation payments to base workers have been paid, possibly due to dwindling consumption spending (note the upsurge in 1993).

The conversion of the military base resulted in increased employment of male service and production workers. We note that even if agricultural work is done in a very limited scale in the city, the number of male workers involved in this line of work increased from 1991 to 1994. To the extent that agricultural work is an occupation of last resort that primarily addresses own consumption needs, as noted in various city annual reports (subsistence farming), those years constitute the crisis years, ostensibly triggered by the closure of the naval base.

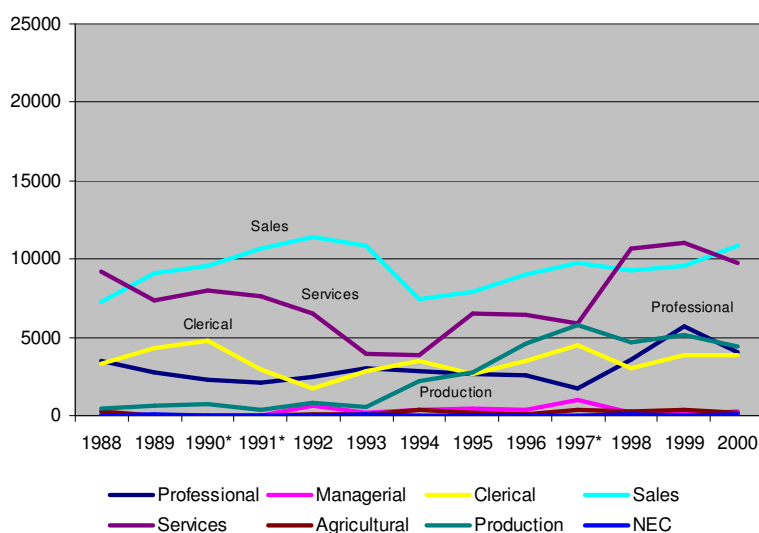
Employed females on the other hand were mostly in sales, services, and clerical jobs. We find the same staggered pattern of decline in employment for this group like that found for male production, services, and sales workers, with clerical workers taking the place of the first. Since the opening of the freeport, we see the resurgence of these jobs together with the burgeoning of production work. In fact, the number of production workers grew ten times between 1993 and 1997. The number of sales and clerical jobs registered in the latter years were near their previous levels while service-related work surpassed its pre-crisis employment figures starting in 1998. Professional workers also rose starting in 1998.

Figure 22. Male workers by occupation, 1988-2000



Source of basic data: LFS, various years and quarters

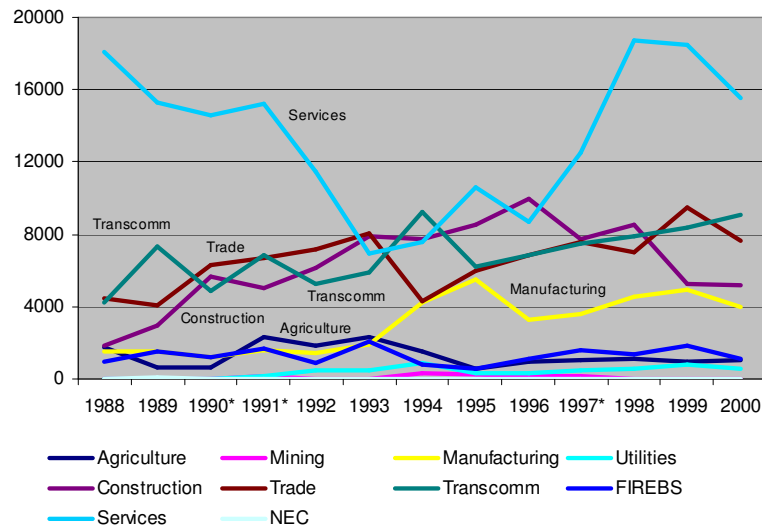
Figure 23. Female workers by occupation, 1988-2000



Source of basic data: LFS, various years and quarters

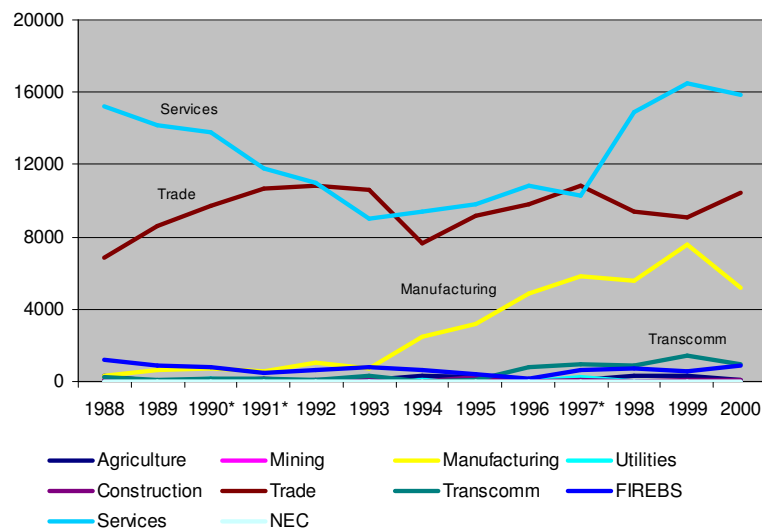
We now turn to employed persons in Olongapo City by major industry group. Majority of males and females belonged to the services sector. Males had varied industry affiliations such as in wholesale and retail trade, transportation, storage and communication, construction, and manufacturing, while the other industries where females were employed were in wholesale and retail trade and recently in manufacturing. The increase in manufacturing jobs was registered starting in 1994 as factories were set up in the freeport. Note that the employment in the agriculture, fishery and forestry industry was negligible for females all throughout and significant for males only from 1991 to 1994.

Figure 24. Male workers by industry, 1988-2000



Source of basic data: LFS, various years and quarters

Figure 25. Female workers by industry, 1988-2000



Source of basic data: LFS, various years and quarters

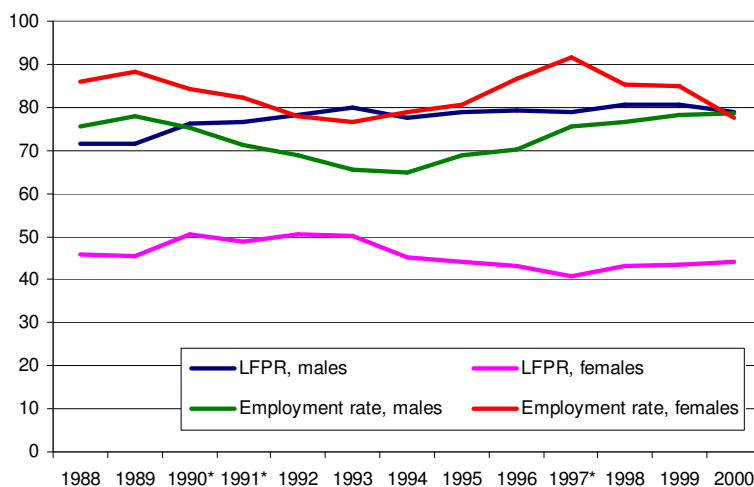
The services sector exhibited the most wide-ranging fluctuation for both sexes and among all industries, with a manifest decline until 1993, due to the closure of the naval base, and a rebound around 1998, as economic activity sufficiently picked up in the freeport. Construction jobs increased for males starting in 1990, possibly absorbing the ones laid off in the services sector, and peaked in 1996 with the flurry of activities associated with the freeport's hosting of the APEC Leaders' Summit. Females, on the other hand, appear to have shifted into jobs in the wholesale and retail trade sector as employment declined in the services sector. Even so, a significant number of females appear to have dropped out of the labor force entirely. Figure 26 confirms this for 1993



and 1994, which is consistent with the story we saw earlier about the exit of female migrants after the closure of the naval base. Indeed, the city's inclination towards the services sector has made it vulnerable to economic dislocations.

The primacy of the services sector is evident in the fact that economic rebound was led by an expansion of jobs in the services sector. This expansion resulted in higher employment rates for both males and females. We also see that historically, the employment rate among females was higher than those for males, contrary to the national and regional picture, and was at its highest level during the pre-crisis period.

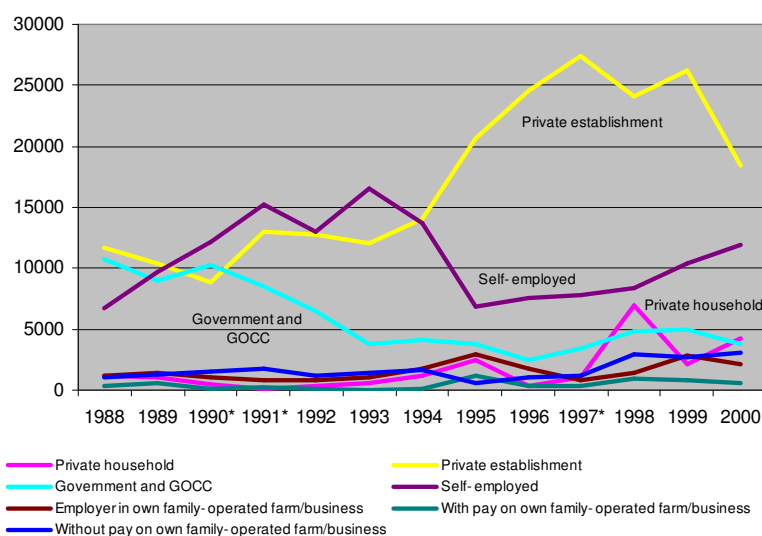
Figure 26. Olongapo City's labor force participation and employment rate, by gender, 1998-2000



Source of basic data: LFS, various years and quarters

Turning to disaggregation by class of worker for males in Olongapo City, we see a marked change in distribution between 1988 and 2000. While workers employed in private establishments and in government had initially comparable figures, their numbers diverged starting in 1991 with increases in the number of workers employed in private establishments and steady declines in the other group. The former swelled in number starting in 1995 due to the availability of job openings in the freeport. Self-employed male workers grew in number during the crisis years and overtook government employment from thereon. Male workers involved in private household work significantly shot up in 1998, coincident with a decline in the number of private establishment workers, in what could be described as a delayed effect of the 1997 Asian crisis to firms operating in the freeport.

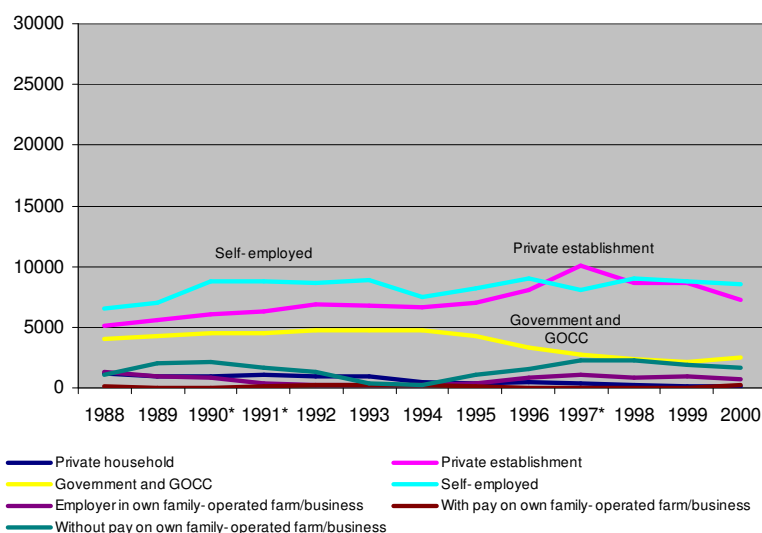
Figure 27. Male workers by class, 1988-2000



Source of basic data: LFS, various years and quarters

The majority of female workers in 1988 are self-employed, followed by workers employed in private establishments and then in government. This distribution was preserved until 2000 except for the brief overtake of private establishment workers over self-employed workers in 1997. The number of female government workers halved from 1994 to 1999.

Figure 28. Female workers by class, 1988-2000

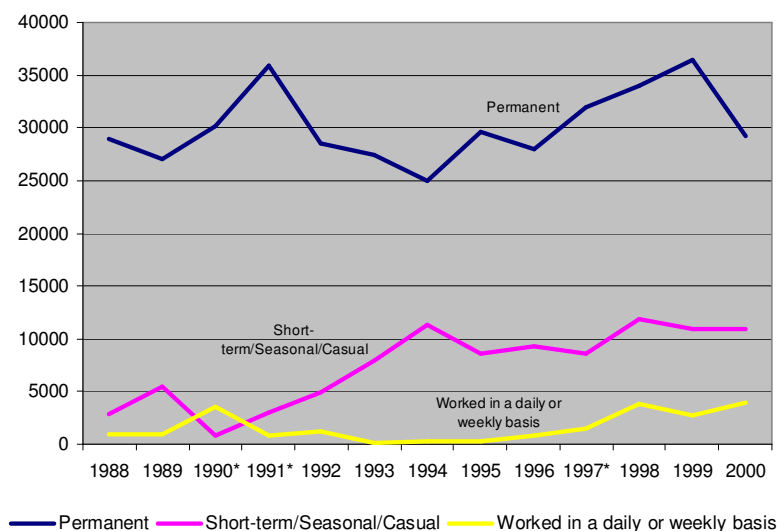


Source of basic data: LFS, various years and quarters

Turning to workers by nature of employment, the number of permanent workers largely reflected the episodes of economic decline and rebound we outlined earlier. We note that in 1999, male permanent workers have matched the previous high registered in

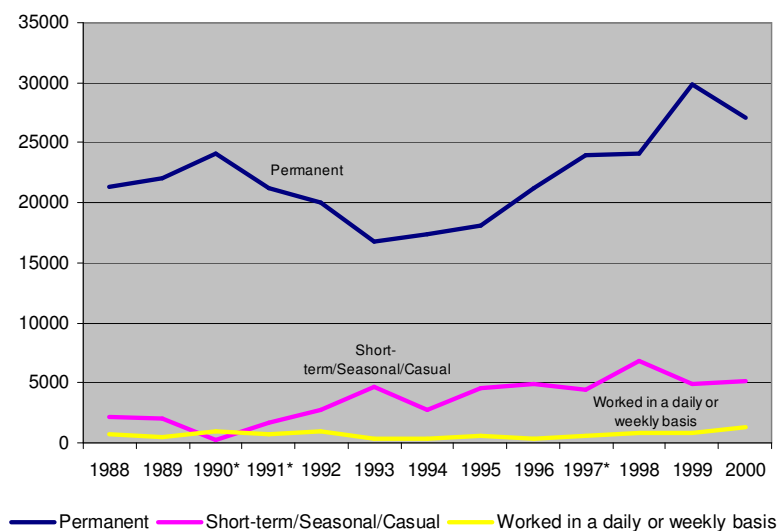
1991. Female permanent workers, on the other hand, have surpassed the 1990 level as early as 1997. The number of short-term/seasonal/casual workers started to rise in 1992 and has remained significant since then: it comprised an average of 19.5% of male workers and 14.7% of female workers from 1991 to 1994, which respectively rose to 23% and 17.3% from 1995 to 2000. It is likely that most members of this group are contractually employed in enterprises located in the freeport. We also see an increase in male workers who worked in a daily or weekly basis starting in 1998.

Figure 29. Male workers by nature of employment, 1988-2000



Source of basic data: LFS, various years and quarters

Figure 30. Female workers by nature of employment, 1988-2000



Source of basic data: LFS, various years and quarters

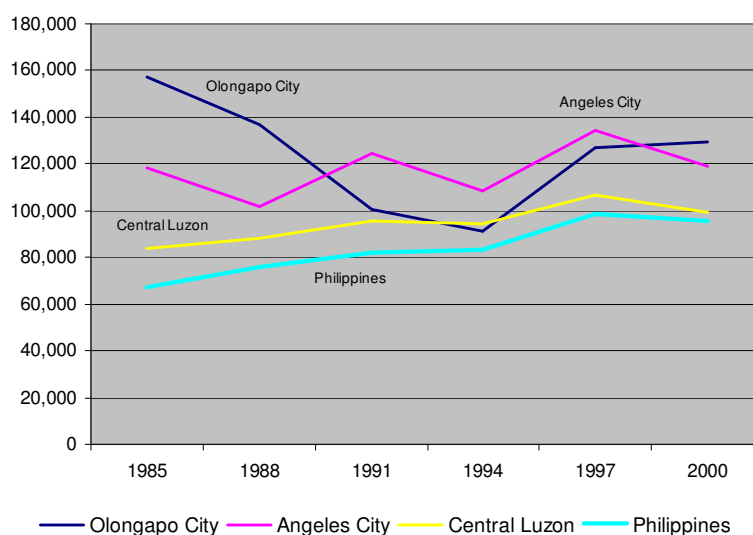
## Household Income and Attributes

Moving on to a description of social outcomes, we turn to the Family Income and Expenditures Surveys (FIES) for information on various household attributes. We utilize three-year intervals starting in 1985 and ending in 2000. We start with household income and expenditures estimates in constant 1994 prices and compare it with those of Angeles City, Central Luzon in whole, and the Philippines in general. This is followed by estimates of the distribution and sources of income, and rounded up by household characteristics such as tenure status, construction materials of roof and outer walls of dwelling unit, type of toilet facility, source of water supply, and electricity coverage.

We see a marked decline in family income for Olongapo City from 1985 to 1994 and a strong rebound in 1997. The sharp dip from 1988 to 1991 may be attributed to the devastation wrought by Mt. Pinatubo's eruption and the certainty that was gleaned about the naval base's closure the next year. The rebound was most certainly due to the opening of factories and establishments in the freeport. Note that it hasn't yet been able to regain the income standing it previously had.

Angeles City had less pronounced swings in family income, and even shows a general upward trend all throughout. While the rise in 1991 may be considered surprising, this might be due to the government assistance poured in the province of Pampanga, the heaviest hit by Mt. Pinatubo's eruption, that raised average family income. The improvement in income in 1997 may likewise be attributed to the conversion of the Clark Air Base into a special economic zone.

Figure 31. Average family income,  
1985, 1988, 1991, 1994, 1997 and 2000 (in pesos)

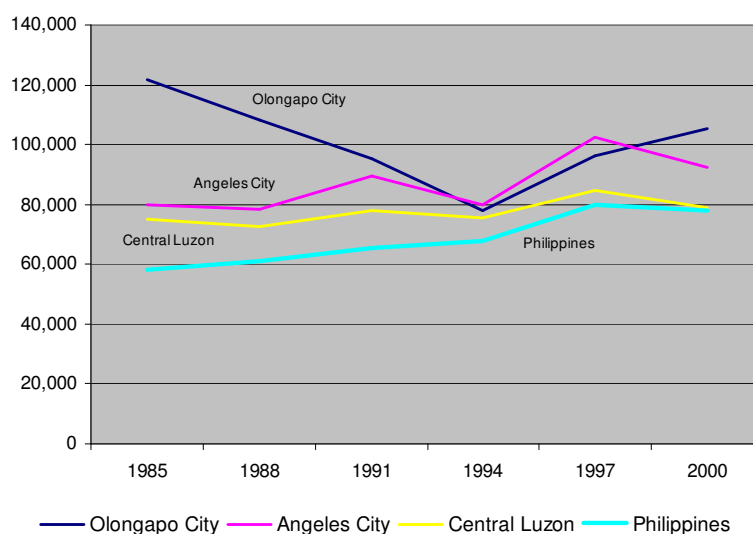


Source of basic data: FIES, various years

Average family income in Central Luzon and in the whole country was slowly inching up from 1985 to 1997, with a slight decline in 2000. Angeles City and Olongapo

City had family incomes higher than the two, except in 1994 when Olongapo's average family income was lower than Central Luzon's. Angeles fared better than Olongapo in 1991, 1994, and 1997, showing the extent of Olongapo's dependence on the Subic base area. Also, it is very much apparent that the economic shocks that affected Angeles and Olongapo were local in character.

Figure 32. Average family expenditures, 1985, 1988, 1991, 1994, 1997 and 2000 (in pesos)



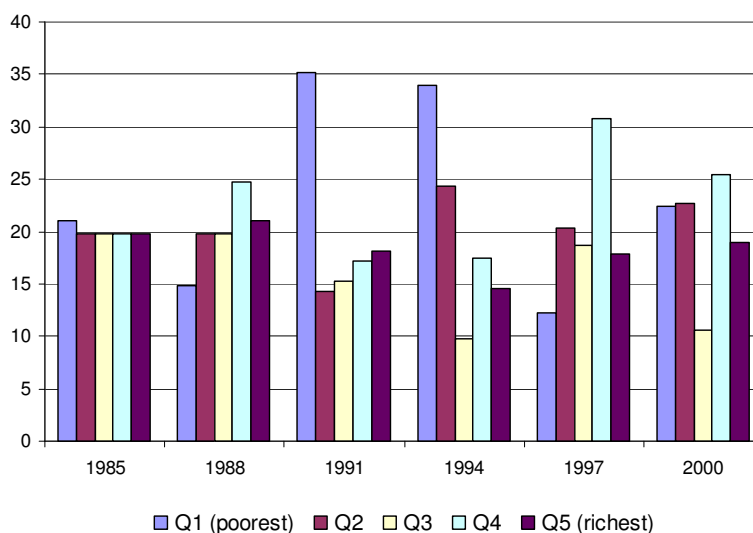
Source of basic data: FIES, various years

We see the same picture with regard to family expenditures, except that expenditures in Olongapo City were still higher than Angeles City's in 1991.

Moving on to the distribution of family incomes, we use the 1985 income estimates as the base. We first divide the 1985 sample into quintiles, get the borderline family incomes, and then project those incomes into the following years using the relevant inflators. If there is an increase in the proportion of families within the fourth and fifth (richest) income classes, then one could say that the distribution improved relative to the 1985 distribution and that more families realized upward mobility. Conversely, an increase in the proportion of families within the first (poorest) and second income classes would mean a deterioration in income distribution relative to the 1985 distribution.

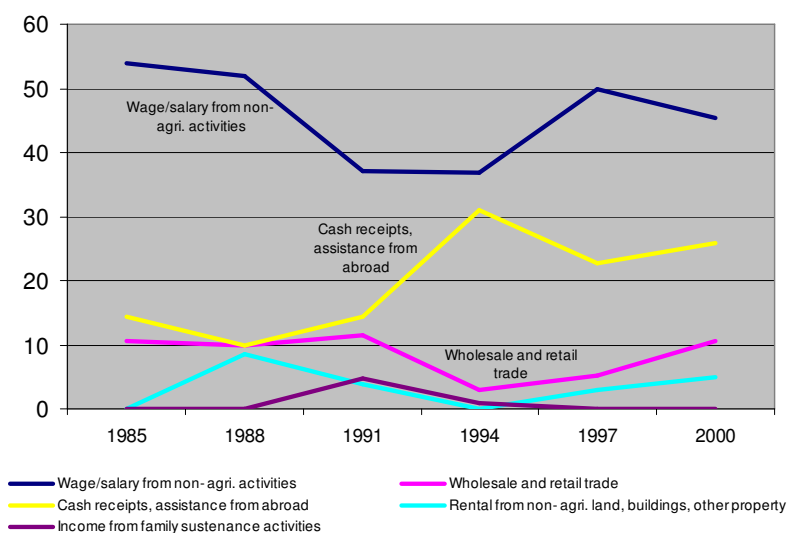
The picture we see here is a general distribution improvement from 1985 to 1988 and from 1994 to 1997. The distribution of income deteriorated from 1988 to 1991 and then to 1994 and from 1997 to 2000. The improvement from 1985 to 1988 was mild while the one from 1994 to 1997 could be considered a reversal. The crisis years from 1991 to 1994 saw family income dive, so much so that the proportion of families belonging to the second to the fifth income classes went down and many families moved into the first income class. The deterioration from 1997 to 2000 could be attributed to the slowdown in economic activity in the freeport.

Figure 33. Distribution of household population by income relative to 1985 income profile (in quintiles), 1985-2000 (in percent)



Source of basic data: FIES, various years

Figure 34. Distribution of household population by minor classification of income sources, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)



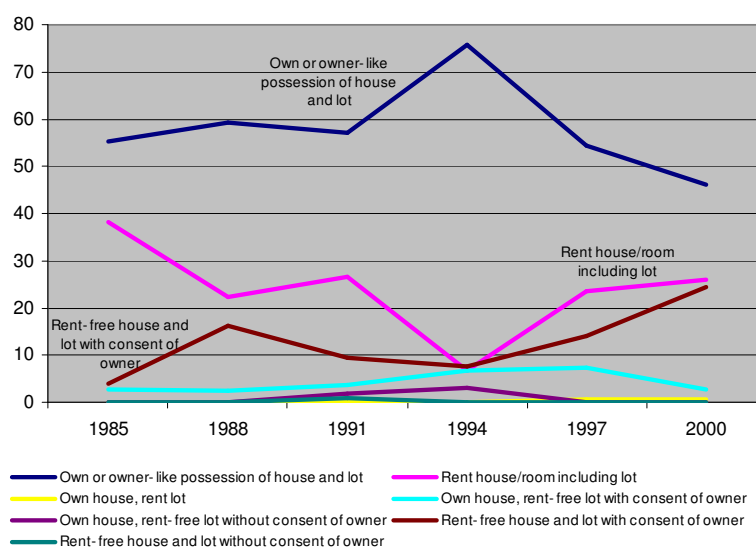
Source of basic data: FIES, various years

Turning to major sources of income, we find that the majority of families received wages/salaries from non-agricultural activities. This proportion dipped during the crisis years and has not gone back to pre-crisis levels. This was followed by cash receipts/assistance from abroad, which increased its share during 1994, almost as prevalent as wages and salaries, and was above 20% ever since. Income from wholesale and retail trade followed next. Note that income from rentals of non-agricultural land,

buildings, and other property was significant in 1988, when transients and migrants were still abundant, and income from family sustenance activities became substantial only in 1991. All other income sources were negligible.

We now look at the impact of these income measures on housing characteristics. In terms of tenure status, majority of the families lived in their owned house and lot, followed by those who rent both. The share of the former rose in 1994 while the latter declined, indicative of the movement out of the city of migrants who merely rented their dwelling place. We also see that informal settlers, or those who rent the house or lot without consent of the owner, are negligible.

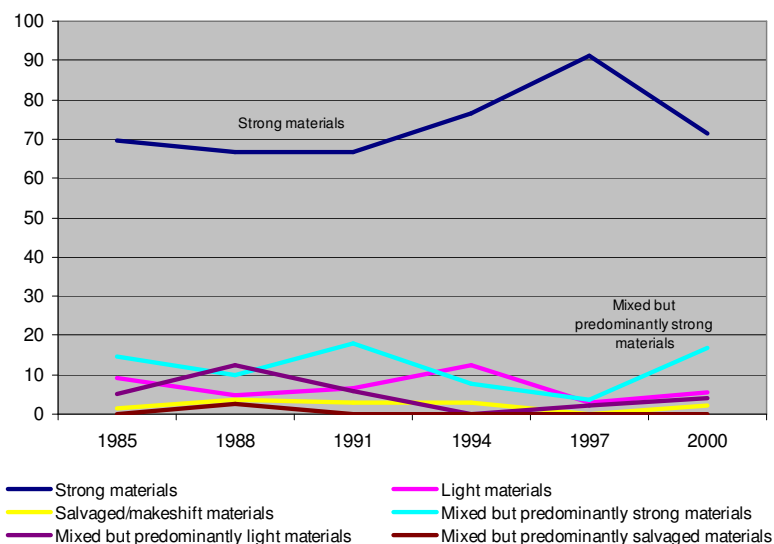
Figure 35. Distribution of household population by tenure status, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)



Source of basic data: FIES, various years

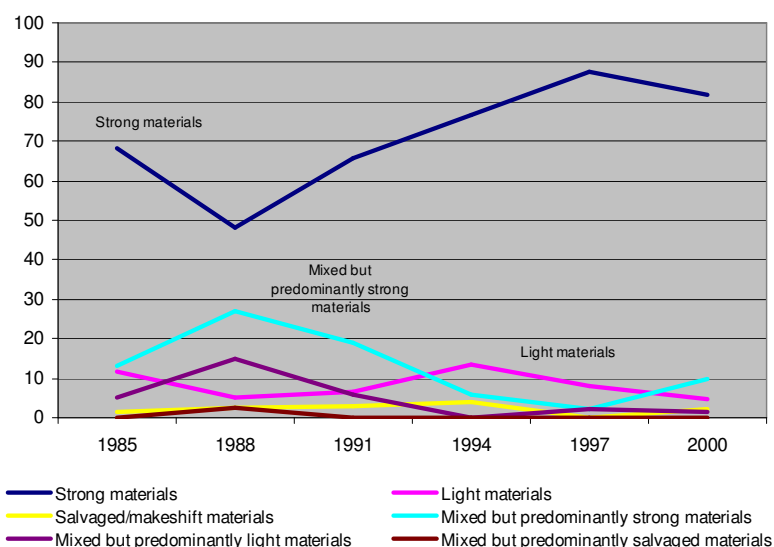
With regard to construction materials of the roof and outer walls, there is a general trend until 1997 towards a larger share of families with houses that have strong materials for both the roof and outer walls, except for a decline in 1988 for the latter. This proportion declined in 2000 in favor of mixed but predominantly strong materials.

Figure 36. Distribution of household population by construction material of the roof, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)



Source of basic data: FIES, various years

Figure 37. Distribution of household population by construction material of outer walls, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)

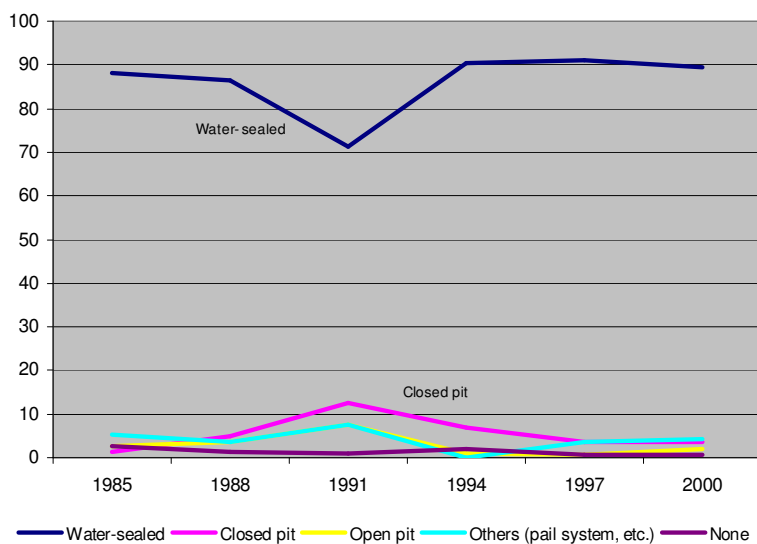


Source of basic data: FIES, various years

Above 80% of households had toilet facilities that were water-sealed, except in 1991 when closed pit and others (pail system and the like) gained ground. This is understandable given the disruption of water and sanitary services in the city due to the ash fall generated by the eruption of Mt. Pinatubo in June 1991 that clogged the city's drainage system.



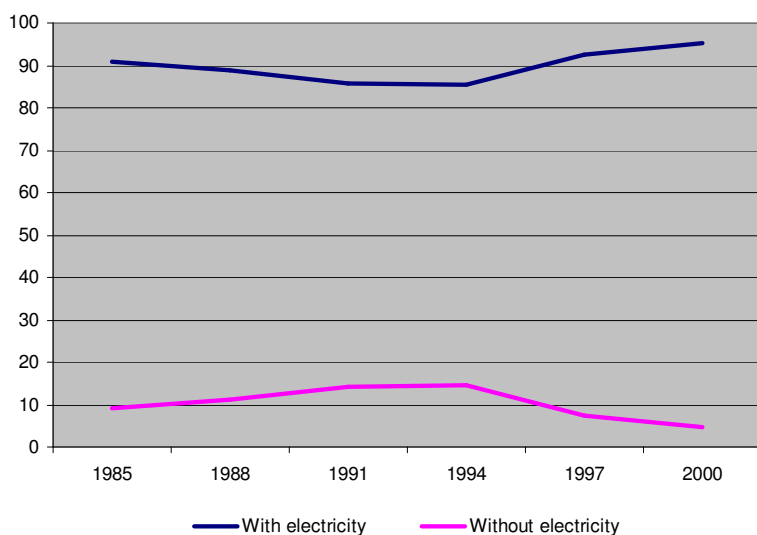
Figure 38. Distribution of household population by type of toilet facility, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)



Source of basic data: FIES, various years

Households without electricity comprised below 11.5% of total households except in 1991 and 1994, the crisis years, when it nudged up by about 3%.

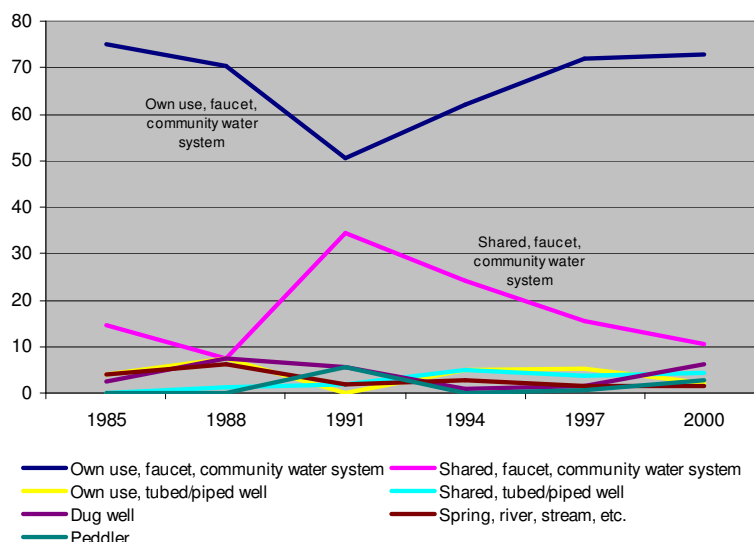
Figure 39. Distribution of household population by electricity coverage, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)



Source of basic data: FIES, various years

The main source of water supply of households in Olongapo City was primarily own use faucet connected to the community water system. Similar to what happened with electricity coverage, the proportion of households with shared faucets rose during the crisis years.

Figure 40. Distribution of household population by main source of water supply, 1985, 1988, 1991, 1994, 1997 and 2000 (in percent)



Source of basic data: FIES, various years

### Direct Measures of Impact

From the foregoing, it is very clear that the city's relationship with the Subic naval base, and later on the freeport, has been one of dependency, and hence it immediately felt the impact of developments in the Subic Bay area. An offshoot of this relationship is the fact that only the services industry flourished in Olongapo City. Agriculture wasn't feasible due to the rolling topography of the city, while the industrial sector was merely composed of a few small cottage enterprises, with related workers employed in activities inside the base and the freeport. This lack of local industry was cited even in the 1974 profile of the city.

Looking at current figures, we see that business registrations were highest for wholesale and retail stores, which is understandable given that this category includes *sari-sari* stores. This is followed by real estate, clearly linked to the small size of the city's built-up area and the considerable number of non-permanent residents and transients. Service establishments come in next, which hire a greater number of workers than the other businesses as seen in the LFS.

Table 4. Business registrations, new and renewal,  
by establishment classification, 1993-2003

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Services	666	769	856	826	720	908	900	866	706	874	1042
Wholesale/retail	2303	1934	1561	1450	2567	2750	2428	2725	2670	2854	2811
Cottage industry/manufacturing	104	124	135	110	90	89	68	95	62	72	102
Banking and finance/lending	22	26	31	33	41	53	93	94	100	102	108
Educational institution	10	11	12	15	10	16	12	10	8	13	24
Hotel and restaurant/disco	157	177	210	196	122	156	154	159	128	152	103
Real estate	871	738	763	619	486	444	532	536	244	600	555
Amusement/recreation	95	78	76	48	30	33	30	27	49	54	60
Transport/communication	11	12	64	85	106	113	92	37	32	37	31
TOTAL	4239	3869	3708	3382	4172	4562	4309	4549	3999	4758	4836

Source: Olongapo City Annual Report, various years

Table 5. Distribution of business registrations, new and renewal,  
by establishment classification, 1993-2003 (in percent)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Services	15.71	19.88	23.09	24.42	17.26	19.90	20.89	19.04	17.65	18.37	21.55
Wholesale/retail	54.33	49.99	42.10	42.87	61.53	60.28	56.35	59.90	66.77	59.98	58.13
Cottage industry/manufacturing	2.45	3.20	3.64	3.25	2.16	1.95	1.58	2.09	1.55	1.51	2.11
Banking and finance/lending	0.52	0.67	0.84	0.98	0.98	1.16	2.16	2.07	2.50	2.14	2.23
Educational institution	0.24	0.28	0.32	0.44	0.24	0.35	0.28	0.22	0.20	0.27	0.50
Hotel and restaurant/disco	3.70	4.57	5.66	5.80	2.92	3.42	3.57	3.50	3.20	3.19	2.13
Real estate	20.55	19.07	20.58	18.30	11.65	9.73	12.35	11.78	6.10	12.61	11.48
Amusement/recreation	2.24	2.02	2.05	1.42	0.72	0.72	0.70	0.59	1.23	1.13	1.24
Transport/communication	0.26	0.31	1.73	2.51	2.54	2.48	2.14	0.81	0.80	0.78	0.64
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source of basic data: Olongapo City Annual Report, various years

To better appreciate the extent of dependency and the economic contribution of the Subic Bay area to Olongapo City, we look into direct measures of employment and financial impact. The 1974 profile put workers in the naval base at more than half of total employment during that time, followed by workers in the government, the private business sector, and lastly the entertainment sector. At its peak level, it is said that the naval base employed as much as 30,000 workers and that the US military bases was the second largest employer in the country, next only to the national government. In a recent report (Liberal Philippines, 2004), the active workforce in the converted military facility is said to have reached 57,000.

Table 6. Employment composition, 1974

	Employment	Percentage
U.S. Naval Base	24,550	54.95
Government sector	12,743	28.52
Entertainment sector	1,547	3.46
Private business sector	5,839	13.07
Total	44,679	100.00

Source: 1974 Socioeconomic Profile of Olongapo City

The quantified financial contribution of the US military bases in 1985, as released by the US Information Service, amounted to some 7.6 billion pesos. Two-thirds of this amount went to the operations of the navy, a significant amount of which went to items such as salaries for Filipino workers, contracts with local construction companies, and spending by sailors/marines on liberty.

Table 7. Financial contribution of the US military bases, 1985

Item	Million Pesos		Percentage	
	Air Force	Navy	Air Force	Navy
Contracts with local construction companies	358	1016	17.45	18.30
Local material procurement	178	480	8.67	8.65
Contracts for local services	162	632	7.89	11.38
Base electricity plus rents/utilities for housing of U.S. personnel	460	-	22.42	-
Off-base rents and utilities	-	152	-	2.74
Salaries for Filipino workers	398	1214	19.40	21.87
Spending by permanently assigned U.S. personnel and dependents	352	494	17.15	8.90
Allotment checks to dependents or retired American personnel in the area	98	724	4.78	13.04
Spending by personnel on leave or on temporary duty	40	-	1.95	-
Spending by sailors/marines on liberty	-	816	-	14.70
Civic action/community relations programs	6	24	0.29	0.43
<b>TOTAL</b>	<b>2052</b>	<b>5552</b>	<b>100.00</b>	<b>100.00</b>

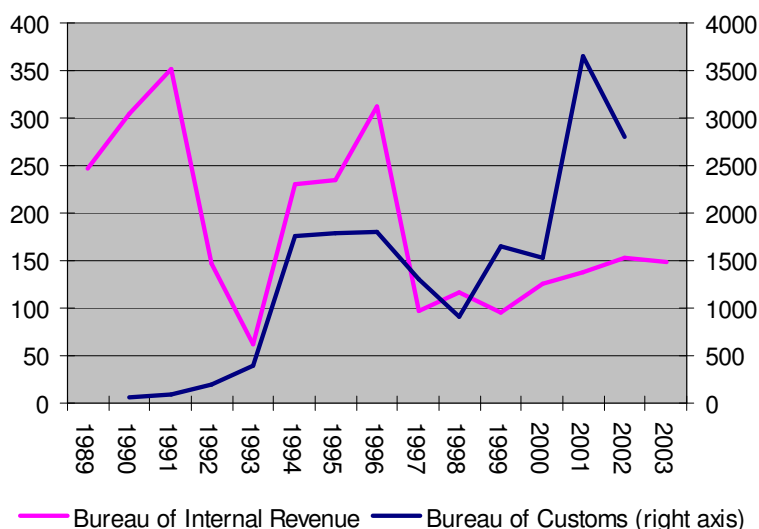
Source: US Information Agency report, 1986

These expenditures were on top of the lease payments to the Philippine government as part of the Military Bases Agreement (MBA). Covering the period 1985 to 1989, these were in the form of an Economic Support Fund (ESF) worth 9.5 billion pesos and a donation to the Armed Forces of the Philippines (AFP) worth 8.5 billion pesos. The ESF was committed to fund infrastructure projects in the country while the donation to the AFP was intended to upgrade the country's military capabilities. These amounts were twice the agreed payments in the MBA negotiated for the period 1980-84.

Further back, a 1971 RAND Corporation study estimated the overall impact of the US military bases to the country's economy at 3.52% of GNP in 1966. Using the same parameters, the contribution was put at approximately 3.47% of GNP in 1982, with direct and indirect employment of 480,000.

For more recent data, we look into the collections of the Bureau of Internal Revenue (BIR) in the revenue district of Olongapo City and of the Bureau of Customs (BoC) in the port of Subic. We see that tax collections sharply dived in 1992 and 1993 with the closure of the naval base, shot back up in 1994 as activity in the just-converted military facility picked up, and went down again in 1997 with the start of the Asian financial crisis. Tax collections barely improved since then, which may partly be due to structural flaws that were uncovered in the country's revenue system in general.

Figure 41. Tax collections, 1989-2003 and customs collections, 1990-2002 (in millions of pesos)



Source: Olongapo City Annual Report, various years

Meanwhile, customs collections grew more than three times in 1994 with the opening of the freeport and likewise dipped in 1997 due to the Asian financial crisis. Collections recovered in 1999 and made a sharp upturn in 2001.

All these numbers are staggering and point to an enormous contribution by the Subic naval base to the local and national economy. The city government knew and understood this all along, so that when the lease on the military bases was set to expire on September 1991, it lobbied for the ratification of a new treaty with the United States that would allow the latter's continued military presence in the country. The treaty was rejected by the Senate in a very close vote.

The closure of the military facility led to widespread apprehension and anxiety among residents about the future of Olongapo City. Those residents who migrated to the city some five, ten or even twenty years ago because of the abundant economic opportunities it previously had were naturally led to a decision to leave. To cope with economic uncertainty, those who chose to stay shifted to the use of public services when they previously did not do so, raising the utilization of existing public services and aggravating the need for additional ones. For example, there was a shift in enrolment from private schools to public ones and in health care availment from private clinics to the city hospital, the lone public hospital in the area. With lower income and higher demand for public services, the city government faced a difficult task ahead.

## F. Local Governance

The problem necessarily boiled down to the loss of economic opportunities. The city government turned to the development plan that it commissioned in 1981 to the

Development Academy of the Philippines for its frame of action. This plan was forward-looking in that it operated under a scenario where the US military vacates the Subic naval base area for any reason at all. Its basic thrust called for the development of the ship repair facility inside the base into a commercial seaport and the promotion of the city as a trade and commerce hub. It also noted the tourism potentials of the city, specifically as a convention city that could take advantage of existing recreation and entertainment establishments.

The conversion of the military facility into an industrial complex and freeport won approval from legislators and the city actively campaigned for a participatory role in this undertaking. Consequently, Republic Act 7227 carried a provision naming the incumbent mayor of the city as the first chair of the Subic Bay Metropolitan Authority (SBMA). It also directed part of government revenue from the gross income tax to be levied on firms that would operate inside the freeport into a development fund for affected and contiguous areas.

The development of the freeport indeed revived the city's economy. Manufacturing jobs started to increase and employment rose again. The employment rate improved to 71% in 1996-97 and rose to 81% in 1998-2001, an even higher level than what was achieved in the 1980s.

Because the city government was already previously adequate in addressing public needs, it did not face as much strain on public finances as was expected in order to meet increased demand for public services. Moreover, the city was capable of turning to the considerable savings it was able to generate from previous years. The fact that significant out-migration set in immediately and that new jobs were soon created in the freeport further eased the strain on service delivery. In addition, the SBMA leadership lent considerable support to the city, including donation of medical apparati and the shouldering of expenses in the dredging and desilting of rivers and creeks in the city. This 80 million peso project was necessary to alleviate the flooding problem that ensued after volcanic debris clogged the city's drainage system and waterways.

This assistance was given in the context of an integrated development plan that envisioned the upgrading of living standards in nearby communities for eventual inclusion into a "Metro Subic" area. In recent years, however, with the change in leadership at SBMA in 1998, the city has found itself in a competing role with the freeport. Assistance dried up and service establishments that directly competed with what the city offered were allowed entry inside the base.

While the city still relies on the freeport for most of the employment of its residents, it had to undertake steps towards self-reliance. Towards this end, a full blast infrastructure program was initiated to complement existing tourism facilities and to promote the city as an all-year-round services and leisure center. This included the construction of a convention center, a museum, a sports and civic center, and a mall. Waiting in the pipeline are the beach redevelopment project, the construction of a stadium, and the conversion of the former disco and club area into a shopping hub. The

city even availed of a 60 million peso loan in 2000 and 2001 to help finance these projects.

This was complemented by enhanced revenue generation measures such as the establishment of a one-stop center for business permits, licenses, and tax payments, the computerization of real estate tax assessment and the use of GIS tax mapping, and the upgrading of facilities at the city-owned electricity distribution utility to cut down on costly system losses.

While the plans have been admittedly ambitious, this did not mean that the provision of basic public services have been set aside. The city continues to pour money in the construction of additional classrooms, the development of the newly-established city college, the provision of scholarships to deserving students from high school to college, the construction of additional wards and private rooms at the city hospital, and the upgrade of all barangay centers to Sentrong Sigla standards. Population management has not taken a backseat either, with the city fully supporting a family planning program that does not discriminate between artificial and natural means. This has led to a continued increase in the number of registered current acceptors. The city population office spearheaded this effort with active support from civic organizations. We provide details of these programs in the service delivery section.

### Innovative Programs

We now provide a quick round-up of programs that the city initiated and which earned accolades from various quarters.

The city initiated the color-coding of public transportation that reduced colorum vehicles and ensured safety in the streets. Since jeeps and tricycles carried colors that signified the routes that they served, it was easier for police authorities to spot vehicles that usurped other vehicles' routes. This had the added benefit of making it easier for first-time commuters to negotiate the city's thoroughfares. To eliminate criminality among public transport drivers, they were also asked to wear uniforms that bore their surnames and to have their vehicles prominently painted with control numbers.

Community slogans were also visibly placed in public spaces that aimed to rally the residents around government programs and priorities. Garbage trucks were emblazoned with "Keep Olongapo City Clean", the public market carried "Bawal and Tamad sa Olongapo", schools had signs that encouraged "Self-Help, Self-Reliance and Cooperation", jeepneys and tricycles had "Bawat Oras Sama-Sama" and "Duty, Dignity, and Determination", and a mountainside even had "Aim High Olongapo" a la Hollywood. After the Mt. Pinatubo eruption, the city hall displayed a large sign that read "Fight On Olongapo". Before the turnover of the base, the residents were exhorted to "Protect and Preserve to Prosper", and when it was being converted, "Vision + Values + Volunteerism = Victory" was adopted. In 1997, as economic activity picked up, "Re-develop, Re-urbanize, It's Our Time" was the battle cry. The residents identified with the slogans and made it their own.

With regard to the entertainment sector that thrived in the city during the presence of the naval base, an STD testing center was established that was tasked to ensure the health of the entertainment workers. They were required to undergo weekly examinations and affected workers were immediately treated. Establishments were routinely checked for compliance of its workers and were closed if found in violation of the mandated health procedure. This program was successful in keeping HIV infections at bay and in controlling the spread of sexually transmitted diseases.

With the turnover of the military base, volunteerism was encouraged to protect and maintain the facilities left at the naval base. Residents physically cut grass, guarded entry and exit points, cleaned buildings and rooms, among others. This was done to avoid incidences of theft and deterioration of the amenities. The volunteers were given priority in job placements and ingrained civic consciousness and sense of duty among the residents.

Through the years, the city consistently reaped honors for its innovative approaches and consistency in high quality service delivery. It garnered numerous Galing Pook awards, Clean and Green citations, the titles Child-Friendly City and Healthy Public Market, among others. In various years, its police force, disaster coordinating council, budget office, and barangay officials (lupong tagapamayapa) have been recognized as the best LGU departments in the region and in the country.

### Budget Performance

We present the city's income and expenditure statement in two tables, the first covering the period 1991-1997 and the second covering 1996-2003, together with their respective percentage distribution in Figures 8 to 11. We were not able to obtain statements prior to 1991 since government records were damaged when the ash fall generated by Mt. Pinatubo led to the collapse of some parts of the city hall. Differences in format and composition led to such a division, although we were able to reconcile some of the items because of the overlap and the use of other financial statements included in the annual reports. This is followed by figures that tell the story of how the city government generated resources for its various projects and the priority given them in terms of allocation. The years with asterisks in the figures were the reconciled items.



Table 8. Income and expenditure statement, 1991-97 (in pesos)

	1991	1992	1993	1994	1995	1996	1997
INCOME	276,448,962	290,070,358	316,808,421	384,903,534	400,449,458	446,151,017	528,660,291
Tax Revenue	61,666,797	80,044,386	123,728,319	152,353,774	164,629,374	185,313,026	208,115,421
Real Property Tax	8,271,867	6,986,370	3,756,385	4,307,334	7,423,581	9,964,793	17,510,669
Business Tax	13,100,996	11,336,618	7,206,251	6,905,264	8,244,206	13,052,171	16,646,402
Occupation Tax	329,083	188,949	155,094	186,238	215,747	150,385	154,575
Hotel Tax	153,742	81,052	27,509	30,408	39,103	40,192	50,766
Amusement Tax	1,258,902	924,536	874,697	795,241	2,296,681	4,786,076	4,914,211
Residence Tax	914,162	794,897	617,313	697,843	860,315	1,151,335	1,307,155
Internal Revenue Allotment	37,224,345	59,431,989	110,501,592	138,803,415	144,278,553	154,596,071	166,324,913
Others	413,700	299,975	589,478	628,031	1,271,188	1,572,003	1,206,730
Operating and Miscellaneous Revenue	193,654,165	189,020,972	172,080,102	211,549,760	223,820,084	248,837,991	308,544,870
Government Services	2,988,975	2,548,325	1,735,114	2,094,467	2,503,274	4,796,217	3,679,640
Government Operations	183,007,700	179,902,655	167,027,663	201,553,284	215,256,412	240,635,413	299,310,919
ESMO	5,713,556	5,339,961	4,812,435	5,126,496	5,390,841	5,721,218	8,475,223
JLGMH	3,157,746	5,215,525	6,491,873	7,313,525	6,651,377	4,694,676	9,169,952
Market and Slaughterhouse	3,319,662	2,781,394	3,248,971	2,854,776	2,989,555	4,991,764	6,399,834
Public Utilities Department	170,816,736	166,565,775	152,474,384	186,258,487	200,224,639	225,227,755	275,265,910
Miscellaneous	7,657,490	6,569,992	3,317,325	7,902,009	6,060,398	3,406,361	5,554,311
Grants	21,000,000	21,000,000	21,000,000	21,000,000	12,000,000	12,000,000	12,000,000
Capital Revenue	128,000	5,000	0	0	0	0	0
EXPENDITURES	270,446,086	287,365,977	258,112,167	331,421,588	406,727,916	447,288,034	554,883,579
Personal Services	57,805,536	60,594,845	61,227,731	73,803,312	93,570,640	111,321,205	155,745,050
Maintenance and Operating Expenditures	185,516,801	176,218,510	167,955,079	212,669,837	250,776,220	264,298,922	316,728,117
Capital Outlay	26,294,802	49,632,175	28,263,923	41,916,676	60,300,635	71,343,207	79,800,719
Local	5,294,802	28,632,175	7,263,923	20,916,676	48,300,635	59,343,207	67,800,719
National	21,000,000	21,000,000	21,000,000	21,000,000	12,000,000	12,000,000	12,000,000
Reserve	828,947	920,447	665,434	3,031,763	2,080,421	324,700	2,609,693
EXCESS/DEFICIT	6,002,876	2,704,381	58,696,254	53,481,946	-6,278,458	-1,137,017	-26,223,288

Source: Olongapo City Annual Report, various years

Table 9. Income and expenditure distribution, 1991-97 (in percent)

	1991	1992	1993	1994	1995	1996	1997
INCOME	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Tax Revenue	22.31	27.59	39.05	39.58	41.11	41.54	39.37
Real Property Tax	2.99	2.41	1.19	1.12	1.85	2.23	3.31
Business Tax	4.74	3.91	2.27	1.79	2.06	2.93	3.15
Occupation Tax	0.12	0.07	0.05	0.05	0.05	0.03	0.03
Hotel Tax	0.06	0.03	0.01	0.01	0.01	0.01	0.01
Amusement Tax	0.46	0.32	0.28	0.21	0.57	1.07	0.93
Residence Tax	0.33	0.27	0.19	0.18	0.21	0.26	0.25
Internal Revenue Allotment	13.47	20.49	34.88	36.06	36.03	34.65	31.46
Others	0.15	0.10	0.19	0.16	0.32	0.35	0.23
Operating and Miscellaneous Revenue	70.05	65.16	54.32	54.96	55.89	55.77	58.36
Government Services	1.08	0.88	0.55	0.54	0.63	1.08	0.70
Government Operations	66.20	62.02	52.72	52.36	53.75	53.94	56.62
ESMO	2.07	1.84	1.52	1.33	1.35	1.28	1.60
JLGMH	1.14	1.80	2.05	1.90	1.66	1.05	1.73
Market and Slaughterhouse	1.20	0.96	1.03	0.74	0.75	1.12	1.21
Public Utilities Department	61.79	57.42	48.13	48.39	50.00	50.48	52.07
Miscellaneous	2.77	2.26	1.05	2.05	1.51	0.76	1.05
Grants	7.60	7.24	6.63	5.46	3.00	2.69	2.27
Capital Revenue	0.05	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Personal Services	21.37	21.09	23.72	22.27	23.01	24.89	28.07
Maintenance and Operating Expenditures	68.60	61.32	65.07	64.17	61.66	59.09	57.08
Capital Outlay	9.72	17.27	10.95	12.65	14.83	15.95	14.38
Local	1.96	9.96	2.81	6.31	11.88	13.27	12.22
National	7.76	7.31	8.14	6.34	2.95	2.68	2.16
Reserve	0.31	0.32	0.26	0.91	0.51	0.07	0.47

Source of basic data: Olongapo City Annual Report, various years

Table 10. Income and expenditure statement, 1996-2003 (in pesos)

	1996	1997	1998	1999	2000	2001	2002	2003
INCOME	462,353,979	564,369,807	676,760,272	705,670,108	878,929,353	982,407,479	903,499,887	946,607,243
Local Sources	307,757,908	398,044,895	483,231,192	500,478,121	628,968,353	736,800,002	641,195,676	669,199,736
Revenue from taxation	35,561,792	47,169,881	45,868,005	51,518,903	50,602,385	86,477,742	91,639,177	86,544,757
Real property tax	9,964,793	17,510,669	15,894,353	19,893,186	20,571,385	22,459,444	51,035,873	26,772,785
Current year	6,045,923	11,507,322	10,419,717	12,590,661	15,037,437	13,452,724		16,911,578
Previous year	1,985,690	3,505,533	2,706,795	4,183,612	3,787,528	4,927,190		5,129,626
Penalties	1,933,180	2,497,814	2,767,841	3,118,913	1,746,420	4,079,530		4,731,582
Business taxes and licenses	14,696,161	17,951,697	19,616,261	22,656,745	24,855,099	60,568,976	33,143,256	46,997,217
Other taxes and fees	10,900,838	11,707,515	10,357,391	8,968,972	5,175,901	3,449,322		12,774,755
Non-tax revenues	272,196,116	350,875,014	437,363,187	448,959,218	578,365,968	650,322,260	549,556,500	582,654,979
Receipts from economic enterprises	230,219,520	281,665,744	370,478,117	392,885,713	475,270,880	552,026,017	498,917,669	521,322,163
Market and Slaughterhouse	4,991,765	6,399,834	6,203,165	7,717,332	7,888,273	9,046,538	12,218,915	13,478,253
Public Utilities Department	225,227,755	275,265,910	364,274,952	385,168,381	467,382,607	542,979,479	486,698,754	507,843,910
Fees and charges (ESMO and JLGMH)	10,415,894	17,645,175	24,205,834	29,065,185	28,594,498	26,063,159	14,518,125	24,032,286
Loans and borrowings	0	0	0	0	30,900,000	31,900,000	0	0
Other receipts	31,560,701	51,564,095	42,679,236	27,008,319	43,600,590	40,333,085	36,120,706	37,300,531
Aids and Allotments	154,596,071	166,324,913	193,529,080	205,191,987	249,961,000	245,607,477	262,304,211	277,407,507
BIR Allotments	154,596,071	166,324,913	193,529,080	205,191,987	249,961,000	218,167,477	246,104,211	253,407,507
National Aids	0	0	0	0	0	27,440,000	16,200,000	24,000,000
National Wealth	0	0	0	0	0	0	0	0
EXPENDITURES								
Current expenditures	435,288,034	542,883,579	644,217,869	661,442,418	803,179,289	980,487,629	894,018,169	938,961,979
General Government	130,940,928	168,832,975	188,430,909	194,055,026	221,529,653	304,476,878	270,845,835	380,804,088
Personal Services	49,528,289	68,654,252	80,099,047	86,557,622	96,979,674	107,762,107	81,202,050	80,123,345
MOOE	25,961,818	36,113,839	43,595,708	66,828,204	75,832,365	87,958,049	80,575,726	86,145,029
Capital Outlay	55,450,821	64,064,884	64,736,154	40,669,200	48,717,613	108,756,722	109,068,059	214,535,715
Public welfare and internal safety	57,639,943	78,577,064	84,461,180	95,031,733	106,547,024	119,212,895	121,699,180	145,500,385
Personal Services	46,799,982	68,543,457	72,819,980	79,315,558	85,398,685	86,022,752	82,318,229	104,128,861
MOOE	8,843,481	9,879,426	11,561,899	14,716,175	19,101,339	24,859,343	30,761,841	41,238,692
Capital Outlay	1,996,480	154,182	79,300	1,000,000	2,047,000	8,330,800	8,619,110	132,833
Economic enterprises	246,707,162	295,473,540	371,325,780	372,355,659	475,102,613	556,797,857	501,473,154	412,657,506
Market and slaughterhouse	5,865,205	6,604,124	7,376,468	8,287,722	8,247,653	7,594,546	6,775,303	6,803,101
Personal services	3,994,383	4,694,110	4,819,721	5,702,512	5,694,922	5,235,663	4,947,728	5,273,668
MOOE	1,870,822	1,910,014	2,556,747	2,585,211	2,552,731	2,358,884	1,827,575	1,529,434
Capital Outlay	0	0	0	0	0	0	0	0
Public Utilities Department	240,841,957	288,869,416	363,949,312	364,067,937	466,854,960	549,203,311	494,697,850	405,854,404
Personal services	10,998,552	13,853,232	13,680,721	18,574,456	21,935,883	19,728,993	18,733,575	19,105,181
MOOE	227,622,799	271,434,532	340,180,649	341,303,416	436,200,071	507,791,268	454,074,980	383,638,239
Capital Outlay	2,220,606	3,581,653	10,087,942	4,190,065	8,719,007	21,683,049	21,889,295	3,110,985
NET INCOME	27,065,945	21,486,228	32,542,403	44,227,690	75,750,064	1,919,850	9,481,718	7,645,264

Source: Olongapo City Annual Report, various years

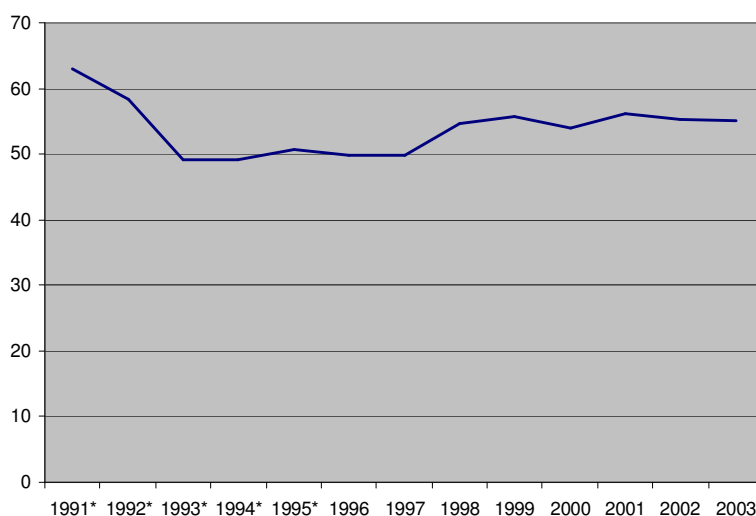
Table 11. Income and expenditure distribution, 1996-2003 (in percent)

	1996	1997	1998	1999	2000	2001	2002	2003
INCOME	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Local Sources	66.56	70.53	71.40	70.92	71.56	75.00	70.97	70.69
Revenue from taxation	7.69	8.36	6.78	7.30	5.76	8.80	10.14	9.14
Real property tax	2.16	3.10	2.35	2.82	2.34	2.29	5.65	2.83
Current year	1.31	2.04	1.54	1.78	1.71	1.37		1.79
Previous year	0.43	0.62	0.40	0.59	0.43	0.50		0.54
Penalties	0.42	0.44	0.41	0.44	0.20	0.42		0.50
Business taxes and licenses	3.18	3.18	2.90	3.21	2.83	6.17	3.67	4.96
Other taxes and fees	2.36	2.07	1.53	1.27	0.59	0.35	0.83	1.35
Non-tax revenues	58.87	62.17	64.63	63.62	65.80	66.20	60.83	61.55
Receipts from economic enterprises	49.79	49.91	54.74	55.68	54.07	56.19	55.22	55.07
Market and Slaughterhouse	1.08	1.13	0.92	1.09	0.90	0.92	1.35	1.42
Public Utilities Department	48.71	48.77	53.83	54.58	53.18	55.27	53.87	53.65
Fees and charges (ESMO and JLGMH)	2.25	3.13	3.58	4.12	3.25	2.65	1.61	2.54
Loans and borrowings	0.00	0.00	0.00	0.00	3.52	3.25	0.00	0.00
Other receipts	6.83	9.14	6.31	3.83	4.96	4.11	4.00	3.94
Aids and Allotments	33.44	29.47	28.60	29.08	28.44	25.00	29.03	29.31
BIR Allotments	33.44	29.47	28.60	29.08	28.44	22.21	27.24	26.77
National Aids	0.00	0.00	0.00	0.00	0.00	2.79	1.79	2.54
National Wealth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EXPENDITURES								
Current expenditures	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
General Government	30.08	31.10	29.25	29.34	27.58	31.05	30.30	40.56
Personal Services	11.38	12.65	12.43	13.09	12.07	10.99	9.08	8.53
MOOE	5.96	6.65	6.77	10.10	9.44	8.97	9.01	9.17
Capital Outlay	12.74	11.80	10.05	6.15	6.07	11.09	12.20	22.85
Public welfare and internal safety	13.24	14.47	13.11	14.37	13.27	12.16	13.61	15.50
Personal Services	10.75	12.63	11.30	11.99	10.63	8.77	9.21	11.09
MOOE	2.03	1.82	1.79	2.22	2.38	2.54	3.44	4.39
Capital Outlay	0.46	0.03	0.01	0.15	0.25	0.85	0.96	0.01
Economic enterprises	56.68	54.43	57.64	56.29	59.15	56.79	56.09	43.95
Market and slaughterhouse	1.35	1.22	1.15	1.25	1.03	0.77	0.76	0.72
Personal services	0.92	0.86	0.75	0.86	0.71	0.53	0.55	0.56
MOOE	0.43	0.35	0.40	0.39	0.32	0.24	0.20	0.16
Capital Outlay	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public Utilities Department	55.33	53.21	56.49	55.04	58.13	56.01	55.33	43.22
Personal services	2.53	2.55	2.12	2.81	2.73	2.01	2.10	2.03
MOOE	52.29	50.00	52.81	51.60	54.31	51.79	50.79	40.86
Capital Outlay	0.51	0.66	1.57	0.63	1.09	2.21	2.45	0.33

Source of basic data: Olongapo City Annual Report, various years

From the foregoing budget tables, we see that a big chunk of income and expenditures came from and went to economic enterprises, composed of the public utilities department (PUD), the city-owned electricity distribution utility, and the market and slaughterhouse, with the latter's contribution only marginal. We see from Figure 42 that these two contributed roughly more than half of total income from 1991 to 2003. This contribution was highest in 1991 at 63% and went down to an even 50% from 1993 to 1997. It rose in 1998 to roughly 55% and has remained in that level until 2003. While it might be tempting to say that the decline during the crisis years was due to the devastation wrought by Mt. Pinatubo and the closure of the naval base, it is actually due to the increase in the importance of the internal revenue allotment (IRA) as an income source; how this happened will be explained shortly.

Figure 42. Contribution of economic enterprises to total income, 1991-2003 (in percent)



Source of basic data: Olongapo City Annual Report, various years

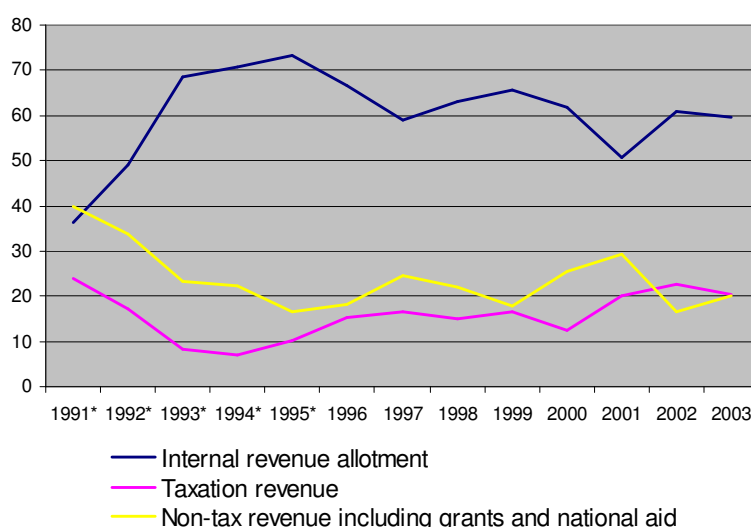
Note that all things the same, this income source is not indicative of the quality of revenue generation efforts simply because it is a vital service that most households and establishments could not thrive without. This is the same reason why its earnings might be used to track local economic activity. We'll see in a later graph that an economic slowdown indeed transpired in the city from 1991 to 1994. But since these city agencies are enterprises, it is important to know how its expenditures were managed in relation to its income so that it would ultimately be able to contribute to the city's coffers. We would discuss this more fully before the end of this section.

Note that very special circumstances surrounded the existence of these assets. The PUD's electricity distribution system was originally installed by the American naval reservation administration; it was turned over to the local government when jurisdiction of the town proper was returned to the Philippine government in 1959. (The turnover included the water and telephone utilities which have since been privatized.) Meanwhile, the infrastructure for the public market and the slaughterhouse were part of the US

government's aid to the city under the Economic Support Fund (this also included the relocation and construction of the city's tertiary hospital). These donations enabled the city to operate economic enterprises without putting up the huge capital requirements.

Now looking into the remainder of the city's income sources, we see in Figure 43 that the contribution of tax and non-tax revenues naturally dropped during the crisis years. The contribution of taxation revenues, which include real estate taxes, business taxes and licenses, and other taxes and fees, has been steadily rising since then, closer to the level in 1991, the highest in our time series. On the other hand, the contribution of non-tax revenues, which include loans and borrowings, fees and charges by the city hospital and the garbage collection department, and other receipts, has been more variable and has not reached the level in 1991. As a result, the city government increasingly relied on the IRA, although the implementation of Republic Act No. 7160, known as the Local Government Code (LGC) of 1991, played a significant role in this.

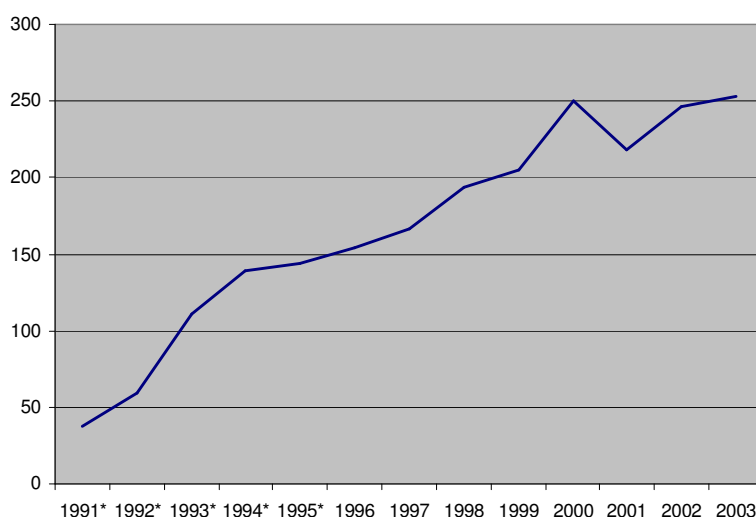
Figure 43. Distribution of major income sources excluding income from economic enterprises, 1991-2003 (in percent)



Source of basic data: Olongapo City Annual Report, various years

The LGC enacted a direct formula for the distribution of a certain proportion of total internal revenues to provinces, cities, municipalities, and barangays, with shares within categories determined by population, land area, and equal sharing. This proportion was 30% in 1992, 35% in 1993, and 40% in 1994 and thereafter. This may explain the steep rise in the IRA from 1991 to 1994 in Figure 44. In addition, note that during this time, the population projection used for the city in the formula was based on the growth registered between the 1980 and 1990 census. We have already seen that population decreased between 1990 and 1995. Both factors were fortunate events given the plunge in all other income sources.

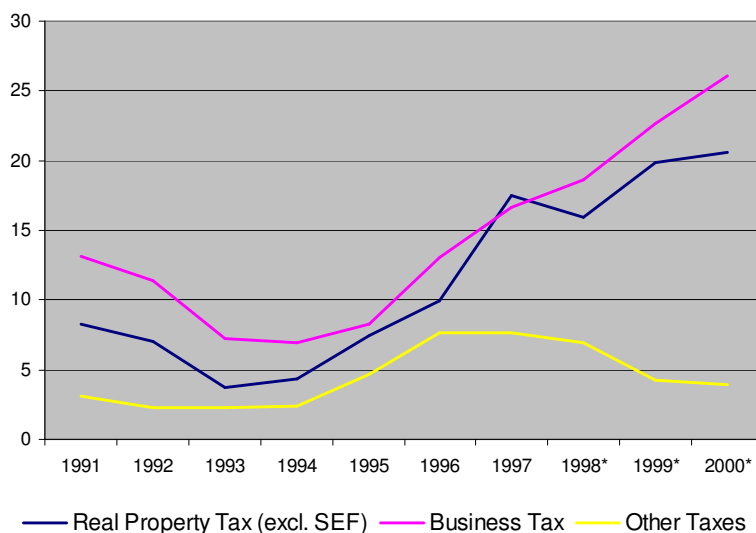
Figure 44. Internal revenue allotment, 1991-2003 (in million pesos)



Source of basic data: Olongapo City Annual Report, various years

The breakdown of locally-sourced tax revenues in Figure 45 shows that the drop in contribution was due to declines in real property and business tax collections. The former significantly picked up in 1995 and the latter only in 1996. We see a steady increase in business tax collections until 2000, while the increase in the rate of levy on assessed real properties from 1% to 2% (excluding the Special Education Fund) in 1997 resulted in a 75% increase in tax collections. This dipped in 1998 due to the Asian financial crisis but recovered the following year. Revenues from other taxes like occupation, hotel, amusement, and residence taxes amounted to less than five million pesos except from 1996 to 1998. Although minimal, this revenue source did not dip as much as the others during the crisis years.

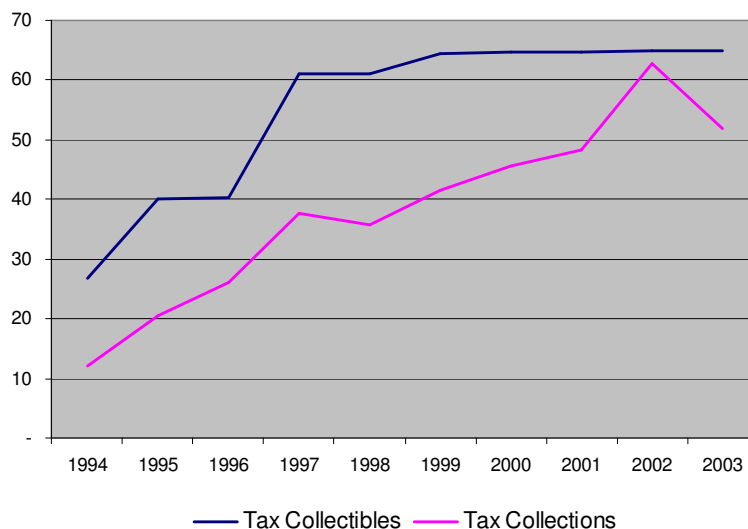
Figure 45. Locally-sourced revenues, 1991-2000 (in million pesos)



Source of basic data: Olongapo City Annual Report, various years

Focusing on real property tax collections in Figure 46, we see a rise in collectibles in 1995 and in 1997, the former due to the implementation of the 1994 general revision of real property assessments and the latter due to the mentioned increase in the rate of levy. Note that Section 219 of the LGC ordered the conduct of a general revision within two years after the effectivity of the code (in 1992) and every three years thereafter. While the first part was complied with, the city assessor submitted a subsequent revision only in 2002 due to concerns about lower (or unchanged) property market values traced to the lingering effects of the local economic crisis and the onslaught of the Asian financial crisis in 1998. Both were thought to have resulted in low collections which may only be exacerbated by an immediate upward revision. The basis for this was the less than proportionate increase in tax collections in 1997 relative to the levy increase and the decline in 1998. This general revision has since remained unapproved by the city council.

Figure 46. Real property tax collectibles and actual collections (includes the Special Education Fund), 1994-2004 (in millions of pesos)



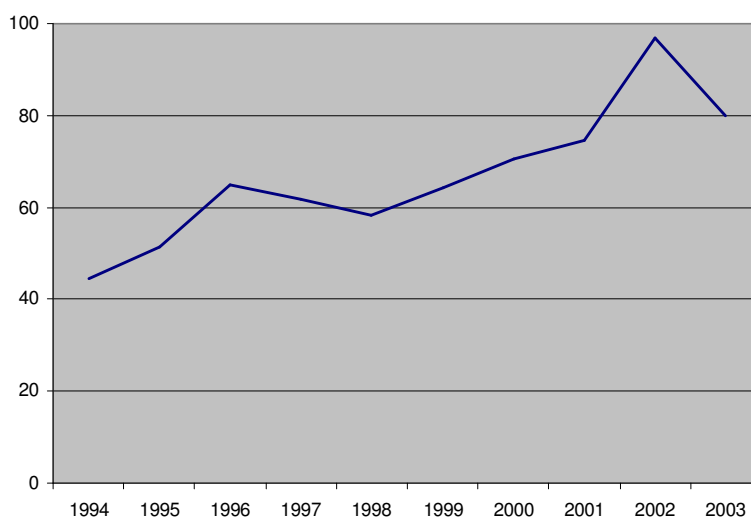
Source: Olongapo City Assessor's Office

We see in Figure 47 that although collection efficiency rose since the crisis years, it has continued to wander around a low level of 60%. To address this concern and others, the city government embarked on the computerization of revenue departments and income-generating offices in 2000. The city assessor's office adopted a software package from Amellar Solutions that automated real property tax administration and kept assessment and payment records in order. The completion of assessment services went down from a range of 30 minutes to an hour to 10-15 minutes. Tax mapping was also improved by using imaging aided by a geographic information system (GIS). This was important considering that in 2001, more than 6,000 hectares were declared for taxation purposes even if the built-up area ran only to 2,279 hectares while alienable and disposable areas added up to only 1,729 hectares. This problem was traced to double declaration, overlapping claims, and declaration of areas not yet alienable and disposable. These technical improvements all led to enhanced collection efficiency which reached



80% in 2003. The uptick in 2002 to a remarkable level of 97% was due to the grant of a tax amnesty for delinquent taxpayers that ran for three months in the latter part of that year.

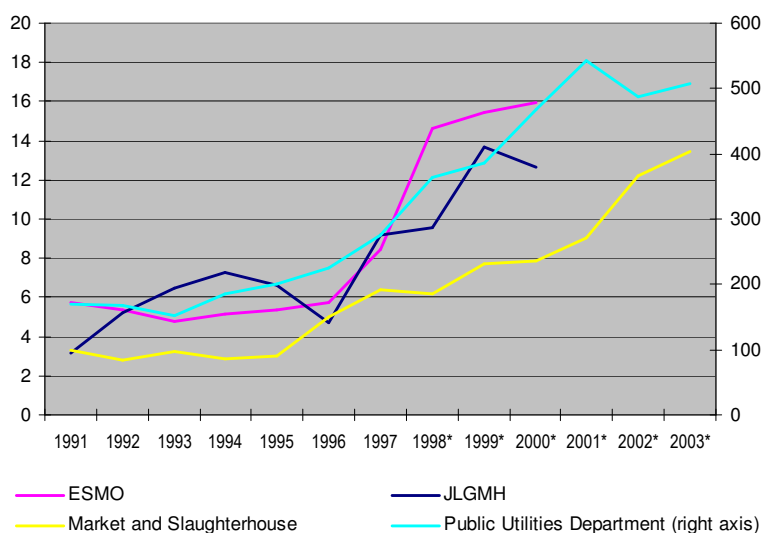
Figure 47. Real estate tax collection efficiency, 1994-2003 (in percent)



Source: Olongapo City Assessor's Office

Turning to income-generating offices, composed of the two economic enterprises, the James L. Gordon Memorial Hospital (JLGMH), and the Environmental Sanitation and Management Office (ESMO), the department responsible for garbage collection and pollution control, we see in Figure 48 a general uptrend in generated income from low and flat levels during the crisis years. This trend, however, was not as smooth for the city-owned hospital as it were for the others: we see that the city hospital's fee income rose from 1991 to 1994 and then subsequently dropped until 1996 before exhibiting an upward trajectory. This is most probably due to the increased utilization of the city hospital during the crisis years as residents shifted away from private clinics and hospitals. Note that when business was brisk and livelihood was easy in the city due to the presence of the base facility, most residents went to private health providers for their medical needs, even if fee rates for common tests and procedures at the city hospital were already being subsidized by the city government (it continues to do so). It appears that this shift subsided after the crisis years and may have already been reversed, in a return to the previous disposition. Supporting this are the results of the 2002 Annual Poverty Indicator Survey (APIS) wherein private clinics in Olongapo City scored a proportion of 57.4% among health facilities visited by residents who visited a health facility at least once in that year, more than double the average rate for the whole country.

Figure 48. Income of economic enterprises, 1991-2003, and of fee-charging departments, 1991-2000 (in million pesos)



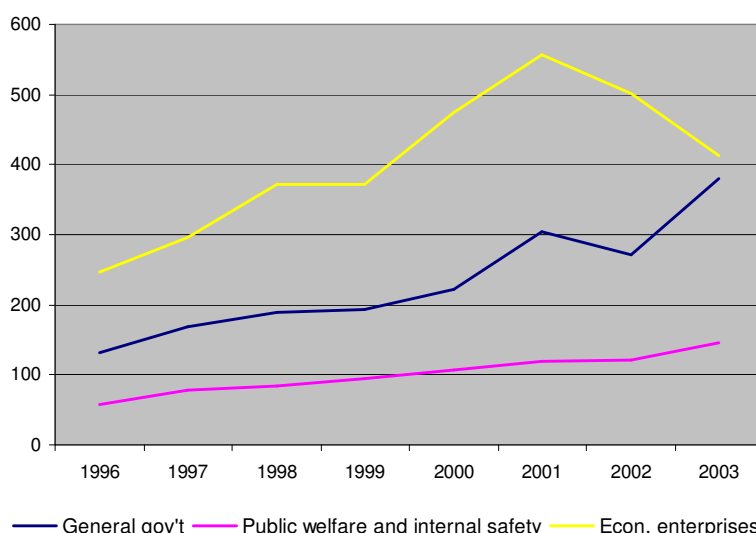
Source of basic data: Olongapo City Annual Report, various years

We note that the ESMO has been earning substantial income; it earns more than the public market and slaughterhouse and edged out the city hospital in more recent years. This department was the result of the institutionalization of the solid waste management program initiated in September 1989 that had the notable feature of relying on user fees for its operations. We would discuss this in more detail in the next section on service delivery.

We also observe that while the public market and slaughterhouse has the lowest income among the four, its earnings has been steadily rising as of late, in contrast to flat growth it registered in 1998 and 2000 after the recovery in 1996. The public utilities department, on the other hand, decisively emerged from the slowdown in 1996 and grew modestly until 2001 when charges for the power purchasing agreement (PPA) were temporarily reduced.

Moving on to expenditures, we see that economic enterprises likewise covered the majority of expenditures, followed by general government and then public welfare and internal safety (Figure 49). The last is composed of expenditures in the city college, the city health office, the city hospital, the ESMO, the city social welfare and development office, and the city veterinarian, with all the other offices classified under general government.

Figure 49. Expenditures by sector, 1996-2003 (in million pesos)



Source of basic data: Olongapo City Annual Report, various years

The bulk of expenditures of the economic enterprises went to maintenance, operating and other expenses (MOOE), which was in turn largely due to electricity purchases from NAPOCOR. The curious uptick in MOOE expenditures in 2001 can be attributed to the rehabilitation, upgrade, and expansion of the aging power distribution system. The rise in general government expenditures that started in the same year is attributable to the infrastructure projects that were initiated to better position the city as a leisure and services center. This included the construction of a sports and civic center, a museum, a convention center, and a mall, together with various improvements in parks, sidewalks, and multi-purpose halls (covered courts). We see this increase in completed infrastructure projects in Table 12 (The record for 1998 includes expenses for the major desilting/declogging of the city's river system). Although expenditures in public welfare and internal safety were low in comparison to these two, it has been steadily increasing at a rate more than enough to cover for inflation.

Table 12. Infrastructure plan, 1998-2003 (in pesos)

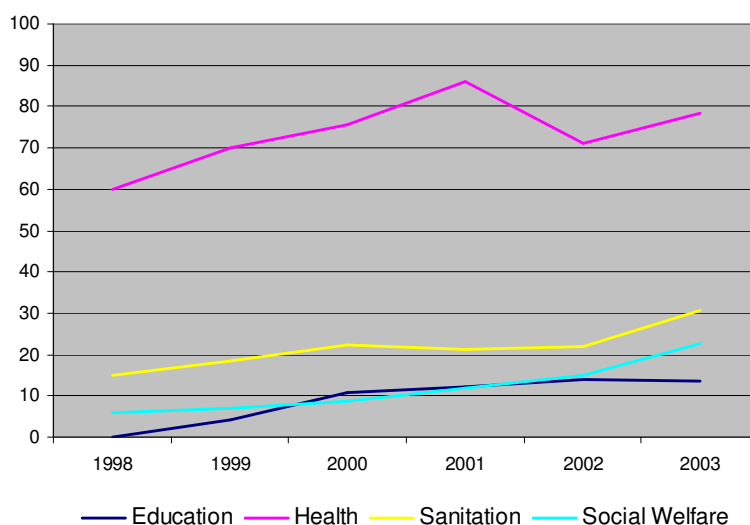
	1998	1999	2000	2001	2002	2003
Completed projects	198,277,466	55,336,442	37,949,265	100,781,855	50,390,916	50,725,774
Ongoing projects	13,946,521	10,474,882	57,477,793	19,803,093	2,627,568	223,436,958
Projects for implementation	2,979,702	9,099,992	21,586,281	3,832,633	12,622,666	2,790,701
Projects scheduled for bidding	13,040,495	36,000,000	10,000,000	8,293,778	23,330,083	10,604,067
Committed projects	9,039,827	9,342,133	3,107,470	40,472,784	15,128,935	
Proposed projects	13,974,117		14,374,269	73,886,597	289,520,022	14,351,274
Total	251,258,128	120,253,450	144,495,078	247,070,741	393,620,191	301,908,774

Source: Olongapo City Annual Report, various years

If we further disaggregate the expenditures on social services, as in Figure 50, we find that most of it went to health services, followed distantly by sanitation, social welfare, and then education. The city hospital carried most of this expenditure, which was huge relative to its earnings from fees and charges; it amounted to less than a quarter of

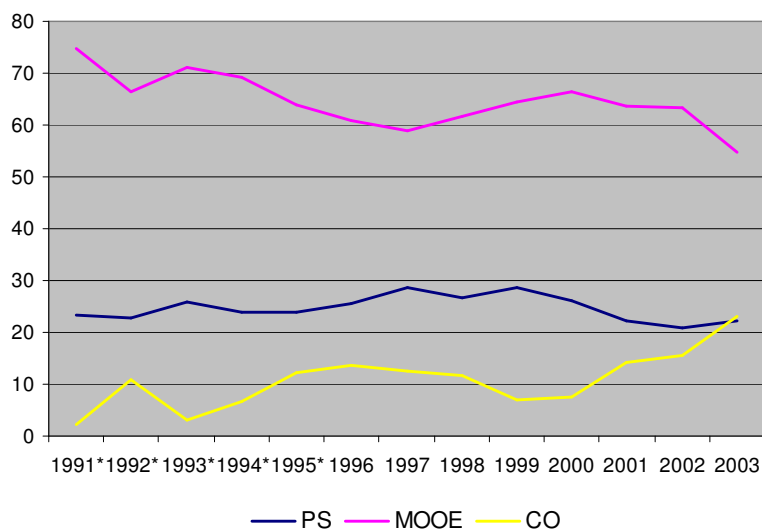
hospital expenditures from 1998 to 2000. These under-recoveries were viewed by the city government as subsidies to its residents and a significant component of its public service thrust. Note that this tertiary hospital also served a significant number of patients that lived in nearby municipalities and provinces.

Figure 50. Expenditures in social services, 1998-2003 (in million pesos)



Source of basic data: Olongapo City Annual Report, various years

Figure 51. Distribution of expenditure allocations by general item, 1991-2003 (in percent)



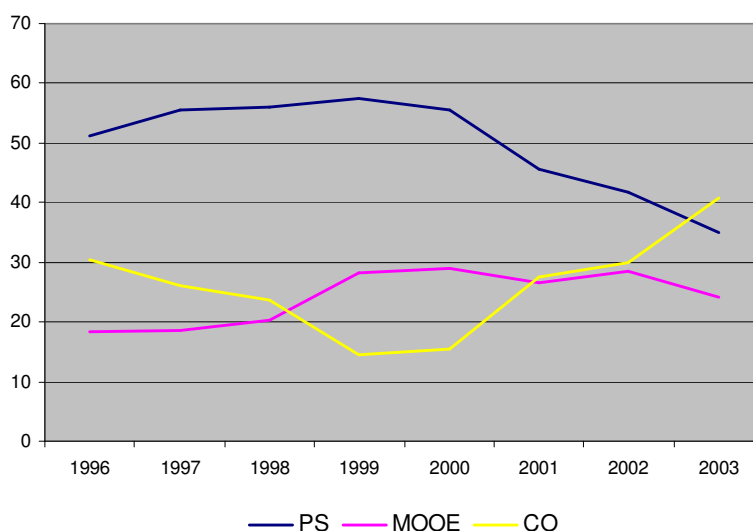
Source of basic data: Olongapo City Annual Report, various years

Looking into the distribution of expenditures by general item in Figure 51, we see that owing to the operating expenses of the PUD, the MOOE item prevailed upon personal services in total budget allocation. While the share of personal services was

relatively stable at roughly 25% all throughout, we find a declining trend in the share of MOOE and a coincident rise in the share of capital outlay. As previously mentioned, this was in support of infrastructure initiatives geared towards enhancing the value of the city as a services and leisure hub.

However, if we exclude the economic enterprises in the computation, we see a different picture. Personal services now claim the most allocation from 1996 to 2002, similar to what is seen in other local government's expenditure mix, although its share has been declining starting in 2001. We find that during the same period, expenses on MOOE and CO have been alternating in budgetary importance, matching each other in 2001 and 2002. The steady increase in the budget share of capital outlay since 2000 resulted in personal services being dislodged in 2003 from the top spot.

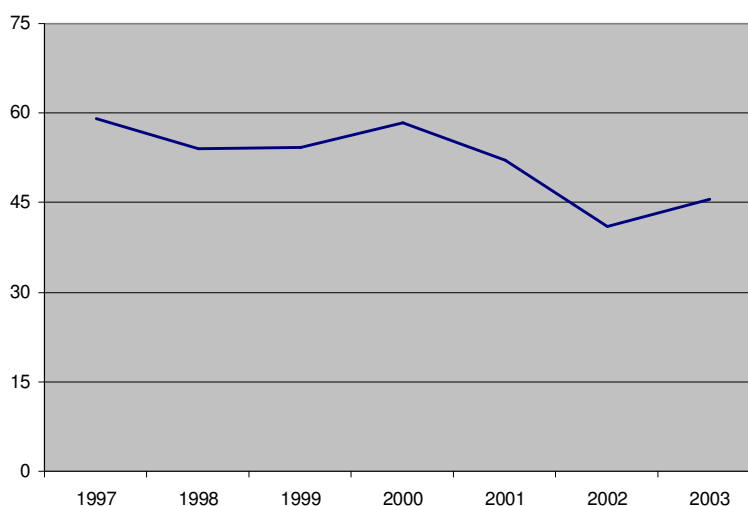
Figure 52. Distribution of expenditure allocations by general item, excluding expenditure on economic enterprises, 1996-2003 (in percent)



Source of basic data: Olongapo City Annual Report, various years

This rise in capital outlay expenditures had the effect of improving the city government's budget mix to mandated standards. We note that the LGC laid out a rule in Section 325(a) that sought to encourage the judicious allocation of resources. To prevent the abuse of public monies by the unchecked grant of plantilla positions and compensation, it prescribed an upper bound of 45% in the ratio of the current budget allocation for personal services to the previous year's income net of economic enterprises. We see in Figure 53 that PS has been above this limit from 1997 to 2001 and only complied with this requirement in 2002 and barely in 2003. It can be averred, however, that the high ratio in 1997 may be traced to the city government's immediate full implementation of the Salary Standardization Law (SSL). Since then, the local bureaucracy seems to have been pared down in terms of expenditure share.

Figure 53. Personal services expenditures (excluding those spent on economic enterprises) in proportion to previous year's income (excluding income from economic enterprises), 1997-2003 (in percent)



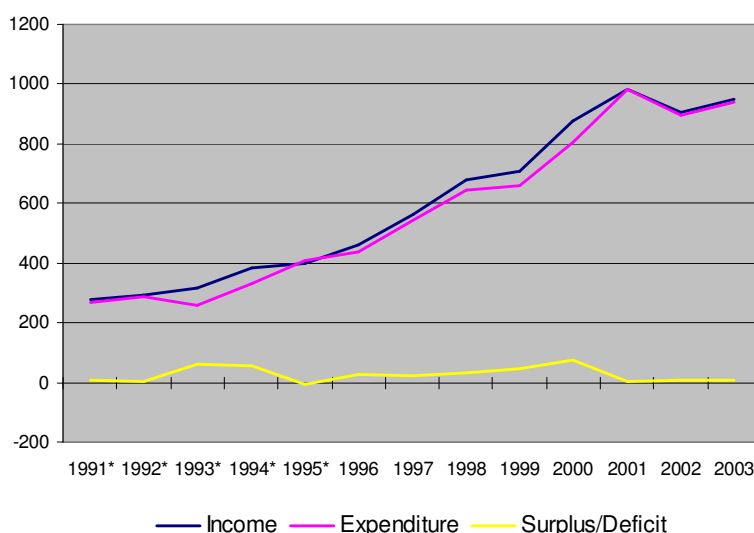
Source of basic data: Olongapo City Annual Report, various years

Moving on to the full income and expenditure picture, we see in Figure 54 that moderate surpluses were recorded in 1993-1994 and in 1999-2000, a benign deficit in 1995, and modest surpluses in the other years. Although local governments are almost always expected to post surpluses given the imposed budgetary reserve of 5% for the calamity fund, one would suppose that the crisis years exerted a discernible impact on the city government's fiscal outcome due to its severity. However, it appears from the income and expenditure statements that it did not have much of an effect on the city's net income.

While it might be plausible to think that the aid the city received during this period eased the pressure on the city's finances, anecdotes from the city budget officer<sup>2</sup> point out that deficits indeed emerged since the crisis struck, not in the final financial results but in the trial balances. He said that the trust fund was being relied on to plug the shortfall and move net income back into positive territory. He even felt cautious that the significant savings the city piled prior to the crisis were nearing depletion, prompting the city government to consider borrowing from banks and multilateral institutions to fund its infrastructure projects (it did so in 2000 and 2001 with the Land Bank of the Philippines (LBP) and the Development Bank of the Philippines (DBP) for the construction of the convention center and the city mall; it also mulls loan arrangements with the World Bank and the Asian Development Bank). This information tends to support the findings we saw earlier.

<sup>2</sup> Interviews with Mr. Johnny Choa, Olongapo City Budget Officer from 1980 up to present, July and September 2004.

Figure 54. Income and expenditure, 1991-2003 (in million pesos)

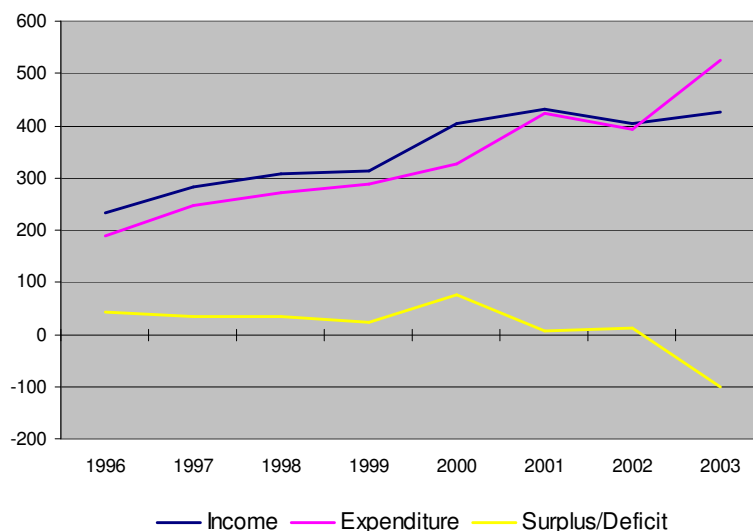


Source of basic data: Olongapo City Annual Report, various years

Going back to the financial statements and excluding economic enterprises from the balance sheet, we find a better fiscal result: healthy surpluses were recorded from 1996 to 2000 (Figure 55). This was not sustained, however, and a deficit of 101 million pesos was incurred in 2003. If we look into the net income of economic enterprises from 1996 to 2003 in Figure 56, we see that the PUD has had mixed financial results; it registered surpluses in 1999 and 2003 and deficits in the remaining years. The market and slaughterhouse, on the other hand, incurred deficits from 1996 to 2000 and surpluses thereafter, although in relatively smaller amounts.

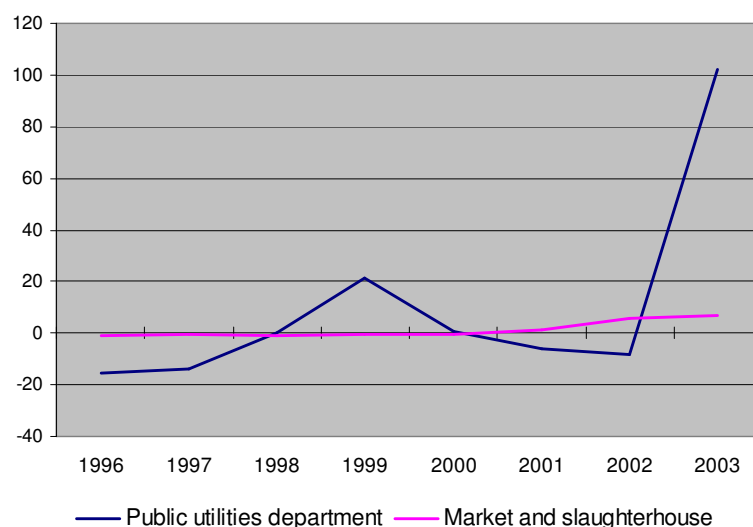
I find the figures for 2003 dubious given that the PUD obtained a staggering surplus in 2003 that was curiously just enough to compensate for the deficit that the city government incurred. The city's annual report attributes this performance to an increase in power rates and a reduction in system losses due to the rehabilitation and upgrade of distribution facilities, while at the same time stating that the city has been asking for technical assistance on an arrangement for the privatization of the management of the public utility, with the city retaining ownership. It has been the lament of the city budget officer that the PUD has been bleeding the city coffers dry due to costly system losses (about 30% of power purchased from the NAPOCOR), low electricity charges (relative to other local electricity distribution utilities), and various exemptions for public buildings and facilities. Given the lack of data on the operating expenses of the PUD in the years prior to 1996, we take his word on this and consider the difficulty this utility has been having in sustaining its operations. Note that similar to the case of the city hospital, the local government believes it is doing the residents a public service through rate subsidies.

Figure 55. Income and expenditure, both excluding economic enterprises, 1996-2003 (in million pesos)



Source of basic data: Olongapo City Annual Report, various years

Figure 56. Net income of economic enterprises, 1996-2003 (in million pesos)



Source of basic data: Olongapo City Annual Report, various years

### Service Delivery

To concretize the effects of the budget allocations we saw earlier, we now take stock of tangible service delivery outcomes, starting out with the garbage disposal system and then move on to indicators of educational access and performance, health and crime coverage, and population campaign effectiveness.



Garbage disposal and collection has not been much of a problem in Olongapo City since it introduced in 1989 an integrated solid waste management system that relied on user fees for its operating expenses. This was a radical step since most people view garbage collection as a service rendered by the government for free. On the other hand, because of competing priorities, most local governments, including Olongapo, could not afford to allot a sufficient budget for this service. After an extensive information campaign that highlighted civic responsibility, the residents understood the need for the sacrifice and adopted the program wholeheartedly. This resulted in arguably the cleanest city in the country. We see from the census reports in Table 14 that the city managed to raise the proportion of households served by the garbage collection system from 77% in 1990 to 96.5% in 2000 even if this was already a high penetration rate by other LGU's standards.

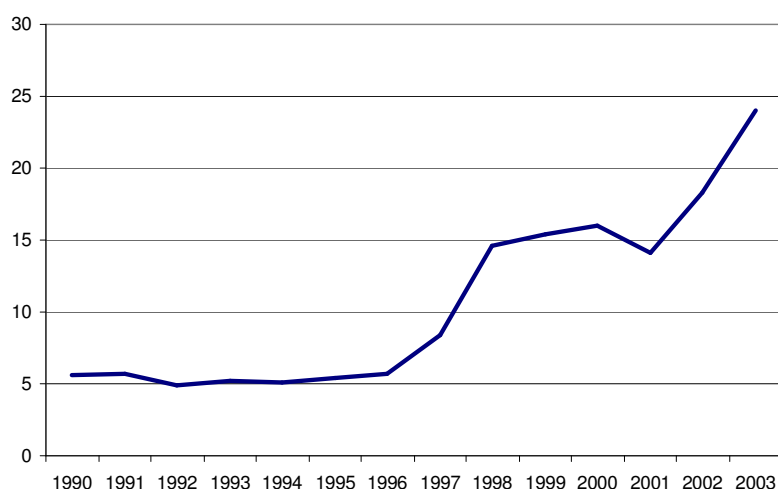
Table 14. Manner of garbage disposal, 1990 and 2000

	1990	2000
Total households	42623	43107
Picked up by garbage truck	76.95	86.45
Dumping in individual pit (not burned)	2.28	1.47
Burning	19.16	7.54
Composting (later used as fertilizer)	0.33	0.81
Burying	0.77	0.77
Feeding to animals	0.16	2.86
Others	0.36	0.09

Source: Census of Population and Housing 1990 and 2000

The city government ingeniously tacked the fees for garbage collection into the electricity bill to ensure prompt and consistent collection. It also adopted a fee-setting scheme that was attuned to the residents' capacity to pay and at the same time ensured the program's financial sustainability. Higher tariff rates are being levied on commercial establishments relative to residential households, with adjustments for size and kind of activity. Rate ranges are set by way of ordinances, ensuring transparency and local participation. When exigencies such as inflation, sustained fuel price increases, the closure of the military base hosted by the city, and the eruption of nearby Mt. Pinatubo were experienced, downward adjustments were made by way of executive orders. In like manner, during the early years, when the appropriate rates were still being determined, the tariffs were immediately raised to cover the initial operational deficits. Additionally, efficiency goals are served by the continuous evaluation of client profiles so that the fees charged are tailored to the volume of garbage generated.

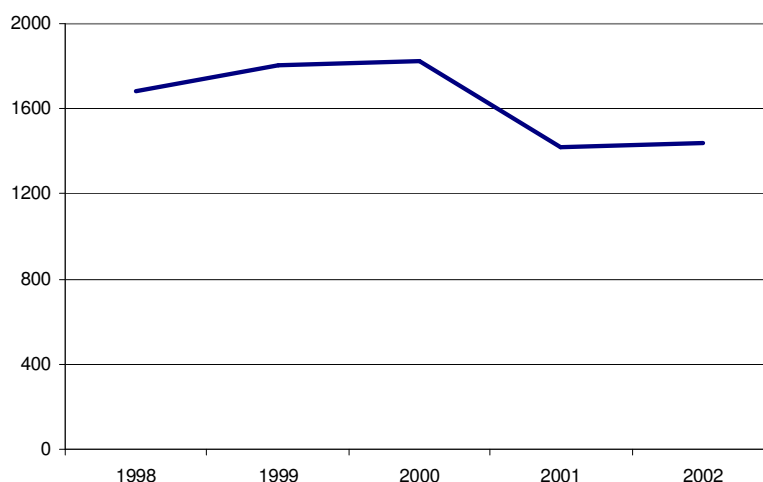
Figure 57. Garbage fee collections, 1990-2003 (in million pesos)



Source: Olongapo City ESMO

We also see that garbage collection fees were rightly adjusted to sustain cost recovery given increasing waste generation. The fee schedules were revised in July 1997 and October 2002 to raise fee collections to a level that would approximate cost. We can glean from Figure 43 the possible effect of the first revision in raising average fee collected per truckload of garbage in 1998 and the need to revise the fee schedule in late 2002 because of a decline in average collections per truckload. On the operational aspect, the city's Environmental Sanitation and Management Office has been coordinating with its counterpart from the City of Windsor in Ontario, Canada since 2000 for technical assistance on the improvement of the city's sanitary landfill.

Figure 58. Average garbage fee per truckload, 1998-2002 (in pesos)

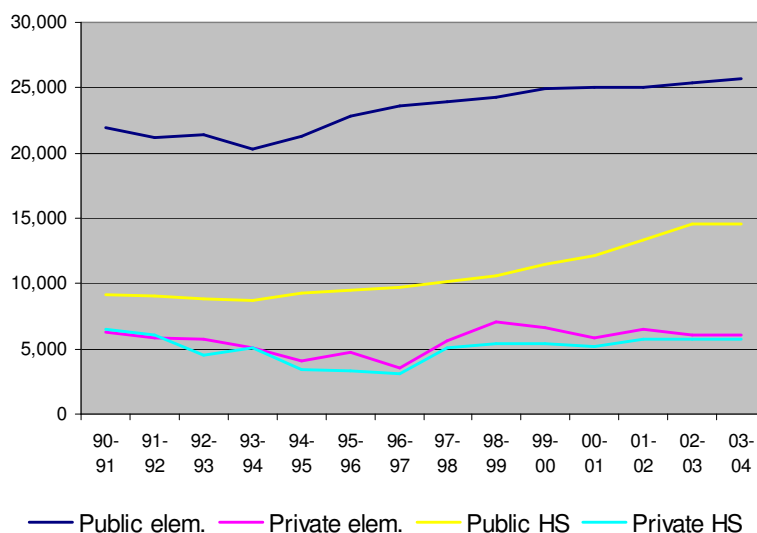


Source of basic data: Olongapo City ESMO

We now look at the impact of the crisis on the distribution of enrolment. One would expect that the decline of economic opportunities in the area during the crisis years

would translate to a shift in enrolment from public to private schools. We indeed find such a shift for both elementary and secondary schools in Figure 44, with effects that lingered until the school year of 1996-97. Resurgence in economic activity is the proximate cause for the rise in private school enrolment the next school year, enough for private elementary schools to attain pre-crisis enrolment shares that have been maintained until the most recent school year of 2003-04 (Figure 45). We see a similar occurrence with private high schools, but only in terms of absolute enrolment; the rise in enrolment in public high schools pushed private enrolment shares lower.

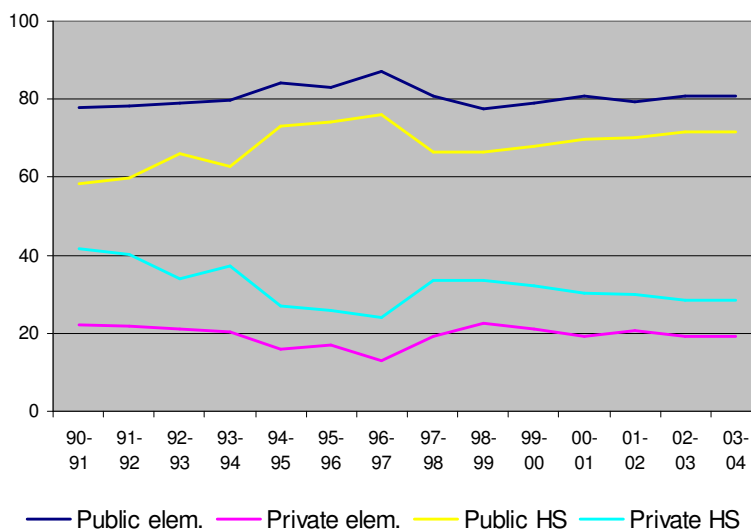
Figure 59. Enrolment in elementary and secondary schools,  
School Year 1990-91 to 2003-04



Source: Division of City Schools, Olongapo City

Note that since the dependency ratio stayed constant in the 1990s (Figure 17), the continued rise in public school enrolment after the crisis years imply improved access to education. The big gap in public elementary and secondary enrolment indicates the difficulty for relatively poorer households to continue sending their school-age members to the next stage in the educational ladder. In contrast, private elementary and secondary enrolment have been roughly equivalent. The city government's stake in this regard is the provision of public facilities to support higher participation in education of the school-aged population. Note that the LGC established a Special Education Fund (SEF) from the proceeds of an additional one percent levy on real property assessments to ensure the availability of funds for this purpose.

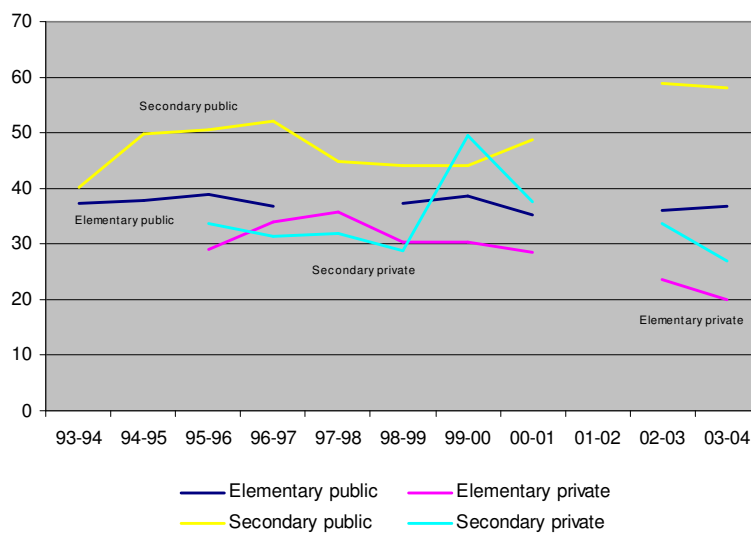
Figure 60. Distribution of enrolment in elementary and secondary schools,  
School Year 1990-91 to 2003-04 (in percent)



Source of basic data: Division of City Schools, Olongapo City

We look at the adequacy of facilities and personnel in the city's educational system in Figures 46 to 48. Missing data preclude us from having continuous series for the number of enrolment per classroom, class, and teacher from school year 1993-94 to 2003-04. Making do with what's available, we find that public schools generally had higher enrolment per classroom, with public secondary schools registering the highest ratios. This ratio was greater than 40 all throughout and even neared 60 as of late, undeniably worse than the standard 1:35 ratio deemed conducive for learning purposes. This suggests that classroom shortage in secondary schools is a problem that the city has not been able to contend with effectively.

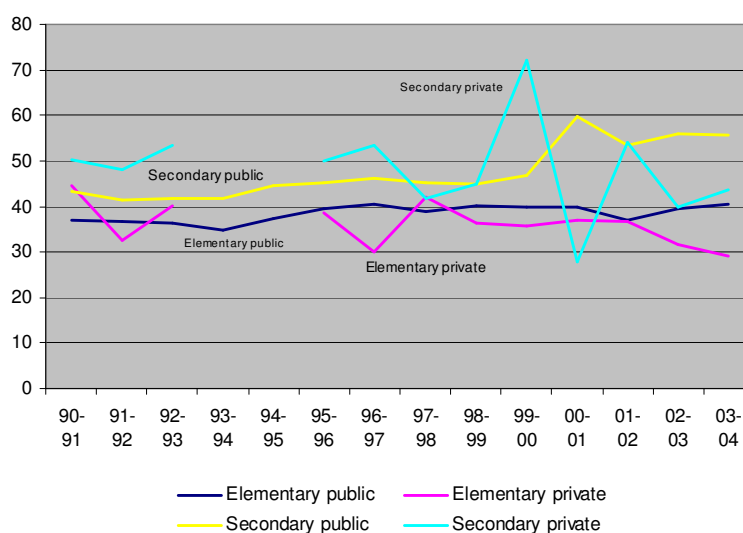
Figure 61. Enrolment per classroom, School Year 1993-94 to 2003-04



Source of basic data: Division of City Schools, Olongapo City

This measure doesn't distinguish, however, how many actual classes there are in each type of school, not to mention the fact that some classrooms are not available for its intended use for one reason or another. Indeed, one possible way out of a classroom shortage is the scheduling of one class in the morning and another in the afternoon. While public schools had ratios which were in line with the ratios in the previous table, we find that private schools had higher enrolment per class compared to its enrolment per classroom, indicating that this practice is being done in private schools. We see that public secondary schools again registered the highest ratio, and that this number rose since school year 2000-01. The volatility in the ratios for private high schools undermines its reliability, deterring us from making use of this information. Nevertheless, it is confirmed in here that there is an inadequacy in classroom facilities for public secondary schools.

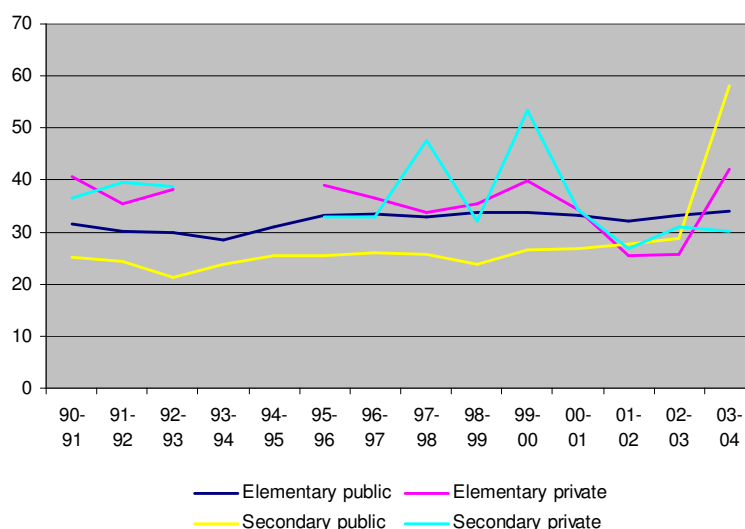
Figure 62. Enrolment per class, School Year 1993-94 to 2003-04



Source of basic data: Division of City Schools, Olongapo City

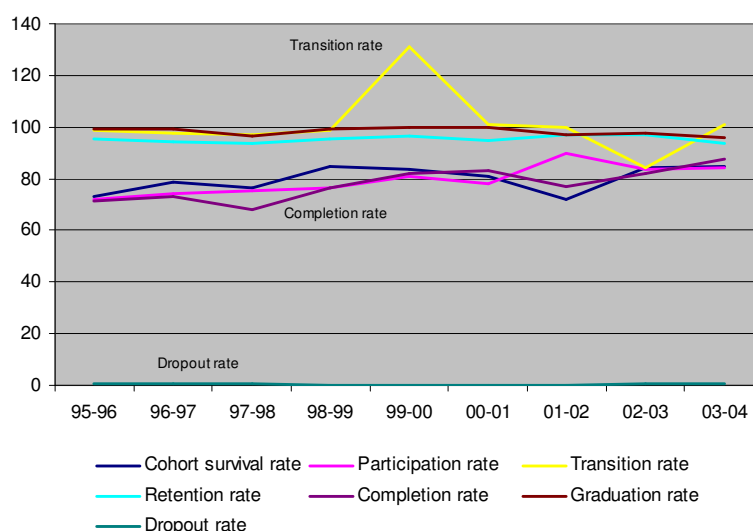
Moving on to enrolment per teacher, we see that the city has done better in this regard. Public schools have had ratios that are lower and less variable than those in the previous figures, while private schools generally had higher ratios than their public counterparts. Also note that in most years, the ratios are satisfactorily lower than 40, with the lowest ratio recorded by public secondary schools (excluding the seeming blip in the data for the last school year). This suggests that even if physical facilities for public schools were insufficient, teacher items were adequately provided for. This might be one reason why the performance indicators which we look into next were quite satisfactory.

Figure 63. Enrolment per teacher, School Year 1993-94 to 2003-04



Source of basic data: Division of City Schools, Olongapo City

Figure 64. Performance indicators for elementary schools, School Year 1995-96 to 2003-04 (in percent)



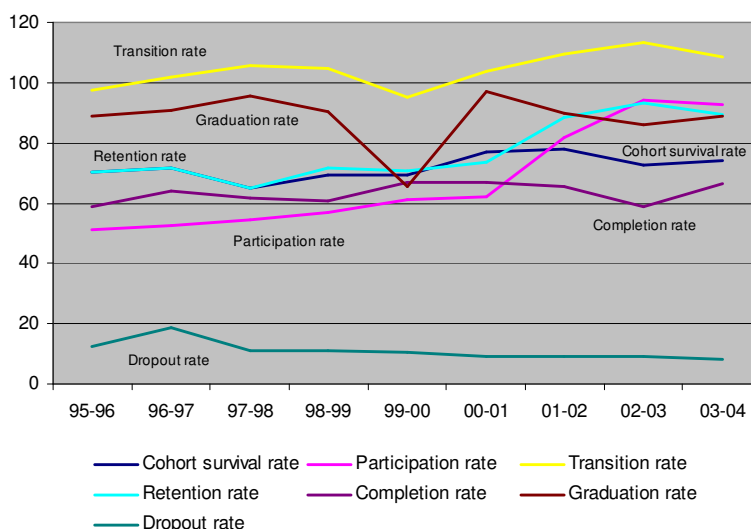
Source: Division of City Schools, Olongapo City

We see in Figures 64 and 65 that the participation rate for both elementary and secondary schools has been increasing, in tune with our previous observation. Together with the retention rate, this is markedly seen in secondary schools in the last three school years. The most probable reason for this is the growing emphasis on the completion of basic education for prospective employment in the freeport. Also note that various performance indicators such as the cohort survival rate, retention rate, dropout rate, completion rate, transition rate, and graduation rate have been rather steady through time, with hints of improvement along the way (abstracting from what seems like abnormal

blips in the transition rate in elementary schools and in the graduation rate for secondary schools in school year 1999-2000).

Note that the performance indicators in secondary schools were lower compared to those in elementary schools. While it is really the case that education in the secondary level is taken less seriously than primary education, especially for poor households, since opportunities for employment, however meager, are more available at this age, the shortage in physical facilities we saw earlier may possibly exacerbate this outcome.

Figure 65. Performance indicators for secondary schools,  
School Year 1995-96 to 2003-04 (in percent)



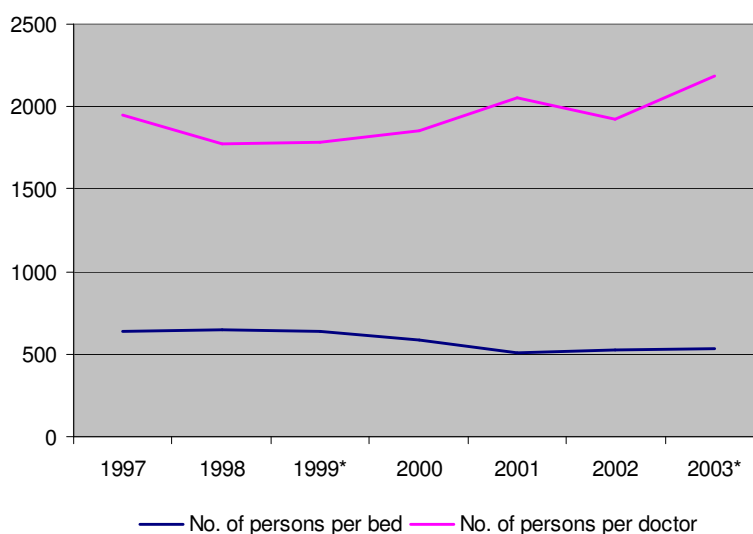
Source: Division of City Schools, Olongapo City

Apparently, what the city focused on was the skills inventory and then training of its working-age residents. For this purpose, it established a training and employment center as early as 1994 and a full-fledged city college in 1999. The end view here was to provide for the immediate labor needs of companies inside the freeport, given that these locators had specific skill requirements. This resulted in no small way to the improvement of the employment picture as we saw in an earlier section.

Moving on to health service delivery, we find that coverage has been rather weak at roughly 2,000 persons per doctor and 500 persons per bed (Figure 66). These rates are rather low relative to recommended international standards. Note the increase in recent years of the persons per doctor ratio while the persons per bed ratio improved; indicative that medical facilities have kept pace with population increases even if the number of physicians has not. The city government played a significant part in this because the city hospital has been doing much of the investment lately, and this went to the construction of additional service wards to support income generation efforts. Since it is the lone fully-equipped tertiary hospital in the greater Olongapo area, it leverages this natural advantage to encourage visits by paying clients to lessen the burden on the city's finances, given that the fee structure in the city hospital subsidizes indigents. It has also been

coordinating with various HMOs to market its executive check-up program.

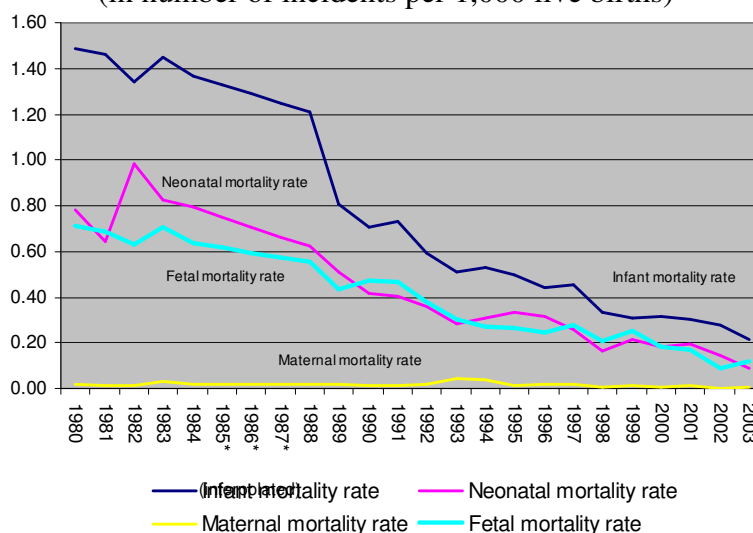
Figure 66. Population coverage of health service  
(public and private), 1997-2003



Source of basic data: Olongapo City Annual Report, various years

We present vital health statistics on the infant, neonatal, and fetal mortality rates in Figure 67 and note that they have markedly declined from the 1980s up to present, showcasing breakthroughs in public health care management. It is instructive to mention that all the city's barangays have health centers that have been upgraded to Sentrong Sigla standards. A three-year grant from the UNFPA that will commence in 2005 will further allow the city to improve health access in its poorest barangays.

Figure 67. Health indicators, 1980-2003  
(in number of incidents per 1,000 live births)

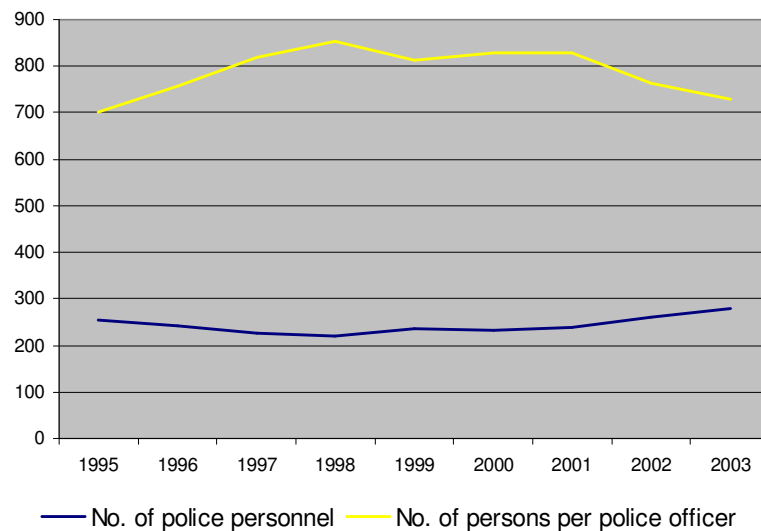


Source of basic data: Olongapo City Health Office



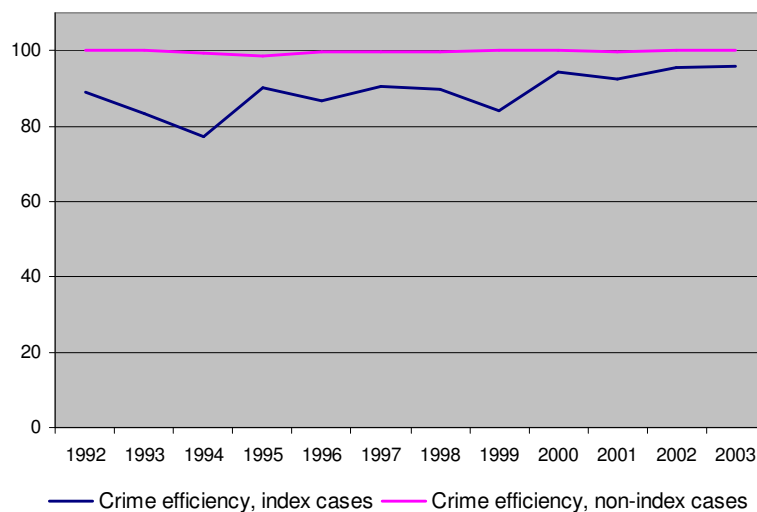
We now look at the adequacy of protective services, seeing that the population coverage ratio of population to police personnel has been rather high by international standards (1:500) at above 700 in Figure 68. The increase in personnel in recent years resulted in a decline in this ratio. If we juxtapose this with the performance of the city police force in Figure 69, we see that its performance has still been exemplary given the increase in the number of non-index crimes in Figure 70. Note that the solution efficiency for index crimes is lower, but this stems from the fact that index crimes involve lengthier litigation and thus preclude swift resolutions. Nonetheless, at above 80% it is still a feat.

Figure 68. Population coverage of police service, 1995-2003



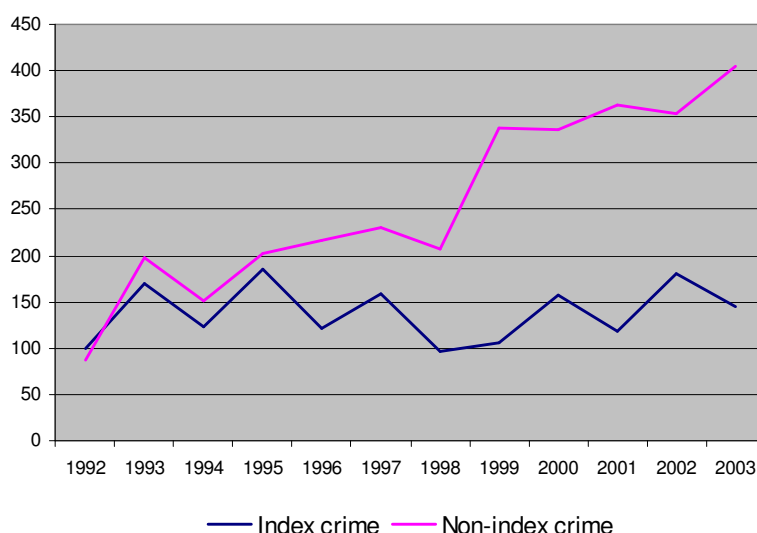
Source of basic data: Olongapo City Annual report, various years

Figure 69. Crime efficiency, 1992-2003  
(in percentage of crime incidents solved)



Source: Olongapo City Annual Report, various years

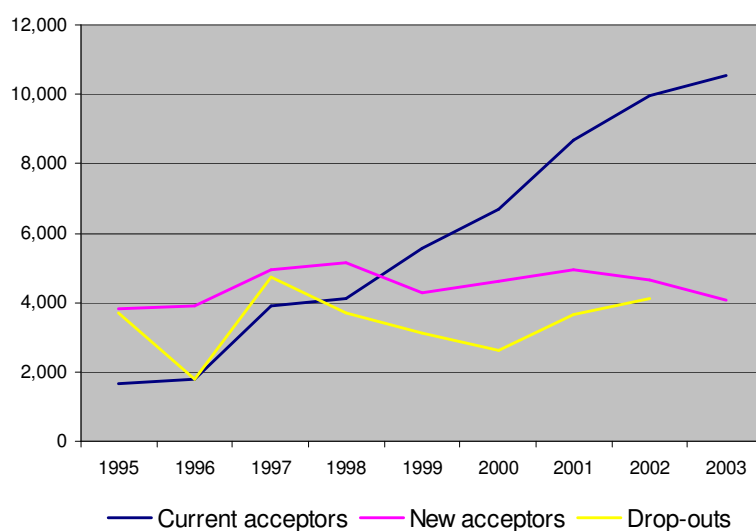
Figure 70. Crime prevalence, 1992-2003 (in number of incidents)



Source: Olongapo City Annual Report, various years

Lastly, moving on to population policy, we find that the city has been pursuing a family planning campaign that sought to encourage responsible parenthood and safeguard reproductive health. The campaign resulted in a steady rise in the number of current acceptors to just above 10,000 in 2003, with new acceptors consistently above 4,000 starting in 1996. Although drop-outs (defined as the difference between the number of current acceptors in the next year and the sum of current and new acceptors) are also significant, we see hints that the LGU Performance Project (LPP) in 1999 and 2000 resulted in a decline in the number of drop-outs.

Figure 71. Outcome of family planning campaign, 1995-2003 (in number of acceptors)



Source: Olongapo City Health Office

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