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**“Transgration” of Chinese Seafarers in Economic Transition:
An institutional perspective on labour mobility**

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ABSTRACT

The term *transgration* refers to a labour “movement” across institutional boundaries. This is particularly true for transition economies like China where the majority of its labour forces are subject to be redistributed as part of the adjustment or reconstruction of economic structure from planned to market economy. In front of increasing challenges and uncertainties, different people may have different coping strategies resulting in various mobility models. Alongside spatially “migration” or temporally “circulation”, transgration is a labour mobility model which is used by those who may play multiple roles to different sectors/employers in the same time until their role definition, employment objective or career route are clarified. Transgration does not only represent the process, stage and consequences of the institutional transition, but also provides opportunities for massive labour forces to participate in and contribute to the new institutions.

Transgration can be illustrated by the case of Chinese seafarers. Whilst the establishment of global labour markets makes it possible for them to flow between ‘national’ and ‘foreign’ ships, the process is driven by both the pressure of seafarer surplus in the state owned enterprises (SOE) and the liberality of seafarer flow. The implications of transgration can be revealed from two aspects. On the one hand, Chinese seafarers are no longer homogeneous but can be distinguished into three groups: *traditional* seafarers who prefer or depend upon traditional employment systems; *transgrant* who are intermediate and moveable across sectors; and *pioneer*, who are first ‘residents’ in new systems and won’t return to old systems. On the other hand, transgration is not merely personal behaviour and selection, but an important indicator reflecting the development and maturity of China’s labour market.

In order to understand the existence and functions of the transgration, an empirical survey was conducted in the port of Hong Kong in the winter of 2002/2003. By analysing the quantitative and qualitative information from over 500 seafarers, this paper offers insights into the extent, characteristics, dynamics and trends of the transgration.

Key Words: transgration, labour mobility, institutional dimension, Chinese seafarers.

1. INTRODUCTION

The past century has witnessed an accelerating mobility of worldwide capital, technology, information and people. This is particularly true for China where the economic transition from central planned to market economy has not only redistributed materialised capitals but also stimulated people mobility at unexpected scale and speed. While the physical movement across geographic or sector boundaries (e.g. internal or international migration, rural-urban circulation) have been well documented (Pieke and Mallee 1999; Yeung 2002; Zhai and Wang 2002; Liao 2003; Xing 2003; Zhang 2003), we know little about another ‘movement’ which may not necessarily involve geographical movement but mainly the change of their employment or recruitment status from one institution to another.

For example, a teacher may “move” from a public school to a newly established private institution within the same city. Rather than “jump” from one to another, the whole process may take one or two years due to many uncertain factors. During the period, s/he may keep her/his full-time job in the former for a while and do part-time work for the latter (called the “second job” in Chinese), and then part-time for the former and full-time for the latter. Such kind of “movement” is not necessarily limited to the same sector, and may be involved in new skill learning or career change. For instances, a government officer may also be a “director” to a private company while a professor may involve the establishment of a high-tech company before he quits his university job. Such phenomenon has been called as *Xia Hai* (swimming at sea) in Chinese, meaning people move from a safely but low paid job in a public institution (e.g. government agency, research or educational institution, state-owned enterprise) to a high income and high risk job in the commercial world. Because of the nature of newly established institutions, less-regulated and high risk-prone, the people who intend to *Xia Hai* usually need a period for “warming up” (to learn “swimming”) by part time or temporary involvement. The term *transgration* is thus referred to such kind of labour movement across the institutional boundaries in order to capture the opportunities and/or to reduce the risks from economic transition.

Transgration cannot be separated from *transgrants*, a group of people who are unsatisfied with their current jobs or working environments, and desire to find a novel career or institution to 'settle down'. During the period, they may not only learn new knowledge or skills, but also adjust their moral and value systems in order to adapt to the new institution or working environments. While all people may have experience in the transformation of their career or social role throughout a life cycle, transgration is particularly referred to such special periods in which s/he has to play multiple roles at the same time or move across different institutions frequently in order to increase opportunities and or to reduce risks. In this regards, transgrants are those who are involving the transformation of their roles, skills, career routes and other relevant characteristics. Transgrant can thus be viewed as intermediates between 'traditional residents' and "new settlers": the former are featured by continuity of their role, knowledge and skills despite dramatic change surrounding their working environment, while the latter, in theory, have "cut-down" links with traditional institutions, and got used to the new environments with a new and clear definition of role, career objective and long term strategy.

Transgration is not limited to personal experience but essentially related to the institutional transition from the planned to market economies. In response to the institutional change, almost all people are subject to the adjustment of their value systems, knowledge and skills, moral standards and role behaviours at various extents, resulting in large scale, unique and unexpected labour mobility in the Chinese history. Due to the complexity of economic transition, institutional environments and personal attributes however, different people may have different needs, constraints, perspectives and coping strategies, resulting in a great variety of role performances. In these regards, transgration is not merely reflecting the process, stage and consequences of economic, social and political transformation, but can be treated as an important dynamic driving the institutional change. Similarly, transgrants are not only adapted to and encouraged by the institutional change, but also participate in and contribute to the establishment and development of the new institution.

The concept of transgration can be clarified by a case study on Chinese seafarers due to the following considerations. First, international shipping as the first globalised industry has established a global labour market, which offers opportunities to observe

the movement of Chinese seafarers between national and foreign fleets. Secondly, there are a few sectors in China today like seafarers whose employment is still dominated by state-owned enterprises (SOE) and tightly controlled by government. These results in a relatively clear boundary between SOE, private and foreign shipping companies by which we can observe the movement of Chinese seafarers across 'institutional boundaries'. Thirdly, because offshore navigation is a unique skill, which can hardly be applied to shore-based sectors, it allows author to concentrate on the movement of seafarers across institutional boundaries with little attention to movement across industrial sectors.

In order to understand the transmigration of Chinese seafarers, an empirical survey was conducted in the Port of Hong Kong in the winter of 2002/2003. The purposes of this paper is to show empirical evidence related to the transmigration, to develop a means for observing and measuring the transmigration, and to explore the contribution of transmigration studies to labour mobility debates. The above aims are addressed through six parts exclusive of this introduction. Section two outlines the background, research design and survey methods. It is followed by distribution of seafarers by recruitment pattern while section four focuses on the structural change of seafarer employment and impacts. Section five distinguishes all sample into the three categories: traditional, migrant and pioneers, and section six provides qualitative information about their flow experience and issues. Based upon empirical evidences above, section seven discusses the theoretic implications, and section eight concludes this paper.

2. BACKGROUND, RESEARCH AND SURVEY DESIGN

Transmigration cannot be separated from institutional change referring to structural change of economic systems leading to a redistribution or relocation of labour forces among economic sectors. A good example is international shipping which was "shocked" by "oil crisis" in the early 1970s, which forced ship owners and managers search for "cheaper labours" in order to reduce the manning costs. Adopting a strategy of "flagging change" from national register to "flag of convenience" (FOC), shipping companies can recruit seafarers worldwide, leading to a reshape of world demand and supply of seafarers (Alderton and Winchester 2002). Replacement for those expensive

seafarers from traditional maritime countries (e.g. Western Europe and North America) for instance, 85 percent of world seafarers come from Asia and Eastern European countries, despite 70 percent of the world fleet controlled by the former (Lane *et al.*, 2002; LRF, 2002). Chasing this opportunity, China is one of many new seafarer supply countries (Liao 2003).

In synchronicity with its 'going-abroad' efforts, a national seafaring labour market has also been established to adapt to the institutional change in China's international shipping. Before the 1980s, all Chinese seafarers were permanently employed by the state-owned enterprises (SOE). Since its economic reform and open-door policies, the monopoly of the SOEs in the freight market and seafaring resources has been broken. By 2000 for instance, there are over 300 shipping companies registered for international transport, of which the majority are those non state-owned companies (NSO) (MOC 2001). Unlike their SOE counterparts, the NSO companies do not own pool of seafarers and all crew are entirely dependent upon the labour market. It has resulted in a flow of seafarers between SOE and NSO sectors. Such flow is also of benefit to SOE companies which suffer from overstaffing at various extents (Gu 1999; Cai *et al* 2001; Zhai and Wang 2002; Zhu and Dowling 2002).

The demand of the NSO sector however, is not big enough to absorb all surplus in the SOE sector, which 'pushes' SOE seafarers and their employers, to search for opportunities in the global labour market. As a result, a new sector, seafarers recruitment agencies have been established, which is comprised of a few SOE shipping companies, government authorised foreign-trade companies and some local labour agencies. By 2002, a total of 45 agencies have been registered in the China Seafarers Export Co-ordination, which offer a new base (institution) to deal with "seafarer export" affairs.

While the establishment of global and national labour markets provides a base for the flow of Chinese seafarers across institutional boundaries, many questions arise here: to what extent, and by what pattern, do Chinese seafarers involve the flow? How do their flow experience impact on their seafaring career development? What factors influence their selection and decision making?

For empirical observation and measure purposes, the term *flow* needs to be defined precisely. In contrast to the lifetime employment and low mobility of SOE employees in the past, here we define the flow of seafarers as any change in either their employment status OR recruitment location. Accordingly, there are two types of “movement” across institutional boundaries: horizontal and vertical. The former is related to change of their recruitment location between SOE ships, NSO or foreign vessels; while the latter refers to the change of employment status between SOE employees, crewing agency-tied seafarers, and individual or self-employed seafarers (freemen). Bringing two dimensions together, in theory, the position (or recruitment status) of a Chinese seafarer in the labour markets at any time can be identified from Table 1.

Table 1 Flow of Chinese Seafarers: a framework for observation and measurable

Employment Status (supply)	Recruitment Location (demand)		
	SOE	NSO	Foreign
SOE employees	St 11	St 12	St 13
Agency tied	St 21	St 22	St 23
Individual (freemen)	St 31	St 32	St 33

By contrast to the homogeneity (only one cell, **St 11**) in the past, today Chinese seafarers are rather heterogeneous, which can be identified by 9 recruitment statuses. Horizontally, St.12 and St.13 denote that SOE employees are working onboard non-state owned (NSO) company ships or foreign vessels. Vertically, Table 1 suggests that a NSO or foreign ship owner/manager can recruit Chinese seafarers from either SOE company or through an intermediate agency. The mobility of Chinese seafarers can thus be expressed as the scale of and frequency of the sample’s ‘movement’ either or both horizontally and vertically shown in Table 1, which can be expressed as a formula below:

Mobility:	$\phi = \sum(\mathbf{St}_{2ij} - \mathbf{St}_{1ij})/N$
Here:	t_2 latest time, t_1 previous measured time; $t_2 - t_1 > 0$; N number of cases; i denotes employment, $i=1$ SOE staff, $i=2$ agency-tied; $i=3$, freemen j denotes recruitment: $j=1$, SOE; $j=2$, NSO; $j=3$; foreign)

The above formula indicates that the mobility of Chinese seafarers can be observed and measured from the movement ϕ which denotes the change of sample seafarers across institutional boundaries. Assuming $\phi_0 = 0$, meaning no mobility at all because of the nature of state monopoly of both freight and seafarers in the past, many questions arise regarding the current state of Chinese seafarers:

1. What progress has China made in establishing and developing a labour market system for seafarer employment and recruitment? In other words, is it true for: $\phi_2 > \phi_1 > 0$ (increasing diversity in both employment status and recruitment location)?
2. If the above statement is true, furthermore, can we see a growing number of seafarers working onboard NSO and foreign fleets ($\phi_{i2} > \phi_{i1} > 0$)?
3. Similarly, can we say that there is growing number of seafarers who prefers/move from SOE employment to agency-tied or freemen ($\phi_{j2} > \phi_{j1} > 0$)?
4. Finally, are there any linkages between the two flows above, from national to foreign fleets; and from SOE employees to agency-tied/freemen? If so how?

The questions above are addressed by a questionnaire survey, associated with a number of in-depth interviews conducted at the port of Hong Kong (HK survey thereafter) in the winter of 2002/2003. The HK port was chosen for this survey due to the following factors. Firstly, HK is one of the largest seaports in the world and therefore has more chance to catch international trading vessels with Chinese crew. Secondly, the HK port is an ideal place to collect information related to small and medium-size shipping companies whose business is confined within the East Asia region route (between Singapore, China, Korea and Japan). Finally, HK is a free port in which targeted ships are relatively easy to access.

In practice, ocean-going vessels with Chinese crew were randomly boarded throughout the anchorage areas of the HK port where seafarers have more time (chance) to participate in questionnaire survey compared with the busy dock areas. In sampled ships, all Chinese seafarers were assembled and invited to fill in questionnaires. The self-administrated questionnaires were checked when submitted with a special attention to their employment status and flow experience. Non-response occurred in the following cases: leaving for shore, sleeping due to overnight working; busy on duty (e.g. repairing engine, loading and unloading cargo, etc). In total, 49 of 55 eligible vessels were involved in this survey.

Regarding the representative sample, a total of 49 sample vessels were registered over 12 flags, and over half (26) were owned by foreign companies, including Taiwan, Hong Kong, Malaysia, South Korea, Japan and Singapore. Of the total 23 China (PRC) owned vessels, 13 belonged to local SOE companies (provincial or below), 5 central SOEs (e.g. COSCO), and 5 from non state-owned companies. Of the total 1078 crew onboard the sample vessels, 940 or 87 percent were Chinese. For the purposes of this research, Hong Kong and Taiwanese are excluded from the term ‘Chinese seafarers’. Among eligible crews, 494 or 53 percent participated in the questionnaire survey. Besides the quantitative data above, over 40 interviews were undertaken in the Hong Kong Mariner Club to collect detailed information related to seafarer flow experience.

3. RECRUITMENT OPPORTUNITIES

Transmigration of Chinese seafarers can be viewed as a response to the establishment and development of the seafaring labour markets at both national and global levels. It raises questions: to what extent have Chinese seafarers involved the labour markets? How important is NSO or foreign sector for their job security? What is the direction of their seafarer flow across sectors?

The above questions can be addressed through an analysis on their recruitment pattern which defines the movement of seafarers through three aspects. Firstly, it considers only active seafarer who are working onboard an international trade vessel at any given time. This excludes those who are on leave for holidays or who are unable onboard ships due to various reasons (e.g. being laid-up). Secondly, it focuses on the demand side of seafarers regardless of their difference in terms of employment nature and length. Thirdly, from institutional perspectives, it distinguishes all sample ships into three groups: SOE, NSO and Foreign, according to the nature of ship owner regardless of differences within each group.

Table 2 indicates that SOE and foreign sectors share a similar size, over 40 percent, of the sample seafarers, leaving 10 percent to NSO ships. A certain caution is necessary to interpret this result due to sample biases which skews to foreign vessels.

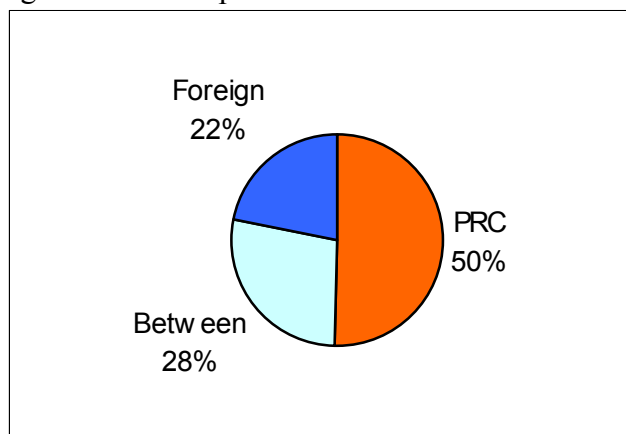
Table 2 Distribution of the Sample by Ship Owner

Category	Unit	SOE	NSO	Foreign	Total
Vessels	N	18	5	26	49
	%	36.7	10.2	53.1	100
Seafarers	N	236	50	208	494
	%	47.8	10.1	42.1	100

Regardless of the accuracy of the sample to Chinese seafarer population, three conclusions can be drawn from Table 2. Firstly, in contrast to the sole pattern adopted by SOE companies in the past, there is a plural structure of the labour market available for Chinese seafarers. It means that, in theory, a qualified seafarer can search for an onboard opportunity from three channels: SOE companies, NSO ships, or foreign shipping companies who recruit Chinese seafarers through a crewing agency/SOE company. Secondly, the global labour market has become an important part of China seafarer employment. Compared with the SOE sector, the demand from NSO (or private) sector is rather small. Finally, the percentage gap between vessels and seafarers in foreign sector is related to multinational crewing pattern, which is in contrast to the single national crewing pattern predominant in Chinese fleets (Wu 2004).

With respect to their flow experience, all participants were asked to provide detailed information of their last three contracts including: sign-on and sign-off dates, rank, and nationality of ship owners. Figure 1 indicates that half of responses remained in the national fleet (or PRC fleets, including SOE and NSO vessels), and over 20 percent continued working for foreign vessels, while nearly 30 percent went between them. While it confirms the importance of the global labour market for Chinese seafarers, it also shows over one quarter of the sample involve “oscillation” between national and foreign fleets in order to catch opportunity in both sides.

Figure 1 Flow Experience in Last Three Contracts (N=357)



The importance of job flexibility could be understood if the pressure of seafarer surplus is taken into account. According to this survey, many senior officers from SOE sector claimed that their companies suffered from labour surplus, which can be illustrated from the following scenarios in Table 3.

Table 3 Seafarers Surplus in Selected SOE Shipping Companies

Company	Ships	Seafarers	Surplus*	Company Measures
A	100	11,000	2.75	Stop recruiting ratings and the vacancies are filled by new graduates from universities and colleges
B	15	1500	2.5	600 are fixed for company's vessels and all others "exported" to outside companies.
C	14	600	1.07	Encourage staff to work onboard outside to learn experience from other companies
D	3	220	1.83	Reducing the length of contract to six months in order to increase share of the jobs
E	2	120	1.50	20 staff are permitted to work outside and contribute 10% of their wage to the company.

Notes: this table is composed from an edition of interview information collected from the HK survey, upon which the extent of seafarer surplus can be estimated by surplus ratio¹. The ratio = 1 means no surplus at all. The higher the ratio, the more serious the seafarer surplus.

¹ Surplus ratio is the ratio of the total number of a company's seafarers to the rational scale of seafarer demand. There are many factors influence rational scale including ship type, size, age, back-up ratio (related to seafarers leaving for shore) and also company policy. Here is a simplified estimation based upon assumptions of 20 crew members per ship and back-up ratio as 2 (meaning for one position onboard a need to recruit two seafarers throughout a year).

Table 3 indicates that SOE companies suffered labour surplus at various extent from almost tripling (2.75) actual demand to just slightly above. The seafarer surplus in SOE companies are supported by the questionnaire survey by which seafarer working opportunities are measured by the probability of going onboard ship each year. Ideally, seafarers should have one contract per year on average (e.g. 8-9 months at sea and 3-4 months shore-break). In reality, the survey results indicate that the probability of seafarers signing an onboard contract per year is only 0.7 in total, and continuous working for foreign fleets are higher in the probability (>0.8) than those keeping to national ships (<0.5). Between the above ends, those seafarers moving between can gain an average opportunity (0.7).

From the demand perspective, this section has shown that the establishment of national and global labour markets have offered a ‘pull’ for Chinese seafarers out of the SOE sector, while the seafarers surplus in many SOE companies also ‘push’ their movement. While there is an overall flow from national to foreign fleets, a large mount of them are actually “oscillating” between them.

4. ADJUSTMENT OF EMPLOYMENT STRUCTURE

While the establishment of the labour markets has broadened their recruitment opportunities beyond the SOE sector, equally important is how Chinese seafarers can use and maintain such opportunities, which involves a seafaring resource management system. Reflecting to the demand-pull and supply-push above, a plural structure of seafarer employment has emerged, which consists of SOE employees, agency-tied and freemen.

SOE seafarers here are either permanently employed by or signed a long term contract (over three years) with a SOE company. This category excludes those who had a only short-term contract with SOE company (less than one year, known as “temporary staff”). Besides SOE employees, agency-tied seafarers are those who have signed a median or long term (usually 3 to 5 years) contract with an intermediate agency, during the period the agency is responsible for searching and providing recruitment opportunities for the seafarers with a fixed charge of their salary extracted every

month. In contrast, “freemen” have only short-term contract (usually 8 to 12 months) with shipping companies (including SOE companies) or crewing agencies.

The outstanding difference between SOE and other seafarers is that the former mainly work for the company’s own vessels whilst the latter are entirely dependent upon either the domestic or international labour market. In addition, the former may have training opportunities, holiday pay or other welfare (e.g. medicine, child schooling, housing subsidy), which contrasts to the latter who get nothing in most cases. However, the division above is not absolute. For instance, large numbers of SOE seafarers need to work outside of their own companies whilst the decline of job security and social welfare in many SOE companies make it difficult to make a distinction between SOE employees and others.

The HK survey shows that about 70 percent of the sample are SOE employees, 10 percent agency-tied, and 20 percent freemen. Taking into account the sole pattern of SOE employment in the past, this result represents a significant development in China’s labour market for seafarers.

Linking seafarers employment with their recruitment status, Table 4 indicates: firstly less than two thirds (64%) of SOE seafarers worked for SOE companies, suggesting the labour supply for outside market has become an important objective of SOE enterprises; secondly, different from their SOE counterpart, agency-tied and freemen share a similar pattern of their recruitment as over three quarters of them were serviced for foreign vessels; thirdly, while the competition can be seen between SOE, agency-tied and freemen in the NSO and foreign vessels, the SOE sector itself beginning to recruit a few agency-tied and freemen seafarers.

Table 4 Recruitment of the Sample by Employment Entitlement

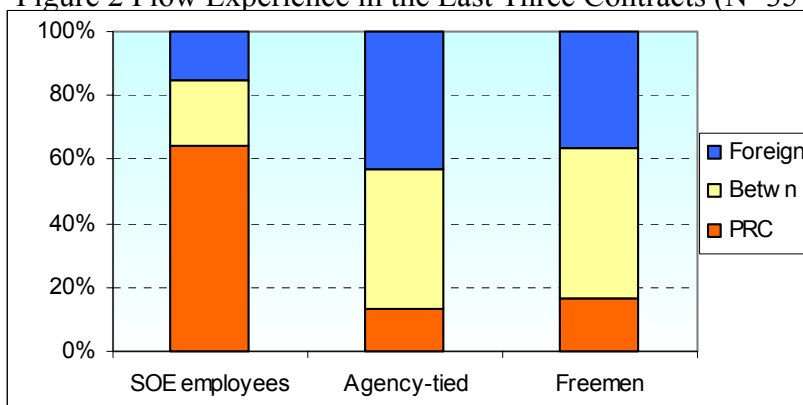
Employment	Sample distribution		Ship owner (%)		
	No.	%	SOE	NSO	Foreign
SOE employees	348	70.7	64.4	8.3	27.3
Agency-tied	49	10.0	4.1	12.2	83.7
Freemen	95	19.3	9.5	14.7	75.8
Total	492	100	47.8	10.0	42.3

For sample distribution, column as 100 percent; for ship owner, row as 100 percent.

Regarding the scale of SOE employee flow, the HK survey shows that just over half (51%) of SOE seafarers had experience in working for outside companies, whilst the rest had never left their own companies. For those SOE staff who have experience working outside, nearly three quarters (73%) have been sent to foreign fleets only, 12 percent for domestic companies only, and 15 percent for both. In most cases, they were sent by their companies. It is not unusual, however, that a SOE seafarer may identify a suitable post with a good salary and then ask for his employer to approve his leave. In that case, his employer usually charges administrative fees for the purposes of taking out his personal certificates and also retaining his post in the company. The charge however, varies company by company.

Concerning the flow experience in the last three contracts, Figure 2 indicates that nearly two thirds (64%) of SOE employees were kept within national fleets, 15 percent continuously worked for foreign fleets, leaving one in five jumping between national and foreign fleets. By contrast, around 40 percent of agency-tied and freemen seafarers were kept onboard foreign fleets, 20 percent on PRC fleets, leaving reminding 40 percent “oscillation” between them.

Figure 2 Flow Experience in the Last Three Contracts (N=357)

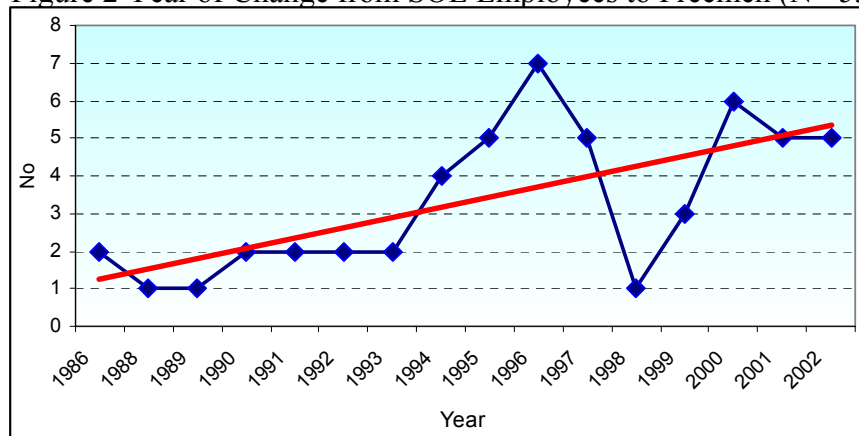


Three conclusions can be drawn from Figure 2. Firstly, it is confirmed that agency-tied and freemen share a similar pattern in terms of recruitment target and ‘movement’ between two national and foreign fleets. Secondly, both they are highly mobile as 40 percent of them involved movement between national and foreign fleets, double the figure of their SOE counterparts. Thirdly, SOE employees themselves are not homogenous as nearly 40 percent work for foreign companies continuously or

move between national and foreign fleets. For those SOE seafarers who continued to work onboard foreign ships, there is little difference from those who were tied by manning agencies in terms of working conditions and recruitment styles except inemployment title.

As the accumulation of the flow experience, according to the HK survey, some of SOE employees may change their employment status in order to increase both income and onboard opportunities, resulting in flow from SOE employees to ‘freemen’. For those “freemen”, the questionnaire survey indicates that over three quarters (77%) claimed that they had had a couple years of working experience in SOE sector. In most cases, they were allowed to departure from SOE companies because of the decline of company fleets. Equally important is that before leaving SOE sector, they had the experience and confidence to work outside their company. Figure 3 shows a growth trend of the departure from SOE employees to freemen since the mid 1990s.

Figure 2 Year of Change from SOE Employees to Freemen (N= 53)



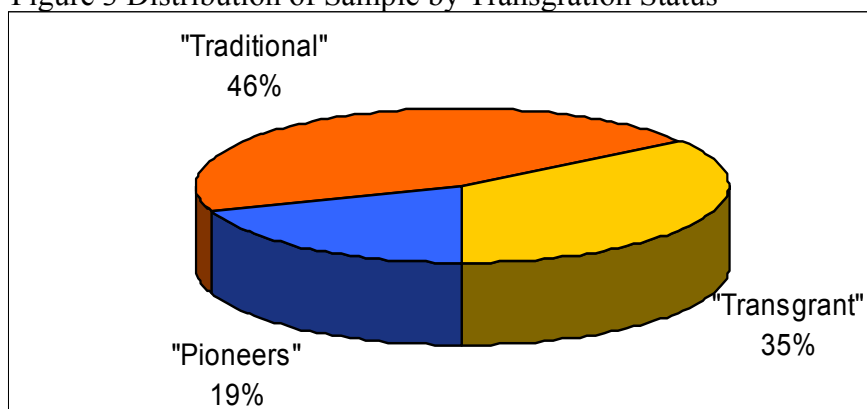
From the seafarer employment system perspective, this section has shown a structural adjustment towards an increase of agency-tied and freemen seafarers. While the agency-tied seafarers can be seen as an intermediate between SOE employment and freemen, SOE employees themselves cannot be treated as a homogenous whole as a large amount of them continue to work for foreign companies. An important finding from the HK survey is that the majority of freemen had experience in working for foreign companies before they left SOE companies. Alongside the change of recruitment pattern from the national to foreign fleets, we have witnessed a trend of the flow of Chinese seafarer from SOE employees to freemen.

5. PROFILE OF SEAFARERS BY TRANSGRATION

Previous section indicates that there is some overlapping between SOE and agency-tied seafarers, and between agency-tied and freemen in terms of recruitment pattern. In addition, there is an one-way flow from SOE or agency-tied seafarers to freemen, but no reverse found. It seems that there is an intermediate status between traditionally seafarers in SOE sector at one end and freemen at the other. Integrating the employment and recruitment dimensions together, all seafarers can be distinguished into three categories according to their recruitment status described in Table 1. At the one end, *traditional* seafarers are those who are totally dependent upon or prefer to stay in SOE sector for not only permanent employment but also continuously working onboard SOE fleets. At the other end, *pioneers* have neither long term relation with nor dependency upon any SOE company or crewing agency for their job security. Intermediate between them, *transgrants* are either agency or SOE-tied seafarers whose recruitment is arranged and controlled by their companies/agencies rather than themselves.

Applying the above definition, Figure 3 shows that nearly 20 percent of the sample are freemen, 46 percent are traditional seafarers, leaving 35 percent as transgrants.

Figure 3 Distribution of Sample by Transgration Status



Bearing in mind sample biases, we do not claim that Figure 3 is representative to all Chinese seafarers. It is safe to say however, that the traditional grouping is still predominant for Chinese seafarers, and pioneers (or freemen) are rather small in number. Nonetheless, we have witnessed an increasing trend in the transgrant group,

which has the potential to become pioneers. To understand the difference and linkage amongst them, the following paragraphs will draw a profile of the sample through quantitative analysis, leaving qualitative information to the next section.

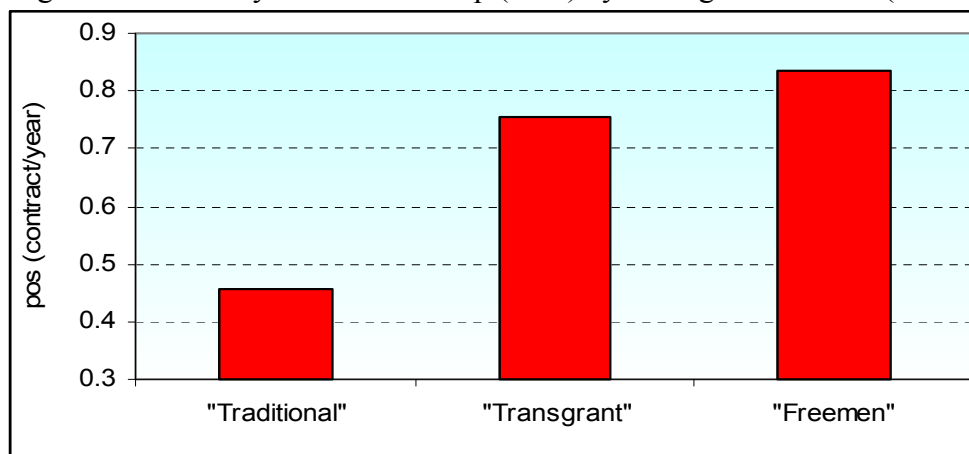
The data analysis shows that there is no difference between traditional, transgrant and pioneer groups in terms of education and rank profile. Significant difference however can be found in age, experience, onboard opportunity and payment level. Table 5 indicates that compared with traditional seafarers, both transgrant and pioneers are younger in terms of age and experience and there is no significant difference between them.

Table 5 Group Comparison by Age and Experience

Status	Age (ys)	Experience (ys)
Traditional	37.2	14.6
Transgrant	35.1	11.2
Pioneer	35.0	11.1
Total	36.0	12.7

Turning to job security, Figure 4 shows that pioneers has more opportunities to be recruited than other groups, followed by transgrants, leaving the traditional seafarers last. This seems to suggest that one of the important rationale to drive seafarers' transgration is to increase onboard opportunity.

Figure 4 Probability of Onboard Ship (POS) by Transgration Status (N=188)



In contrast to the international standard, the low payment is a concern of Chinese seafarers. Based upon the information of HK survey, Table 6 outlines the wage and variety among the sample. This indicates that there is no significant difference between traditional and transgrant seafarers. By contrast, pioneer (i.e freemen) is 70 percent higher than their counterparts in senior rank, 40 percent higher in junior rank, and 10 to 20 percent higher in ratings level.

Table 6 Comparison of Seafarers' Wage by Rank and Status (US \$/month)

Status	Senior	Junior	Ratings	Total
Traditional	956	667	470	623
Transgrant	1007	700	415	632
Pioneer	1700	1000	512	878
Total	1124	681	457	666

Notes: This table is resulted from a combination of questionnaire survey and author's interview information. This is a total payment.

The similarity of seafarer income between traditional and transgrants can be interpreted as the mechanism of the current seafarer income extraction system by which SOE employees working onboard foreign ships earn almost the same amount of money as their colleagues onboard company vessels while crewing agencies may just pay a similar wage to seafarers as SOE companies. As a result, it is estimated that about 30 to 50 percent of transgrants' wage are contributed to either SOE companies or tied agencies every month. By contrast, pioneers are those who have "bargain power" because they don't have a long term contract with any agency and also they may search and handle many job offers in order to negotiate and make a choice. Owing to their rich experience, skills and accessibility, according to the HK survey, pioneers can manage to select and use a suitable "agency" with minimum charge (15% of their wage for instance) and maximum freedom (only one contract).

The difference between traditional, transgrants and pioneers can be further recognised by different responses to major issues facing them. For instance, over three quarters and 70 percent of traditional and transgrants seafarers are concerned about their wage standard respectively, 15 and 10 percent points higher than the pioneers. Over 60 percent of the traditional seafarers are concerned about job security, compared with 54 percent and 41 percent in transgrants and pioneer groups respectively.

6. INSTITUTIONAL FACTORS OF TRANSGRATION

While previous sections show a trend of seafarers' transgration from traditional to pioneers, many questions arise: why such large number of them are limited to transgrants rather than pioneers? What factors constrain their transgration? Such kind of questions are addressed through the qualitative information below.

Firstly, seafaring experience including service for foreign fleets is a precondition for those who intend to be pioneers. According to this survey, pioneers usually had spent five to ten years at sea before their experience and skills were attractive to crewing agencies and foreign shipping companies. To gain such experience, they have to join a SOE company or a crewing agency first. Differing from the predomination of those large SOE companies in the past, employment in crewing agencies is increasingly popular for those younger professionals, which can be seen from the case of Dalian Maritime University (DMU), a top university in China's maritime high education. Below is a quotation from a graduate from the DMU.

Differing from SOE employment in the past, employment through crewing agencies is more popular amongst new graduates this year because they would like to work aboard foreign ships. As a result, those crewing agencies who came to the university for career fairs have set up tough criteria to be short-listed for interview: their academic scores should be in the top 30 or first 50 of all graduates.

Secondly, for those who have rich seafaring experience and social networks, the transgration to pioneer is never easy because of many constraints in the current seafarer management system. One of important means used by SOE or crewing agency is control of seafarer certificates and other legal document which can be illustrated by Box 1.

BOX 1 WHY SHOULD THE COMPANY HOLD MY CERTIFICATES?

Almost all of Chinese seafarers, except those ‘freemen’, are required to return their seaman book and officer certificates to their “working unit” (whatever SOE company or crewing agency in the case of agency-tied seafarers) as soon as they complete their duties at sea. As a result, seafarers’ certificates become a means for those SOE or crewing agencies to constrain or control the flow of seafarers. Without national regulation however, negotiation between seafarers and their ‘units’ for taking out their personal documents varies greatly company by company. While some allow seafarers to quit from the company if applicants can refund the cost of training and development, others may totally prohibit the outflow even if there is a serious surplus of seafarers. The quotes below indicate the complexity of seafaring resource management:

“Our employer has 30 vessels and 2000 seafarers. In addition, we also support another 2000 retired staff. We are not allowed to leave from our company even if there are labour surpluses. Instead, we are sent by the company to either domestic non-state owned companies or foreign ships to earn money for our company. In other words, we are cash machines for the company.”

“Like many poor SOE companies, there is a trend of decline in social welfare (e.g. no housing or schooling support) available for staff, and I had to pay all the costs of training and examinations for a chief officer certificate by myself. Having successfully passed the examination, unfortunately the new book has been taken over by my employer again. Why should my personal documents be held by them?”

Thirdly, a ‘pioneer’ (freeman) is not really *free* from institutional constraints. Box 2 shows how vulnerable freemen are in any potential conflicts or unexpected events, which is also is barriers against their transmigration.

BOX 2 WHO TAKES CARE OF CHINESE SEAFARERS?

Compared with the visible income gap, many seafarers raised questions about their rights and means of protection. Unlike their colleagues from other developing countries such as Filipinos, Indians, Indonesians and Bangladesh, who can complain to the ship owner or managers through their own trade unions or International Transport Workers’ Federation (ITF), Chinese seafarers are more vulnerable if any contradictions or conflicts happen. It is particularly true for those freemen. This is a quotation from two senior officers on a foreign vessel.

Regarding the flow of Chinese seafarers in the global labour market, the big issue according to our opinion is the lack of an organisation to protect us. For instance, if any conflict happens with the shipping company, Filipinos may ask for their Seamen union to provide legal assistance or submit their complains to the ITF. By contrast, we cannot do anything because we are told to make no contract with the ITF, and cause no argument with the shipping company. If we are fired from our current job, whether we are right or wrong, we cannot get a refund of our deposits held in the shipping company and crewing agency, and also we have to pay the air ticket by ourselves. Being at the bottom of the global seafarers in both economic income and political rights, we feel really vulnerable and frightened of making any possible mistakes as soon as we go onboard ship.

When there are many constraints against the flow of seafarers, transmigration is also an important dynamic driving the change of traditional seafaring management systems. Table 4 have shown that 10 percent of pioneers were aboard SOE vessels. Why and how can it happen? The story in Box 3 offers insights into the impacts of transmigration on seafarer resource management in SOE companies.

BOX 3 WHY ARE WE ABOARD SOE VESSELS?

It is well-known that the SOE companies suffer from overstaffing. Onboard some SOE vessels however, you may find one or two crewmembers, even senior officers, who are recruited from outside the company. Why does it happen? Regarding the complexity of China's labour market, the story below told by a freemen captain in a SOE vessel may expose some issues related to the management of the SOE companies.

This is a local SOE company whose six of ten vessels have been sold due to poor economic performance without any reduction in its employees. It suffers a serious labour surplus whilst the wage aboard ships is kept at a very low level. For instance, the chief officer gets only 4800 yuan/month (or \$560/month) in this company but 10000 yuan/month (or \$1180/month) in the market. It results in that many seafarers, especially those senior officers, do not want to work for the company. None are allowed to flow out - they might apply for a sick leave, and then pay the managers about 1500 yuan/month (\$175/month) to take out their seamen book and certificates in order to work for foreign or domestic ships. As a result, the company had to recruit three senior officers (captain, chief engine and chief officer) from the labour market, because no qualified staff were available for the positions at that moment.

By bringing some qualitative information from interviews during the HK survey, many conclusions can be drawn from this section. Firstly, reflecting labour market signals, there is increasing demand for transmigration among Chinese seafarers. Secondly, the process of transmigration is never straightforward but facing constraints from the traditional seafaring management systems. Thirdly, transmigration is also an important dynamic driving the change of SOE seafaring management systems.

7. INSTITUTIONAL PERSPECTIVE ON TRANSGRATION

The case of Chinese seafarers described in previous sections sheds lights on the mobility of Chinese labour forces in the economic transition in general, and the importance of the institutional dimension in labour mobility studies in particular. Many questions arise regarding the contribution of the seafarers' case to the labour mobility debates: why is an institutional dimension so important to understand transgration phenomenon? How can institutional variable be measured? And what are the implications for labour mobility studies? The above questions are addressed by the following paragraphs.

1. The case of Chinese seafarers has shown that the complexity of the labour mobility in the economic transition, to which conventionally, spatial-temporary measure system are used, not enough to explain the phenomenon (Lee, 1966; Zelinsk 1971; Prothero and Chapman 1985; Skeldon 1990). Alongside space and temporal elements, this paper proposes an *institutional dimension* to observe, measure and interpret the people 'movement' across the boundaries of different economic/employment elements. Fitted to the case of Chinese seafarers, the institutional dimension is comprised by two sub-dimensions, recruitment and employment, and nine statuses, St.11 to St.33, and any movement across institutional boundaries can be identified by the change of parameter S_{ij} . By an empirical survey conducted in HK port, this paper has shown the necessity and feasibility of an institutional dimension for labour mobility studies.
2. Applying above 'measurable system', transgration can be defined as a process, stage and consequence of labour 'movement' across the institutional boundaries in order to maximise the utilisation of the labour resources and/or to minimise the risks of personal unemployment. In this regard, the institutional dimension itself is not an absolute but relative variable to reflect the change and development of the labour markets nationally and internationally. Linked with the case of Chinese seafarers, the establishment of a global labour market and a NSO sector has induced ('pull') an 'institutional' innovation, leading to set-up of a national labour market for seafarers, while the pressure of labour surplus in the SOE sector has

driven ('push') both seafarers and politicians to make the novel institution work. As a result, we have witnessed a large scale of transgration among Chinese seafarers, which roughly involved about half of the sample.

3. Reflecting the progress in the transformation of the labour forces, transgration can be observed and measured by two aspects: *horizontal* and *vertical*. Horizontal transgration is related to the redistribution of labour forces among sectors without the change of their employment status. For the case of Chinese seafarers, it involves the change of their recruitment pattern (working location) between SOE, NSO and foreign fleets. By contrast, vertical transgration is related to the relocation of labour forces among different economic elements. For the seafarers' case, it refers to the change of employment status regardless of the change in recruitment pattern. Whilst two types of transgrations can be differentiated in terms of nature, scale and frequency, they are also interrelated and interwoven with each other. Empirical evidences from HK survey have shown that the two processes above are not separated, but rather interconnected, interacted and interwoven each other. As a result, we have witnessed an increasing heterogeneity among Chinese seafarers who can be divided into three groups: traditional seafarers, newly emerging pioneers and transgrants between them.

4. As a novel type of labour mobility, transgration is related to and overlapped with other labour 'movements'. Convenient migration and circulation can be viewed as labour movement without institutional change (i.e. *horizontal transgration*, $\mathbf{j2} - \mathbf{j1} = \mathbf{0}$). In that case, emigration is a labour movement from home to foreign countries or from rural to urban areas, which can be expressed as $\Phi_{i2} > \Phi_{i1} > \mathbf{0}$ while immigration as $\Phi_{i1} > \Phi_{i2} > \mathbf{0}$. For circulation, $t_3 > t_2 > t_1 > \mathbf{0}$, $\Phi_{i3} - \Phi_{i2} - \Phi_{i1} = \mathbf{0}$, indicating that given a defined time (from t_1 to t_3) and space ($i1$, $i2$ and $i3$) boundaries, there is no physical movement in total because people always return their home after spending a certain time outside, resulting in a total balance of inflow and outflow of labour forces in both sending and receiving regions. One good example is the similarity between transgration of seafarers and transhumance in pastoral animal husbandry systems. The latter refers to a practice of herd movements that are seasonal, occurring between two points, following very

precise routes and repeated each year. Differing from seafarers however, nothing changes among livestock farmers in terms of their economic and social role. Another example is the linkage between the transgrants among Chinese seafarers and the *Sojourner* who temporarily live in a ‘foreign’ country/place as ‘stronger’ (Siu, 1952). Both treat their jobs in new places as means for their livelihood security and both have kept a strong link with traditional culture or home institutions. What different between them is that the aim of the sojourner is to return to in the ‘home land’, while the target of the transgrant is to settle down in a ‘new land (a new role in the new institution)’.

5. By focusing on institutional change, transgration offers a novel approach to labour mobility debates. Linking labour mobility with institutional changes/issues is not new, various approaches can be distinguished into three schools. At the one end, Zelinsk (1971) viewed labour mobility as part of “mobility transition” defined as “there are definite, patterned regularities in personal mobility through space-time during recent history, and these regularities comprise an essential component of the modernisation process”. Refusing the interpretation of modernisation school, at the other end, neo-Marxism scholars emphase on the nature of ‘reproduction of migrant labour’ for a capitalist economy which assume “institutional differentiation” between home and host economies, and physical separation of the migrant labours from their families (Burawoy 1976). Intermediate between two ends, de Haan *et al* (2002) suggest that patterns of migration are determined by both demand for labour and local institutions which determines opportunities and resources. While institutional elements in the above schools are treated as exogenous variable, this paper has put them into central variables to reveal the interconnection and interaction between labour mobility and institutional change/innovation in transition economies like China.
6. Related to the landscape change above, transgrant labour becomes the centre of economic and social development who are not merely responsible for opportunities emerged from the labour markets (horizontal transgration) in order to improve their welfare and livelihood security, but also positively participate in institutional change (vertical transgration). In this regard, transgrants can be viewed as an important actor or director contributing to institutional development

and innovation. It would be misleading to assume however, that transgration is always good thing without any side impact or that all transgrants have positive functions to the society. A lack of a clarifying role definition, inevitably, some transgrants have to pay a heavy personal cost to break the constraints of traditional institutions, while other may use the opportunities of deregulation to gain personal interests at an expensive cost to society (e.g. corruption). Transgration studies would be helpful to identify the constraints from traditional economic and political systems, and to explore a new ground for regulating labour market.

8. CONCLUSIVE REMARKS

Labour mobility in transitional economies like China cannot be fully understood without an institutional dimension which focuses on the structural adjustment from planed economy to plural/mixed economy and impacts on the redistribution of labour forces. Alongside spatial and temporal elements, this paper has brought an institutional dimension into a labour survey in order to reveal the flow and distribution of Chinese seafarers. Generalising empirical information collected from the HK survey has resulted in a new concept, transgration, referring to ‘labour movement’ across institutional boundaries. By bringing a methodological approach (institutional dimension), empirical evidence (HK survey on seafarers) and theoretic construction (transgration) together, many conclusions and policy implications can be drawn as follows.

Firstly, compared with other societies, labour mobility in China is extremely complex due to many factors such as population and labour surplus, increasing economic and social inequality, joining world economic system, and on-going economic transition. While such unique economic and social change has caused large scale, deep, multi-dimensional people movement in Chinese history, a convenient research framework based upon space-time dimensions is not enough to cope with the complexity. Based upon a case study on Chinese seafarers, this paper has added a transition into the classification of labour mobility, and developed an institutional dimension for empirical observation and measure. As a novel type of labour mobility, transgraton is interconnected, overlapped or compensated with migration and circulation.

Secondly, based upon the empirical survey in Hong Kong port, this paper has explored the transmigration of Chinese seafarers through observing their flow experience between national and foreign fleets, analysing the scale of their employment transition from SOE employees to pioneers, and revealing dynamic factors behind their movement. Three conclusions can be drawn from the empirical survey: 1) above half of the sample involves the horizontal transmigration between SOE, NSO and foreign fleets, indicate that labour markets and in particular global labour market have become an important factor influencing their job security; 2) despite the predomination of the SOE sector, there is a trend of vertical transmigration from SOE employees via agency-tied to pioneers. This seems to indicate that there is long way to go for China to reform its traditional seafaring labour system in the SOE sector which still hold double objectives/functions: high efficiency in international freight market and full employment of its seafarers. 3) two transmigrations, horizontal and vertical transmigrations, are interconnected and interacted each other. This seems to indicate that participation and contribution of Chinese seafarers in the global labour market are not separated from but closely related to development and improvement of its domestic labour market.

Third, related to various opportunities and constraints, different people may have different roles in transmigration. According to the HK survey, Chinese seafarers can be distinguished into three groups. *traditional* seafarers who prefer or depend upon traditional employment systems; *transmigrants* who are intermediate and moveable across sectors for job security; and *pioneers* who have totally rejected the old systems but may continue to 'utilise' it until the new systems materialised. At moment, traditional category is still predominant in Chinese seafarers and pioneers take a small percentage. Nonetheless, an increasing trend can be found in transmigrant group which have potential to become pioneers. Three conclusions can be found from transformation from traditional to pioneers. First, Chinese seafarers cannot be viewed as homogenous but are increasingly heterogeneous in terms of recruitment pattern and employment status. Second, there are many factors impeding their transformation including, traditional resource controlling system, lacking of regulations in recruitment industry, and an absence of trade unions. Third, transmigrants are not merely response for opportunities in the labour market, but participate in and contribute to the establishment and development of new institutions.

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