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The Nature of Kwun Tong as an Industrial Community: An Analysis of Economic Organisations

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THE NATURE OF KWUN TONG AS AN INDUSTRIAL COMMUNITY: AN ANALYSIS OF ECONOMIC ORGANISATIONS

by

Victor Mok

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I. Introduction

1. Scope of Study

It is only a matter of fifteen years an undeveloped area of scattered villages and settlements of squatters' cottages on the east side of the Kowloon Peninsula has been transformed into an urban area thriving with industrial activities. Kwun Tong, as it has come to be known, is now a major industrial zone in Hong Kong with a population of about 450,000 according to the latest (1971) census. From the very start, its development has been "planned" -- stretches of flat land were created by reclamation and levelling of foothills to provide space for a simultaneous development of industrial, commercial and residential areas. In Hong Kong this is the first venture of its kind, and now few people can deny that in many ways it is a success. However, this does not mean that all expectations have been fulfilled and everything has worked out according to plan. We may ask an interesting question: if we were to do it all over again, should we do it in exactly the same way as we did? Such an assessment is very important because further development of satellite towns in Hong Kong is inevitable. The planning and development of Kwun Tong are valuable sources of experience for us to draw upon in formulating plans for similar projects in the future.

Kwun Tong is a new town, or is it? If we define a town as a self-contained community in which inhabitants carry on their social and economic activities mainly within its limits, there is little doubt that Kwun Tong is not. Even spatially it is not an easy task to delineate it from Kowloon. Then, is it just part of the latter? To answer this question, we have to look into its social and economic structure.

Inasmuch as Kwun Tong is a new industrial area developed with planning, it would be a tragedy if it turns out to be no more than a natural extension of a sprawling city and haunted by problems prevalent in the old areas. Assuming for a moment that this is indeed the case, the inevitable question is: why? In all fairness we cannot attribute this entirely to poor planning or lack of foresight, for there are fundamental reasons preventing Kwun Tong from being a self-contained community, plan or no plan. These factors govern the nature of Kwun Tong and its close relationship with the rest of Hong Kong. Its proximity to Kowloon, for instance. We need to pinpoint these factors and find out how they prevent the actual development of Kwun Tong from becoming what was envisaged by the plan. Perhaps, the original "plan" did not envisage much in the first place. It was vaguely conceived and had little idea of the complexity of problems and their possible consequences arising from the rapid growth of this new urban area. All it sought was to provide some usable land badly needed for all purposes, some social and economic overhead, and then let development take its natural course. If this were indeed the case, we can try to identify these problems and their causes. In either case, we can learn a great deal.

The purpose of this report is to study the economic aspect of this problem. We shall pay special attention to the industrial structure of Kwun Tong by making its factories our focal point of study. By analyzing their pattern and industrial activities, the use of their outputs, sources and employment of inputs, their mutual interdependence and their relationship with the economic infrastructure, we hope to gain more insight into the nature of this industrial community. Hopefully this will shed some light on the entire problem of development planning for more new areas and satellite towns in Hong Kong.

2. Historical Background of Kwun Tong

Geographically speaking, Kwun Tong is the area in Kowloon east of Kowloon Bay with Kwun Tong Town as its central area.[1] Prior to its development there was no industrial area as such in Hong Kong. Industrial and commercial establishments were intermingled with residential units, and it was a common scene (in many areas it still is) that factories were operated on the ground floors of buildings with the upper floors serving residential purposes. No doubt this was an inhabiting factor to Hong Kong's industrial development at a time when Hong Kong was emerging from an entrepot port into an industrial city. The outcry of industrialists for more and cheaper factory sites promoted the Government to appoint an Interdepartmental Committee in 1954 to study the matter. It was recommended that 140 acres of industrial land be provided by reclamation in Kwun Tong.

Kwun Tong then was still largely undeveloped. The scheme called for the levelling and terracing of foothills to the north of Kwun Tong to provide fill for reclamation; the reclaimed land then would become factory sites and the levelled areas would be provided for commercial and residential purposes. This entire area, when developed, was to be known as Kwun Tong Town.

Certainly this was not an easy task. Even though a lot of private investments could be attracted into the area for its overall development, the Government must provide the basic framework to make such investments profitable. Reclamation work started in mid-1954, and it was planned that it would be completed by 1957 along with water supply, electricity, road network and drainage. Therefore from the very beginning the plan already envisaged the building of a new town. There was to be some sort of balance among industrial, commercial and residential areas, and between industries and the

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[1] The other districts are: Ping Shek, Ngau Tau Kok, Jordan Valley, Kowloon Bay, Sau Mau Ping, Lam Tin, Yau Tong, Cha Kwo Ling and Lei Yue Mun.

economic infrastructure. Zoning was planned for the grouping together of different industries, and factories above a certain size were supposed to provide accomodation for their workers. In addition, part of the industrial land provided was for the construction of flatted multi-storey factory buildings for rental to small factories. And because of Kwun Tong's proximity to the Kai Tak Airport, only factories relying on electric power were allowed so as not to create smoke nuisance. All in all, Kwun Tong was a planned industrial town from the start as part of the decentralization plan for Hong Kong.

Part of the reclaimed land was auctioned off early 1956 but construction of factories was slow. Presumably industrialists were still waiting for the provision of ancillary services, which were slow in supply. Even in early 1960 it was reported that "Development of the new reclamation at Kun (sic) Tong is being hampered by the lack of public services. Roads which are unpaved and narrow create bottlenecks in certain parts of the area. Transportation facilities are inadequate -- at rush hours bus termini are crowded with workers. Conditions of sanitation are poor. The area is in urgent need of houses. The present supply of electricity and the scale of charges are certainly not helpful to industrial development".[1]

In the meantime, the original zoning plan was dropped, and factories were no longer required to provide accommodation for workers. The relaxation of these requirements was probably prompted by the government's decision to attract more factories into Kwun Tong as early as possible. Development began to take place in other districts of the greater Kwun Tong area. Most significant was the completion of a number of Resettlement and Government Low-Cost Housing Estates starting 1960. The Housing Society and the Housing Authority also provided Estates of better-class housing. No doubt this was an important factor in the development of Kwun

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[1] S.C. Chen, "Hong Kong's Industrial Needs", Far Eastern Economic Review, March 11, 1960. p. 503.

Tong as they provided it with an ample supply of local work force. An increasing number of factories also began to appear in these districts. By 1964 it seemed that Kwun Tong was well on its way in taking its shape. The transportation network, housing and public services were provided; social facilities, though inadequate, also began to multiply. In Kwun Tong Town alone, there were 197 registered factories in individual or flatted factory buildings employing 30,500 workers. However, still "it depends heavily on Kowloon for its facilities and social needs, and much more than half of the labour force comes from outside, in spite of the numbers resident in the district, apparently preferring the evils of the journey to the dullness of living at Kwun Tong".[2]

Reclamation went on and was completed in 1967, providing a total of 641 acres of land of which 154 acres were earmarked for industrial use.[3] Since then new reclamation work was started in Kowloon Bay adjacent to the Kai Tak Airport. By January 1971 there were altogether 1,449 registered factories employing 91,778 workers.[4] In the reclaimed area alone there were more than 800 registered factories employing 81,977 people.[5] The preliminary result of the latest census (1971) shows that there are 446,830 residents in the greater Kwun Tong area with about one-third of them living in Kwun Tong Town. Needless to say, Kwun Tong has become an industrial town in its own right.

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1 Hong Kong Annual Report, 1964.

2 R.H. Leary, "Rising from the Dust", Far Eastern Economic Review, April 16, 1964. pp. 179-181.

3 Hong Kong Annual Report, 1967.

4 Data supplied by Labour Department.

5 Data supplied by Labour Department. Figures were as of end of 1970.

3. Sources of Information

The Employment and Vacancies Statistics of the Labour Department lists all the registered factories in Hong Kong. This list provides the name of every factory, its address, the number of its employees and the type of industry to which it belongs. As of March 31, 1971, the total number of such factories located in Kwun Tong amounts to 1,552.[1] In its classification of industrial type, the Labour Department uses a 5-digit system, which is too detailed for our purpose. Relying on the first two digits, all the factories in Kwun Tong are regrouped into 15 industries as follows: (figures in parentheses are the first two digits used by the Labour Department)

1. Mining: mining and quarrying. (14)
2. Food: food, beverages and tobacco products. (20, 21)
3. Textiles: cotton, wool and synthetics. (23)
4. Apparel: garment, footwear (except rubber and plastic). (24, 41)
5. Wood: wood and rattan products including furniture. (25, 26)
6. Paper: paper products, printing and publishing. (27, 28)
7. Rubber: rubber products including footwear. (30)
8. Chemical: chemicals and chemical products. (31, 42)
9. Plastic: plastic products including footwear. (39)
10. Non-metallic: glass and other non-metallic mineral products except products of coal and petroleum. (33, 44, 45)
11. Basic Metal: iron, steel and non-ferrous basic products. (34, 46)
12. Fab. Metal: fabricated metal products except machinery and equipment. (35)
13. Machinery: machinery, equipment and instruments. (36, 37, 38, 47)
14. Others: toys, wigs and other misc. products. (48)
15. Services: transportation, repair, maintenance etc. (61, 71, 72, 84, 85, 86, 87)

The following table summarizes our basic information of the factories in Kwun Tong with respect to their industrial type and number of employees.

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[1] There is no way of knowing the number of unregistered factories. Presumably most of them are home industries still working under the putting-out system.

Table 1: Size Distribution of Factories in Kwun Tong

(in number of factories)

Industry	Number of Employees										
	Not in operation	1-9	10-19	20-49	50-99	100-199	200-499	500-999	1000-1999	2000-2999	Total
1. Mining	0	0	1	1	5	1	0	0	0	0	8
2. Food	1	15	5	3	4	2	2	1	0	0	33
3. Textiles	8	78	52	56	46	33	29	3	3	0	308
4. Apparel	4	59	21	21	28	14	13	3	0	0	163
5. Wood	4	47	19	10	6	1	1	0	0	0	88
6. Paper	2	20	20	21	14	3	0	0	0	0	80
7. Rubber	2	21	9	20	13	1	1	1	0	0	68
8. Chemical	1	4	5	3	2	3	1	0	0	0	19
9. Plastic	11	102	55	62	27	9	5	1	0	0	272
10. Non-metallic	1	4	0	5	2	1	0	0	0	0	13
11. Basic Metal	1	4	5	6	2	1	0	0	0	0	19
12. Fab. Metal	3	93	22	20	18	10	7	1	0	0	174
13. Machinery	4	28	19	36	28	16	13	4	1	1	150
14. Others	11	23	10	14	18	16	6	5	2	0	105
15. Services	5	19	10	12	5	1	0	0	0	0	52
Total	58	517	253	290	218	112	78	19	6	1	1552

Compiled from Employment and Vacancies Statistics of the Labour Department.

A sample of 35% was taken from the population of 1,552 factories in our survey.[1] Sampling was stratified according to industrial type, and the survey was conducted by interview with pre-coded questionnaires. Out of a total of 546, there were 200 unsuccessful interviews.[2] Thus we have an actual sample of 346 factories, or 22.2% of the population.

Table 2: Population and Sample in Kwun Tong Factory Survey

(in number of factories)

Industry	Population (P)	Sample (S)	S/P (%)
1. Mining	8	0	0
2. Food	33	8	24.2
3. Textiles	308	77	25
4. Apparel	163	42	25.7
5. Wood	88	21	23.8
6. Paper	80	18	22.5
7. Rubber	68	12	17.7
8. Chemical	19	2	10.5
9. Plastic	272	53	19.5
10. Non-metallic	13	5	38.4
11. Basic Metal	19	14	73.6
12. Fab. Metal	174	26	14.9
13. Machinery	150	16	10.7
14. Others	105	38	36.2
15. Services	52	11	21.1
Total	1552	345*	22.2

* One factory failed to identify its industrial type.

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1 Even though 58 factories were listed as "not in operation", in fact a number of them were operating during the time of our survey. Therefore they were included in our sampling process.

2 The reasons for unsuccessful interviews are: factory moved or closed, manager not in, reject, can't find address, promised to answer by mail but actually not, etc.

The last column shows that for some industries the actual sampling ratio is substantially different from the average. Some of these are due to smallness of sample sizes and especially high (as in the case of the Non-metallic industry) or low (as in the case of the Mining and Chemical industries) rate of successful interviews. The Machinery industry also suffers from low successful interviews. Moreover, differences can also be attributed to inconsistent reporting. In our survey respondents are asked to identify the industrial type of their factories. Their answers might not be consistent with those under the classification of the Labour Department from which we obtain information on the entire Kwun Tong factory population. This is especially true for some closely related industries. The high ratio for the Basic Metal industry and low ratio for the Fab. Metal industry is a case in point. The element of time could also be a factor. The list supplied by the Labour Department was for March 31, 1971, which was probably based on information towards the end of 1970;[1] and our survey was conducted in August 1971. Considering the flexibility of small factories, six to eight months is plenty of time to cross the line from one industry to another which is similar in nature. Finally, when respondents were not quite sure, they tended to answer "Others". This explains the high sampling ratio of this industry.

In our interviews, respondents were mostly owners, their authorized spokesmen or managers of factories. With respect to the questionnaire, it contained 160 items on various subjects concerning the owner and his ideas, the history of the factory, its internal organization and communication pattern, products and markets, input factors, its relationship with the Government and factories both within and outside of Kwun Tong, problems of transportation, housing etc. Based on information from this cross-

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[1] The Labour Department conducts a quarterly survey of registered factories.

section of factories, this study will concentrate on those aspects relating to the industrial structure of Kwun Tong.

A word of caution should be given here with respect to quantitative answers. Some of them can be considered quite accurate, such as the number of employees, the size of the factories in terms of space etc. However, others are probably much less so. For instance, there are a number of reasons for which the respondent might not be willing or able to disclose the value of capital and output of his factory. This is why in the questionnaire very often we sought answers in percentages instead of absolute values, and in our analysis we frequently use the numbers of factories and percentages as indicators. In case absolute values are used, this word of caution should be borne in mind.

II. Size Distribution of Factories in Kwun Tong

There are a number of size indicators for factories, namely the number of employees, physical size, output and capital value. In this study, we shall rely heavily on the first one. This is because it is the size indicator most commonly used in similar studies. Not only that it is much more precise, but also it is economically more significant for the purpose of inter-industry comparison. Moreover, we have both population and sample information to work on in the present study. As for the other indicators, we have to rely exclusively on sample information. Regarding the physical size of factories, our sample information is probably accurate. It is not difficult to tell the size of a factory in terms of square feet, and probably there is little reluctance for the respondent to disclose such information. But this is not so when we come to output and capital. Bearing these in mind, we shall use these indicators only as references.

1. Number of employees

Our first task here is to classify the factories into small-, medium- and large-sized factories. Since there is no generally accepted standard, any way of classification will have to be arbitrary. We shall define small factories as those with less than 50 employees,[1] and medium-sized factories as those with employees from 50 to 199.[2] Those having 200 or more employees are considered large.

The following table shows the size distribution in percentages of the population of 1,552 factories according to

[1] This is also the criterion used by D.J. Dwyer and Lai Chuen-Yan in The Small Industrial Unit in Hong Kong: Patterns and Policies. (University of Hull, 1967).

[2] In his 1972-1973 Budget Speech, Mr. Haddon-Cave announced a government plan to extend loans to small- and medium-sized factories which included factories having less than 200 employees.

this classification. Percentages of employees in each category are also estimated to show the distribution of employees in these categories.[1]

Table 3: Distribution of Factories and Employees

Industry	% of factories			% of employees		
	small	medium	large	small	medium	large
1. Mining	25.0	75.0		8.6	91.4	
2. Food	71.9	18.7	9.4	10.9	26.0	63.1
3. Textiles	62.0	26.3	11.7	10.9	29.5	59.6
4. Apparel	63.5	26.4	10.1	10.8	34.0	55.2
5. Wood	90.5	8.3	1.2	47.5	33.1	19.4
6. Paper	78.2	21.8		42.8	57.2	
7. Rubber	75.8	21.2	3.0	29.4	35.6	35.0
8. Chemical	66.7	27.8	5.5	17.1	52.3	30.6
9. Plastic	83.9	13.8	2.3	37.1	36.1	26.8
10. Non-metallic	75.0	25.0		39.2	60.8	
11. Basic metal	83.3	16.7		50.1	49.9	
12. Fab. metal	78.9	16.4	4.7	19.6	37.8	42.6
13. Machinery	56.9	30.1	13.0	9.4	25.3	65.3
14. Others	50.0	36.2	13.8	5.6	28.0	66.4
15. Services	87.2	12.8		55.6	44.4	
Total	70.9	22.1	7.0	15.9	32.3	51.8

Estimated from data in Table 1.

In the table above, it is obvious that the factories in Kwun Tong are predominantly small. More than 70% of them belong to this category; in number they are ten times that of large factories. Only in the Textiles, Apparel, Machinery and Others industries,[2]

[1] By using the mid-point of each interval in Table 1, we first estimate the number of employees in each cell. They are then pooled together to form the number of employees in each category.

[2] The "Others" industry is dominated by wig factories.

more than 10% of the factories are large. These are also industries with relatively more medium-sized factories. In a number of industries, there are even no large factories; they are dominated by small factories, except in Mining.

On the other hand, more than 50% of all employees work in large factories. Again in the Textiles, Apparel, Machinery and Others industries, there are especially high proportions of employees working in large factories. For these industries, such proportions in both small and medium-sized factories are relatively low. The Food industry also has a high percentage of employees working in large factories. Considering its large number of small factories, this indicates that in this industry many small factories coexist with a few very large ones. To varying degrees, this is also true in the Fab. Metal, Rubber, Chemical, Wood and Plastic industries.[1] As for the rest, the dominance by medium-sized factories is outstanding only in Mining; and in Basic Metal and Services, more than half of all employees work in small factories. The average number of employees in each industry is estimated as follows:

Table 4: Average Number of Employees Per Factory

Industry	Employees	Industry	Employees
Others	141.7	Fab. Metal	43.9
Machinery	121.1	Non-metallic	40.9
Textiles	94.4	Plastic	35.6
Apparel	77.3	Paper	33.4
Food	71.8	Basic Metal	33.2
Mining	71.4	Service	25.2
Chemical	63.5	Wood	21.5
Rubber	47.6	Total	68.4

Estimated from data in Table 1.

[1] Referring also to Table 1, we see that in Food, 3 factories (out of 33) employ 63.1% of the total; in Wood, 1 factory (out of 88) employing 19.4; in Rubber, 2 factories (out of 68) employing 35%; in Chemical, 1 factory (out of 19) employing 30.6%; in Plastic, 6 factories (out of 272) employing 26.8%; and in Fab. Metal, 8 factories (out of 174) employing 42.6%.

In summary, we can in very general terms classify these industries into four groups with respect to their factory size and distribution. The Textiles, Apparel, Machinery and Others industries form one group. Even though small factories are largest in number, there are still many medium and large factories. This results in higher average number of employees per factory in these industries. Mining is a class of its own; it is dominated by medium-sized factories. The third group consists of the Food, Chemical, Rubber, Plastic, Fab. Metal and Wood industries. In number, they are dominated by small factories; but, a few large factories in each industry manage to employ substantial proportions of the work force. This implies that there exists a sharp contrast between traditional and modern factories in these industries. In this group, the average number of employees ranges from 71.8 in Food, which is comparable to Mining, to 21.8 in Wood, which is actually the lowest among all industries. The rest, i.e., the Non-metallic, Basic Metal, Paper and Service industries, belong to the last group; they all have average number of employees of less than 50 and have no large factories.

From our sample, which is stratified according to industry alone, we have the following size distribution.

Table 5: Distribution of Factories and Employees

Industry	% of factories			% of employees		
	small	medium	large	small	medium	large
2. Food	75.0	25.0		18.0	82.0	
3. Textiles	65.8	27.6	6.6	12.3	34.6	53.1
4. Apparel	71.4	16.7	11.9	12.0	19.4	68.6
5. Wood	90.5	9.5		68.3	31.7	
6. Paper	77.8	22.2		50.5	49.5	
7. Rubber	83.3	16.7		28.4	71.6	
8. Chemical	100.0			100.0		
9. Plastic	83.0	17.0		34.9	65.1	
10. Non-metallic	100.0			100.0		
11. Basic Metal	92.9	7.1		61.8	38.2	
12. Fab. Metal	69.2	7.7	23.1	4.3	5.2	90.5
13. Machinery	40.0	33.3	26.7	0.8	12.2	87.0
14. Others	71.1	18.4	10.5	15.6	22.2	62.2
15. Services	72.7	27.3		22.9	77.1	
Total	73.9	19.1	7.0	14.5	26.5	58.9

Estimated from Kwun Tong Factory Survey data. Mining is excluded because there are no Mining factories in our sample.

In total, 73.9% of our sample factories are small, employing 14.5% of all employees. For large factories the respective percentages are 14.5% and 58.9%. All these are remarkably close to those from our population information.[1] The percentages for individual industries are not entirely comparable to those in Table 3 because of sampling. However, the Textiles, Apparel, Machinery and Others still stand out as industries with more large factories employing higher percentages of the work force. The Fab. Metal industry also belongs to this group. The following shows the average size of factories in each industry.

[1] See last line in Table 3.

Table 6: Average Number of Employees Per Factory

Industry	Employees	Industry	Employees
Machinery	245	Plastic	32.5
Fab. Metal	165.7	Basic Metal	28
Others	97.2	Rubber	26
Apparel	91.8	Wood	22.4
Textiles	88	Chemical	19.8
Services	35.2	Non-metallic	6.9
Food	34.1		
Paper	33.4	Total	77.6

Estimated from Kwun Tong Factory Survey data.

The overall sample mean is 77.6, compared to the population of 68.4 in Table 4 above. Due to sampling, there are serious deviations from the population means in some cases. The rank correlation coefficient between the population and sample means is 0.55. Combining the information from Tables 5 & 6, we can tentatively call the Machinery, Apparel, Textiles, Others, and probably Fab. Metal industries the large-scale industry in Kwun Tong.

2. Physical size

In our sample, 341 factories give information on their sizes in terms of square feet. Out of the total, 194 of them (56.9%) are below 5,000 sq. feet, and only 43 (12.6%) are above 20,000 sq. feet. In fact, there are 134 factories (39.9%) with a space of less than 2,000 sq. feet, and only 13 (3.8%) are larger than 50,000 sq. feet.

Table 7: Size Distribution of Factories

(in number of factories)

Industry	Size of factories (in sq. feet)						Total
	less than 5,000		5,000-19,999		20,000 & above		
Food	5	(62.5)	2	(25.0)	1	(12.5)	8
Textiles	34	(44.1)	31	(40.3)	12	(15.6)	77
Apparel	24	(57.1)	14	(33.3)	4	(9.5)	42
Wood	14	(66.7)	4	(19.0)	3	(14.3)	21
Paper	9	(50.0)	7	(38.9)	2	(11.1)	18
Rubber	9	(75.0)	3	(25.0)			12
Chemical	2	(100.0)					2
Plastic	35	(64.8)	16	(29.6)	3	(5.6)	54
Non-metallic	4	(100.0)					4
Basic Metal	7	(50.0)	5	(35.7)	2	(14.3)	14
Fab. Metal	16	(61.5)	4	(15.4)	6	(23.0)	26
Machinery	8	(53.3)	2	(13.3)	5	(33.3)	15
Others	22	(57.9)	13	(34.1)	3	(7.9)	38
Services	5	(50.0)	3	(30.0)	2	(20.0)	10
Total	194	(56.9)	104	(30.5)	43	(12.6)	341

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages within each industry.

For individual industries, only in Textiles we find less than one half of the factories in the lowest category, while the Apparel, Paper, Basic Metal, Machinery, Others and Services industries also have relatively less smaller factories. On the other hand, there are still a number of industries having more than one-tenth of factories in the upper category. In fact, for Basic Metal, Fab. Metal and Machinery more than one-tenth of their factories have a floor space of more than 50,000 sq. feet.[1]

[1] Not seen in Table 7.

Because of different factor intensities, the pattern of factory size of various industries according to floor space is not entirely comparable to that according to the number of employees. However, we should point out that the large-scale industries according to the number of employees are also among those with relatively larger factories according to floor space.

3. Other size indicators

Two other indicators of factory size, namely output and capital values, are now used as reference. Here we are on much shakier grounds. In addition to reasons mentioned earlier, we have to be very careful because the concepts for "output" and "capital" used here are not those normally used in economic analysis. The data we use are not derived from business or national income accounting statistics. There are more of a businessman's idea on the capital value of his factory and the value of its gross annual output.

Table 8: Gross Annual Output of Factories

(in number of factories)

Industry	Gross Annual Output						Total
	less than $500,000		$500,000-$5,000,000		above $5,000,000		
Food	4	(57.1)	2	(28.6)	1	(14.3)	7
Textiles	29	(46.8)	22	(35.5)	11	(17.7)	62
Apparel	18	(50.0)	11	(30.6)	7	(19.4)	36
Wood	11	(78.6)	3	(21.4)			14
Paper	10	(58.8)	7	(41.2)			17
Rubber	7	(63.6)	3	(27.3)	1	(9.1)	11
Chemical			2	(100.0)			2
Plastic	20	(44.4)	24	(53.3)	1	(2.2)	45
Non-metallic	5	(100.0)					5
Basic Metal	7	(53.8)	3	(23.1)	3	(23.1)	13
Fab. Metal	13	(56.5)	7	(30.4)	3	(13.1)	23
Machinery	6	(46.2)	4	(30.8)	3	(23.0)	13
Others	14	(48.3)	9	(31.0)	6	(20.7)	29
Services	6	(66.7)	2	(22.2)	1	(11.1)	9
Total	150	(52.5)	99	(34.6)	37	(12.9)	286

Compiled from Kwun Tong Factory Survey Data. Figures in parentheses are percentages within each industry.

There are 286 responses to the question on gross annual output. More than one half of the factories report that their gross annual outputs amount to less than half a million dollars, and only about one-eighth have gross annual outputs amounting to more than 5 million dollars.

For individual industries, only in the Textiles, Apparel, Chemical, Plastic, Machinery and Others there are fifty percent or less of the factories in the lower category. Moreover, in a number of industries more than one half of the factories report that they actually have gross annual outputs of less than $200,000.[1] Factories in the Chemical and Plastic industries tend to concentrate in the middle category. On the other hand, higher percentages of factories are found in the upper category of the Textiles, Apparel, Basic Metal, Machinery and Others industries.

With respect to capital value, 308 factories give the following answers.

Table 9: Capital Value of Factories
(in number of factories)

Industry	Capital Value						Total
	less than $200,000		$200,000-$1,000,000		above $1,000,000		
Food	4	(66.7)	1	(16.7)	1	(16.7)	6
Textiles	41	(55.4)	21	(28.4)	12	(16.2)	74
Apparel	22	(58.0)	11	(28.9)	5	(13.1)	38
Wood	11	(73.3)	4	(26.7)			15
Paper	7	(46.6)	6	(40.0)	2	(13.4)	15
Rubber	7	(58.3)	5	(41.7)			12
Chemical	1	(50.0)	1	(50.0)			2
Plastic	32	(62.8)	17	(33.3)	2	(3.9)	51
Non-metallic	4	(100.0)					4
Basic Metal	6	(42.8)	4	(28.6)	4	(28.6)	14
Fab. Metal	15	(62.5)	4	(16.7)	5	(20.8)	24
Machinery	6	(46.1)	3	(23.1)	4	(30.8)	13
Others	18	(56.3)	10	(31.3)	4	(12.4)	32
Services	4	(50.0)	2	(25.0)	2	(25.0)	8
Total	178	(57.8)	89	(28.9)	41	(13.3)	308

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages within each industry.

[1] They are the Food, Wood, Non-metallic and Basic Metal industries. Figures are not indicated in Table 8.

In total, close to sixty percent of our sample of factories have a reported capital value of less than $200,000, and little more than one-eighth have a reported capital value of more than a million dollars. Only in the Paper, Basic Metal and Machinery industries less than fifty percent of the factories belong to the lower category. In fact, in many industries there are fifty percent or more factories having reported a capital value of less than $100,000.[1] Machinery stands out as the industry having most factories (relatively speaking) in the upper category, with the Basic Metal, Services and Fab. Metal industries also having more than twenty percent of their factories in this category. In our sample, eight factories have a reported capital value of more than five million dollars; they are in the Textiles, Apparel, Paper, Fab. Metal, Others and Services industries. The largest one is in Fab. Metal, which has a reported capital value between twenty to thirty million dollars.[2]

4. Concluding remarks

Our above analysis clearly indicates the predominance of small factories in the Kwun Tong industrial structure. If we define small factories as those having less than 50 employees and large factories as those having 200 employees or more, more than seventy percent of the factories in Kwun Tong are small and less than ten percent can be considered as large.

Furthermore, if we define a small factory as one having less than 5,000 square feet in space, or with a gross annual output of less than half a million dollars, or a capital value of less than $200,000, more than half of the factories in Kwun Tong are small. On the other hand, if we define a large factory as one

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[1] Figures are not reported in Table 9. These industries are: Food, Apparel, Wood, Rubber, Non-metallic, Fab. Metal and Services.

[2] These figures are also not reported in Table 9 above.

having at least 20,000 square feet in space, or producing at least five million dollars of gross output annually, or reportedly with at least a million dollars of capital, only less than fifteen percent of the factories in Kwun Tong can be considered as such.

We must remember that Kwun Tong is an industrial town. In fact, eighty-one percent of the factories in our sample are in Kwun Tong Town,[1] which was specially planned for industrial development. Therefore for the entire Hong Kong economy, the percentage for small factories should be somewhat higher and large factories somewhat lower.

By using various size indicators, consistently a number of industries are found to have relatively less small factories and more large factories. They are the Textiles, Apparel, Machinery, Others industries. To a lesser extent is the Fab. Metal industry. Even in these supposedly large-scale industries, small factories still dominate in number. Needless to say, the predominance of small factories in the other industries is even more remarkable.

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[1] According to Labour Department Statistics, eighty-three percent of the factories in greater Kwun Tong are in Kwun Tong Town.

III. Output -- Production and Market

As an industrial town, Kwun Tong is naturally a point of manufacture. We have already classified all the factories into fifteen industries (only fourteen in our sample) according to their products. In this section, we shall analyze the nature of their production, use of their products, markets and the seasonal variations of their production.

1. Nature of production

The Kwun Tong factories are characteristic of their specialization in production. The product range of each factory is surprising narrow. A question is asked in the questionnaire concerning the kinds of product manufactured by each factory, where a product is defined as "the output of a generally independent process of production", almost three quarters of the factories answer that they produce only one kind of product. This pattern is not limited to the small factories. In fact, in the Textiles industry, which is supposed to be relatively large in scale, we find the highest level of concentration. More than ninety percent of the factories answer that they produce only one kind of product.

Table 10: Kinds of Product Produced by Kwun Tong Factories (in number of factories)

Industry	Kinds of Product					Total
	1	2	3	4	5 & above	
Food	5	3	0	0	0	8
Textiles	71	4	1	0	1	77
Apparel	33	4	1	2	2	42
Wood	16	2	0	0	2	20
Paper	11	3	1	0	3	18
Rubber	9	0	1	0	2	12
Chemical	1	0	1	0	0	2
Plastic	34	7	0	2	11	54
Non-metallic	3	0	1	0	1	5
Basic Metal	10	2	0	0	2	14
Fab. Metal	13	3	3	0	7	26
Machinery	10	1	2	0	2	15
Others	32	4	1	0	1	38
Services	5	0	1	0	0	6
Total	253	33	13	4	34	337

Compiled from Kwun Tong Factory Survey data.

The table above shows that not in a single industry we find more than one half of the factories producing more than one kind of product as we previously defined. Only in the Plastic and Fab. industries there are (relatively)more factories which claim to produce five kinds of product or more.

A slightly different question produces the same result. Factories are asked what combination of finished products, semi-finished products and raw materials they produce. Out of 346 factories, 220 report that they produce entirely (100%) finished products, 77 produce entirely semi-finished products and 4 produce entirely raw materials. This means that there are only 35 factories which produce some combination of the three types of products.[1]

Thus, both results indicate the specialized nature of the factories in Kwun Tong. Each factory limits itself to the production of outputs not very differentiated in nature. In other words, there are very few multi-product firms. Probably, this is due to the fact that the majority of factories in Kwun Tong (and also Hong Kong) depend heavily on foreign markets and produce to order according to foreign specifications. This practice naturally limits their range of products. Moreover, the simple correlation coefficient between factory size (measured by number of employees) and kinds of product is 0.2031, meaning that there is some positive correlation between these two variables, i.e., the larger factories tend to produce more kinds of products.[2]

2. Export of output and markets

As the Hong Kong industries thrive largely on exports, we should also expect that the factories in Kwun Tong are heavily export-oriented. Of course, not all factories are of that sort, because many of them are needed to support the export industries by supplying them with raw materials and semi-finished products as

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1 Figures are from Kwun Tong Factory Survey.

2 Mid-intervals are used to compute the correlation coefficient, which in this case is significant at the 5% level by a F-test.

well as rendering them services, and still some others are needed to cater for local consumer demand. But the evidence of export-orientation is clear, especially for certain industries. About one third of the factories in our survey report that they have no export business, while about the same number report that all their products are exported.

Table 11: Export Orientation of Kwun Tong Factories

(in number of factories)

Industry	Exporting 80% of output or more		Exporting 20% of output or less		Total
Food	0		8	(100.0)	8
Textiles	35	(50.0)	29	(40.8)	71
Apparel	28	(71.8)	8	(20.5)	39
Wood	4	(20.0)	16	(80.0)	20
Paper	0		16	(89.0)	18
Rubber	8	(66.7)	4	(33.3)	12
Chemical	1	(50.0)	1	(50.0)	2
Plastic	35	(64.8)	15	(27.8)	54
Non-metallic	0		2	(40.0)	5
Basic Metal	1	(7.1)	8	(57.1)	14
Fab. Metal	14	(56.0)	10	(40.0)	25
Machinery	2	(12.5)	7	(43.7)	16
Others	19	(52.8)	13	(36.1)	36
Services	0		11	(100.0)	11
Total	147	(44.5)	148	(44.8)	330

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

In the table above we use "80% or more" and "20% or less" to categorize the degree of export orientation. The number of factories in these two categories are about the same in total, while in individual industries there are significant differences. The Apparel, Rubber and Plastic industries are clearly export-oriented, each with more than sixty percent of the factories in the upper and a substantially lower percentage in the lower category.

Even though the Textiles, Chemical, Fab. Metal and Others industries all have high percentages in the upper category, the number of factories (and thus the percentages) in the lower category are also large, meaning that a considerable amount of their products are intermediate goods to be used as inputs for local firms, or final consumer goods for local consumption. The rest are basically oriented to the local market (i.e. the Hong Kong market). These are the Food, Wood, Paper, Non-metallic, Basic Metal, Machinery and of course the Services industries.

In our analysis above, a number of industries are found to market a substantial proportion of their products locally, the degree of export orientation for Kwun Tong factories in general may not appear as high as we might suspect. Here we have to note that the analysis above is based on the number of factories, while their sizes are ignored. The correlation coefficient between factory size (measured by the number of employees) and percentage of output exported is only 0.1747; however, it is still significant at the 5% level,[1] implying that there is some positive correlation between these two variables. Thus, the overall export-orientation of Kwun Tong factories is actually higher than it first appears.

For those factories which report to have export business, a question is asked as to what extent they conduct their exports directly instead of through export merchants. The results for those industries having relatively samples are as follows.

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[1] Mid-intervals for both variables are used to compute the correlation coefficient. The significance test used is the F-test.

Table 12: Direct Exports of Kwun Tong Factories

(in number of factories)

Industry	Directly exporting 80% or more	Directly exporting 20% or less	Total
Textiles	17 (34.7)	17 (34.7)	49
Apparel	13 (43.3)	13 (43.3)	30
Rubber	2 (25.0)	5 (62.5)	8
Plastic	7 (16.7)	30 (71.4)	42
Fab. Metal	2 (12.5)	9 (56.2)	16
Machinery	4 (40.0)	2 (20.0)	10
Others	12 (50.0)	10 (41.6)	24

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective total.

In the seven industries listed, Rubber, Plastic and Fab. Metal are those more dependent on merchants in their exports. Remember that these are also the relatively small industries, whereas the others, which also happen to be the relatively large industries, tend to conduct their export business more by themselves. However, the correlation coefficient between factory size (measured by number of employees) and the percentage of direct exports is too small to be statistically significant.[1]

In general, overseas markets for the products of factories in Kwun Tong are quite well-diversified. Few factories report that they depend exclusively on one particular market.

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[1] It is only 0.0629. Mid-intervals for both variables are used for its computation.

Table 13: Overseas Markets for Kwun Tong Factories

(in number of factories)

Country	Percentage of total exports			Total
	40% & below	40%-80%	80% & above	
U.S.A.	33	39	41	113
U.K.	51	16	9	76
Japan	19	4	5	28
West Germany	43	5	5	53
Other Europe	41	13	7	61
Canada	33	3	1	37
Australia	36	4	1	41
South Africa	16	2	2	20
S.E. Asia	11	3	21	35
Latin America	13	2	1	16
All Others	19	6	2	27

Compiled from Kwun Tong Factory Survey data.

In our survey, 204 factories in Kwun Tong report that their products find outlets in overseas markets. The table above shows that more than half of them have exports going to the U.S. Other important markets are the U.K., other European countries, Australia, Canada and S.E. Asia. Products seem to be widely distributed, as in general most factories report in the "40% & below" category. Exceptions are the U.S.A. and S.E. Asia, where most factories export in the "80% & above" category. The dependence on such markets, especially the U.S.A. which is a very large market, may well subject such factories to wider fluctuation in their export business. Many factories have worked to avoid over-concentration, as around two-fifths of them report that in recent years they have increases in the number of their overseas markets, and only six have actual decreases.[1]

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[1] See Kwun Tong Factory Survey data.

3. Use of output in Kwun Tong

We have pointed out earlier that in Kwun Tong the products of a considerable number of factories are not for exports. These are intermediate and consumption goods for local use. By "local" we mean Hong Kong in general. It is interesting at this juncture to go one step further and ask the question that to what extent these products are catered to the needs of Kwun Tong itself. The answer to this question will enable us to assess the inter dependence of factories in Kwun Tong and further understand to what extent Kwun Tong is a self-contained industrial town.

In our Factory Survey, 150 factories answer that they have outlets for their products in the Hong Kong market, of which 51 report that they have no sales in Kwun Tong at all.[1]

Table 14: Use of Output in Kwun Tong

(in number of factories)

Industry	Kwun Tong's share in local (H.K.) sales		Total
	80% or more	20% or less	
Food	1 (33.3)	0	3
Textiles	3 (9.1)	25 (75.7)	33
Apparel	0	13 (100.0)	13
Wood	1 (8.3)	9 (75.0)	12
Paper	2 (11.1)	8 (44.4)	18
Rubber	1 (25.0)	2 (50.0)	4
Chemical	0	0	2
Plastic	1 (6.1)	11 (73.3)	15
Non-metallic	1 (33.3)	2 (66.7)	3
Basic Metal	2 (20.0)	4 (40.0)	10
Fab. Metal	1 (8.3)	9 (75.0)	12
Machinery	0	9 (90.0)	10
Others	0	7 (70.0)	10
Services	1 (20.0)	2 (40.0)	5
Total	14 (9.3)	101 (67.3)	150

Compiled from Kwun Tong Factory Survey data.

[1] Data from the Kwun Tong Factory Survey.

It should be noted here that in the table above the percentages in "80% or more" and "20% or less" are percentages of local sales, not total sales. That is to say, if we include export sales, the Kwun Tong shares will be lower, except for those factories which do not export at all. This points further to the limited use of the output of Kwun Tong's factories among themselves.

It is abundantly clear that very few factories depend heavily on Kwun Tong itself as the market for their outputs. In all, only 14 are found in the "80% or more" category.[1] Relatively speaking, only in the Food, Rubber, Non-metallic, Basic Metal and Services industries there are more factories in this category. These are the the intermediate and consumption goods industries. And yet, much more factories in these same industries depend heavily on markets outside of Kwun Tong, and this is even more so in the other industries. The high percentages of factories in the "20% or less" category witness the lack of linkages among them. In summary, this gives us the picture that Kwun Tong is a settlement of factories each producing goods mostly for use in Hong Kong (excluding Kwun Tong itself) and foreign markets and having little technical and economic relation with one another. It completely defies the idea of a regional balanced growth in any sense of the term. It is merely a point of manufacture, developed because of the general lack of industrial land in Hong Kong, and its present pattern of factories reflects the nature of the Hong Kong economy, of which Kwun Tong is part of it, which has developed under a policy of laissez-faire. We shall return to this point when we discuss the inputs of factories in Kwun Tong.

4. Overall use of output

In the previous section, we have used the number of factories in each category as the basis for our analysis. By using mid-intervals (percentages), we have estimated the average percentages of the various categories within each industry in the table below.

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[1] Of which 10 claim that all of their local sales are marketed in Kwun Tong, none of which is in Textiles.

Table 15: Use of Output of Kwun Tong Factories

Industry	% of Output for		
	Export	Kwun Tong	Rest of Hong Kong
Food	1.3%	65.8%	32.9%
Textiles	54.5	4.0	41.5
Apparel	76.4	0.1	23.5
Wood	19.5	9.3	71.2
Paper	5.0	34.3	60.7
Rubber	65.8	4.7	29.5
Chemical	45.0	8.3	46.7
Plastic	65.7	1.8	32.5
Non-metallic	34.0	26.4	39.6
Basic Metal	24.0	22.2	53.5
Fab. Metal	56.0	4.6	39.4
Machinery	33.7	3.3	63.0
Others	59.1	2.6	38.3
Services	0	15.4	84.6

Estimated from Kwun Tong Factory Survey data.

The general pattern is consistent with our analysis above - the Textiles, Apparel, Rubber, Plastic, Fab. Metal and Others industries are those highly oriented to foreign markets, whereas Food, Paper, Non-metallic and Basic Metal are those industries catering more to the local (Kwun Tong) economy. For some industries, such as Paper, Basic Metal, Machinery and Services, relatively high figures in the last column ("Rest of Hong Kong") are understandable because they are basic inputs for industries in Hong Kong. However, it should be pointed out here that in our estimation the figures in this column are residuals. The under-estimation of the figures in the first column ("Export") would result in higher figures in this column. Bearing this in mind, a few comments are in order with respect to the question of the importance of export for the factories in Kwun Tong.

First, in our estimation we have implicitly assumed that all factories within each industry are of the same size. However, we have pointed out earlier in this section that large factories tend to export higher percentages of their products. Therefore, the export percentages (first column) in the table above are under-estimates of the actual export proportions. The bigger the size differentiation among factories in a certain industry, the more serious the under-estimation becomes.

Second, our results are derived from answers given by the respondents whose knowledge of export percentages may not be complete. In view of the trade practices in Hong Kong, it is probable that some percentages of outputs reported to be marketed in the "Rest of Hong Kong" (third column) are eventually channelled to export markets. For this reason, the "export" figures (first column) in the table above are probably somewhat under-estimated.

Third, so far we have discussed only the export-orientation of individual industries. To estimate the degree of overall export-orientation, we have to find their weighted average. It is unfortunate that we do not have usable value figures to work with, but the number of employees can be used as a proxy. In our sample the six most export-oriented industries, namely Textiles, Apparel, Rubber, Plastic, Fab. Metal and Others, are estimated to employ close to 80% of all factory employees.[1] The overall degree of export-orientation must be close to those of these industries.

Therefore, finally, if we take all these considerations into account, we cannot escape from the conclusion that the Kwun Tong factories are highly export-oriented.

5. Seasonal pattern and capacity use

About one half of the factories in our Survey report to have pronounced seasonal changes in their production. They tend to concentrate in two types of industries: those having very low export proportions like Food and Paper, and those having very high export proportions like Textiles, Apparel, Rubber, Plastic and Others.

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[1] See Table 18 below.

In terms of quarters, the peak seasons for these industries are as follows:[1]

Food	2nd and 3rd quarter (of the year)
Paper	2nd and 3rd quarter
Textiles	2nd and 3rd quarter
Apparel	1st, 3rd and 4th quarter
Rubber	1st and 4th quarter
Plastic	2nd and 3rd quarter
Others	2nd, 3rd and 4th quarter

This pattern suggests that there is no one season in particular which is the peak or through season for all factories in Kwun Tong because of their varied nature. It also helps to stabilize the employment situation as workers can flow from industry to industry depending on their level of activities. Moreover, that certain highly export-oriented industries do show more pronounced seasonal variations in their production is consistent with the general impression that seasonal variations in industrial activities in Hong Kong and the flow of workers from industry to industry are governed to a considerable extent by external demand.[2]

In general, 1970 was a good year for business in Hong Kong. A question is asked in our questionnaire on the use of productive capacity for that year. Out of 333 answers, 170 report that their capacities were fully utilized. The use of capacity of industries with relatively large samples are as follows.

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1 Derived from Kwun Tong Factory Survey data.

2 Their effects on employment in Kwun Tong will be discussed also in Section IV - 2 below.

Table 16: Use of Capacity of Kwun Tong Factories (1970)

(in number of factories)

Industry	F (more than 90% utilized)	T (total)	F/T
Textiles	27	47	57.5%
Apparel	24	31	77.4%
Rubber	3	8	37.5%
Plastic	17	37	46.0%
Basic Metal	3	6	50.0%
Fab. Metal	6	14	42.8%
Machinery	5	10	50.0%
Others	15	22	68.2%

Compiled from Kwun Tong Factory Survey data.

It seems that the large-scale industries have higher percentages of factories with high capacity use.[1] However, these are also the industries with high export proportions. It is difficult to judge at this point whether high capacity uses are due to the size factor or the effects of exports. Presumably large factories are moe modern with heavier capital investments, and therefore the use of capacity can be more readily specified, whereas the smaller factories are more flexible in adjusting their capacity to market situations and thus their use of capacity is more difficult to define. This causes the comparison all the more difficult. On the other hand, the relationship between capacity use and export ratio is also difficult to trace, as seen in the table below.

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1 Using Mid-intervals, the capacity use of these industries (in 1970) are estimated as follows: Textiles - 88.3%; Apparel - 94.2%; Rubber - 86.9%; Plastic - 83.0%; Basic Metal - 78.3%; Fab. Metal - 82.5%; Machinery - 77.0%; and Others - 91.4%.

Table 17: Capacity Use and Export Proportion

(in number of factories)

% of output exported	Use of capacity					Total
	90% & above	80-90%	70-80%	60-70%	below 60%	
80% & above	84	21	19	9	10	143
60-80%	9	2	1	2	0	14
40-60%	5	0	2	0	1	8
20-40%	7	2	1	0	3	13
0-20%	4	2	3	0	0	9
Sub-Total	109	27	26	11	14	187
None	88	14	15	8	8	133

Compiled from Kwun Tong Factory Survey data.

It is not altogether clear that there is a difference in capacity use between the "export" and "non-export" factories; and within the export group, export and capacity use do not seem to correlate. The same pattern holds when factories are broken into various industries. A plausible explanation is that in a year of high economic activities generated by booming exports, secondary effects have also spilled over to the non-export industries. As a result, it becomes difficult to identify the relation between the capacity use and the export proportion of factories.

6. Concluding remarks

With respect to the production of the factories in Kwun Tong, there are two basic characteristics. One is the simplicity in their product lines. Most factories limit themselves to the production of only one or two kinds of product. This is true in virtually all industries. The other characteristic is the high degree of export orientation. It is especially so in the Textiles, Apparel, Rubber, Plastic, Fab. Metal and Others industries. In view of the fact that the general practice of export trade in Hong Kong is to fill orders according to foreign specification, dependence on foreign demand is consistent with the specialization of factories each in a few products.

It is found that size is a factor determining the kinds of product as well as the degree of export orientation of factories. Both the size of factories and the size of industries have positive correlations with the two variables mentioned above.

Except in a few industries, the local (Kwun Tong) use of the products of factories in Kwun Tong is surprisingly small. In other words, the degree of mutual interdependence among these factories is very low. Kwun Tong is a point of manufacture where factories are established mainly because industrial land is available. They cater mainly to foreign markets. For those industries which still market substantial proportions of their products in Hong Kong (Kwun Tong excluded), the consideration on transportation cost is by far overwhelmed by the availability of industrial land. As a result, the local (Kwun Tong) market is the least important consideration for the establishment of factories in Kwun Tong.

IV. INPUT -- LABOR AND EMPLOYMENT

In our earlier discussion, we have dealt with the problem of employment in connection with the size of factories and industries in Kwun Tong. We shall devote this section to discussing the overall industrial employment situation, the structure of employment relating to functional, age and sex groups, the pattern of employment fluctuation and turnover, and the source of work force for factories in Kwun Tong.

1. Industrial employment

From the data supplied by the Labour Department, it is estimated that as of March 1971 there were 102,242 employees in the registered factories in Kwun Tong. In our sample of 22.2% of all factories, the number of employees is 26,451, which is 25.9% of the total.[1] The percentage distribution among various industries is as follows.

Table 18: Distribution of Factory Employees by Industry (in percentages)

Industry	All factories	Sampled factories
Mining	0.6%	0%
Food	2.2	1.0
Textiles	27.7	25.3
Apparel	12.0	14.6
Wood	1.8	1.8
Paper	2.5	2.3
Rubber	3.1	1.2
Chemical	1.1	0.1
Plastic	9.1	6.5
Non-metallic	0.5	0.1
Basic Metal	0.6	1.5
Fab. Metal	7.3	16.3
Machinery	17.3	13.9
Others	13.0	14.0
Services	1.2	1.4
Total (in percentages)	100.0%	100.0%
(in numbers)	102,242	26,451

Estimated from Labor Department and Kwun Tong Factory Survey data.

[1] Interval means are used to estimate the total number of employees.

In the table above, figures for our "population" and "sample" seem to be remarkably close, except in the case of Fab. Metal.[1] Four major industries, Textiles, Apparel, Machinery and Others, together employ around 70% of the work force; and in Textiles alone, it is more than 25%. This indicates the importance of these few major industries in the overall industrial employment in Kwun Tong.

About 330 factories answer a group of questions concerning various types of employees classified into:

1. managerial (managers, section chiefs),
2. clerical,
3. technical (engineers, craftsmen, skilled workers),
4. general (semi-skilled and unskilled workers), and
5. seasonal workers.

Roughly speaking, part of type 3 and types 4-5 are the "production workers", which account for almost 90% of the entire work force.

Table 19: Distribution of Factory Employees by Type

Type	Number	Percentage
Managerial	1,526	6.0%
Clerical	1,222	4.7
Technical	4,989	19.3
General	15,096	58.4
Seasonal	1,996	11.6
Total	25,829	100.0

Estimated from Kwun Tong Factory Survey data by using mid-intervals and the average of 78 employees per factory. The small number of clerical workers is because that in 154 factories their responsibilities are assumed by proprietors or some other people. Some workers in the Managerial group are employers themselves.

[1] Reasons for this deviation, see discussion in Section I-3 above.

This picture from our sample seems to be in close conformity with the overall situation. According to data collected by the Labor Department, in 1971 there were 95,896 employees in all registered factories in Kwun Tong,[1] of which 11,656 (12.2%) were classified as "Managerial and Clerical" workers, and 84,240 (87.8%) were classified as "Manual" workers. It is difficult to tell in this broad classification to which category certain subgroups belong, the "engineers", for instance. Most probably it is classified into the managerial group. In any case, our estimation that about 90% of the total work force are "production workers" should be close to reality.

There are 334 factories reporting the male-female ratio of their employees. In general, large factories tend to hire higher proportions of female workers. Using Mid-intervals, we have estimated that for all reporting factories 51.7% of their employees are male, and 49.3% are female workers. This is quite close to another estimate based on information from all factories in Kwun Tong.[2] We therefore submit that the ratio between male and female factory workers in Kwun Tong is approximately half and half.

2. Employment variations

The economy of Hong Kong enjoyed a high level of activity starting in 1969 and developed into a threatening inflation in 1970. For Kwun Tong, there is also a high level of employment. But this does not necessarily mean stable employment for all industries due to labor mobility responding to demand and supply situations in the labor market. Moreover, various categories of employment show different patterns of variation because they belong to different segments of the labor market. In other words, there are non-competing

[1] Compared to our estimate of 102,242. See Table 18 above.

[2] According to data collected from Labour Department Statistics 1971, 54.4% of all Kwun Tong factories workers are female. Besides sampling bias, our lower estimates is probably due to the fact that we use 800 as the Mid-interval for the class of "500 or more" workers. This figure is probably too low because 2,000 is the upper limit for this class of (largest) factories according to the classification of the Labour Department. As the large factories tend to hire more female workers, our estimate for the number of female workers becomes relatively lower.

groups. And furthermore, employment changes also result from seasonal changes in the demand for labor, which is different in various industries.

In our survey, factories are asked to specify the turnover rates of their categories of employees, with the turnover rate defined as the ratio (in percentage) of the number of change in employment positions to the total number of employment positions over the period of a year (1970).

Table 20: Turnover Rate of Kwun Tong Factory Employees

(in number of factories)

Category of Employment	Turnover Rate								Total
	0%	0-5%	5-10%	10-20%	20-30%	30-40%	40-50%	above	
Managerial	281	16	4	4	3	0	0	1	309
Clerical	263	31	5	5	2	1	0	2	309
Production	131	30	21	15	22	18	17	68	322

Compiled from Kwun Tong Factory Survey data.

It is clear that for the "managerial" and "clerical" groups employment is highly stable. Not only the overwhelming majority of factories report there has been no employee turnover, but also that the number of factories reporting higher turnover rates are exceedingly small. But this is entirely different in the category of "production workers". Even though still 41% of the factories report no turnover, those reporting high turnover rates are still substantial.

The following table summarizes our estimates of the turnover rate of various categories of workers in different industries.

Table 21: Turnover Rate of Kwun Tong Factory Employees

Industry	Turnover Rate		
	Managerial	Clerical	Production
Food	0%	0%	9.2%
Textiles	1.4	1.7	26.3
Apparel	0.1	2.1	9.1
Wood	0.4	0.4	14.0
Paper	0	0	7.4
Rubber	0	0	20.2
Chemical	7.5	27.5	12.5
Plastic	1.2	0.9	22.0
Non-metallic	0	0	14.4
Basic Metal	3.9	1.9	22.8
Fab. Metal	1.1	1.6	19.1
Machinery	0	0.5	23.6
Others	0.1	0.4	14.1
Services	0	0	20.8

Estimated from Kwun Tong Factory Survey data by using mid-intervals.

The general pattern clearly indicates the low turnover of managerial and clerical employees in all industries.[1] In the category of production workers, high turnover rates are generally found in those industries which are either large in scale or highly export-oriented, except in Apparel and Others.[2] It should be pointed out here that a high turnover rate by no means implies slackening employment opportunities. In fact many of these industries did enjoy high use of capacity in 1970. Therefore it only

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1 The exceptionally high percentages in the first two categories of the chemical industry are probably due to smallness of sample size.

2 These two industries, along with Food, tend to rely more on seasonal workers in peak seasons.

reflects the flexibility of a buoyant labor market in which the mobility of the labor force is largely guided by the external demand for their products.

Another contrast between the "managerial" and "clerical" employees on the one hand and "production" workers on the other is in their recruitment. Factories are asked how difficult (or easy) it is to recruit these various categories of employees. Their answers are listed as follows.[1] (Figures in parentheses are numbers of reporting factories in ascending order)

1.	"Managerial" --	very easy	(9)
		very difficult	(10)
		average	(30)
		rather easy	(33)
		rather difficult	(65)
2.	"Clerical" --	very difficult	(4)
		rather difficult	(10)
		very easy	(12)
		average	(50)
		rather easy	(95)
3.	"Production" --	very easy	(6)
		average	(44)
		rather easy	(56)
		very difficult	(80)
		rather difficult	(141)

In all, production workers are most difficult to recruit -- this also helps explain their high turnover. On the contrary, the clerical workers are in a buyers' market. This is, in fact, typical of the labor market in developing countries where industries are fast growing, and consistent with the low turnover rate of clerical workers we mentioned earlier.

The difference in the turnover rates of production workers between small and large factories is also worth mentioning.

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[1] Compiled from Kwun Tong Factory Survey data.

Table 22: Factory Size and Turnover Rate of Production Workers

No. of Production Workers	No. of Factories	Turnover Rate
1 - 9	112	17.1%
10 - 19	56	19.9
20 - 49	63	18.3
50 - 99	34	19.6
100 - 199	29	19.1
200 - 499	15	22.5
500 & above	8	24.7

Estimated from Kwun Tong Factory Survey data.

Our estimates[1] show that the turnover rate is an increasing function of factory size. One plausible explanation is that smaller factories are organized more along traditional lines in which employers and employees are tied together by more personal and perhaps kinship relations. Moreover, their less rigid organization structure also makes it easier to adjust. On the other hand, the larger factories normally rely more on open market recruitments of their production workers. This practice subjects them more to market competition and thus the impact of labor mobility generated by export markets, which the large factories have more than a fair share.

Of all the factories in our survey, about 200 report that they have no need for seasonal workers. The others report that in peak seasons their employment of seasonal workers may amount to more than 50% of their regular work force. In the Wood, Non-metallic, Basic Metal, Fab. Metal and Machinery industries, around 70% or more factories need less than 10% of temporary hands in peak seasons. But in the Food, Textiles, Plastic, Apparel, Others and Services, around 10% or more factories state that they need

[1] A 55% turnover rate is used as the mid-point for the "50% or above" interval.

more than 40% seasonal workers. These industries are generally those reporting pronounced seasonal changes in their production.[1] Except Food and Services, which basically cater to local demands, they are highly export-oriented. And, inasmuch as these industries also account for a large proportion of factory employees in Kwun Tong,[2] the effect of seasonal variation of foreign demand on the employment of Kwun Tong factory workers must be substantial. The following table shows the percentages of seasonal (to regular) workers of various industries.

Table 23: Employment of Seasonal Workers in Peak Seasons (in percentages)

Industry	Percentage	Industry	Percentage
Food	15.0%	Plastic	20.6%
Textiles	9.1	Non-Metallic	7.0
Apparel	12.6	Basic Metal	6.4
Wood	3.8	Fab. Metal	5.0
Paper	13.3	Machinery	5.9
Rubber	12.5	Others	14.7
Chemical		Services	7.3

Estimated from Kwun Tong Factory Survey data.

3. Sources of the work force

In our survey, about 310 factories report the source (by residence) of their employees. Answers are given for various categories of workers.

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1 See discussion also in Section III - 5 above.

2 See Table 18 above.

Table 24: Residential Distribution of Kwun Tong Factory Employees (in number of factories)

Category of Employees	Percentage of Employees living in Kwun Tong						
	none	0-20%	20-40%	40-60%	60-80%	80-100%	100%
Managerial	179	44	15	20	10	15	40
Clerical	191	40	14	18	11	10	32
Technical	140	41	22	28	14	33	40
General	57	30	21	40	27	73	65
Seasonal	175	15	8	10	13	35	49

Compiled from Kwun Tong Factory Survey data.

One striking fact is the large number of factories reporting that none of their employees are residents of Kwun Tong in all categories except for the case of "General" workers. Even in this case, many factories still have to draw substantial proportions of their employees from areas outside of Kwun Tong. The actual numbers of employees are estimated as follows.

Table 25: Residential Distribution of Kwun Tong Factory Employees (in number of employees)

Category of Employees	Total number of employees	Residents of Kwun Tong	Percentage of employees residing in Kwun Tong
Managerial	1,418	372	26.2%
Clerical	1,112	242	21.7
Technical	4,567	1,569	34.3
General	13,593	8,149	60.0
Seasonal	2,625	881	33.5
(Technical, General & Seasonal)			(51.0)
Total	23,315	11,213	48.0

Figures are estimated from the table above together with the information from Table 19 above and the average of 78 employees per factory. Our estimated total number of employees is 23,315 compared to the actual total of 26,451 (see Table 18 above). The difference is partly due to some 35 non-reporting factories.

In total, only about 50% of the factory employees are residents of Kwun Tong. For some categories, such as "managerial" and "clerical", it is about one quarter or lower. For the other three categories combined, which can be considered as the "production workers", only 51% are residents.

Perhaps this is not all unexpected, because Kwun Tong is what we called a point of manufacture. People should be flocking here to work from other parts of Hong Kong every morning, and go back to where they live when work is over. Thus, the traffic congestion during such hours may well be the result of the fact that Kwun Tong is an industrial town. However, this is not the entire picture. Kwun Tong has its own residential areas; its 446,830 reported residents should be enough to man all factories.[1] It would be interesting to find out where do these people work.

The Kwun Tong Life Quality Study provides us with some answers.[2] In that study, a stratified sample of 1,065 families are selected for interview. Among other things, information on the occupations and work locations of the working members of these families are collected. For these families the respondents of which are skilled or unskilled "industrial" workers, we have the following information. Note that some of the "other working members" of the families are not industrial workers.

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1 According to a transport survey conducted by the Public Works Department in February 1972, during weekdays traffic going into Kwun Tong (from Kowloon) is much less than that coming out of Kwun Tong at morning rush hours.

2 The Kwun Tong Life Quality Study is conducted by Dr. Stanley Shively.

Table 26: Work Location of Kwun Tong Industrial Workers

(in number of persons)

Type of Worker	(A) Kwun Tong Residents	(B) Working in Kwun Tong	(B)/(A)
Skilled workers			
respondents	129	86	66.7%
Other working members	688	377	54.8
(sub-total)	(817)	(463)	(56.7)
Unskilled workers			
respondents	91	61	67.0
Other working members	219	89	40.7
(sub-total)	(310)	(150)	(48.4)
Total	1,127	613	54.4

Compiled from Kwun Tong Life Quality Study data.

In both the skilled and unskilled worker families, two-thirds of the respondents, who are probably heads of households, work in Kwun Tong. The percentages of the working members of their families actually working in Kwun Tong are substantially lower. In total, only about one half of the working members of all these families are employed in Kwun Tong factories. This completes the picture of the source of work force for Kwun Tong factories and the work location of the Kwun Tong work force, and further explains the problem of traffic congestion.

We may go further to ask the question why it is so. Surely we cannot attribute this entirely to the incompatibility between the factories and workers in Kwun Tong. Frictions in the process of adjustment can account for part of this, but in the longer run market adjustments (through either change of work location or change of residence) should iron them out.

First, we have pointed out earlier that due to demand conditions labor mobility is high in Hong Kong. This is the very nature of the Hong Kong and Kwun Tong economy. The adjustment process, especially in the change of residence, takes a longer period and the workers may even be reluctant to do so because of

constant changes in employment opportunities. On the other hand, to change one's employment to suit one's residence may not be that easy for the average factory worker.

Second, it has been more than ten years since Kwun Tong began to provide substantial housing facilities. Over the years, the younger members of the working families have grown up and joined the labor force. Many of them, perhaps better educated, may not be willing or able to find suitable employment opportunities in Kwun Tong. Many of them have to take jobs outside. Due to the general housing shortage in Hong Kong and perhaps according to Chinese tradition they tend to stay with their parents in Kwun Tong.

This leads us to the third point, which is perhaps the basic reason. The policy of alloting resettlement and low-cost housing facilities does not consider the work location of the occupant, and many people work elsewhere are alloted to Kwun Tong. Because the rents for such housing are considerably lower than their market rates, people who have allotments there are very eager to move in, regardless of their work locations. On the other hand, it is not easy for those who work in Kwun Tong and live elsewhere to find housing there, unless they are willing and able to pay for their housing at market rates. It is of course fortunate for those who can get housing allotments and employments both in Kwun Tong. But in case they change their work location, which is not uncommon in view of high labor mobility, it is most unlikely that they are willing to give up their housing allotments. In all these cases, workers would rather spend more time and some money on transportation than a lot of money on relocation of their residence. This reflects nothing but the general problem of housing shortage in Hong Kong, especially low-cost housing. The resultant cross-traffic of workers, along with the transportation of goods, generates a tremendous traffic congestion.[1]

[1] For those who can afford better housing, it is also a problem. Many people of this group are owner-occupants. A change in work location would be unlikely to cause them to move in view of the ever increasing value of real estates throughout Hong Kong. Furthermore, Kwun Tong has no really high-class housing. This explains the low residential rate among the "managerial" group.

4. Concluding remarks

As we have pointed out in the last section the Kwun Tong factories are highly export-oriented, so is the pattern of factory employment. In addition, the work force there is highly concentrated in a few industries - the Textiles, Apparel, Fab. Metal, Plastic and Others industries together employ more than three quarters of the work force, and these industries are most export-oriented. Furthermore, some of these industries also need substantial numbers of temporary workers at peak seasons. All these are indications of the high degree of dependence of factory employment on foreign demand.

In a year of booming exports, like 1970, labor shortage becomes apparent. This is especially true in the case of production workers. Tight market situation and high labor mobility result in a high rate of labor turnover, and it becomes a general phenomenon that additional production workers are most difficult to recruit. The clerical workers are quite a distinct group, which suffers from over-abundance of supply. The easiness in recruiting clerical workers and their low turnover rate are directly contrary to the case of production workers. Market adjustments seem to work only slowly to demolish the distinction between these two groups, if they work at all.

It is interesting to find while approximately half of the factory employees in Kwun Tong come from other areas, also about one half of the residents (most of them are industrial workers) in Kwun Tong also seek employment elsewhere. Of course, the proximity of Kwun Tong to the rest of Hong Kong is one basic reason. The high mobility of labor is another. We suggest that the general housing shortage in Hong Kong is also an important factor. Those who are fortunate enough to obtain low-cost housing are most unlikely to change their residence regardless of their work locations. While no doubt many people can still adjust their work locations to their residence, the ever changing situation in the labor market, however, limits the extent of such adjustments. All these result in a heavy cross-traffic of workers between Kwun Tong and the rest of Hong Kong.

V. OTHER INPUTS

In standard economic terminology, there are four factors of production: the entrepreneur, labor, land and capital. The entrepreneur uses the other factors of production as inputs and combines them in such way as to achieve his goal of profit maximization. We have discussed labor input in the last section, and shall deal with the others in this. However, we shall adopt the more everyday use of terminology by classifying these inputs into: land and factory building, capital and equipment, raw materials and intermediate products, and information. We include the last one to see through what channels they are obtained, even though it is difficult to measure in quantitative terms.

1. Land and factory building

Land as an input determines the location in which economic activities take place. The selection of an appropriate location for industrial development like Kwun Tong does not necessarily depend on the availability of land alone; even though land is generally short in Hong Kong, it is not so short that any piece of available land is immediately grabbed for development. The availability of other inputs, the provision of ancillary services, the cost of transportation and the proximity to markets must be considered in order to attract enough entrepreneurs and keep development going.

How important is the availability of land in the industrial development of Kwun Tong? To answer this question, a digression on the development of land values in Kwun Tong would provide some hints. Since land lots are sold by auction, prices are determined at what the market can bear. At the beginning, the upset price per square foot of land was set at $5 in 1956 (the first auction which took place for land sales in Kwun Tong), the actual sales prices per square foot for three lots were $17.6, $23.1 and $15.1.[1] These were still somewhat lower than those in other areas, where indus-

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[1] "Hong Kong Industrial Developments", Far Eastern Economic Review, September 27, 1956. p. 410.

trialists had to pay $20 to $30 per square foot.[1] Probably because industrialists found out that such sites were not ready for immediate development due to lack of public services, prices dipped lower in subsequent sales and were as low as $5 per square foot towards the end of 1956.[2] However, interest in these new sites soon picked up, and by 1958, Mr. A.G. Clarke stated accusingly that industrialists "... have bought the new cheap land with the intention of moving their existing factories there, so that they can sell their present sites at a profit. No doubt these present sites will then be developed for tenement housing. When we were developing Kun (sic) Tong we thought, and hoped, that we were providing for new industry; it is a little disappointing to find that, in some cases at least, we were merely affording existing industries the opportunity to realise a substantial capital gain".[3] Surely, this should have been expected when land lots were sold by open auction and established industrialist were always in a better position. Since then, land prices in Kwun Tong fluctuated along with the real estate business in Hong Kong, and by late 1960 it reached $40 or $50 per square foot.[4] At the peak of 1970-1971, it was several times that figure. The price per square foot of factory space in flatted (factory) building was around $50.

Rising land prices and rents there might be, there was nothing to stop industrialists from buying more land and building more factories in Kwun Tong as it continued to grow. In fact, investments in factory buildings, no matter for one's own use or for rental, have become a profitable business itself. Those who work in their own premises have preempted themselves from the

1 U Tat-chee, "Hong Kong's Industry And Its Future", Far Eastern Economic Review, Aug. 12, 1954. p. 213.

2 "Hong Kong Industrial Reports", Far Eastern Economic Review, March 28, 1957. pp. 406-470.

3 "Problem of Hong Kong" (Statements by Government Department Chiefs), Far Eastern Economic Review, April 10, 1958. p. 480.

4 "Another Land Boom?" by A Special Correspondent, Far Eastern Economic Review, December 22, 1960. p. 629.

pressure of rising rents, and can even realize sizable profits when they sell out. This hunger for industrial land finds expression in the continuing growth of the number of factories. In our sample only 46 factories were established in Kwun Tong before 1961, during the period 1961-1967 there were 131, and from 1968 onwards there were 166.[1] Of 340 factories, 167 report that they were new when established in Kwun Tong,[2] and the rest report that they moved to Kwun Tong over the years. For the latter category, most of them (150 in number) were from Kowloon, and 95 of them give specific reasons for doing so. The main reasons are "resettlement" and "cheaper land". The first one applies to the smaller factories of which there are 45; those giving the second reason (38) are presumably the larger one utilizing their own or rented premises. There are 11 factories moved to Kwun Tong because they thought that it was easier to hire workers, and almost none answered that they did so because it was closer to the sources of supply of materials or markets for their outputs.

Factories are also asked in which type of premises (by ownership) they are operating. These premises are either self-owned, rented from private sources, or rented from the government. The following are the answers relating to the sizes of factories measured by the reported capital values of the factories.

Table 27: Ownership of Factory Premises in Kwun Tong
(in number of factories)

Reported Capital	Ownership Type			Total
	Self-owned	Rented (Private)	Rented (Gov't)	
below $200,000	13 (7.4)	90 (51.1)	73 (41.5)	176
$200,000 to $1,000,000	29 (32.5)	56 (63.0)	4 (4.5)	89
$1,000,000 to $10,000,000	22 (59.5)	14 (37.8)	1 (2.7)	37
above $10,000,000	2 (100.0)	0 (0)	0 (0)	2

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

[1] Figures are from Kwun Tong Factory Survey.

[2] Some of these "new" factories are branches of factories situated elsewhere.

It shows that the large factories tend to use more of their own premises and therefore are less subject to the pressure of rising land prices and rents. In fact, there seems to be an increasing trend for them to do so, and this is at the same time a very profitable form of investment. The small and medium-sized factories are less fortunate, except those in government resettlement factory buildings the rents for which are considerably lower than market rates. Many of them were closed down in 1971 at the height of rising rents and in the face of changing market situations. The wig industry seems to suffer most under this squeeze from both ends.[1] However, their premises were soon taken up by other factories.

All those point to only one thing. The prevalent hunger for industrial land in Hong Kong has made Kwun Tong a prime target. The availability of industrial land has become a very important factor for the location of factories. It overshadows many other factors, such as transportation cost and proximity to input and output markets.

2. Capital and Equipment

The overwhelming majority of the factories in Kwun Tong are personal or family businesses owned by the local people in Hong Kong. In a total of 338 reporting factories, 252 are under either single or family proprietorship. Some of these are quite large, especially in the latter category where stocks are held by members of the family. Another 79 are partnerships and only 7 are reported to be open joint stock companies. Needless to say, the open joint stock companies are the large ones. With respect to the source of capital, 319 out of 340 factories are reported to be totally owned by local people. The rest (21) are either entirely foreign-owned or joint ventures, and they tend to concentrate in the Textiles, Apparel, Basic Metal, Machinery and Other industries,[2] i.e., the large scale industries.

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1 The number of interview failures due to "close-down" of wig factories in our Survey is especially high.

2 Data from Kwun Tong Factory Survey.

It is commonly stated that large factories are normally in a better position in obtaining finance. This is especially true in the case of bank financing in the purchase of machineries and equipment, which is a longer term loan and therefore more risky for the commercial banks. In other words, the smaller factories have to depend more on their own for such capital expenditures.

Table 28: Sources of Capital Expenditure

(in number of factories)

Factory size	Source		Total
	own capital	bank loans (part or all)	
Number of employees			
below 50	196 (84.1)	37 (15.9)	233
50-199	50 (80.6)	12 (19.4)	62
above	14 (77.8)	4 (22.2)	18
Reported capital			
below $200,000	144 (85.7)	24 (14.3)	168
$200,000-$1,000,000	67 (79.7)	17 (20.3)	84
$1,000,000-$10,000,000	28 (75.7)	9 (24.3)	37
above	1 (50.0)	1 (50.0)	2

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

The table above does show that there is such a tendency. Measured either by the number of employees or by the amount of reported capital, the large factories tend to have more access to bank loans to finance their capital expenditure. However, when factories are asked whether the government should set up an industrial bank and to what extent they think they can benefit from it, there is no clear evidence that the small factories tend to express their need more urgently.

Table 29: Need for A Government Industrial Bank

(in number of factories)

Factory Size	Need for Govt. Industrial Bank		Total
	yes	no	
Number of employees			
below 50	190 (81.9)	42 (18.1)	232
50-199	54 (90.0)	6 (10.0)	60
above	18 (85.2)	3 (14.8)	21
Reported capital			
below $200,000	129 (79.1)	34 (20.9)	163
$200,000-$1,000,000	79 (91.8)	7 (8.2)	86
$1,000,000-$10,000,000	30 (88.2)	4 (11.8)	34
above	2 (100.0)	0	2

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

Table 30: Benefit from A Government Industrial Bank

(in number of factories)

Factory Size	Benefit from Govt. Industrial Bank			Total
	much	average	little	
Number of employees				
below 50	112 (47.4)	62 (26.3)	62 (26.3)	236
50-199	31 (51.7)	16 (26.7)	13 (21.6)	60
above	9 (56.2)	4 (25.0)	3 (18.8)	16
Reported capital				
below $200,000	82 (49.1)	40 (23.9)	45 (27.0)	167
$200,000-$1,000,000	51 (60.7)	19 (22.6)	14 (16.7)	84
$1,000,000-$10,000,000	11 (33.3)	11 (33.3)	11 (33.3)	33
above	0	2 (100.0)	0	2

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

This result is very interesting. Perhaps it is due to the fact that compared to large factories the small ones do have less capital requirements. A more plausible interpretation is that the small factories have their own means of finance. It is commonly known that in Hong Kong small proprietors plough back their profits heavily into their businesses, and in addition they can rely on the savings of their kinsmen and other traditional

channels. On the other hand, this result may also reflect that some small industrialists are not quite sure about the role and function of an industrial bank, or may even be sceptical about the idea of getting the government involved in their businesses, as many people do in Hong Kong, so that even if they do have a more urgent need, they will try to satisfy it through some other channels.

This, however, should not be taken as the absense of need for an industrial bank financed by the government. For, regardless of size, the majority of factories still favor the idea of having such a bank and believe that they will benefit much from it.

With respect to the sources of machinery and equipment, about one-third of the factories answer that they depend entirely on local (Hong Kong) supply, and another one third report that more than 80% of their machinery and equipment come from abroad.[1] Apparently, the dependence on foreign sources of supply is not specially remarkable. However, it should be pointed out that there are many degrees of complexity in machinery and equipment, and that the machine-building industry in Hong Kong is not sophisticated at all. Therefore, those purchased in the local market are probably simple machinery and workshop tools, whereas those from foreign sources of supply are more advanced and complex in nature.[2] It all depends on the technical requirements of the factories concerned, and because of this, the large factories tend to depend more on foreign supplies. As a result, the percentage of imported machinery and equipment must be very substantial indeed if measured in value terms. In the order of importance, the major sources of foreign supply are: Japan, West Germany, U.S., and the U.K.

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1 Data from Kwun Tong Factory Survey.

2 Probably some of the "local" machinery and equipment are actually imported from China, which, in the minds of some respondents, may not be considered as "foreign".

A question is also asked about how modern their machinery and equipments are. In general, the larger factories tend to have purchased more new machinery and equipment in recent years. However, there are still 60% of the small factories (defined as having a reported capital of less than $200,000) reporting that their newest machinery and equipment were purchased within the last three years, and only around 20% reporting that they have not purchased any new machinery and equipment in the last five years. The large scale industries, such as Textiles, Apparel and Others, are those using the newest machinery and equipment.

3. Raw materials and intermediate products

Hong Kong is extremely short of natural resources. The growth of its industries depends largely on the processing of imported materials and semi-finished products. As a point of manufacture, Kwun Tong provides a typical example of this particular situation. In our survey, factories are asked what percentage of their inputs of raw materials and intermediate products are from foreign countries. Their answers are as follows.

Table 31: Foreign Supply of Raw Materials and Intermediate Products (in number of factories)

Industry	Percentage of Foreign Supply		Total
	80% or more	20% or less	
Food	4 (57.1)	2 (28.6)	7
Textiles	38 (54.3)	15 (31.4)	70
Apparel	23 (58.9)	6 (15.3)	39
Wood	16 (84.2)	3 (15.8)	19
Paper	13 (72.2)	5 (27.8)	18
Rubber	9 (75.0)	1 (8.3)	12
Chemical	2 (100.0)	0	2
Plastic	45 (83.3)	6 (11.1)	54
Non-metallic	5 (100.0)	0	5
Basic Metal	9 (64.3)	0	14
Fab. Metal	17 (68.0)	5 (20.0)	25
Machinery	9 (60.0)	4 (26.6)	15
Others	19 (51.3)	8 (21.6)	37
Services	2 (20.0)	8 (80.0)	10
Total	211 (64.5)	63 (19.2)	327

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

It shows that in all industries (except of course Services) high percentages of factories have to rely heavily on the foreign supply of raw materials and intermediate products as their inputs. In fact, 52.6% of all factories report that they depend exclusively on foreign sources of supply.[1] The relatively small percentages of factories (again except Services) relying heavily on local supplies is also clear. The table also suggests that there is some interdependence between the Apparel and Textiles industries, as well as among the metal-working industries. However, this interdependence does not necessarily exist among factories inside Kwun Tong, because local purchases are made from factories throughout Hong Kong. We have to find out the actual interdependence among the Kwun Tong factories themselves.

Table 32: Kwun Tong Supply of Raw Materials and Intermediate Products (in number of factories)

Industry	Percentage of Kwun Tong Supply (in Local Supply)		Total
	80% or more	20% or less	
Food	0	5 (83.3)	6
Textiles	3 (7.5)	34 (85.0)	40
Apparel	2 (9.5)	14 (66.7)	21
Wood	1 (14.3)	6 (85.7)	7
Paper	1 (11.1)	6 (66.7)	9
Rubber	0	4 (100.0)	4
Chemical	0	1 (100.0)	1
Plastic	1 (6.7)	11 (73.3)	15
Non-metallic	0	1 (100.0)	1
Basic Metal	1 (11.1)	6 (66.7)	9
Fab. Metal	1 (5.6)	14 (77.7)	18
Machinery	1 (14.3)	6 (85.7)	7
Others	0	18 (90.0)	20
Services	2 (100.0)	0	2
Total	13 (8.1)	126 (78.7)	160

Compiled from Kwun Tong Factory Survey data. Figures in parentheses are percentages of respective totals.

[1] This figure is not shown in the table, and is derived from Kwun Tong Factory Survey data.

Note that in the table above, the percentages in "80% or more" and "20% or less" refer to proportions of Kwun Tong purchases within Hong Kong purchases. If, instead, we use total purchases, such percentages will be even lower. The striking feature is the extremely low percentages of factories which reportedly rely on other Kwun Tong factories as their main sources of supply of raw materials and intermediate products. The majority of factories (in all industries except Services) make local purchases of these heavily from sources outside of Kwun Tong. In fact, about one-third of the reporting factories say that they rely exclusively on outside sources. This indicates the very limited interdependence that Kwun Tong factories have achieved among themselves.

Using mid-intervals, the overall sources of supply of raw materials and intermediate products to Kwun Tong factories are estimated as follows.

Table 33: Sources of Supply of Raw Materials and Intermediate Products

Industry	% of Supply From		
	Foreign	Kwun Tong	Rest Hong Kong
Food	57.1%	5.0%	37.9%
Textiles	67.8	4.0	28.2
Apparel	70.8	6.5	22.7
Wood	84.2	2.3	13.5
Paper	71.6	5.6	22.8
Rubber	84.2	0	15.8
Chemical	100.0	0	0
Plastics	87.0	2.2	10.8
Non-metallic	100.0	0	0
Basic Metal	80.7	4.1	15.2
Fab. Metal	70.8	4.5	24.7
Machinery	66.7	5.7	27.6
Others	65.7	1.7	32.6
Services	19.0	81.0	0

Estimated from Kwun Tong Factory Survey data.

The general pattern here is remarkably consistent with our analysis above. Only the Services industry depends heavily on local (Kwun Tong) supplies. The figures in the last column ("Rest of Hong Kong") are residuals in our estimation. It is conceivable that some respondents may not consider China as "foreign". This would generally cause over-estimations of the figures in this column. If this is true to some extent, the figures in the first column ("foreign" - meaning outside of Hong Kong) should be even higher, and indicate the dependence on foreign supplies all the more overwhelming.

4. Information

Where do factories get their information based on which they get inputs and market their output? A number of choices are given to the respondents, and their answers indicate that the factories in general depend very little on the government, trade associations, foreign visitors and foreign tours. Very few factories, large or small, say that they actually rely on such sources. Instead, they emphasize on trade bulletins, existing business connections, purchasing agents and their own research. With respect to research, we see a major distinction between the large and small factories. More than half of the large factories (defined as having 200 or more employees) say that they rely on this source of information, and the number of reporting factories is larger than those reporting their reliance on the other three sources.[1] About two-thirds of the small factories (with less than 50 employees) depend on existing business connections as their source of information, and this number is substantially larger than those answering all the others combined. This distinction is in fact very much expected.

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[1] In the questionnaire, a factory is not limited to giving only one source of information.

5. Concluding Remarks

In our analysis of inputs, we find that the factories in Kwun Tong depend heavily on imported machinery and equipment, raw materials and intermediate products. This means the proximity to input markets has little to do with their factory location. Since overwhelming proportions of these inputs have to come from abroad, the point of manufacture could easily be any place in Hong Kong, provided that industrial land in available and public services are sufficiently provided.

The lack of mutual interdependence among the factories in Kwun Tong also reflects the important role played by the availability of industrial land. For most factories, considerations on input and output markets are probably marginal in their decision on location, since these markets are in foreign countries anyway. Even though there are still many factories having substantial input-output relations with factories in other areas of Hong Kong, difficulties in obtaining suitable factory sites elsewhere necessitate their establishment in Kwun Tong. Furthermore, the proximity of Kwun Tong to many areas makes the transportation problem not insurmountable. For, compared to land (or rent) cost, inland transportation cost is certainly much less and part of it can be shifted to others, e.g., the transportation cost of workers. Consequently, this adds more to the problem of traffic congestion.

VI. PUBLIC AND OTHER SERVICES

The provision of an adequate economic infrastructure plays a very important role in the process of economic development. These overhead investments provide the economic base on which private investments can be profitably undertaken without having to assume these costs internally. The adequacy of the supply of these social overheads, of course, depends on the number of users. That is to say, the capacity of the economic infrastructure must be in pace with the level of economic development in order to facilitate the transactions among firms and sectors. Most important of these overhead investments are in water and power supply, land and sea transportation network, air traffic facilities and the communication system. It seems that in Kwun Tong the provisions for these public services are adequate except in the case of land and sea transport. This we shall dwell on in this section. In addition, we shall also discuss the provision of other services to factories rendered by the private sector. Even though the economy of Hong Kong thrives largely on laissez-faire, the role of the government and its contact with the business community should also be studied. It is interesting to find out how often the factories come into contact with the government, how they feel about the government's reaction towards their proposals, and what their general opinion is about government regulation (or lack of it) on industries.

1. Transportation

Land transport is the major form of transportation for the factories in Kwun Tong, and the vehicles used are mostly large or small trucks. As far as the availability of these means is concerned, there seems to be no problem. About a quarter of the factories in our survey report that they use their own vehicles, whereas most of the rest use hired ones and claim that they are readily available. But the crux of the problem is not this. Most of the factories report that in transportation (of inputs and outputs), their connections are mainly with factories or other establishments outside of Kwun Tong, especially in the Kowloon and New Kowloon area. Because of the distance and traffic congestion,

it takes mostly from one to two hours per trip.[1] This seems to be the major complaint of the factories. When they are asked what they think about the road network in Kwun Tong, we have the following results.

Table 34: Adequacy of Road Network in Kwun Tong

Answer	No. of Factories	Percentage
Very adequate	6	1.8%
Adequate	36	10.6
Fair	72	21.2
Inadequate	137	40.3
Very inadequate	89	26.1

Compiled from Kwun Tong Factory Survey data.

There is no doubt that with the present provision of road network the problem is serious, and it will get worse with further development of this area. This will be further compounded if the factories in Kwun Tong continue to draw half of their work force from outside areas and half of the factory workers residing in Kwun Tong find employment elsewhere.[2] We have mentioned earlier that under the present situation the factory workers seem to be willing to absorb the time and cost of transportation to and from work. This is so only because it is still better than changing their place of residence. However, given comparable conditions, they can also adjust their work location. Then, in a tight labor market factories must find ways to induce such workers to remain working in Kwun Tong either in form of higher wages or other compensations. There is some evidence to this in our factory survey. Thirty-six factories claim that they have special (chartered) buses for the transportation of workers to and from work free of charge,

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1 From Kwun Tong Factory Survey.

2 See discussion in Section IV - 3 above.

and another thirty-six factories say that they grant cash subsidies to workers for this purpose.[1] Presumably these are large factories which normally provide better welfare benefits to attract the labor force.

With respect to sea traffic, pier and wharf facilities in Kwun Tong also seem to be somewhat on the short side, even though the problem is not as serious as in the road network.[2]

Table 35: Pier and Wharf Facilities in Kwun Tong

Answer	No. of Factories	Percentage
Very adequate	3	1.1%
Adequate	46	16.5
Fair	112	40.3
Inadequate	88	31.7
Very inadequate	29	10.4

Compiled from Kwun Tong Factory Survey data.

2. Communication

In general, the provision of communication facilities such as telephone, telegram and postal service in Kwun Tong is better than the road transportation system. Probably it is because that these facilities enjoy much greater flexibility in their capacity, and that it is easier for them to adjust without encountering much environmental restrictions. Therefore, the factories in Kwun Tong generally agree that they have a fair supply of such services, and the majority of them[3] think that they are provided with a good standard of service.

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1 Figures are from Kwun Tong Factory Survey.

2 Note that our Survey was undertaken before the completion and opening of the new pier early 1972.

3 245 out of a total of 305 factories.

Table 36: Communication Facilities in Kwun Tong

Answer	No. of Factories	Percentage
Very adequate	7	2.2%
Adequate	99	31.0
Fair	99	31.0
Inadequate	97	30.4
Very inadequate	17	5.3

Compiled from Kwun Tong Factory Survey data.

3. Other services

Of these the most important is the repair and maintenance of machinery and equipment. They are all provided by the private sector. Almost two hundred factories reply that they rely mainly on their own technical personnel for such services. In our sample alone, there are 16 factories in the Machinery industry some of which are probably also in the repair and maintenance business. This is also true in the Services industry. It is the general feeling of the factories that such services are fairly adequate in Kwun Tong.[1]

4. The Government

It is said that under laissez-faire the government only sets the ground rules, provides basic services and let the market forces of supply and demand to take over. Even so, there must be some ways through which the government gets information and feedbacks from the business community in order to assess its own decision on the provision of basic services. Moreover, problems inevitably arise in the process of market adjustment which the business community would like the government to help solve. In other words, the line of communication between the two must be kept open. In their capacity as community leaders and unofficial members of certain government bodies, many successful industrialists do speak

[1] Figures are from Kwun Tong Factory Survey.

up on behalf of the community and their industrial interests, and very often they get responsive results from the government. However, we are here more interested in the communication between the government and the average industrialist, who is usually in our study a small factory proprietor in Kwun Tong.

In our survey, factories are asked through what channel they usually come into contact with the respective departments of the government, and the overwhelming majority of them answer that they contact those departments directly.[1] "Through trade and industry associations" is a poor second.[2] Apparently, it seems that the factories are very eager to contact the government directly and bring up whatever proposals, complaints, etc., they have in mind. This is not the entire story. When asked how many times they have actually contacted the government (through whatever channel) in the past three months, about two-third of them answer that there has been none at all,[3] even though quite a few of them have contacted more than six times.[4]

It is even more interesting to point out that 326 factories admit they have never made any proposal to the government. Of the 15 which claim that they have, only 2 think their proposals have been given thorough consideration, and 8 think that there has been no consideration given at all. This state of affairs in the communication between the government and factories is deplorable. On a more personal basis, the respondents are asked how they find the reactions to their opinions when they come into contact with government officials. Of 297 replies, 147 give the answer "it depends", 61 give the answer "completely ignored", and only 33 think their opinions have been given "serious consideration".[5]

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1 212 cases out of a total of 253. Kwun Tong Factory Survey data.

2 With only 24 cases.

3 204 cases out of a total of 327.

4 26 cases in number.

5 Figures are from Kwun Tong Factory Survey.

However, this indifference on both sides does not seem to bother the industrialists. Perhaps they do not expect much in the first place. Of course they will raise their voice of protest in certain occasions. But the most they want seems to be left alone and let thing go as they are. For, when asked how they think about government regulations on industries, the factories give the following answers.

Table 37: Opinions on Government Regulation

Opinion	No. of answers	Percentage
Too much regulation	51	18.2%
Somewhat excessive	71	25.5
About right	109	39.1
Not quite enough	36	12.9
Too little	12	4.3

Compiled from Kwun Tong Factory Survey data.

5. Concluding remarks

From our previous analysis of the sources of inputs and destinations of output, it is well expected that the major bottleneck of Kwun Tong's further development is its transportation network, especially that of land transport. Indeed it is. There is only one road connecting Kwun Tong with Kowloon. By ordinary standard in Hong Kong, the traffic capacity of this road (Kwun Tong Road) is good, but it is by far insufficient for the present volume of traffic, not to speak of certain peak hours. This has been the major complaint of the people in Kwun Tong, factories owners, employees and residents alike. A lag in the provision of social overheads can of course be eliminated by further investments. In the case of providing more roads into Kwun Tong, remedial measures may encounter numerous difficulties. The shortage of land itself is a problem. Looking back, better planning and foresight could have prevented such problems and less costly in the long run.[1]

[1] The government now has a plan for the construction of another road leading to Kwun Tong which will have to go under the Kai Tak Airport. Still another is the expansion of Lung Cheung Road in the north.

VII. COST AND WAGES

After discussing the sources and supply of inputs, we shall discuss the costs of these inputs. For lack of accurate cost figures, we can only try to establish the relative importance of the cost components, namely that of machinery and equipment, land, materials and labor. This list is not exhaustive, and this classification is somewhat different from that used in conventional economic analysis. It is so because of the fact that we rely on survey data and our questionnaire is designed for the convenience of the ordinary businessman. Of the four cost components, our special emphasis will be on the analysis of wages. We shall try to find whether there are significant difference among various industries and factories of different sizes, as well as the wage differentials among various categories of employees.

1. Cost components

In our survey, factories are asked about the relative importance, in terms of percentages, of the four above-mentioned cost components. Here we are assuming that these four components exhaust almost all, if not entirely, costs incurred by these factories.[1] By using the number of factories as weights and the mid-points of percentage intervals, we have estimated the cost structure of all 14 industries in terms of percentage. Since each cost component is estimated separately and they do not necessarily add to 100%, all percentages are adjusted accordingly so that their respective sum totals are 100%.

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[1] In fact, transportation cost is also included in our questionnaire. All answers for this item are negligible.

Table 38: Cost Structure of Factories in Kwun Tong

Industry	Cost Components							
	Mach. & Equip.		Rent		Wages		Material	
Food	32.7%	(8)	6.3%	(3)	27.3%	(4)	33.7%	(8)
Textiles	35.4	(66)	7.4	(44)	27.5	(50)	29.6	(77)
Apparel	28.9	(38)	4.4	(23)	27.8	(28)	38.9	(42)
Wood	23.5	(15)	4.6	(12)	33.5	(11)	38.4	(21)
Paper	35.8	(15)	10.0	(9)	19.0	(15)	35.2	(18)
Rubber	31.9	(8)	6.7	(9)	27.1	(10)	34.3	(12)
Chemical	28.6	(2)	2.9	(1)	17.1	(1)	51.4	(2)
Plastic	37.2	(45)	6.1	(34)	29.6	(45)	27.1	(55)
Non-metallic	16.7	(3)	16.7	(2)	16.7	(3)	50.0	(5)
Basic Metal	31.5	(13)	4.6	(12)	27.2	(11)	36.7	(14)
Fab. Metal	31.7	(20)	6.2	(16)	30.4	(20)	31.7	(26)
Machinery	35.9	(14)	3.8	(7)	31.5	(12)	28.8	(16)
Others	28.1	(33)	6.0	(21)	29.9	(26)	36.0	(38)
Services	38.5	(8)	10.3	(6)	29.0	(6)	22.2	(11)
Overall	32.4 (288)		6.2 (199)		27.8 (242)		39.5 (251)	

Estimated from Kwun Tong Factory Survey data. Figures in parentheses are numbers of reporting factories. The relatively small number of reporting factories in the "rent" category is because some factories use their own factory premises.

Rent seems to be the least important cost component of all. It is to some extent due to the fact that some factories are housed in low-cost government factory buildings the rents for which are substantially lower than market rates.[1] Only in the Paper, Non-metallic and Services industries, we find that rent constitutes 10% or more of the total cost, and none has more than one-sixth of its total cost in rent payments. This general pattern suggests that none of the industries in Kwun Tong is land intensive.

[1] For the number of factories housed in such buildings, see Table 27 above.

In the overall picture, the distinction among the other three cost components are less marked. Relatively speaking, material, machinery & equipment seem to be of equal importance and carry more weight than wages. In none of the industries wages become the most important cost component, and there are only five industries, namely Wood, Plastic, Machinery, Others and Services, in which the wage component is higher than one of the other two components. Insofar as the material component is of highest importance in most (9 out of 14) industries, the processing nature of the Kwun Tong factories is clear. The main substitute in the process of production is between labor and machinery. Yet between wages and the cost of machinery and equipment, only in the Wood industry the wage component is clearly larger. Four other industries, Non-metallic, Fab. Metal, Apparel and Others have approximately the same percentages for the two components, whereas in the other nine industries the wage component is clearly smaller. With these very crude observations based on limited data and the lack of an appropriate definition of factor intensities, we cannot state whether these industries are capital or labor intensive. But there is one thing we are sure. For the factories in Kwun Tong, capital (in form of machinery and equipment) is a very important input in most industries. This is especially true in the Textiles, Paper, Plastic, Machinery and Services industries. It is doubtful to state that they thrive mainly on labor input. In general, industries in Kwun Tong (and Hong Kong) have come to the point where capital as an input is at least as important as labor.

From the very limited information we have, it is difficult to detect the relation between cost structure and export-orientation.

2. Wage & factory size

By using mid-intervals and the number of reporting factories as weights, we have estimated the mean salaries and wages of various categories of factory employees in Kwun Tong. In order to pin-point the relationship between wages and other factors, factory size (in number of various types of employees) and industrial type are included in our analysis. The estimates below are mean monthly salaries and wages excluding bonuses.

Table 39: Factory Size and Salaries of Managerial Employees

Number of Managerial Employees	Mean Salary	No. of Factories
1	$988	16
2 - 4	1,143	95
5 - 9	1,463	54
10 - 14	1,223	17
15 - 19	2,800	5
20 - 24	1,594	9
25 - 29	2,425	2
30 and above	1,350	2
Overall	1,492	200

Estimated from Kwun Tong Factory Survey data.
For the "30 and above" category, the mid-interval used is 32.

Table 40: Factory Size and Salaries of Clerical Workers

Number of Clerical Workers	Mean Salary	No. of Factories
1 - 4	$584	104
5 - 9	634	40
10 - 14	700	18
15 - 19	--	0
20 - 29	525	4
30 and above	600	8
Overall	618	174

Estimated from Kwun Tong Factory Survey data.
For the "30 and above" category, the mid-interval used is 35.

Table 41: Factory Size and Wages of Production Workers

Number of Production Workers	Mean Wage	No. of Factories
1 - 9	$514	118
10 - 19	578	60
20 - 49	597	67
50 - 99	665	36
100 - 199	615	26
200 - 499	619	16
500 and above	788	8
Overall	649	331

Estimated from Kwun Tong Factory Survey data.
For the "500 and above" category, the mid-interval used is 600.

In comparing the salaries and wages of various categories of employees as seen in the three tables above, we may notice the relatively small number of reporting factories in the categories of managerial and clerical workers. This is due to the fact that in many factories there are just no such employees. Especially in the small factories, very often the job of a manager or a clerk is assumed either by the employer himself or by an immediate relative who is not considered as an employee, or by another employee who has also other duties to perform. Therefore, the numbers of factories reporting to have these two types of employees are substantially less than the total number of sampled factories.

It is interesting to point out that in our estimates the mean wage of production workers is somewhat higher than the average salary of the clerical workers. This verifies the general impression that it has been so in recent years and characterizes a growing economy in which a shortage of production workers gradually appears, while the supply of clerical workers is abundant.

For individual categories, the increase of the mean wage of production workers with the increase of factory size is also consistent with our previous analysis. The large factories are probably the more efficient ones. They concentrate in a few modern industries and are more oriented to export markets where profits are high. Therefore they are in a better position to offer higher wages in order to capture the labor force in a tight market.

But this is not so in the case of clerical workers. There seems to be little difference in their mean salaries between small and large factories. The ample supply of clerical workers in Hong Kong is a well known fact, and our previous analysis has also provided evidence for this.[1] Here once again we see that the abundance in the supply of clerical workers has depressed their wages to a low and stationary level. The process of transfer from clerical to production workers is slow.

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[1] See Section IV - 2 above.

Except for the very small factories where the mean salary is substantially lower than that in larger factories, the pattern for the managerial employees is not clear. A plausible interpretation for this perhaps is in the difference in the role played by a "managerial employee" between smaller and larger factories. In smaller factories where there are only very few employees of this type, these people are really very important. They are "managers" in the true sense of the word and perhaps difficult to replace. But, in the very large factories, the managerial employees are of various capacities. Those few at the top of the entire hierachy, the real "managers" so to speak, are of course highly paid. But those in the lower echelons, like some department chiefs, can be paid considerably lower, for many of them may not be that indispensable after all. As a result, the variation of wages within the managerial group for the large factories is larger than that in smaller factories, and some employees of this group in large factories are probably paid lower than their counterparts in smaller factories. Therefore, even though in Table 39 there seems to be a rising trend, the change in the mean salary of managerial employees from one factory size to another is very irregular. Of course, we cannot rule out the possibility that this may be due to sampling, because for some factories sample sizes are very small.

3. Wages of industries

To compare the salaries and wages of different categories of employees in various industries, we have estimated their average salaries and wages. So doing, the numbers of factories are used as weights, with the implicit assumption that factories in the same industry are of the same size. In view of our analysis that larger factories tend to pay higher salaries and wages (to managerial and production workers), our estimates here will be biased against the large scale industries.

Table 42: Mean (Monthly) Salary of Managerial Employees

Industry	Mean Salary	No. of Factories
Food	$ 950	3
Textiles	1,280	49
Apparel	1,227	22
Wood	800	6
Paper	1,033	12
Rubber	1,050	4
Chemical	1,550	2
Plastic	1,007	36
Non-metallic	3,500	1
Basic Metal	1,580	10
Fab. Metal	1,454	13
Machinery	2,194	8
Others	1,431	29
Services	1,528	7
Overall	1,293	202

Estimated from Kwun Tong Factory Survey data.

As a few large scale industries are hiring very high proportions of the entire work force, the overall estimates will also become lower. In the case of managerial employees, the overall average is $1,293, compared to our earlier estimate of $1,492. The same is true for production workers. The overall estimate here is $622, compared to our previous estimate of $649.

Table 43: Mean (Monthly) Wage of Production Workers

Industry	Mean Wage	No. of Factories
Food	$525	8
Textiles	533	75
Apparel	507	40
Wood	695	20
Paper	516	18
Rubber	575	12
Chemical	600	2
Plastic	525	53
Non-metallic	650	5
Basic Metal	750	14
Fab. Metal	642	25
Machinery	694	16
Others	558	37
Services	610	10
Overall	622	335

Estimated from Kwun Tong Factory Survey data.

Our estimates for the average salaries of the clerical workers are not subject to this bias, as we have showed that there is little difference in the salaries of these workers between small and large factories. The overall estimate here is $613, compared to our previous estimate of $618.

Table 44: Mean (Monthly) Salary of Clerical Workers

Industry	Average Salaries	No. of Factory
Food	$750	2
Textile	645	46
Apparel	564	22
Wood	600	6
Paper	541	11
Rubber	450	3
Chemical	600	2
Plastic	546	28
Non-metallic	750	1
Basic Metal	600	8
Fab. Metal	728	14
Machinery	762	8
Others	577	26
Services	630	5
Overall	613	182

Estimated from Kwun Tong Factory Survey data.

From the three tables above, it is very difficult to make generalizations on inter-industry comparison. We can hardly relate the level of salaries and wages to relevant variables, such as size of industry, degree of export orientation. Assuming that there are no serious errors in our estimation, a lot of other factories will have to be studied in order to make such comparison. Some of these factors are: factor intensities of various industries, technical requirements for each type of workers, homogeneity of workers within each category, and the supply of workers to different industries. Ignoring those cases with specially small samples, the metal-working industries (especially Machinery) are consistently the high-paying industries, whereas the Paper and Plastic industries are consistently the low-paying industries for all categories of employees.

4. Concluding Remarks

In our analysis of the cost structure of the factories in Kwun Tong, material is found to be the most important cost component. This is not at all unexpected - industries in Hong Kong are in general processing industries. As for the other cost components, capital costs are at least as important as wages. Only in the Wood industry we find the labor input is much more important than capital. Thus, we can state that in the process of economic development the Kwun Tong factories have well passed the stage where labor still remains to be the major input. The emerging shortage of labor has worked gradually to increase the capital intensity of the Kwun Tong industries in general.

With respect to salaries and wages, factory size seems to exert certain effects, i.e., large factories tend to pay higher salaries and wages. The effect of this factor is most consistent for the wages of production workers, while for the salaries of managerial employees it is not so clear. Among our three categories of factory employees, the clerical workers are least paid. The abundance in their supply and the slow transfer of this group to other groups have contributed to this. In fact, this has actually overwhelmed the size effect, so that there is little difference in the salaries of clerical workers between large and small factories.

Our small sample and rough estimates have prevented us from making inter-industrial comparisons of salaries and wages. Therefore, it is not possible for our study here to relate salary and wage differentials to other variables. Such differentials are probably determined by factors relevant to Hong Kong in general, as Kwun Tong is hardly a separate labor market.

VIII. SUMMARY AND CONCLUSIONS

In this report, we have dealt with various aspects of the factories in Kwun Tong. The concluding remarks of each section summarize our findings in connection with these aspects. This overall summary will draw on such findings and present a general picture of the nature of Kwun Tong as an industrial community. In so doing, we shall also try to answer some of the questions which we originally raised.

1. The Nature of Kwun Tong Factories

Even though Kwun Tong is said to be an industrial zone, we should not be deceived by that term. The economic development of Kwun Tong (and Hong Kong) has not come to the stage where there are many large factories. By our modest standard, which classifies factories having 200 employees or more as large, only about 7% of the factories can be considered as such. On the contrary, more than 70% of them are small, each having less than 50 employees. When other size indicators are used, we get similar results. Therefore, there is no doubt that in number the factories in Kwun Tong are dominated by small ones. Only in a few industries, namely the Textiles, Apparel, Machinery and Others, there are relatively more medium- and large-sized factories. To a lesser extent, so is the Fab. Metal industry. We refer to these as the large scale industries.

Regardless of size, export orientation is a major characteristic of the factories in Kwun Tong, except those in the Food, Paper and of course Services industries. There seems to be indications that the large factories (and industries) tend to be even more export-oriented. The Textiles, Apparel, Rubber, Plastic, Fab. Metal and Others industries are most export-oriented. They export from well over 50% to 75% of their products.[1] Since these are generally the large scale industries and together they employ approximately 80% of the work force, their pattern is representative of the overall export orientation of the Kwun Tong factories.

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[1] Even these high percentages are under-estimates.

Even though their overseas markets are rather diversified (with the U.S. as the leading market) and most industries are involved heavily in export trade, the product lines of individual factories are surprisingly narrow. Most factories limit themselves to the production of one or two kinds of output. This further reflects their dependence on export trade, as their outputs are mainly produced according to the specification of their foreign buyers. This practice of filling orders, instead of tyring out new and diversified products, necessitates the specialization in their production.

As most factories in Kwun Tong are manufacturing final products for export markets, perhaps it is not surprising at all to find that they actually depend very little on one another as sources of their inputs and outlets for their outputs. However, in the simultaneous development of industries in this area, considerations on such market relations should still have a certain role to play if the market mechanism of supply and demand works at all. Conceivably, there should be close interrelations between the Textiles and Apparel industries, and among the metal-working industries, etc. These linkages seem to exist, but only to a very limited extent. Even in those industries which tend to market higher proportions of their products in Kwun Tong, the rest of Hong Kong is still a much more important market for their products. This suggests that these factories are as much part of Hong Kong as part of Kwun Tong itself.

The other side of the coin is the source of their machinery and equipment and other material inputs. There is little doubt that the heavy machinery and equipment are purchased from abroad, and it is the large factories (and the large scale industries in general) which depend mostly on this source of supply. With respect to raw materials and intermediate products, all industries (except Services) report that they depend overwhelmingly on foreign supplies. Of the small part which they purchase from the local market, again the share of Kwun Tong is much less than that of the rest of Hong Kong. In other words, the choice of location of the factories in Kwun Tong has little to do with the local supply of these inputs.

The same is true for labor input. Even though there is a vast source of labor supply in Kwun Tong with its 450,000 people, only half of the factory employees are from Kwun Tong. On the other hand, about half of the Kwun Tong residents who are factory workers are employed elsewhere. This is entirely irrational from the economic point of view if we just think about the time and money consumed in this heavy, daily cross-traffic, not to speak of the resulting traffic conjection which is a typical case of external diseconomy. Theoretically, with the help of the invisible hand of the market mechanism, all will end up well in the long run, and the workers will adjust their place of residence to where they work or the other way around. In reality, this is not happening at all. One explanation is found in the nature of the Kwun Tong factories. Since they depend heavily on exports markets, their demand for labor will fluctuate with the seasonal and cyclical variations of foreign demand. As a result, a considerable proportion of the labor force in Kwun Tong (as well as in Hong Kong) tend to have high mobility and flow from one industry to another depending on job opportunities. We have evidence for the high turnover of regular production workers. Some industries also depend heavily on seasonal workers. This frequent change of jobs makes the adjustment we have mentioned all the more difficult. For the average factory worker, he simply cannot afford to change his place of residence every time he changes his job. He might also be expecting that his next job would be closer to his present address, which may not materialize at all. This partially explains why the Kwun Tong labor market cannot be considered an entity of its own; its demand for and supply of manpower are inseparable from those of Hong Kong at large.

Thus, another major characteristic of the Kwun Tong factories is the lack of interdependence. Not only are they lacking in input-output relations among themselves, but also they are not closely tied to the local work force. It seems that what they have is only a common ground, literally speaking. Beyond that, their relations are not much different from those among all factories in Hong Kong. The input land is thus the deciding factor.

There is little doubt that these factories, newly established or moved in, are located in Kwun Tong because of the availability of industrial land. In fact it was due to the shortage of land (industrial, commercial as well as residential) that Kwun Tong was planned and developed, and it is from this very same factor we shall seek explanations for the problems that face Kwun Tong today. To this we shall shortly return in our discussion on the nature of Kwun Tong as an industrial community.

2. Employment

In our discussion on the factories and industries in Kwun Tong, we have already mentioned the contrast in their scale. When it comes to their employment the contrast is much more remarkable. There is a very high concentration of the work force in a few industries. The four large scale industries combined (namely Textiles, Apparel, Machinery and Others) employ close to 70% of the factory workers in Kwun Tong, and in the Textiles industry alone it is more than 25%. If we consider the six most export-oriented industries, namely Textiles, Apparel, Rubber, Plastic, Fab. Metal and Others, they provide employment for close to 80% of the work force. As these industries are all subject to seasonal and cyclical fluctuations as a result of changing foreign demand, the high mobility of labor only reflects the adjustment of the labor market to these changing conditions. Needless to say, the production workers are those most vulnerable to changing demand conditions and they have to adjust their employment accordingly. We find indeed that the turnover of the production workers is highest among various categories of factory employees. This high turnover also reflects the ability and willingness of these workers to adjust. These are important qualities for the workers themselves as well as for the factories. For, in an economy like Kwun Tong (and also Hong Kong in general) which is highly susceptible to fluctuations generated abroad, the lack of such flexibility could easily lead to structural unemployment.

In 1970, which was a good year for Hong Kong's export trade, there were growing signs of a labor shortage. Compared to other categories of employees, the general consensus was that additional production workers were most difficult to recruit. This phenomenon, together with high labor turnover, are all symptoms of a tight labor market in which the production workers are all taking advantage of their sellers' position.

Our analysis of wages also leads to the same conclusion. In recent years the general impression in Hong Kong is that the blue-collar workers are faring better than the white-collar workers. This is indeed the case, as our estimates show that the average wage of the production workers is higher than the average salary of the clerical workers. Not only that. In order to attract the cream of the production workers, the large factories tend to offer higher wages and other welfare benefits. All these are signs of rapid growing industries in confrontation with a growing labor shortage.

But the case for the clerical workers is entirely different. They earn lower salaries and their turnover is also low. The general consensus is that there is little difficulty to recruit such workers, and there is little difference in their salaries between small and large factories. Unlike the demand for production workers, the demand for clerical workers is not rigidly geared to the level of production; and for factories, their major manpower requirements are not in this particular cetegory. On the supply side, the massive influx of high school graduates into this segment of the labor market annually guarantees that there is no shortage in supply. In all, it is a buyers' market.

At the present stage of industrial development of Kwun Tong (and Hong Kong), there is still not much difference in the technical requirements for production and clerical workers. With some additional training and proper inducement the barrier can easily be surmounted. Theoretically the market mechanism can facilitate the transfer from one group to another; but in fact it seems to be painfully slow. Technical education is of course very important to foster this transfer; what is more basic is

psychological preparedness and acceptance. For it is a general phenomenon in the developing economies that society looks better at white-collar workers even though they are lowly paid, whereas industrialists are hard put and yearning for manpower. In our case of the factories in Kwun Tong, perhaps this contradiction is not as acute as in some other countries. Hong Kong does have a large commercial and financial sector which also has its vast potential opportunities, and the current wage differential may not be sufficient to warrant such transfers even if the workers have no psychological barriers to cross. All we suggest here is that we do see some emerging signs of this interesting phenomenon in our analysis of the employment situation in the Kwun Tong factories. And, with the further development of the factories in Kwun Tong (and Hong Kong), this problem can become very real.

3. The Overall Nature of Kwun Tong as An Industrial Community

The original question we raised at the beginning of this report is whether Kwun Tong is a self-contained community, or just part of Kowloon. We raised this question because the development of Kwun Tong was "planned"; at least it was half-planned. After fifteen years Kwun Tong is now well-developed. We can pause to review the elements of inadequate planning, which can be measured by the problems facing Kwun Tong today, and those factors that prevent Kwun Tong from becoming a self-contained community.

In our analysis all indications show that Kwun Tong is hardly a self-contained community, even though it was planned with the simultaneous development of industrial, commercial and residential areas. The development of an industrial community depends on a number of factors, such as the availability of industrial land, the proximity to output markets, the supply of labor, the accessibility to other input markets, and the sufficient provision of the economic infra-structure. It is the configuration of all these factors that ultimately determines the location of economic activities. Let us consider these factors for the case of Kwun Tong.

First, we have already pointed out the locational choice of the factories in Kwun Tong has very little to do with the proximity to their output markets. Overwhelming proportions of their outputs are marketed abroad or in the rest of Hong Kong. In this respect, it would not make much difference if these factories are located somewhere else in Hong Kong.

Second, even though Kwun Tong is well supplied with manpower, there is no evidence that the factories there depend mainly on the local supply of labor. The heavy cross-traffic of workers between Kwun Tong and the rest of Hong Kong indicates that there is only one labor market. The geographic proximity of Kwun Tong to many areas in Hong Kong is of course a major factor. In fact, a trip from some of these areas to Kwun Tong Town may not take much more time than from some outlying districts of greater Kwun Tong. The willingness of the workers to absorb the time and money consumed in travelling is another factor. In any event, these factories might as well be located elsewhere.

Third, in the case of markets for other inputs it is not different, since the factories in Kwun Tong purchase such inputs mostly from foreign countries or the rest of Hong Kong anyway.

Fourth, except road network the provision of the economic infrastructure in Kwun Tong is generally adequate. But this is not something unique. The supply of power and water, the communication system and other services are also adequate in many developed areas of Hong Kong. On the other hand, inadequate road network has gradually become a cause of external diseconomy and could be a stiffling factor for the further development of Kwun Tong.

This leads us to the final factor, the availability of land, which we believe to be the deciding factor for Kwun Tong to become an industrial community. It was because of the industrial land shortage that Kwun Tong was developed, and most factories readily admit that land is its major attraction. Factories are located there not because of other reasons but to satisfy their hunger for more land. Thus Kwun Tong has become a major point

of manufacture. All other factors are adjusted to it making it impossible to become a self-contained community. The convergence of so much industrial activities in Kwun Tong and its frequent and yet unavoidable relations with the rest of Hong Kong has put tremendous pressure upon the existing supply of road network. This problem is further compounded by the mobility of people between Kwun Tong and the rest of Hong Kong. We have already dwelt on some of its causes; however, we submit here that land shortage is also a major cause for this high mobility of labor.

The provision of resettlement and low-cost housing facilities in Kwun Tong was presumably aimed at providing the factories there with sufficient supply of local work force. As it turned out it was not quite successful. Those who obtain housing allotments there very often do not work in Kwun Tong at all. The general housing shortage in Hong Kong is so that once people obtain such housing they can hardly be expected to move, even if it is a long way from their work location. Compared to the cost of transportation, the cost of moving is much higher, because comparable housing accomodations are far more expensive at market rates. The same is true for better-class housing. The majority of the occupants in such housing are owners, and they consider their purchase as a hedge against rising housing cost. They would rather travel to work than move as housing costs are rising everywhere. The lack of first class housing further increases the flow of traffic. On top of these, there is also the large number of children travelling to school in other areas everyday as school facilities are by far insufficient in Kwun Tong.

Putting all pieces together it is understandable why Kwun Tong is very much an integral part of Hong Kong. The heavy cross-traffic of goods and people was quite unexpected in the original "plan", because it only provided one road leading to Kwun Tong which unfortunately had to pass through San Po Kong, another industrial area. The bottleneck is at Choi Hung and Ping Shek, the point of entry to Kwun Tong, where traffic has come to the point of saturation many hours during the day.

At present there are two road plans both attempting to ease the traffic congestion by bypassing San Po Kong. One is the expansion of Lung Cheung Road in the north which connects Kwun Tong with industrial areas and port facilities on the west side of the Kowloon Peninsula, another is to build a road under the Kai Tak Airport leading to Kwun Tong from Kowloon. When finished, these roads will no doubt help alleviate the traffic congestion. The necessity for these remedial measures reflects the realization of the fact that Kwun Tong is hardly a self-contained community because of its very nature.

The provision of more roads attacks the problem from one angle. It seeks to facilitate the present volume of traffic within the land space currently in use. But there is an easy limit to this -- the volume of traffic continues to increase while road construction also has a claim on land. A rational solution in the longer run should be in attempts to spread out the volume of traffic into wider areas and if possible reduce the volume of traffic itself. This is why in Hong Kong the development of more satellite towns is a necessity. Because of the nature of the Hong Kong economy, there will still be cross-traffics of goods. But the big difference is that it will be more widely spread. On the other hand, the decentralization of population will reduce the traffic of people. However, it still depends on the provision of much more low-cost housing facilities in many areas. The easing of the general housing shortage will reduce the cost differential between public and private housing, so that more people will become willing and able to adjust their place of residence to where they work. Only this can help reduce the cross traffic of people.

Almost twenty years ago, Mr. U. Tat-chee, then President of the Hong Kong Manufacturers' Union, wrote, "Hong Kong has the facilities and enjoys many advantages for success in her efforts to promote her industries. There is a good and efficient Government, a stable currency, good shipping and banking facilities, a cooperative and contented labour force, and above all there are adventurous industrialists. There is plenty of readily available

capital in this Colony and more funds are pouring into HK..... There is a large supply of skilled labour force..... There is however one big obstacle: the building land problem. Cheap land for factories does not exist".[1] In many ways this is still true. Our analysis of the nature of Kwun Tong as an industrial community indicates that the provision of residential housing facilities is also of great importance. Not only that it is a social problem of its own, over-crowdedness of people can also have adverse effects on the further development of industries in form of external diseconomies.

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[1] U Tat-chee, "Hong Kong's Industry And Its Future", Far Eastern Economic Review, August 12, 1954. p. 213.

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