Preliminary Survey Results about Burmese Migrant Workers in Thailand:

State/division of origin, year of entry,
Minimum wages and work permits

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1. INTRODUCTION

People from Burma have been entering Thailand since the Ne Win coup in 1962. Most of these people have fled civil war, hunger, poverty, unemployment and political oppression. A significant proportion of these Burmese are employed in the lower rungs of the Thai labour market. Despite the large numbers of people from Burma working in Thailand, there has been very little reliable statistical analysis undertaken in order to understand the situation faced by these people. The paucity of reliable information in this area led us to conduct a survey of about 1,400 people from Burma working in Thailand.[1] The survey was undertaken between October 2003 and March 2004, in the following 12 provinces:

- Bangkok
- Singburi
- Lopburi
- Saraburi
- Tak (Mae Sot District)
- Ratchaburi
- Kanchanburi (Kanchanaburi and Sangklaburi Districts)
- Ranong (Ranong District)
- Samut Sakhon (Mahachai)
- Phetchaburi
- Chiang Mai (Chiang Mai and Fang Districts)[2]
- Mae Hong Son (Mae Hong Son District)

[1] The survey was carried out by several teams of Burmese mostly migrant workers, who were responsible for the conduct of the survey in their respective areas.
[2] Migrant workers employed in Fang District have yet to be included in our database. The workers in Fang are mostly ethnic Shan, and these surveys have yet to be translated.

The following is a discussion of the results of a partial preliminary statistical analysis of a sample of about 1,100 of these workers with regard to their place of origin, time of arrival, income in the last 20 years, receipt of a minimum wage and their possession of a work permit.[3] The analysis does not involve the estimation of population parameters and any consequent inferences about the nature of the population (though inferences about the population will be published later). Rather, the following is a statistical description of Burmese workers in Thailand, which we, argue is important given the paucity of reliable and credible work in this area.

2. YEAR OF ARRIVAL AND STATE/DIVISION OF ORIGIN

Our survey shows that the number of people from Burma entering Thailand (and who subsequently engage in employment) has been steadily increasing since 1980. Diagram 1 shows a drop in the number of new arrivals in 2001 and 2002, but the variations in arrivals in earlier years suggest that no inference can be made regarding a secular slowdown in the number of Burmese people entering Thailand..[4]

Annual and Cumulative Arrivals, by Year

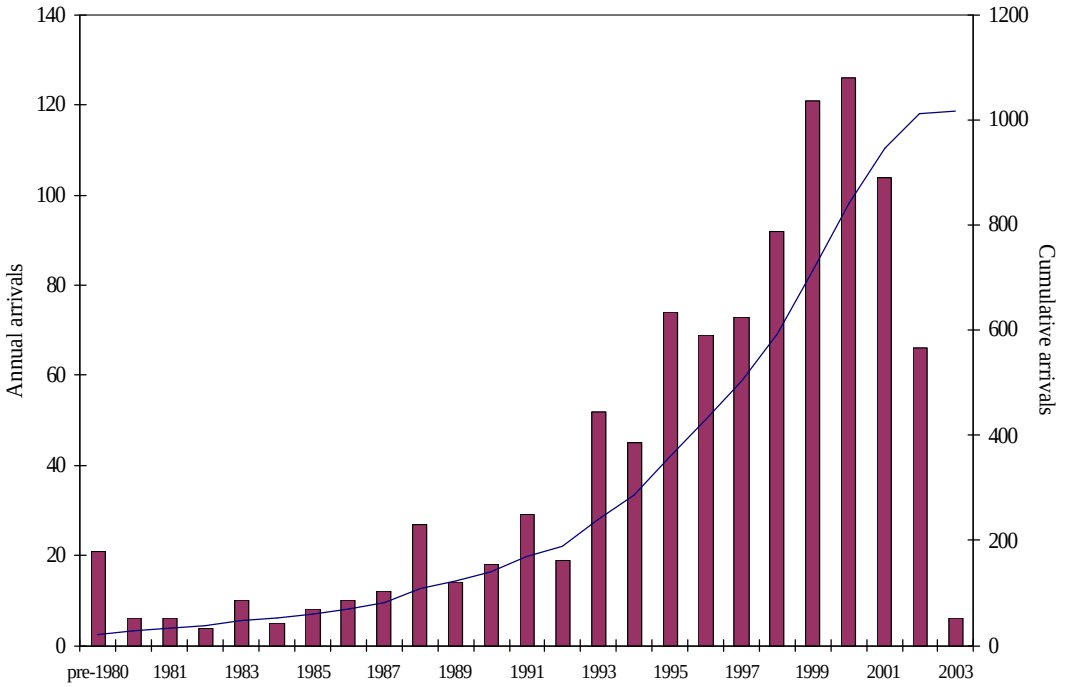

DIAGRAM 1

[3] The discrepancy between the number of Burmese workers surveyed and the number analyzed is due to the non-inclusion of about 200 surveys in the database. More than 100 surveys were discarded and another 80 have yet to be translated.

[4] The number of arrivals in 2003 should be ignored as the survey was partially conducted in this year.

The results could easily reflect sampling variation, or that newer arrivals were less willing and/or were less integrated into their new communities, thus being outside the survey catchment group. The lower number of arrivals in 2001 and 2002 certainly should not be taken as an indication that there has been a slowdown in arrivals. Rather, the data suggests that the number of Burmese people entering Thailand for work continues to increase. The line chart (Diagram 1) shows that the total number of Burmese in Thailand has continued to increase since the 1980s.

The largest numbers of migrant workers in the survey came from Tenasserim Division, Mon, Karen, and Shan States (Diagram 2).[5]

State/Division of Origin

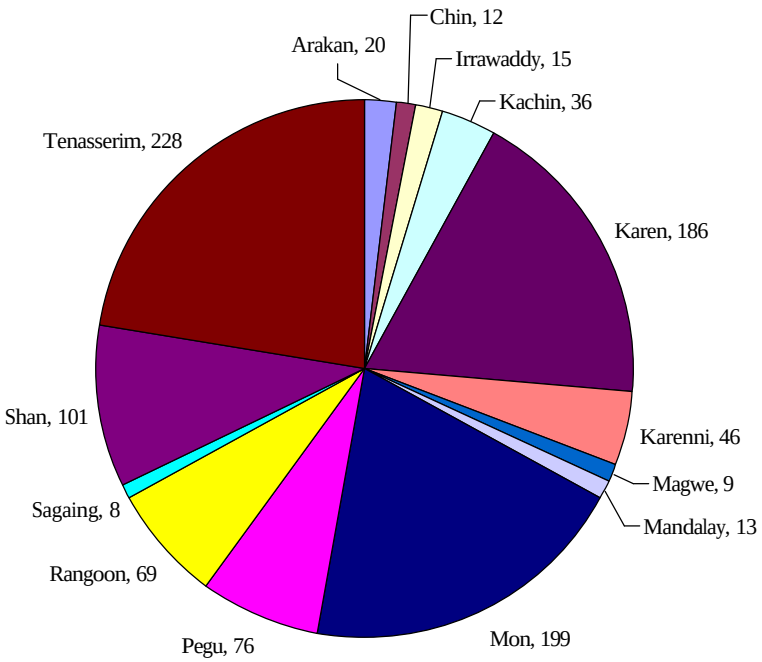

DIAGRAM 2

The absolute numbers of migrant workers coming from each State/Division should be adjusted to take account of the different sized populations in each of these areas. Hence, Diagram 3 shows the share in the sample population from each State/Division, relative to

[5] Note again, however, that about 80 surveys of people from Shan State have yet to be included in the analysis.

the population share of each State/Division in the total population of Burma.[6] This adjustment shows that people from Karenni, Tenasserim Division and Karen State are over-represented in the sample of migrant workers relative to their share of Burma's total population.

Ratio of Migrant Worker Share to Burma Population Share

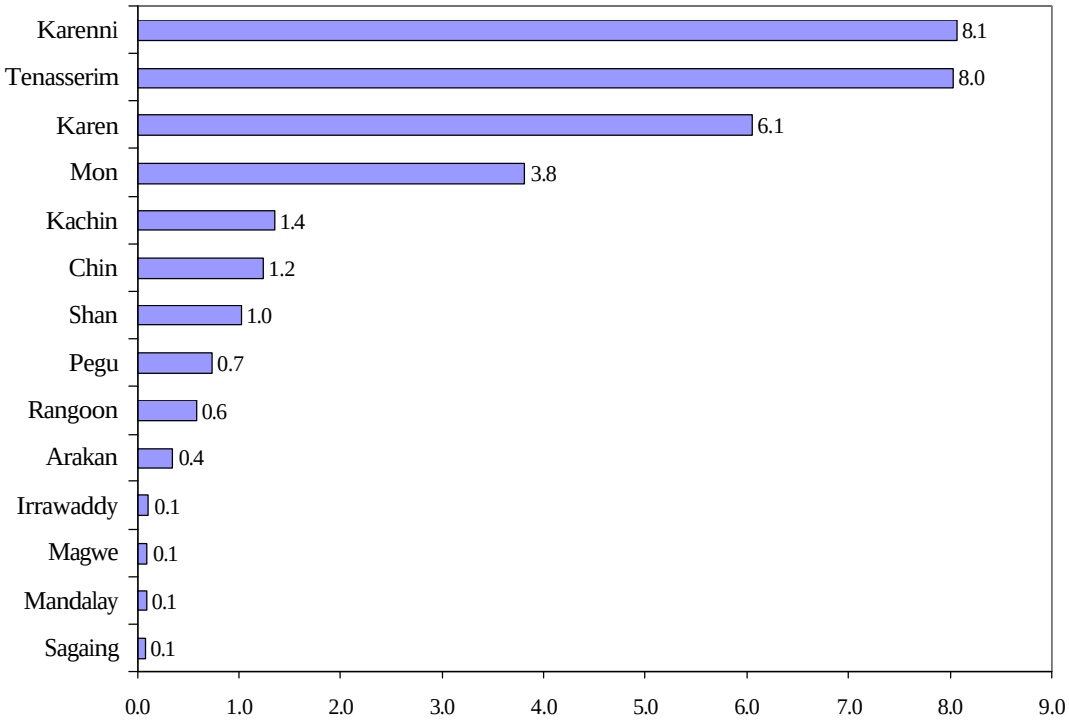

DIAGRAM 3

These results are in line with anecdotal evidence and expectations, except possibly for the over-representation of people from Tenasserim Division (and the under-representation of people from Shan State). However, the long border that Tenasserim Division shares with Thailand (and the Ye-Tavoy gas pipeline) arguably account for the large numbers of people from this area. Relatively larger numbers of people would also be expected from Karenni, Karen, Mon and Shan States given they border Thailand, and because these States have been the geographic centres of civil war.[7]

The fighting between opposition groups and the central military government has been concentrated in the rural areas of Karen, Karenni, Shan and Mon States. The majority of

[6] www.etrademyanmar.com/stats/2.htm
[7] The survey questioned respondents on the reasons for leaving Burma. The answers to these will be analyzed and published in a forthcoming issue of BEW.

workers from these States, except for those from Mon State, described themselves as coming from a rural area (Diagram 4).[8] Workers from Mon State were nearly equally as likely to come from a rural or urban area. Also, the vast majority of workers from Tenasserim Division, though not a conflict area came from rural areas.[9] The building of the gas pipeline between Ye in Mon State and Tavoy in Tenasserim Division led not only to the wide-spread use of forced labour and land expropriation, but to the increased presence of the Tatmadaw, with all its consequent problems.[10] We will hopefully be able to quantify this impact, when we analyze the section of the survey which deals with the reasons for leaving Burma.

Composition of arrivals by State/Division

State/Division	No.	%	Rural	Urban	Male	Female
Arakan State	20	2.0%	45.0%	55.0%	95.0%	5.0%
Chin State	12	1.2%	16.7%	83.3%	58.3%	41.7%
Irrawaddy Division	15	1.5%	33.3%	66.7%	80.0%	20.0%
Kachin State	36	3.5%	77.8%	22.2%	33.3%	66.7%
Karen State	186	18.3%	84.9%	15.1%	60.8%	39.2%
Karenni State	46	4.5%	65.2%	34.8%	52.2%	47.8%
Magwe Division	9	0.9%	66.7%	33.3%	77.8%	22.2%
Mandalay Division	13	1.3%	61.5%	38.5%	76.9%	23.1%
Mon State	199	19.5%	53.3%	46.7%	67.8%	32.2%
Pegu Division	76	7.5%	67.1%	32.9%	65.8%	34.2%
Rangoon Division	69	6.8%	10.1%	89.9%	78.3%	21.7%
Sagaing Division	8	0.8%	37.5%	62.5%	62.5%	37.5%
Shan State	101	9.9%	70.3%	29.7%	40.6%	59.4%
Tenasserim Division	228	22.4%	75.9%	24.1%	62.7%	37.3%

Overall rural/urban split: 65% 35% ; male/female: 62% 38%

DIAGRAM 4

Unfortunately, the small number of workers surveyed from the States/Divisions where civil war has not occurred does not allow for any conclusions to be made about the impact of civil war in rural areas and migration, (though nearly 90% of workers who came from

[8] Diagram 4 shows arrival numbers in column 1 as a percentage of the total in column 2. Rural/Urban and Male/Female percentages refer to arrivals by State/Division; Overall shares of total arrivals are shown at bottom.

[9] The survey also included questions not only about the reasons for leaving home, but also the town/village of origin. So the impact, if any, of the pipeline and associated problems on migration should be able to be ascertained by future analysis.

[10] Earth Rights International (2000) *Total Denial Continues: Earth Rights Abuses Along the Yadana and Yetagun Pipelines in Burma*, Earth Rights International [www.earthrights.org]

Rangoon Division nominated themselves as being from an urban area.) There is also no reliable information on the relative levels of urbanization between the States/Divisions in Burma. All that can be concluded at present is that the majority of workers from the States having experienced conflict came from rural areas.

Cumulative arrivals by gender

Year	All	Male	Female
1985	6.1%	7.7%	3.4%
1990	13.9%	16.6%	9.5%
1995	33.4%	37.6%	26.4%
2000	79.0%	79.7%	77.8%

For females and overall, *median arrival year* = 1998
For males, *median arrival year* = 1997

DIAGRAM 5

The sample of workers surveyed suggests that a larger number of men than women are working in Thailand – nearly 62% are men - though the cumulative pattern of arrivals for males and females is similar (Diagrams 4 & 5).[11]

Diagram 6, shows that the median year of arrival, where 'median year' refers to the year by which 50% of migrant workers from each State/Division were in Thailand, differs between the States/Divisions.[12] More analysis is required to account for the differences in the median years of arrival. However, of the States that have been actively engaged in civil war, people

[11] Diagram 5 - the 'years' should be read as 'by this year' e.g. 26.4% of female migrants had arrived in Thailand *by* the end of 1995.

[12] Diagram 6 - note caveat at bottom. As non-responses for individuals do not line up across categories (e.g. income, year of arrival etc), the overall relevant sample size differs from diagram to diagram. The percentage results will always refer to the total relevant to a particular diagram.

from Karenni State have the earliest median year of arrival (1994). The establishment of the refugee camps for people from Karenni in the same year (though the camps had been unofficially in existence for many years), probably account for the majority of workers from this state having arrived earlier than others. In the later years, most of the people from Karenni probably entered the refugee camps, rather than seek work in Thailand.

Cumulative arrivals by State / Division

	No.	1985	1990	1995	2000	*Median arrival year*
Arakan State	20	20.0%	20.0%	45.0%	80.0%	*1996*
Chin State	12	-	-	25.0%	75.0%	*1999*
Irrawaddy Division	15	6.7%	13.3%	33.3%	73.3%	*1999*
Kachin State	36	-	2.8%	5.6%	61.1%	*2000*
Karen State	186	3.8%	7.0%	26.3%	82.3%	*2000*
Karenni State	46	23.9%	37.0%	54.3%	89.1%	*1994*
Magwe Division	9	11.1%	22.2%	33.3%	66.7%	*2000*
Mandalay Division	12	8.3%	16.7%	50.0%	91.7%	*1995*
Mon State	198	3.0%	10.1%	34.8%	80.8%	*1997*
Pegu Division	75	-	2.7%	6.7%	66.7%	*2000*
Rangoon Division	69	2.9%	14.5%	31.9%	85.5%	*1998*
Sagaing Division	8	-	-	25.0%	75.0%	*1997*
Shan State	101	10.9%	17.8%	27.7%	69.3%	*1999*
Tenasserim Division	226	7.1%	21.7%	47.3%	81.0%	*1996*

Number differences from Diagram 4 reflect missing observations – percentages relative to table numbers

DIAGRAM 6

3. INCOMES FOR BURMESE WORKERS IN THE LAST 20 YEARS

Due to the absence of reliable and regular collection of data regarding Burmese migrant workers, there is no income data available to assess income changes across time. The survey in an attempt to obtain some information about income across time, included questions regarding the income earned by Burmese workers' in their *first* job in Thailand. This was used to provide some indication of the changes in the monthly income of Burmese migrant workers over the last 20 years.[13] Diagrams 7-9 are partial graphical representations of the

[13] Diagrams 7-9 - 'Number' refers to the count of how many arrived *within* the year ranges shown directly below. Left hand column are income ranges in baht. Entries in tables are estimates of the median incomes by arrival group derived from the grouped data on income.

median monthly income of Burmese workers in their first job, for the different time periods in which they arrived in Thailand.

The survey found, not surprisingly, that nominal incomes for all Burmese workers had increased during the last 20 years (Diagram 7). The results show that nominal median income per month for migrant workers in their first job increased from about 1,000 baht prior to 1985 to about 2,500 baht for the 2001-2003 period.

Median monthly income – First job in Thailand (baht, nominal)

Number	*53*	*56*	*73*	*217*	*392*	*210*
	prior 85	**85-88**	**89-92**	**93-96**	**97-00**	**01-03**
2500-2750						2533
2250-2499						
2000-2249					2239	
1750-1999				1962		
1500-1749		1519				
1250-1499			1272			
1000-1249						
500-999	999					

DIAGRAM 7

Though, the nominal median income for Burmese women in their first job in Thailand has been consistently lower than the nominal income received by Burmese men in their first job in Thailand (Diagram 8).

Median monthly income – First job in Thailand by Gender (baht, nominal)

Number	*12, 41*	*13, 43*	*22, 51*	*78, 139*	*170, 222*	*84, 126*
	prior 85	**85-88**	**89-92**	**93-96**	**97-00**	**01-03**
2500-2750						2693
2250-2499					2405	2303
2000-2249				2129		
1750-1999					1989	
1500-1749		1666	1545	1737		
1250-1499						
1000-1249	1045	1125				
500-999	625		750			

DIAGRAM 8

When nominal incomes are adjusted for inflation, real incomes for Burmese migrant workers (both men and women) have remained fairly steady in the last 20 years (Diagram 9).[14] Hence, Burmese migrant workers (in the aggregate) have not shared the experience of Thai workers, who have, in contrast, obtained large increases in real income over this period of time.

[14] For Diagram 9, the deflator was calculated thus:

i. the base of the whole kingdom CPI deflator (source: World Bank World Tables) was changed to 2001-2003=100

ii. for each year period shown in the table a composite deflator was formed by computing a weighted average of the individual year deflators with weights given by the share of arrivals in each year of the range relative to total arrivals in the year range (e.g. for 89-92, the weight for 1989=1989 arrivals/total arrivals in 89-92)

iii. these deflators then used to convert the nominal values to real (note that differences in flows in the 01-03 years means that the weighted average deflator is not exactly equal to 1, hence the difference between real and nominal values).

Median monthly income – First job in Thailand (baht, real, 2001-2003 prices)

Number	*53*	*56*	*73*	*217*	*392*	*210*
	prior 85	**85-88**	**89-92**	**93-96**	**97-00**	**01-03**
3000-3249						
2750-2999		2751				
2500-2749				2507		2533
2250-2499	2474				2353	
2000-2249						
1750-1999			1931			
1500-1749						

DIAGRAM 9

4. WORK PERMITS

In 1996 Thailand introduced a system to regulate the employment of Burmese (and Cambodian and Lao) workers.[15] The basis of the regulatory system is registration for a permit, which confers legal employment status, usually for one year. The regulatory system is poorly designed and this is evidenced by the poor uptake of work permits. Nearly 60% of the surveyed group did *not* hold a work permit.[16] There has been little empirical work conducted to ascertain the characteristics and reasons some Burmese migrant workers register for work permits, and others do not. Hence, the analysis that follows is to provide some information about the characteristics of migrant workers and the holding of work permits.

[16] One of the disincentives of the regulations governing the issuing of work permits is the limited time period offered each year for registration. There were 3 short registration periods, where our sample of migrant worker could have obtained a work permit, with about 410,000 people in total obtaining registration. The registration periods were:

i. 15 Sept-6 Nov 2002 – about 363,000 registered
ii. 22 Nov 2002-15 Jan 2003 – about 35,000 additional workers registered for work in the fishing industry
iii. 8-15 Jan 2003 – 11, 267 workers registered for work in Tak Province

Possession of current work permit vs monthly disposable income

	=999	1000-1999	2000-2999	3000-3999	4000-4999	5000+	*Total*
Permit	36	69	86	99	50	63	***403***
No permit	78	102	132	149	84	47	***592***
Total	***114***	***171***	***218***	***248***	***134***	***110***	***995***

Shaded cells within table show values that contribute more than 8.5% of the value of the $?^2$ statistic (pink=high, green=low)

$?^2(5) = 17.3073$, p-value = 0.004

N.B: 21 non-responses on income question, 7 on permit question, excluded

DIAGRAM 10

The fee to register to obtain a work permit has been criticized for being too high given the low wages of migrant workers.[17] Our preliminary analysis provides some support for this criticism. Individuals who earn 5,000 baht or more per month are much more likely to hold a work permit compared with migrant workers on lower salaries (Diagram 10). Whereas only about 40% of the sample held a work permit, nearly 60% of those earning 5,000 baht and above held a work permit. Individuals who earned less than 1,000 baht were significantly less likely to hold a work permit than the rest of the workers surveyed. Nearly 70% of Burmese workers in this income group did not hold a permit.

We also found that there was no evidence of any difference between individuals earning between 1,000 and 5,000 baht per month, and the probability of them holding a work permit. We put forward the tentative hypothesis that income has to reach a certain point (other factors held constant) before income is large enough to over-ride other factors and influence migrant workers to pay the 3,800 baht necessary for registration.

[17] This fee of 3,800 baht covers the following – registration fee (B600), work permit fee (1 year B1800; 6 months B900, 3 months B450), a medical check-up and health insurance fee (B1,300) and a 100 baht application fee. The health insurance allows migrant workers to access public hospitals for B30 a visit, in line with Thai citizens.

Monthly disposable income in relation to minimum wage by possession of current work permit

$?^2(1) = 2.8776$ p= 0.0898

	Permit	**No Permit**	***Total***
Above minimum	212	279	*491*
Below minimum	191	313	*504*
Total	*403*	*592*	*995*

N.B: 21 non-responses on income question, 7 on permit question, excluded

DIAGRAM 11

Obtaining a work permits along with providing legal employment status is also supposed to confer coverage by the Labour Protection Act (1998). One of the provisions of the Act provides for the payment of a minimum daily wage. We found some weak evidence that those holding work permits are more likely to earn above the minimum monthly wage (Diagram 11).[18] This accords with the evidence presented in Diagram 10. However, this does

[18] Diagrams 11, 15-17, 19 & 20 - The minimum wage in Thailand is a daily wage, which varies between the provinces. However, for preliminary purposes we calculated what we have called a minimum monthly disposable income. The definition of 'below minimum' is based on the minimum daily wage and was calculated thus:

i. Diagrams 11, 15, 17, 19 & 20 use the province-specific minimum wage, in that each worker's disposable income was compared to the relevant provincial minimum as supplied by TDRI; In Diagram 16 the lowest minimum daily wage of B133 of all the provinces was used to calculate the minimum wage
ii. Assumed that everyone worked only 24 days in the month; We realize that many migrant workers labour for more than 24 days in the month. Hence, this monthly minimum wage is a 'hard' target, as it is easier for a worker to be classified as receiving monthly minimum, as most migrant workers, work more than 24 days in the month.
iii. It is also a 'hard' target in that a worker is defined as 'below minimum' if the upper limit of the income band they are in (we have only grouped data on income) is below the minimum for their province. In other words, this is the best case scenario - if we could

not provide any information about the direction of causation, between the receipt of our minimum monthly income and holding a work permit. In other words, we do not know if the employers of registered migrant workers are more likely to adhere to the legally enshrined minimum wage, or if earning above the minimum increased the likelihood that workers can afford the registration fee. We are inclined towards the later hypothesis.

	International Standard Industry Classification Categories (ISIC)	**Common jobs held by Burmese Migrant Workers**
A	Agriculture, Hunting and Forestry	Farm workers; (illegal) logging; charcoal making; Royal Forestry Department – planting teak etc.
B	Fishing, Aquaculture and Service Industries Incidental to Fishing	Fishing boats/traps – fresh or seawater; Prawn, fish farms
C	Mining and Quarrying	Hammer-men; Demolition; Operating/cleaning stone crushing machinery. Mostly quarrying provides inputs for construction
D	Manufacturing	Mostly factories including vegetable, fish, prawn processing; brick making; clothing & textiles; covers unloading packing jobs & those using machines regardless of position; also includes primitive production (at home) which is produced for sale
F	Construction	Includes skilled & unskilled jobs in construction
G	Wholesale & Retail Trade; Repair of Motor vehicles, motorcycles and personal and household goods	Market stalls (not selling cooked food), all shops – large & small; warehouses supplying shops; carrying & loading for these workplaces
H	Hotels and Restaurants	Market stalls selling cooked food; waiters, cooks, dishwashers, bar workers in hotels & restaurants
P	Activities of Private Households as Employers and Undifferentiated Production Activities of Private Households	Domestic workers; Subsistence production (agricultural production for self-consumption)

The *industry* of employment also has an impact on the likelihood of Burmese workers holding a work permit (Diagram 12).[19] In particular, individuals employed in the

include those who are in income bands that cover the minimum but whose income is still less than it, the overall incidence of being under minimum would be worse.

[19] Diagrams 10-14 & 17-20 - the $?^2$ values are for a test of the hypothesis that row and column categories are statistically independent of one another. The value in brackets is the degrees of freedom, equal to (# of rows - 1)×(# of columns - 1). The p-value shows the probability of observing the sample outcome if the null hypothesis of independence was in fact true. Some chance variation from the precise outcome we would expect under independence is unavoidable, but if the sample outcome is too unlikely, we would reject the null hypothesis and conclude that this sample must come from a population in which the row and column categories are related somehow. 'Too unlikely' is usually defined as 5% - this is the meaning of a 'significance level'. The p-value shows the *minimum* significance level at which the null will be rejected. We can compare the actual results to those expected if the variables were independent. The marked cells are those cases where the actual outcome exceeds the expected theoretical frequency. That is, the marked cells reflect the contribution to

manufacturing industry are much more likely to hold a work permit compared with workers employed in all other industries.[20] In the manufacturing industry, 60% of workers hold a work permit compared with only 40% in the total population. When those employed in the manufacturing industry are excluded from the sample population, only about 33% of Burmese migrant workers hold a work permit. Employment in the fishing industry is also related to the probability of holding a work permit (Diagram 12). Though, in contrast to the manufacturing industry, Burmese working in the fishing industry are *less* likely than the rest of the sampled group to hold a work permit. Only about 20% of our sample working in the fishing industry held a work permit.

Possession of current work permit by broad industry group

	A	B	C	D	E	F	G	H	P	Other	*Total*
Permit	46	11	22	163	8	30	60	24	31	13	***408***
No permit	99	43	40	108	80	52	93	51	77	37	***608***
Total	***145***	***54***	***62***	***271***	***16***	***82***	***153***	***75***	***108***	***50***	***1016***

Shaded cells within table show values that contribute more than 5% of the value of the $?^2$ statistic (pink=high, green=low)

$?^2(9) = 71.996$, p-value~ 0

N.B: 7 non-responses on permit question excluded

DIAGRAM 12

The lower costs of policing migrant workers employed in factories, compared with other industries, could explain the higher probability of workers in the manufacturing industry holding work permits compared with other industries. The average cost of ascertaining work

the c^2 statistic, deemed to be 'large' (i.e. $> c^2 / r \times c$). The colour of the cells also indicate the direction of the contribution (i.e. too high or too low relative to the expected frequency). This gives some idea of the nature of the relationships in the cases where independence has been decisively rejected.

[20] See Table for description of Industries, A-H & P.

permit status of employees in workplaces employing large numbers of people in an enclosed area is lower for the authorities (and associated groups), than in other industries where migrant workers are less concentrated in numbers. The lower costs of policing increases the probability of arrest (and harassment) for migrant workers, providing an incentive for both workers and employers in the manufacturing industry to hold work permits, (at least compared to other industries).

Burmese migrant workers in the younger and older age groups have a lower probability of holding a work permit compared to the rest of the sampled group (Diagram 13). Workers who are younger than 20 years and those between 46 and 50 are less likely to hold a work permit than other age groups.

Possession of current work permit vs age

	=20	21-25	26-30	31-35	36-40	41-45	46-50	50+	*Total*
Permit	30	124	122	52	29	25	9	10	***401***
No permit	70	184	157	66	51	27	30	20	***605***
Total	***100***	***308***	***279***	***118***	***80***	***52***	***39***	***30***	***1006***

Shaded cells within table show values that contribute more than 10% of the value of the $?^2$ statistic (pink=high, green=low)

$?^2(7) = 13.7037$, p-value = 0.0567

N.B: 17 non-responses excluded

DIAGRAM 13

There is no evidence that gender and the holding of a work permit are related (Diagram 14). Simply, Burmese migrant workers regardless of gender are equally likely to hold (or not hold) a work permit.

Possession of current work permit vs gender

$\chi^2(1) = 0.0847$ p= 0.7712	**Male**	**Female**	***Total***
Permit	256	152	*408*
No permit	376	232	*608*
Total	*632*	*384*	*1016*

N.B: 7 non-responses on permit question excluded

DIAGRAM 14

5. MONTHLY DISPOSABLE INCOME

Our preliminary analysis shows that the monthly disposable income of migrant workers varies on the basis of a number of important variables.[21] The monthly disposable income of migrant workers in the aggregate differs on the basis of the region of employment (Diagram 15).[22] In the north of Thailand, more than 75% of workers earn less than 3,500 baht per month (which is approximately our minimum monthly disposable income), compared with

[21] Monthly disposable income was calculated rather than monthly income. This is because not all workers, notably those employed in manufacturing knew their total income before debts and fines were deducted. In others, some workers did not know the size of their repayments to their employers. The survey does include questions that will allow construction of estimates for total incomes for nearly all workers. This will have little effect on the analysis as there is no difference between disposable income and total income for nearly all workers in most industries, except for manufacturing. In addition, the timing of the survey meant that very few workers were still repaying their employers for work permit fees.

[22] Diagrams 15 & 16 are box and whisker plots. The leftmost 'whisker' extends to the minimum value observed. The left edge of the box shows the *first quartile* (value below which 25% of observations fall). The line within the box is the median, and the right edge shows the *third quartile* (value above which 25% of observations lie). The right whisker extends to the maximum value. The plot shows something of the central tendency, dispersion and skewness for each group. The horizontal axis is in baht. See Footnote 19 for definition of minimum monthly disposable income.

about 70% in the south of the country, in central Thailand only about 50% of migrant workers earn less than this amount.

Monthly disposable income by region

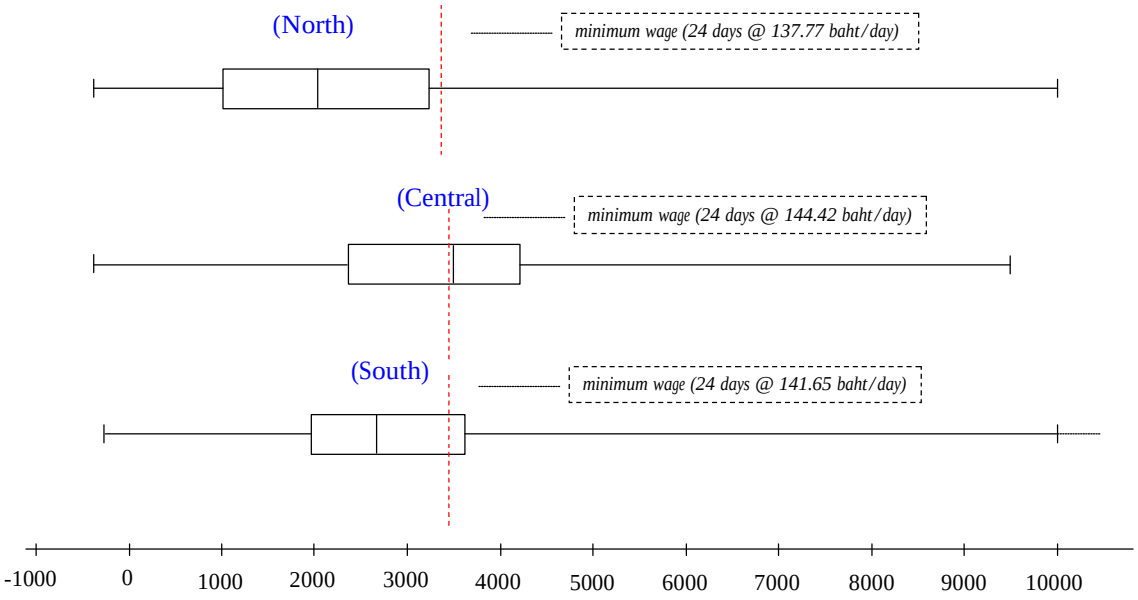

DIAGRAM 15

The monthly disposable income of migrant workers is also related to the industry of employment. Diagram 16 shows the monthly disposable incomes (in quartiles) for Burmese workers in 8 different industries.[23] In 3 of these industries – agriculture and forestry, fishing and aquaculture, and manufacturing – about 5% of workers earned a 'negative' income in the month surveyed. These negative incomes were due to debts owed to their employers. In the manufacturing industry, negative incomes arise because of debts owed to employers for work permits, food and accommodation, and workplace 'fines'. In the agriculture and forestry industry, the negative income usually occurs because their employer has paid for their work permit. Agricultural workers in this situation usually live on their employer's land and are 'bonded' to this employer in the sense that they have first call over their labour. This call over labour can be important during peak agricultural periods, when labour can be scarce. At other times, these workers obtain employment wherever and whenever possible. As in agriculture, workers in the fishing industry can receive negative incomes, because

[23] Some industries omitted due to low numbers.

employers have paid for their employees' work permits. Also, workers in the fishing industry can sometimes obtain negative incomes because of debts incurred from brokering.[24]

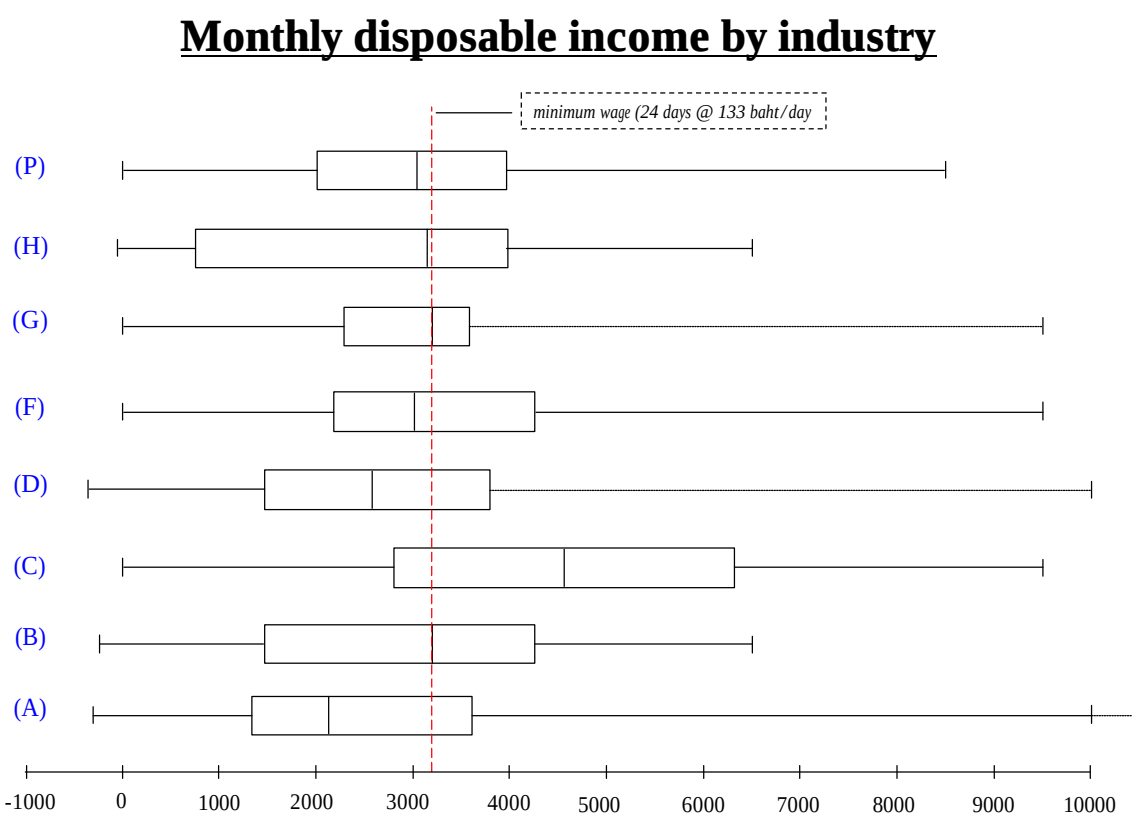

DIAGRAM 16

The highest monthly disposable incomes were earned in the agriculture, quarrying, manufacturing, construction, and domestic services industries. However, despite the highest incomes in each of these industries being quite similar, they do not reflect similar situations. Firstly, the *dispersion* of income for the top 25% of monthly income earners in these industries varies. The greatest dispersion in the top 25% of income earners in each industry was in manufacturing (˜ B3,750-B10,000). This suggests that very few Burmese workers in the top 25% of earners in manufacturing were receiving 10,000 baht per month. In fact, there was only one worker earning B10,0000, and this worker was a very experienced machinist earning piece rates in a textile and clothing factory in central Thailand. In the agriculture, construction, wholesale and retail trade and domestic service industries, the dispersion between the top 25% of income earners was also noticeably large. This again suggests that few workers in each of these industries were in receipt of monthly incomes between 9,000 and 10,000 baht. All these industries contrast with the quarrying industry,

[24] In this situation the broker is paid by the employer and then the debt is transferred to the employee. The debt is repaid by their employer via deductions from their income vary.

where the highest income earner in the month surveyed received B9,500, but even the lowest earner in the top 25% here earned much more than in all other industries (˜ B6,250).

The construction of a measure of the monthly minimum disposable income allows for a comparison between monthly incomes on the basis of industry. About 50% of Burmese migrant workers in each of the following industries earned below our monthly minimum income - fishing, construction, retail and wholesale, hotels and restaurants industries, along with workers employed by private households. About 60% of workers in the manufacturing industry earned less than the monthly minimum disposable income. The situation for Burmese workers employed in the agriculture and forestry industry is worse, where about 65% earned less than the monthly minimum income. Yet, again all these industries contrast with the quarrying industry, where only 30% of workers earned less than the minimum monthly income. The higher percentages of Burmese workers in the quarrying industry earning above our monthly minimum income must be balanced by the larger number of serious workplace accidents in this industry (including death).[25]

Monthly disposable income in relation to minimum wage by broad industry group

	A	B	C	D	E	F	G	H	P	Other	*Total*
Above minimum	53	29	43	120	9	41	85	38	57	10	***485***
Below minimum	94	25	19	151	7	41	64	34	52	10	***497***
Total	***147***	***54***	***62***	***271***	**16**	***82***	***149***	***72***	***109***	***20***	***982***

Shaded cells within table show values that contribute more than 5% of the value of the $?^2$ statistic (pink=high, green=low)

$?^2(9) = 28.0870$, p-value˜ 0

N.B: 21 non-responses on income question, 20 on industry question, excluded

DIAGRAM 17

More information is provided regarding the relationship between the industry of employment and receipt of the minimum monthly disposable income by the analysis of

[25] We hope to quantify workplace injuries in a future publication.

Diagrams 17 and 18.[26] Diagram 17 shows that more than 50% of all the workers surveyed earned below the monthly minimum income, but it also shows those industries where the percentage of workers earning below (or above) the monthly minimum is different from the results for the overall sample of workers. Burmese workers employed in agriculture (64%) and manufacturing (56%) were more likely to have earned less than the monthly minimum income, compared with the overall sample. In other words, Burmese working in agriculture and manufacturing have an increased likelihood of earning below the monthly minimum. In contrast, Burmese workers employed in quarrying, and retail and wholesale trade, are more likely to earn above the monthly minimum income compared with the overall sample.

Monthly Disposable Income (*baht*) by Broad Industry Group

	A	B	C	D	F	G	H	P	Other	*Total*
=999	30	2	3	37	7	5	11	33	3	***109***
1000-1999	31	14	4	66	11	20	9	15	1	***171***
2000-2999	33	9	12	48	23	39	14	26	12	***216***
3000-3999	29	12	8	67	18	51	12	30	11	***246***
4000-4999	7	8	9	34	14	25	12	15	6	***130***
=5000	17	9	26	19	9	9	6	12	3	***110***
Total	***147***	***54***	***62***	***271***	***82***	***149***	***72***	***109***	***36***	***982***

Shaded cells within table show values that contribute more than 5% of the value of the $?^2$ statistic (pink=high, green=low)

$?^2(40) = 145.3040$, p-value~ 0

DIAGRAM 18

Diagram 18 shows the number of workers in different income groups on the basis of industry. The analysis of this relationship shows that working in particular industries is

[26] There are some minor discrepancies between the results in Diagrams 16 and 17 that both examine the relationship between income and industry. In Diagram 16, the quartiles are based on estimates of the median in each quartile; whereas with the c^2 analysis in Diagram 17 each person was categorised on the basis of whether the upper limit of their monthly disposable income class was above or below the estimated monthly minimum.

associated with receiving a certain level of income. Workers in agriculture are more likely to earn less than 1,000 baht, in contrast with workers in wholesale and retail trade who are unlikely to earn less than this amount compared with the overall sample. Agriculture workers are also less likely to earn higher incomes than workers in the overall sample. Also, workers in manufacturing are more likely to be concentrated in the B1,000 to 1,999 income group. Again, workers in quarrying are more likely to earn the highest incomes relative to the workers in the sample.

We know that the industry of employment has some bearing on whether workers earn above or below our minimum monthly income. Diagram 19 shows us that the age of Burmese workers also has a bearing on whether the monthly minimum income is received. The youngest and oldest groups of Burmese workers are more likely to earn below our monthly minimum wage and less likely to earn above the monthly minimum, compared with the average Burmese worker. However, Burmese workers aged between 26 and 35 are more likely to earn above (and less below) the monthly minimum wage than the average worker in the group.

Monthly disposable income in relation to minimum wage by age group

	=20	21-25	26-30	31-35	36-40	41-45	46-50	50+	*Total*
Above minimum	32	157	172	73	30	18	6	3	***491***
Below minimum	63	148	107	43	43	33	35	29	***501***
Total	***95***	***305***	***279***	***116***	***73***	***51***	***41***	***32***	***992***

Shaded cells within table show values that contribute more than 5% of the value of the $?^2$ statistic (pink=high, green=low)

$?^2(7) = 81.5549$, p-value~ 0

N.B: 31 non-responses excluded

DIAGRAM 19

There is also some weak evidence that men have a greater probability of earning above the minimum monthly wage than women (Diagram 20). About 52% of male Burmese workers

earned above the monthly minimum income; whereas only 44% of female Burmese workers earned more than the minimum. Correspondingly, 48% of men earned below the monthly minimum, whereas 56% of women earned less than the minimum.

Monthly disposable income in relation to minimum wage by gender

$?^2(1) = 5.9462$ p= 0.0148

	Male	**Female**	***Total***
Above minimum	326	169	*495*
Below minimum	296	211	*507*
Total	*622*	*380*	*1002*

N.B: 21 non-responses on income question excluded

DIAGRAM 20

SUMMARY OF PRELIMARY RESULTS

ARRIVALS

- In the last 20 years there has been a fairly steady increase in the number of Burmese people entering Thailand each year and finding employment
- Burmese people from the rural areas in the States/Divisions bordering Thailand are over-represented amongst migrant workers. These areas are the zones where conflict has been centred.
- There are more men than women from Burma employed in Thailand, though the cumulative patterns of arrival are similar.

WORK PERMITS

- Men and women are equally as likely to hold a work permit
- Those on the highest incomes are more likely to hold a work permit
- Those on the lowest incomes are less likely to hold a work permit
- Those earning above our minimum monthly wage are more likely to hold work permits, than those earning below our minimum monthly wage
- Workers in the manufacturing industry are more likely to hold a work permit than workers in other industries
- Younger and older workers are less likely to hold a work permit than other age groups.

INCOMES

- Real Incomes for workers (men and women) from Burma have remained relatively constant in the last 20 years, in contrast to their Thai counterparts.
- Women have consistently earned lower wages, than men in the last 20 years and are more likely to earn below our minimum monthly income
- Income varies on the basis of the region of employment. In the central region of Thailand, which includes Bangkok about 50% of Burmese workers earned less than 3,500 baht per month; whereas in northern and southern Thailand about 75% earned less than this amount.
- Income also varies on the basis of industry of employment.
    - About 50% of workers in the following industries earned less than 3,500 baht per month
        - Fishing and aquaculture (B)
        - Construction (F)
        - Wholesale and retail trade (G)
        - Hotels and restaurants (H)
        - Domestic Services and Subsistence Production (P)
    - About 70% of workers in the following industries earned less than 3,500 baht per month.
        - Agriculture and Forestry (A)
        - Manufacturing (D)