



Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains

LABOR CONDITIONS AND THE DECISION TO STUDY OR WORK



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**Migrant and Child Labor in Thailand's
Shrimp and Other Seafood Supply Chains:
*Labor Conditions and the Decision to Study or Work***

FINAL REPORT

**Bangkok, Thailand
June 2015**

Migrant and Child Labor in Thailand’s Shrimp and Other Seafood Supply Chains: Labor Conditions and the Decision to Study or Work

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Foreword

This report is the product of a partnership between the International Labour Organization (ILO) and The Asia Foundation (the Foundation) in designing and conducting a research study on *Migrant and Child Labor in Thailand's Shrimp and Other Seafood Supply Chains: Labor Conditions and the Decision to Study or Work*.

The study aims to strengthen the evidence base on child labor and the labor conditions of migrant workers in Thailand's shrimp and other seafood supply chains, with a particular focus on communities engaged in these industries. Its objective is to provide practical, empirically grounded policy recommendations that can be discussed with different stakeholders and considered by both national and provincial governments and industry. The study draws on a combination of existing evidence and data from the ILO's work in Thailand and supplementary qualitative information generated through focus group discussions, key informant interviews, and consultations with stakeholders.

The research methodology includes certain features that are intended to enhance the practical significance and value of the report. First, the research involves an integrated analysis of three independent datasets collected in the context of ILO's recent engagement, with a focus on work, education, and health issues among migrant children working in shrimp and seafood processing. Second, the comparative value chain analysis of Thailand's canned tuna and shrimp processing sectors examines labor issues throughout these value chains, acknowledges the differences between these sub-industries, highlights ways in which each sub-industry has achieved success in improving labor standards, and identifies actionable steps for further improvement. Third, the report presents an extended analysis of the decisions made by migrant families to send their children to school, to alternatively engage in various forms of work, or both. It concludes with recommendations for sustainable strategies that policy makers and industry may consider adopting to promote and enforce sound labor practices in the shrimp and other seafood processing industries, to work to eliminate child labor from the value chain, and to increase access to education among migrant children living in Thailand.

The report reflects the conceptual design, research, and analytical efforts of a team of distinguished specialists convened by the Foundation, which implemented the project under the direction and guidance of Ms. Simrin Singh, Senior Specialist on Child Labour with the ILO Decent Work Technical Support Team for East and Southeast Asia and the Pacific; Mr. Tuomo Poutiainen and Ms. Birgitte Krogh-Poulsen, former Project Managers, ILO-IPEC Thailand; Dr. Aphitchaya Nguanbanchong, Monitoring and Evaluation Officer, ILO-IPEC Thailand; and Ms. Chitrapon Vanaspong, Consultant (Education Specialist), ILO-IPEC Thailand.


Special thanks are extended to team leader Dr. Ellen Boccuzzi, the Foundation's Acting Director of Governance and Law, who provided overall direction for the research and served as lead author of the report. The core research team included four distinguished technical specialists: Dr. Suthikorn Kingkaew, Director of the Consulting Networking and Coaching Center of Thammasat University; Dr. Kiatanantha Lounkaew, Assistant to the Vice President for Research, Dhurakij Pundit University; Ms. Nicola Pocock, Ph.D. candidate at the London School of

Hygiene and Tropical Medicine; and Ms. Veronique Salze-Lozac’h, the Foundation’s Chief Economist and Senior Director of Economic Development. Dr. Suthikorn was supported by Dr. Prasert Sinsermsuksakul, Ms. Nattaporn Suthatartrakul, and Ms. Waranya Sittisomrueng, while Dr. Kiatanantha was supported by Ms. Pornpimon Singhasem, Ms. Waranchana Thairat, and Ms. Winyuda Dangtem.

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The ILO and The Asia Foundation extend their thanks to the many stakeholders—including government officials, civil society leaders, industry representatives, and workers in the shrimp and other seafood processing industries—who generously shared their time, insights, and experience.

The partners gratefully acknowledge the generous financial support for the study provided by the U.S. Department of Labor and Stanford University.



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Table of Contents

Abbreviations	8
List of Tables	9
List of Figures.....	13
Executive Summary	15
Findings on Labor Issues.....	16
Recommendations on Labor Issues	18
Findings on Migrant Education.....	21
Recommendations on Migrant Education.....	23
Introduction.....	26
Methodology	27
Value Chain Analysis.....	27
Quantitative Analysis of Existing ILO Data	28
Qualitative Follow-on Research	32
Immigrant Labor and the Thai Labor Market.....	33
Focal Provinces: Samut Sakhon, Surat Thani, and Nakhon Si Thammarat	35
The Migrant Registration Process under Memoranda of Understanding.....	36
Child Labor Definitions	41
ILO Definition	41
Thai Ministry of Labour (MOL) Definition.....	42
Research Definition	43
Part I. Thailand’s Canned Tuna and Shrimp Value Chains.....	44
1. Overview of the Canned Tuna Value Chain.....	44
1.1 Thailand in the Global Canned Tuna Industry	44
1.2 The Fishing and Tuna Trading Sector	45
Fishing	45
1.3 The Canned Tuna Processing Sector.....	47
Processing Steps.....	47
Consolidation in the Tuna Canning Industry	48
2. Interaction among Players in the Tuna Value Chain.....	48
2.1 Market Concentration in Different Parts of the Value Chain	48
2.2 Structure and Distribution of Value along the Chain.....	50
3. Thailand in the Global Canned Tuna Value Chain	51
3.1 Thai Canned Tuna Companies.....	53
4. Overview of the Thai Shrimp Value Chain	53
4.1 Thailand in the Global Shrimp Industry.....	53
4.2 The Thai Shrimp Industry and its Value Chain	55
Global Shrimp Farming.....	56
Shrimp Farming in Thailand	56
Trading.....	58
Processing.....	58
5. Institutional Issues in the Global Shrimp Industry	59

6. Interaction among Players in the Value Chain	60
Farming.....	60
Trading.....	60
Processors	61
Retail.....	61
7. Labor in the Shrimp Supply Chain	62
7.1 Monitoring and Oversight	63
8. Comparing the Canned Tuna and Shrimp Value Chains	64
8.1 Case Studies: Thai Union Frozen (TUF) and Sea Value’s Rubicon	65
Thai Union Frozen (TUF)	65
Sea Value’s Rubicon	66
Part II. Work, Education, and Health among Working Children.....	67
1. Working children	68
1.1 Sample description	68
Documentation	73
Thai Language Facility	75
1.2 Work.....	76
Sector	76
Employee status.....	79
Employment Contracts.....	83
Working hours.....	84
Wages.....	90
Work location.....	94
Tasks at work.....	96
Household work	98
1.3 Education.....	101
School attendance.....	101
Migrant and Thai children comparison in Samut Sakhon.....	106
Impact of home-based work and chores on school attendance and performance.....	108
1.4 Health and Occupational Hazards	109
Occupational hazards.....	109
Personal Protective Equipment (PPE)	112
Work-related injuries/health problems	115
Abuse during Work at Home or in the Workplace.....	117
Awareness	117
1.5 Aspirations.....	119
Aspirations.....	119
Assistance needed.....	123
2. Child labor.....	125
2.1 Proportion of children in child labor according to ILO definition.....	125
2.2 Proportion of children in child labor according to MOL definition.....	130
Part III. Choosing Education or Work	133
1. Perceptions of Education vs. Work among Migrants Sampled	133
1.1 Migrants from Myanmar	133

Samut Sakhon.....	134
Surat Thani	134
Kanom, Nakhon Si Thammarat.....	134
1.2 Migrants from Lao PDR and Cambodia.....	135
2. Formal and Informal Education in the Communities Studied	135
2.1 Burmese Language School.....	135
2.2 Community-based School	136
2.3 Formal Thai School	137
3. Understanding the Decision: Education vs. Work.....	138
3.1 Factors Supporting School Enrollment among Migrant Children	139
Higher Socioeconomic Status.....	139
Access to Transitional Education.....	139
Employer-Sponsored Education.....	139
Positive Perception of Education	139
Prospect of Remaining in Thailand in the Future.....	140
3.2 Factors Leading Migrant Children to Work.....	140
Employment Opportunity	140
Debt.....	140
Parental Mobility.....	140
Limited Correlation between Education and Earning Power.....	141
Household Commitments	141
Prospect of Child’s Return to Myanmar.....	141
Part IV. Policy Recommendations.....	142
Recommendations on Labor Issues in the Seafood Processing Industry	142
Recommendations on Migrant Education.....	145
Annex.....	148
1. Summary of Quantitative Findings	148
References	155

Abbreviations

CoC - Code of Conduct
DOF - Department of Fisheries
DPU - Dhurakij Pundit University Research Center
EEZ - Exclusive Economic Zones
EMS - Early Mortality Syndrome
EU - European Union
GAP - Good Aquaculture Practice
GLP - Good Labor Practices
ILO - International Labour Organization
MOL - Ministry of Labour
NSO - National Statistics Office
PPE - Personal Protective Equipment
PSU - Prince of Songkhla University
TDRI - The Thailand Development Research Institute
TFFA - Thai Frozen Food Association
THB - Thai Baht
TSIC - Thailand's Standard Industrial Classification
TTIA - Thai Tuna Industry Association
TUF - Thai Union Frozen
US - United States
USD - US Dollar

List of Tables

Table 1. Number of interviewees by sector	28
Table 2. Daily minimum wage increase in 2012 to 2013	29
Table 3. Surveys and target populations.....	31
Table 4. Details on participants by province.....	33
Table 5. Gross provincial product (GPP) and GPP per capita in 2013.....	35
Table 6. Market concentration in each part of the global canned tuna value chain	49
Table 7. 2014 Thai imports of frozen whole round tuna from the world by volume and value	51
Table 8. 2014 Thai exports of tuna products to the world by volume and value.....	52
Table 9. Thai tuna processors by production size	53
Table 10. Global farmed shrimp production.....	54
Table 11. The top ten exporting countries of shrimp products by volume (tons) in 2013	55
Table 12. Power relationships in the shrimp value chain.....	62
Table 13. The current distribution of players and labor force along the value chain.....	63
Table 14. Main differences between canned tuna and shrimp value chains	64
Table 15. Age groups by province, whole sample.....	68
Table 16. Age groups by province among children in the shrimp/seafood industries.....	68
Table 17. Age and sex distribution by province, whole sample	69
Table 18. Age and sex distribution by province among children in the shrimp/seafood industries	70
Table 19. Age and sex distribution of Thai and migrant children in Samut Sakhon, TDRI	71
Table 20. Age and sex distribution of migrant children in Samut Sakhon, DPU	72
Table 21. Age and sex distribution of migrant children in Samut Sakhon, TDRI	72
Table 22. Age and sex distribution of migrant children in the shrimp/seafood industries in Samut Sakhon, DPU.....	72
Table 23. Documents held by migrant children by age group, DPU	73
Table 24. Documents held by migrant children in the shrimp/seafood industries by age group, DPU	74
Table 25. Industry by province	76
Table 26. Whether job relates to the shrimp/seafood industries by province, age and sex	77
Table 27. Whether job relates to the shrimp/seafood industries among Thai and migrant children, TDRI	77
Table 28. Employee status by province among children in the shrimp/seafood industries	79
Table 29. Employee status among home-based child workers in the shrimp/seafood industries, Samut Sakhon and Surat Thani.....	80
Table 30. Employee status by age group.....	82
Table 31. Selected employee status by sex, age.....	82
Table 32. Type of contract by province, age, industry, sex^	83
Table 33. Hours worked weekly by province.....	85
Table 34. Hours worked weekly among shrimp/seafood workers in Samut Sakhon, Surat Thani*	85

Table 35. Hours worked weekly in Samut Sakhon and Surat Thani by age, sex, industry	86
Table 36. Children working more than 48 hours/week by industry in Samut Sakhon and Surat Thani.....	88
Table 37. Working hours among migrant children by age group, documents, language ability, industry, DPU.....	89
Table 38. Hourly pay in Samut Sakhon and Surat Thani by age, sex, industry.....	91
Table 39. Wage per hour among migrant children by age group, documents, language ability, industry, DPU*	92
Table 40. How income is spent among Thai and migrant children in the shrimp/seafood industries in Samut Sakhon	94
Table 41. Work location among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani.....	94
Table 42. Work location among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla	94
Table 43. Work location among migrant children in the shrimp/seafood industries, DPU.....	96
Table 44. Tasks at work among those in the shrimp/seafood industries in Samut Sakhon and Surat Thani	96
Table 45. Tasks at work among those in shrimp/seafood industries in Samut Sakhon and Surat Thani by sex.....	97
Table 46. Tasks at work among migrant children in the shrimp/seafood industries, DPU.....	98
Table 47. Hours spent on household chores/week by province, age, sex.....	99
Table 48. Tasks in household chores by sex.....	100
Table 49. Hours spent on household chores among migrant children by age group, DPU.....	100
Table 50. Whether attending school by province among children in the shrimp/seafood industries	101
Table 51. School attendance by age among children in the shrimp/seafood industries.....	101
Table 52. School attendance by province, age among children in the shrimp/seafood industries	102
Table 53. School attendance by province, sex among children in the shrimp/seafood industries	103
Table 54. Reasons for not attending school by province among children in the shrimp/seafood industries	105
Table 55. Reasons for not attending school among Thai and migrant children in the shrimp/seafood industries not in school currently in Samut Sakhon, TDRI	106
Table 56. Ever attended school in Thailand among migrant children by age and industry, DPU	106
Table 57. Main reasons for never having attended school in Thailand among migrant children who worked in the past week in any industry, DPU	107
Table 58. Main reasons for never having attended school in Thailand among migrant children not studying or working, DPU.....	107
Table 59. School attendance and reasons for not attending school among migrant children by age group, DPU	107
Table 60. Ever attended Thai school among children in the shrimp/seafood industries by documents, DPU.....	108

Table 61. Occupational hazards by industry	110
Table 62. Occupational hazards among children in the shrimp/seafood industries by age....	111
Table 63. Who provides safety equipment by industry	113
Table 64. Possession of safety equipment among Thai and migrant children working in the shrimp/seafood industries in Samut Sakhon, TDRI	114
Table 65. Ever incurred a work-related injury or health problem by industry	116
Table 66. Severity of injury or health problem among children in the shrimp/seafood industries	116
Table 67. Experiences of abuse	117
Table 68. Child protection law not known in Samut Sakhon and Surat Thani by industry, age	117
Table 69. Who can provide assistance if work-related problems occur among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani	118
Table 70. Who can provide assistance if work-related problems occur among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla	118
Table 71. Who can provide assistance if work-related problems occur in Samut Sakhon by status among children in the shrimp/seafood industries, TDRI.....	119
Table 72. Whether want to study by age, sex among children in the shrimp/seafood industries NOT currently studying (n=188)**	120
Table 73. Whether want to continue studying by age, sex among children in the shrimp/seafood industries currently studying (n=276)**	121
Table 74. Whether want to study by industry and whether still in school	121
Table 75. What opportunities you would like to do most by sex among children in the shrimp/seafood industries.....	122
Table 76. Whether want to continue study and opportunities you would like to do most among children in the shrimp/seafood industries in Samut Sakhon by status, TDRI.....	122
Table 77. Types of assistance needed among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla by age	123
Table 78. Types of assistance needed most among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani by age.....	124
Table 79. Types of assistance needed most in Samut Sakhon among Thai and migrant children in the shrimp/seafood industries, TDRI.....	124
Table 80. Proportion of working children in the shrimp/seafood industries in child labor by province, age, sex (ILO), TDRI and DPU	125
Table 81. Proportion of working children in child labor, hazardous work, and permissible work (ILO), Samut Sakhon by age, sex, industry, TDRI	126
Table 82. Proportion of working children in child labor, hazardous work, and permissible work (ILO) in Surat Thani by age, sex, industry, TDRI	128
Table 83. Proportion of migrant working children in child labor, hazardous work, and permissible work (ILO) in Samut Sakhon by age, sex, documents, industry, DPU.....	129
Table 84. Proportion of working children in the shrimp/seafood industries in child labor, hazardous work, and permissible work (ILO) in Samut Sakhon by status, TDRI and DPU	129
Table 85. Hours worked/week and hourly pay by child labor (ILO) in Samut Sakhon and Surat Thani, TDRI	130

Table 86. Proportion of working children in child labor (MOL) in Samut Sakhon and Surat Thani by age, sex, industry, status, TDRI.....	131
Table 87. Hours worked/week and hourly pay by child labor (MOL) in Samut Sakhon and Surat Thani, TDRI.....	131
Table 88. Determinants of schooling and work decision.....	138

List of Figures

Figure 1. Daily wage primary seafood-processing migrant workers in Samut Sakhon in 2011-2012	30
Figure 2. Participants classified by groups.....	32
Figure 3. Number of registered migrants in Thailand.....	34
Figure 4. Share of migrants by province.....	36
Figure 5. Migrant registration process.....	37
Figure 6. The distribution of value along the chain based on difference in gross margin.....	45
Figure 7. Summary of key characteristics of the canned tuna value chain	49
Figure 8. 2011 Top five exporting countries by value.....	52
Figure 9. Distribution of value along the chain based on difference in gross margin.....	56
Figure 10. Shrimp production cycle.....	57
Figure 11. Structure of the Thai shrimp industry	60
Figure 12. The shrimp value chain of Sea Value	67
Figure 13. Age and sex distribution of children in the shrimp/seafood industries, by age, sex (N=985).....	69
Figure 14. Age and sex distribution by province among children in the shrimp/seafood industries	70
Figure 15. Proportion of child workers among all workers in the shrimp/seafood industries, by province.....	71
Figure 16. Documents held by migrant children, by age	73
Figure 17. Migrant children who speak Thai (N=557).....	75
Figure 18. Migrant children in shrimp/seafood industries who speak Thai, by age (N=155)....	75
Figure 19. Migrant children in the shrimp/seafood industries who speak Thai.....	78
Figure 20. Migrant children in the shrimp/seafood industries with documentation	78
Figure 21. Employee status among migrant children in the shrimp/seafood industries.....	80
Figure 22. Selected employee status by sex	81
Figure 23. Selected employee status by age.....	81
Figure 24. Workers with written, verbal, and no contracts in the shrimp/seafood industries (N=280).....	84
Figure 25. Mean and range of hours worked weekly among shrimp/seafood workers in Samut Sakhon	86
Figure 26. Mean and range of hours worked weekly among shrimp/seafood workers in Surat Thani.....	87
Figure 27. Mean and range of weekly hours worked by children in the shrimp/seafood industries	90
Figure 28. Mean and ranges of wages per hour declared by migrant children, DPU*	92
Figure 29. How income is spent by children in the shrimp/seafood industries.....	93
Figure 30. Work location among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani, by sex	95
Figure 31. Proportion of males and females who normally do household chores	98
Figure 32. Mean number of hours per week spent on household chores.....	99

Figure 33. School attendance by age among children in the shrimp/seafood industries	102
Figure 34. School attendance in all four provinces, by age, sex among children in the shrimp/seafood industries.....	103
Figure 35. School attendance by province, sex among children in the shrimp/seafood industries	104
Figure 36. Reported school attendance among Thai and migrant children in the shrimp/seafood industries in Samut Sakhon.....	104
Figure 37. Reasons children in the shrimp/seafood industries are not in school	105
Figure 38. Occupational hazards among children in the shrimp/seafood industries	111
Figure 39. Occupational hazards among children in the shrimp/seafood industries by age ..	112
Figure 40. Number of workers who were provided with or wore any safety equipment or protective equipment (PPE)	113
Figure 41. Who provides safety equipment for Thai children working in the shrimp/seafood industries in Samut Sakhon	114
Figure 42. Who provides safety equipment for migrant children working in the shrimp/seafood industries in Samut Sakhon.....	114
Figure 43. Children in the shrimp/seafood industries who were ever injured or suffered health problems while working (N=468)	115
Figure 44. Number of children working in the shrimp/seafood industries who want to study by age, sex	119
Figure 45. Proportions of child workers in the shrimp/seafood industries who want to study	120
Figure 46. Opportunities that children working in the shrimp/seafood industries want to do most (male and female; N=461; 9 missing)	122
Figure 47. Proportion of migrant children among shrimp/seafood workers in different work conditions (ILO definition) in Samut Sakhon, by age	126
Figure 48. Proportion of migrant children among shrimp/seafood workers in different work conditions (ILO definition) in Samut Sakhon, by sex.....	127
Figure 49. Proportion of working children in child labor.....	130

Executive Summary

This research study draws on existing evidence and data from the earlier ILO/IPEC Thailand research projects¹, and supplements it with qualitative information generated through focus group discussions (FGDs), key informant interviews (KIIs), consultations with key stakeholders, and other methodologies.

The purpose of this study is twofold: first, to strengthen the evidence base on child labor and labor conditions in the shrimp and seafood supply chain and within the communities engaged in the shrimp and seafood processing industries; and second, to provide practical and empirically grounded policy recommendations that can be discussed with different stakeholders and utilized by both national and provincial governments.

The research study and associated policy analysis take a socioeconomic approach in exploring how available data can inform our understanding of: (i) the social and economic impacts of migration into land-based shrimp and other seafood processing industries on migrant communities and Thailand more broadly; (ii) attitudes among industry workers and employers; (iii) labor conditions within the industry; (iv) exploitation of migrant workers; (v) access to services by migrant workers and their children; and (vi) related issues and considerations.

This report builds on the ILO's work to date in three ways. First, the research involves an integrated analysis of three independent datasets collected in the context of ILO's recent engagement, with a focus on work, education, and health issues among migrant children working in shrimp and seafood processing. Second, the comparative value chain analysis of Thailand's canned tuna and shrimp processing sectors examines labor issues throughout these value chains, acknowledges the differences between these sub-industries, highlights ways in which each sub-industry has achieved success in improving labor standards, and identifies actionable steps for further improvement. Third, the report presents an extended analysis of the decisions made by migrant families to send their children to school, to alternatively engage in various forms of work, or both. It concludes with recommendations for sustainable strategies that policy makers and industry may consider adopting to promote and enforce sound labor practices in the shrimp and other seafood processing industries, to work to eliminate child labor from the value chain, and to increase access to education among migrant children living in Thailand.

Background

Land-based shrimp and seafood processing constitute a vital part of Thailand's USD \$7 billion seafood export industry.² Thailand is a world-leading supplier of canned tuna, with an annual revenue of USD \$1.1 billion that accounts for 53 percent of the global canned tuna trade. Its shrimp production and processing industries generate more than USD \$2 billion per year.

¹ Thailand Development Research Institute, *Baseline Survey on Child Labor in Selected Province in Thailand Selected Province in Thailand Samut Sakhon and Surat Thani Provinces* (Thailand: TDRI, 2013). The Department of Mathematics and Statistics, University Prince of Songkhla, The International Labour Organization (ILO), *Baseline Survey on Child Labour in Selected Areas where Shrimp and Seafood Related Industries are Condensed in Nakhon Si Thammarat and Songkhla Provinces 2011-2012* (Thailand: PSU, 2013). Dhurakij Pundit University Research Center. *Baseline Survey of Migrant Communities in Samut Sakhon Province* (Thailand: DPU, 2014)

² Food and Agriculture Organization (FAO), *The State of World Fisheries and Aquaculture 2012*. (Rome: FAO, 2012), 71.

As tuna canning and shrimp processing are labor intensive, Thailand has taken advantage of its access to low-cost migrant labor from neighboring countries, particularly Myanmar, to support the industry. Thailand's canned tuna processing industry employs approximately 200,000 workers throughout its value chain. It is estimated that approximately 60 percent of these workers are migrant workers, primarily from Myanmar. The shrimp industry employs 700,000 workers, 80 percent of whom are migrant workers, primarily from Myanmar.³

Thailand's canned tuna industry is export-oriented, with approximately 95 percent of total production destined for overseas markets, particularly the United States, Europe, and Japan. Approximately 50 percent of total shrimp production is exported to these countries, while the other half is distributed domestically through wholesale and retail markets.

This study found significant differences in labor standards and oversight between processing operations that were part of export-oriented value chains and those that were connected to the domestic market. The Thai canned tuna industry is characterized by strong monitoring mechanisms and labor standards, as pressure from overseas buyers has compelled Thai canned tuna processors to achieve and maintain high quality, labor, and environmental standards in their processing operations. Importantly, the Thai canned tuna industry is highly consolidated, with 18 players in the industry, all of whom are members of the Thai Tuna Industry Association (TTIA). The supply of raw tuna is itself controlled by only three traders: FCF, Itochu, and Tri-Marine. This highly integrated system allows for strong controls throughout the value chain.

The Thai shrimp industry, in contrast, is highly diverse, with a large number of players operating in different parts of the value chains. These include more than 10,000 grow-out farms, several hundred traders, approximately 1,000 primary contract processors, and more than 100 export processors. This diversity has made it very difficult for Thai government authorities to regulate all entities. In addition, Thai shrimp production is divided, with 50 percent of production bound for export and another 50 percent supplying the domestic market. In response to pressures from overseas buyers and governments of importing countries, export processors have taken steps to improve their value chains, exerting influence over other actors in the chain and forcing them to improve their standards; however, the lack of clear regulation and standards enforcement in the processing of shrimp products for the domestic market in particular (given the absence of pressure from overseas buyers) gives rise to various problems in the industry. The exploitation of immigrant labor, in particular, remains a key challenge to be addressed.

Against this industry backdrop, this research identified a number of key issues relating to migrant children working in the shrimp and seafood processing industries, particularly with regard to the nature and conditions of their work, as well as their perceptions of work vs. education.⁴

Findings on Labor Issues

Children working in the shrimp and seafood industries were more frequently exposed to occupational hazards than children working in other industries: Much higher proportions of children in the shrimp and seafood industries worked with fire, gas, or flames (25.9 percent), compared to other industries (12.7 percent). In shrimp and seafood, 23.3 percent of children were working in wet and dirty conditions, compared to 7.6 percent in other industries (Table 61). Generally, older children working in the shrimp and seafood industries appear to be more exposed to workplace hazards than younger children. Follow-up

³ These numbers are estimates provided by Thai seafood industry experts who served as key informants for this study.

⁴ Findings draw from quantitative analyses of earlier IPEC studies as well as new qualitative research conducted under this project.

interviews revealed that these hazardous working conditions also apply to home-based work, with home-based work rendered more hazardous during the early morning and late evening working hours as a result of poor lighting conditions.

Children in the shrimp and seafood industries were twice as likely to incur injuries as children working in other industries: 19.4 percent of children in the shrimp and seafood industries reported workplace injuries, compared to 8.4 percent in other industries. In Samut Sakhon and Surat Thani, children in the seafood industry appear to be at greater risk of being injured (11.1 percent) or having a health problem (14.8 percent) compared to children in the shrimp industry (6.3 percent and 4.6 percent, respectively [Table 65]).

One-fourth of migrant workers in the Thai shrimp industry are irregular: Based on interviews with experts, this study estimates that approximately one-fourth of the 560,000 immigrant laborers in the shrimp industry are working without proper registration. Irregular workers are concentrated in labor-intensive activities and in firms that are less exposed to international networks and pressure, including farming, sorting shrimp, and simple processing under small contract manufacturers. The informal nature of these production units implies that they are difficult to monitor and regulate. Such workers are also subject to irregular and uncertain employment.

High proportions of children reported not having any safety equipment: 44.3 percent of children working in the shrimp and seafood industries reported having no personal protective equipment (PPE) (Figure 40). Given the occupational hazards that children face as detailed above, the consequences of not having PPE can be serious. Additionally, for children in the shrimp and seafood industries who did have safety equipment such as suits, boots, gloves, and helmets, this study found that three-quarters provided their own equipment. There were also significant differences between migrant and Thai working children, with only 9 percent of migrant children receiving such safety equipment from their employers, compared with 40 percent of Thais (Figures 41 and 42).

Migrant children in the seafood and shrimp industries worked longer hours on average than did Thai children, and in all provinces some children worked above the legally permitted limit: Among children in the shrimp and seafood industries, migrant children were working around 6 hours per week longer on average than Thai children (49.6 hours and 43.2 hours, respectively [Table 35]). Nakhon Si Thammarat and Songkhla had the highest proportion of children working above the legally permitted 48 hours/week (18.4 percent), followed by Surat Thani (12.5 percent) and Samut Sakhon (10.9 percent). In the Dhurakij Pundit University Research Center (DPU) study, migrant children worked a mean of 50.4 hours/week (Table 37).

Few working children were aware of child labor laws: No children working in the shrimp and seafood industries in Surat Thani were aware of the child protection law. Among working children surveyed in Samut Sakhon, more children in the shrimp industry were unaware of the law (78.3 percent) than children in seafood (62.9 percent) or children in other industries (45.7 percent) (Table 68).

Nearly seventy percent of working children did not have a contract: Among shrimp and seafood workers, 69.6 percent did not have a contract, followed by 27.1 percent who had verbal contracts. Very few children—only 3.2 percent—had written contracts (Table 32).

Consolidation of the Thai canned tuna industry has enabled stronger controls and oversight throughout the value chain: Thailand's canned tuna industry was found to be highly consolidated, with 18 players in the industry, all of whom are members of the Thai Tuna Industry Association (TTIA). The supply of raw tuna is itself controlled by only three integrated traders: FCF Fishery Company Ltd., Itochu Corporation, and Tri-Marine. Together these three trading firms control more than half of the global trade

of cannery-grade tuna through contractual agreements with small and medium-sized operators, with tuna trading the most concentrated part of the value chain. This highly integrated system allows for strong controls, since a small number of players exert strong control on the market and can influence activities throughout the value chain.

Labor standards and conditions in the canned tuna industry showed a marked improvement as a result of pressure from overseas buyers: The Thai canned tuna industry is export oriented, with approximately 95 percent of production destined for overseas markets. Pressure from overseas buyers and the necessity to meet international standards to remain competitive have compelled Thai canned tuna processors to achieve and maintain high quality, labor, and environmental standards in processing operations.

The diversity of players in the Thai shrimp industry has made it difficult for government authorities to regulate: The Thai shrimp industry is highly diverse and fragmented, with a large number of players operating in different parts of the value chain. The industry includes many micro and small enterprises, including more than 10,000 grow-out farms, several hundred traders, approximately 1,000 primary contract processors, and over 100 export processors. This makes it difficult for the Thai government to regulate. For instance, although shrimp grow-out farms are required to register and be licensed, it is difficult for the Department of Fisheries (DOF) to monitor them. In practice, there are unregistered farms that only culture shrimp when the market conditions are right. Some farmers also raise shrimp together with tilapia to reduce the cost of feed. These practices make up a considerable part of total shrimp farming for Thailand's domestic market. Without control under Good Agriculture Practice (GAP), these farms are more likely to employ undocumented workers and provide below-standard welfare for them. Small-scale farmers in particular face difficulties complying with the more stringent requirements set by export markets.

Due to the lower level of pressure exerted by international buyers in the shrimp industry, that industry has been slower to adopt and enforce international standards for processes and labor conditions: As half of the shrimp industry is geared toward the domestic market, there is less pressure from buyers to comply with international standards. Regulation and standards enforcement in the processing of shrimp products continue to be uneven, particularly in production for the domestic market. This gives rise to various problems in the industry, including the exploitation of immigrant labor and child labor.

Export processors in the Thai shrimp industry have taken positive steps to improve labor standards throughout the value chain: The study found significant differences in labor standards and oversight between processing operations that were part of export-oriented value chains and those that were connected to the domestic market. Thai shrimp production is divided, with 50 percent of production bound for export and another 50 percent supplying the domestic market. In response to pressures from overseas buyers and governments of importing countries, export processors in the Thai shrimp industry have taken steps to improve their value chains, exerting influence over other actors in the chain and forcing them to improve their standards. This is particularly true of secondary processing that occurs in factories, which is subject to stricter standards requirements by overseas buyers and regulation by authorities than processing that occurs in less formal venues.

Recommendations on Labor Issues

Recommendations for Policymakers:

Increase the focus on labor issues within the validation and oversight process: Policymakers should make a concerted effort to improve labor standards within the validation and regulation process, with a

particular focus on law enforcement and workplace inspection. In addition, under the existing Good Labour Practices (GLP) programme, the Thai Government's leadership of the Task Force chaired by the Ministry of Labour (MOL) and Department of Fisheries (DOF) should include more regular meetings to encourage active application of the prescribed practices. GLP Task Force members (representing Thai industrial associations, trade unions, and NGOs; the ILO in its technical advisory capacity; and buyers in an observer capacity) should use GLP as a guideline for appropriate labor practices and good labor conditions, making compliance with GLP a competitive advantage for Thailand

Close gaps in registration requirements: Labor brokers should be monitored through licensing by the Department of Employment (DOE) to enforce fair treatment of migrant workers. Labor brokers should be responsible for supporting and helping workers through the duration of employment in Thailand, including through the provision of or referral to legal consultations, as well as through support for securing health insurance and facilitating access to social welfare.

Simplify the registration and national verification processes: Given the large number of unregistered migrants currently working in Thailand and their important role in the shrimp and seafood sectors, it is essential to simplify the migrant registration and national verification processes to ensure that irregular migrants be brought into regular status. In parallel, employers should be encouraged to employ regular migrants through greater monitoring and oversight.

Improve efforts to tighten the supply chain to allow more effective monitoring and encourage businesses to employ registered migrants: The highly fragmented nature of the seafood processing industry has made it difficult to establish and maintain standards, with the development of an enforcement mechanism that reaches every part of the industry especially challenging. To address gaps in regulation, efforts should be made to tighten the shrimp supply chain, looking to the canned tuna sector as a model.

Make legal avenues more accessible to potential migrant workers by reducing cost and time taken for processing: The procedures for migrating through legal channels should be reviewed and streamlined by the governments of Thailand and neighboring countries in consultation with social partners, identifying which documents and what steps are duplicative or unnecessary. Regular migration must also offer better protection from the risks of migration to make legal migration a more attractive prospect. This should also reduce the comparative advantages of illegal migration channels, making them less attractive to migrants.

Ensure compliance with labor standards by subcontracted employers: If subcontracting agencies employ migrant workers, the Thai government should ensure that they bear statutory responsibilities/liabilities as employers under the relevant labor laws—including the Alien Working Act, the Labour Protection Act (1998), the Social Security Act, and the Workmen's Compensation Act.

Focus efforts to improve labor conditions in primary processing on Samut Sakhon first: Since more than half of primary processors are based in Samut Sakhon, it may be economical to focus initial efforts on this area and its connection to Bangkok—the center of domestic demand and a transportation hub for seafood exports.

Ensure awareness of the Thai government's commitment to equal treatment with regard to labor protection: It is essential to widely disseminate the Thai government's commitment to provide equal treatment with regard to labor protection, under the Labour Protection Act (1998), regardless of nationality and legal status.

Provide support services that are accessible to migrants: The Thai government and the governments of migrant-sending countries should provide support services and cooperate with NGOs and trade unions to

establish channels through which to disseminate information on policies and procedures, and to facilitate migrants' access to services, including complaint mechanisms.

Ensure effective coordination among government departments involved in migration management:

The committees managing labor migration in sending countries and in Thailand should include representatives from all key government departments involved in migration management, including labor, immigration, health, and social welfare.

Strengthen collection and dissemination of data on migrant workers: Data on migrant workers should be strengthened, through greater interagency collaboration at the national and subnational levels, and through regional harmonization of data from sending countries. This includes the regular exchange of labor market information, administrative records on regular migration through the MOU and the registration/nationality verification processes, as well as data on deportations and irregular migration, and analysis of trends and patterns. Processes for correcting discrepancies in data should be established.

Raise awareness of the value of migrant labor: Research on the role of migrant labor and its value added in the Thai canned tuna and shrimp value chains can help raise public awareness of the value of migrant labor in these sectors and the negative impact a shortage of such labor would have on the Thai economy. This recommendation also applies to non-government stakeholders.

Recommendations for Non-Government Stakeholders:

Encourage international buyers to be more vigilant and engage more directly with their suppliers to help them implement international standards, including for labor: Independent monitoring of the implementation of GLP standards will encourage businesses to comply with a set of criteria that ensures safe labor conditions for all. Involving international buyers in multipartite meetings in which international buyers, national businesses, national and local authorities, workers' representatives, and NGOs participate could lead to commonly agreed-upon steps to upgrade the Thai seafood industry.

Implement programs that promote GLP standards among small businesses: As multiple stakeholders in the GLP taskforce develop guidelines for GLP standards across the fisheries industry, opportunities will be created for greater collaboration among the public and private sectors and civil society. Small business owners in particular can benefit from NGO initiatives designed to increase their knowledge and awareness of GLP.

Develop the capacity of SMEs working in shrimp processing to improve their labor conditions: The lack of concentration in the shrimp industry and the large number of SMEs in the sector make it difficult for authorities and large companies to monitor labor conditions throughout the value chain. NGOs could work more closely with larger companies and public authorities to reach out to micro and small enterprises and help them build labor management practices that align with international standards.

Conduct additional research on the topic of hazardous work among children and adolescents in Thailand: Additional research on hazardous work among children is needed to enhance our understanding of this subject. Future research should include a wider range of occupational hazards specific to the shrimp and seafood sectors.

Encourage employers to ensure that children aged 5-14 are not engaged in work:⁵ This study found that high proportions of young working children—one in three—suffered injuries while working. In cases where parents bring young children to worksites, business owners should ensure that these children are in safe environments and not conducting work. Ideally, parents should bring children to day care or school rather than to their worksites.

Include the brokerage and registration fees of migrant workers in the costs paid by employers when hiring a migrant worker: As part of efforts to close gaps in the registration process, the brokerage and registration fees of migrants should be paid by employers. This will reduce the potential for debt bondage and other vulnerabilities.

Ensure that children 15-17 have access to an advocate for work-related problems: Among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla, one in 10 children did not know who they could turn to for help with work-related problems, and one in four said they had no one to turn to for such problems. Private sector employers can help address this issue by identifying a point person for workers to turn to within the workplace, and NGOs can provide similar assistance at the community level.

Recommendations for Multi-Stakeholder Efforts:

Establish a regional forum for improved regional value chain management in the seafood sector: A regional forum including government, the private sector (producers as well as domestic and international buyers), international organizations, and NGOs would provide a platform for the discussion of best practices in management and oversight in support of improved labor conditions across the value chain.

Findings on Migrant Education

One in three children was not in school, and boys were disproportionately affected: Among children in the shrimp and seafood industries, only 56.4 percent were attending school or non-formal education centers. One in three children (40.7 percent) were currently not attending any school. Samut Sakhon had the highest proportion of children not attending school (78.6 percent). Over a third of children in Surat Thani (43.5 percent) were not in school, followed by 30.1 percent in Nakhon Si Thammarat (Table 50).

Over three times as many boys as girls were not attending school in Surat Thani (85.7 percent and 25.0 percent respectively); twice as many boys as girls were not attending school in Songkhla (33.6 percent and 14.2 percent respectively [Table 53]). Higher proportions of girls were attending school than boys in all provinces surveyed.

Second children, particularly girls, were disproportionately taken out of school to care for siblings: Parents in all three provinces noted that one of the older children had to take on the responsibility of

⁵ Thailand's 1998 Labor Protection Act (LPA) outlines conditions for the employment of young workers. Children below the age of 15 are prohibited from working in Thailand, with the implication that any individual under 15 years of age who is working is classified as child labor. Child labor is coded positively for:

- Anyone under 15 years of age who is working at least one hour per week
- OR: Ages 15-17 and working in hazardous work
- OR: Ages 15-17 and working more than 48 hours/week
- OR: Ages 15-17 and working between 10:00 p.m. and 6:00 a.m.

looking after the younger ones. As most of these families had a child of working age (15 or above), the typical age for such a caregiver was 12. The responsibility to take care of younger dependents therefore fell on the second child; if that child happened to be a girl, it would be more likely that she would have to remain home to oversee the younger dependents.

A much higher proportion of girls did household chores in all provinces compared to boys, with 90.2 percent of girls doing chores compared to 61.2 percent of boys (data not shown).

Nearly all migrant children who had never attended school gave work as the reason: Among working migrant children in the DPU survey, only a very low proportion of children in the shrimp and seafood industries had ever attended school (3.9 percent [Table 56]). Among the 192 migrant children who had never attended Thai school and who had worked in the past week, almost all (96.2 percent) cited having to work as the primary reason they had never attended school (Table 57).

Migrants' earning power was not significantly increased by their completion of primary or secondary education: Statistical analysis found that the ability to speak Thai increased the average daily wage of a migrant who works in seafood-related industries by about 1.54 percent. For a person working at a peeling shed who earns 300 baht per day, the ability to speak Thai would increase that person's daily earnings to 304.5 baht. In contrast, one hour of extra work would add another THB 50-60 to that individual's daily wage. Decisions to leave school for work in part reflect this economic calculation.

Parental debt and mobility were linked to lower enrollment among children: Household debt was a factor leading parents to choose work over education for their children. Debt was cited by several respondents as a reason a family might suddenly relocate to a new area, withdrawing children from school and in some cases driving the family underground, thus impeding children's access to school in the future.

Parents who believed they would remain in Thailand for the foreseeable future were more likely to send their children to school: Migrants who were confident that they would be able to remain in Thailand for an extended period were more inclined to send their children to school. This was particularly true for those migrants who knew they would remain in Thailand at least until their children reached the working age of 15, as they viewed schooling as important in improving their children's employment prospects.

Parents who believed they would return to Myanmar soon were more likely to have their children work or to enroll them in a Burmese-language school: Families who saw their time in Thailand as limited were more likely to focus on generating income in the short term. This effort sometimes extended to children, who were expected to help contribute to the family income, often through home-based work. However, respondents also revealed that Burmese-language schooling was seen by such families as an attractive option, as it prepared students for reintegration into the Myanmar school system (and Myanmar culture more broadly).

The practice of transitioning migrant children into the Thai formal school system at the first grade level (even when migrant children are significantly older than their Thai peers) has been linked to problems for schools, students, and teachers, as well as to higher drop-out rates among migrant children: Parents, school administrators, and NGO leaders described challenges associated with the practice of transitioning migrant children to Thai schools at the first grade level. While this practice ensures that migrant children gain exposure to the full primary school curriculum, it is also associated with high drop-out levels among migrant children. Migrant parents noted that their children felt embarrassed about being paired with Thai students who were many years their junior. Teachers and school administrators also noted the challenges of teaching a classroom with substantial age heterogeneity, while NGO leaders cited instances in which the older children grasped the material more

readily (due in part to their age), fostering resentment among Thai parents and low-level conflict within the school community.

Recommendations on Migrant Education

Recommendations for Policymakers:

Improve migrant children's access to early childhood education centers: Migrant children should be encouraged to enroll in childcare centers managed by the Ministry of Social Development and Human Security located in every *tambon* (sub-district), with the local budget adjusted to accommodate these children. Migrant children should be encouraged to begin early learning centers when they are three to four years old, ensuring that they become proficient enough in Thai to enter formal Thai schools at the first grade level with their peers.

Place migrant children with their age peers when they enter formal Thai schools: To support better integration of migrant students into formal Thai schools, school administrators should transition migrant children into classrooms with Thai children who are close to their own age (rather than requiring all migrant children to begin in first grade, regardless of age). Prior to entering a formal Thai school, migrant children should be provided with Thai language training and tutoring on key aspects of the curriculum.

Maintain low school fees: While all children have access to education in Thailand regardless of registration status, this research found that the children of undocumented migrants were less likely to enroll in school, as their families had lower incomes than documented migrants and were therefore less able to pay fees. Fees associated with school attendance should be kept low so as not to exclude these children.

Ensure that part-time schooling is available for migrant children, particularly those in the 15-17 legal working age group: Part-time classes and vocational school offer excellent opportunities for these children to continue their education while working (as opposed to dropping out to work full time). Flexible educational modalities for children aged 13 and above can encourage these children to stay in school beyond the transition to junior high, when many are currently dropping out in favor of work.

Establish school-based vocational training programs for children aged 13-14: Migrant parents who are confident that they will remain in Thailand until their children reach the working age of 15 are more inclined to send their children to school. Providing vocational training linked to market needs (and if possible, to employment at age 15) would provide a strong incentive for parents to keep their children in school. Such a program could also help employers fill positions in key areas where there is a labor shortage.

Consider establishing a government-run education fund for migrant children: Given the importance of school attendance as a means of stemming child labor, the government should consider having employers pay into a fund supporting migrant education in Thailand as part of their application to bring migrant workers into the country. The education fund could subsidize the operation of centers providing transitional education to migrants and helping them effectively integrate into the formal Thai system.

Support bilateral cooperation on educational equivalency: As part of the MOU process, efforts should be made to establish a clear framework for educational equivalency between migrant-sending countries and Thailand.

Ensure that education provided to migrants is of high quality: High-quality education is essential for human development and the development of productive citizens. Moreover, high-quality education

supports better student retention rates and is therefore an important incentive for migrant families to choose education over work for school-age children. Regular and standardized monitoring and evaluation of teachers of migrant children will help ensure quality.

Make support services available to children currently in school with the goal of continuing education:

Given the extremely high levels of interest in continuing education among those who are already in school, and the substantial percentages who drop out after primary school and again upon turning 15, support services should be made available to children in school to help them navigate challenges associated with dropping out.

Recommendations for Non-Government Stakeholders:

Increase education and advocacy in migrant communities: Thailand recently implemented a change in the registration process, allowing migrant workers to renew their work permit after a brief period out of the country. By giving migrants the assurance that they can stay in Thailand long-term (as long as they continue to have productive working relationships with their employers), these migrants will be far more invested in a life in Thailand for themselves and their children, with a significant effect on migrant parents' willingness to send their children to primary school.

Conduct outreach on the right to education and its benefits among working children aged 13-17: A significant portion of older children working in shrimp and seafood processing who were not currently in school indicated that they were unsure of whether they wanted to enter school. This represents an opportunity among this group to raise awareness of migrant children's right to access school in Thailand, and of the benefits of education more generally.

Support the transition of migrant children into Thai schools: NGOs and the private sector can help support the successful transition of migrant children into Thai schools, by helping to identify teachers who speak both Thai and Burmese to serve as tutors for children as they prepare to enter the formal Thai school system and for a period of time after their transition, and by working together with government to help train these teachers to meet the specific needs of migrant children who are entering the Thai school system for the first time.

Support improved relations and understanding between Thais and migrants: NGOs and the private sector can support better educational and social outcomes for migrant children by working to increase mutual understanding among Thais and migrants living in the same community. Community-based activities that promote understanding of and respect for both cultures, as well as a sense of investment in a shared community, will provide an important foundation on which to build successful educational interventions for migrant children.

Provide financial assistance and/or incentives to migrant families to keep children in school:

Employers of migrant workers should consider providing financial and other incentives to facilitate migrant children's enrollment and ongoing schooling. Incentives can include school uniforms, learning materials, teacher salaries, school equipment, classroom space, free transportation from migrant communities to learning centers or schools, free lunch, and financial rewards in the form of scholarships for migrant children who perform well in schools.

Recommendations for Multi-Stakeholder Efforts:

Establish a multi-stakeholder platform to address challenges related to migrant education:

Government, NGO, and private sector stakeholders should come together to establish a multi-stakeholder platform to address challenges related to migrant education. The platform should support coordination on roles and responsibilities for implementing the recommendations in this report and other actions in support of improved access and quality of migrant education.

Introduction

Over the past several years, the International Labour Organization (ILO) has been supporting research and implementing project activities aimed at reducing child labor and securing decent working conditions for migrants in Thailand's shrimp and seafood processing industries. These projects have devoted special attention to the situation of working children and adolescents who are at risk of entering, or are involved in, hazardous child labor.

The ILO's current project operates at three different and mutually reinforcing levels, with the involvement of government, employers' organizations, workers' unions, non-governmental organizations (NGOs), and industry associations. At the *policy level*, the project strengthens national policy and implementation frameworks to protect the rights of Thai, migrant, and stateless children in relation to labor, education, employment, and social protection, taking account of the respective roles of national government ministries and other agencies and subnational government bodies. At the *industry level*, it ensures that enterprises throughout the shrimp and seafood supply chains comply with national labor laws and international labor standards—in particular those relating to child labor and forced labor—through the establishment of the Good Labor Practices (GLP) program. At the *community level*, it provides access to formal and non-formal education, social protection, and livelihood services to migrant and Thai children and their families who live and work in shrimp and seafood industry areas. The latter component is primarily implemented by NGOs, and targets approximately 10,500 beneficiaries, including Thai and migrant children and their families in five provinces that are home to high concentrations of shrimp and other seafood processing operations (Samut Sakhon, Samut Prakarn, Nakhon Si Thammarat, Surat Thani, and Songkhla).

To enhance the sectoral knowledge base for the implementation, monitoring, and refinement of program activities, the ILO project has supported several research studies that aimed to fill important knowledge gaps on the nature and incidence of child labor in specific parts of the shrimp and seafood processing industries. In particular, two comprehensive baseline surveys in four project areas and an industry mapping in Samut Sakhon have been conducted to contribute to the knowledge base on migrant children and their families in the shrimp and seafood industries. The project also conducted a survey on migrant children in Samut Sakhon province as the basis for a possible impact evaluation of education interventions and further contribution to the provincial knowledge base, and supported a study on Hazardous Child Labor (HCL) in various sectors.⁶

This research study and policy analysis draws on the existing evidence and data from the earlier ILO research projects, and supplements it with qualitative information generated through focus group discussions (FGDs), key informant interviews (KIIs), consultations with key stakeholders, and other methodologies.⁷

The purpose of this study is twofold: first, to strengthen the evidence base on child labor and labor conditions in the shrimp and seafood supply chain and within the communities engaged in the shrimp and seafood processing industries; and second, to provide practical and empirically grounded policy

⁶ Thailand Development Research Institute, *Baseline Survey on Child Labor in Selected Province in Thailand Selected Province in Thailand Samut Sakhon and Surat Thani Provinces* (Thailand: TDRI, 2013). The Department of Mathematics and Statistics, University Prince of Songkhla, The International Labour Organization (ILO), *Baseline Survey on Child Labour in Selected Areas where Shrimp and Seafood Related Industries are Condensed in Nakhon Si Thammarat and Songkhla Provinces 2011-2012* (Thailand: PSU, 2013). Dhurakij Pundit University Research Center. *Baseline Survey of Migrant Communities in Samut Sakhon Province* (Thailand: DPU, 2014).

⁷ Details on methodology are provided in the next section.

recommendations that can be discussed with different stakeholders and utilized by both national and provincial governments.

The research study and policy analysis take a socioeconomic approach in exploring how available data can inform our understanding of: (1) the social and economic impacts of migration into land-based shrimp and other seafood processing industries on migrant communities and Thailand more broadly; (2) attitudes among industry workers and employers; (3) labor conditions within the industry; (4) exploitation of migrant workers; (5) access to services by migrant workers and their children; and (6) related issues and considerations.

This report builds on the ILO's work to date in three ways. First, a value chain analysis of Thailand's canned tuna and shrimp processing sectors, which examines labor issues throughout the value chain, highlights ways in which these industries have achieved success in improving labor standards, and identifies actionable steps for improvement. Second, the report conducts an integrated analysis of the three datasets collected under the ILO project, with a focus on work, education, and health issues among migrant children working in shrimp and seafood processing. Third, the report presents an extended analysis of a key dimension of these results—the decisions made by migrant families to send their children to school or to engage in various forms of work. It concludes with recommendations for sustainable strategies that policymakers and industry can adopt to promote and enforce sound labor practices in the shrimp and seafood industries, eliminate child labor from the value chain, and increase access to education among migrant children living in Thailand.

Methodology

Value Chain Analysis

Part I of the report consists of a value chain analysis of Thailand's canned tuna and shrimp processing sectors. The analysis examines labor issues throughout the value chain, ways in which the canned tuna and shrimp processing sectors have improved labor standards, and areas of remaining vulnerability.⁸ For the value chain analysis, a desk review of literature relating to the shrimp and seafood processing industries in Thailand was conducted. In addition, primary data was collected through semi-structured interviews with key informants, including top executives in Thai seafood companies and senior government officials. Table 1 provides detail on these interviews.

⁸ While acknowledging the importance of sourcing in Thailand's tuna and other seafood value chains, this research study does not cover the fishing sector. Some fishing boats have been reported to engage in illegal, unreported, and unregulated (IUU) fishing, where labor conditions are a vital concern. Questions with regard to sourcing create a threat to the sector, as Thai seafood exporters must address perceptions from overseas that they may be sourcing raw material from IUU fishing and/or from fish suppliers with very low labor standards. This situation may jeopardize their capacity to export to destinations such as the European Union (EU). Only fishery products validated by the competent authorities can be imported to or exported from the EU. Indeed, the EU is battling against IUU fishing that depletes fish stocks, destroys marine habitats, and represents unfair competition to regular fishers and fishing communities. The EU Commission is working with all relevant stakeholders to ensure strict implementation of the IUU Regulation. To address this risk, some Thai exporters are considering the option of importing raw seafood products from more reliable sources before exporting to Europe.

Table 1. Number of interviewees by sector

Sector	Number of Interviewees
1. Government Officer	4
2. Company Executive	6
3. Industry Association Representative	4
4. NGO Representative	3
5. Worker in the Industry	3

Quantitative Analysis of Existing ILO Data

Part II of the report includes a quantitative analysis of data collected in three studies commissioned by ILO-IPEC to investigate child labor. All three studies use cluster sampling in various forms:

- TDRI (Samut Sakhon, Surat Thani) – one-stage cluster sampling
- PSU (Nakhon Si Thammarat, Songkhla) – one-stage, stratified cluster sampling
- DPU (Samut Sakhon) – two-stage cluster sampling

In one-stage cluster sampling, all of the elements that compose a cluster (i.e. primary sampling unit, or *psu*) are surveyed.⁹ In the PSU and TDRI studies, all elements (households) in the selected clusters were sampled. In two-stage cluster sampling, random elements that compose a cluster are surveyed. For DPU, randomly selected elements (households) in the selected clusters were sampled.

In the TDRI study, the researchers partnered with the National Statistics Office (NSO) to select the areas, based on Thailand’s Standard Industrial Classification (TSIC) data for areas concentrated with the agriculture, forestry, fishery, and fish processing industries.

In the DPU study, the researchers also consulted with the NSO and community organizations to locate migrant communities in the three districts of Samut Sakhon province.

In the PSU study, the target areas were on the coast, lakeside, or in estuaries where shrimp farms, industrial factories, and seafood primary processing worksites were located (in two districts in Songkhla and four districts in Nakhon Si Thammarat). These six districts were then classified into four strata, two of which had a high suspected prevalence of child labor and two of which had lower suspected prevalence of child labor. In the two strata with high suspected child labor prevalence, 100 percent of clusters (villages) and all elements (households) within them were surveyed. In the two strata with lower suspected child labor prevalence, 35-40 percent of clusters (villages) and all elements (households) within them were surveyed.

Limitations

It is noted in the TDRI report limitations that the TSIC data was outdated: fishery-related industries had moved, along with many communities whose migrant and other members worked predominantly in fisheries. Sampling was thus conducted in areas in which the fishing industry was less dominant than expected and other industries also operated. This accounts for the lower proportions of children working in shrimp/seafood industries in Samut Sakhon and Surat Thani compared to Nakhon Si Thammarat and Songkhla. This also explains why the TDRI survey ended up selecting areas with mostly Thai

⁹ Sharon Lohr, *Sampling Design and Analysis*. 2nd ed (USA: Brooks/Cole CENGAGE Learning, 2010), 170.

communities who were working in other industries, although there are enough migrant and Thai children in the Samut Sakhon sample to draw comparisons.

Both the TDRI and PSU studies note in their limitations that, while they hired interpreters to carry out the surveys with Mon and Burmese communities, the quality and accuracy of the information given on sensitive issues such as child labor depended on the quality of communication and trust between respondents and the interpreters. The PSU research team also did not have enough time to follow up with working migrant children identified in the household survey, so the PSU data only includes in-depth information for Thai working children.

A limitation of the DPU report is that the locations of clusters across districts are not specified. It is not clearly specified in all reports what assumptions were made as a basis for fixing the sample size for the household surveys, and thus we cannot state that the data are representative of the provinces sampled. However, in the TDRI data for Samut Sakhon, the team focused on Muang district, one of three districts in the province, and sampled from 36 villages located in 13 of 18 sub-districts. While this methodology is accurate to provide representative data for Muang district, we also note that it is likely not representative of working children in the shrimp and seafood industries, as the sampling was based on the outdated TSIC data.

While we cannot say definitely that the data are representative by province in all studies, the sampling designs and large sample sizes enabled the researchers to collect data from households that included working children of diverse ages and sex across the seafood, shrimp, and other industries. These comprehensive data provide a good overview of what may be the situation for many working children in different parts of Thailand.

The Impact of Changes in the Minimum Wage

Thailand currently has a nationwide minimum wage of 300 THB per day. This minimum wage was implemented in two phases in 2012 and 2013. During the first phase, which took place in April 2012, provinces with a minimum wage of 215 THB per day had their provincial minimum wages raised to 300 baht (an increase of 39.5 percent). At that time, the wages in the other 70 provinces were also raised to a level between 222 and 273 baht per day, depending on province. During the second phase of implementation, which took place in January 2013, a 300-baht daily minimum wage was instituted nationwide.

Table 2 shows the wage increase in the study's three target provinces over this period. The TDRI, DPU, and PSU data used in this study were collected from six months to one year prior to the first increase in the minimum wage.

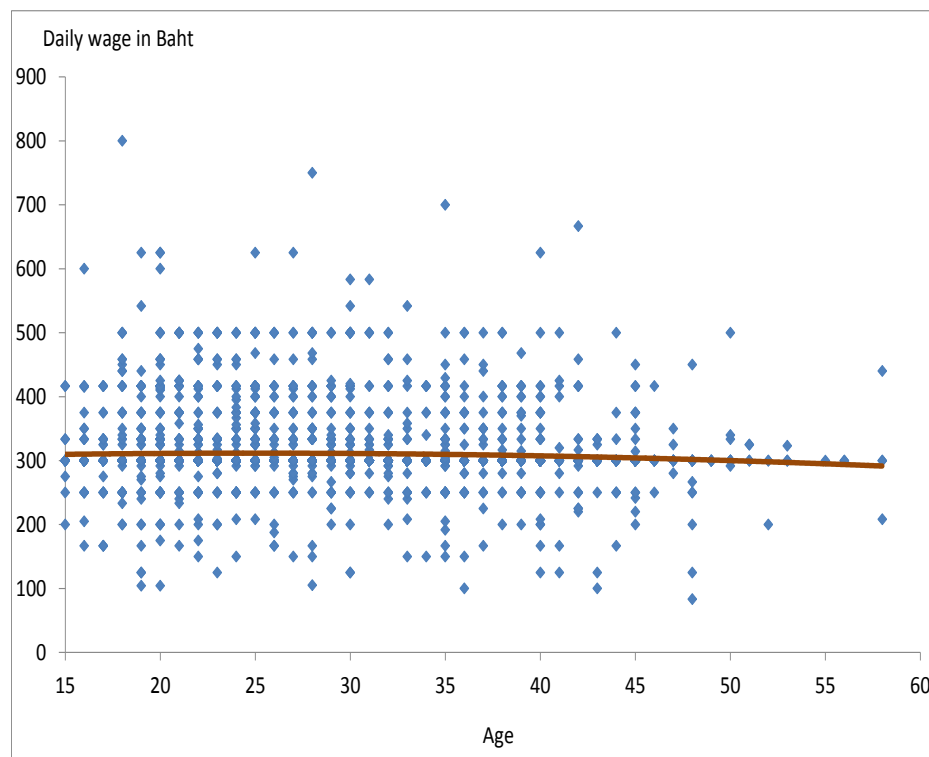
Table 2. Daily minimum wage increase in 2012 to 2013

Province	Daily minimum wage (THB)		
	2011	April 2012	January 2013
Samut Sakhon	215	300	300
Nakhon Si Thammarat	174	243	300
Surat Thani	172	240	300

To understand the effect of the new minimum wage policy on the data collected, it is important to understand the way this policy was implemented in the three target provinces. The 300 THB daily wage applies to workers who work on a full-time basis (at least seven hours per day, excluding lunch time). In seafood-related industries, where payment to workers is generally made based on output (e.g., kilos of shrimp peeled), employers had to adjust the amount of raw materials allocated to each full-time worker (and the payment per output) to make sure that those workers' seven to eight hours of work would entitle them to earn at least 300 baht. For those who worked under seven hours, the daily wage was adjusted accordingly.

Figure 1 shows daily wage data from DPU's survey in Samut Sakhon. The red line represents average wage received per day, and is close to 300 THB. This means that most employers in the province adjusted their daily wage payments to 300 THB a few months prior to the effective date of the new minimum wage policy. This was not only to comply with the government's new wage requirement, but was also an effort to dissuade workers from changing employers when this new wage rate went into effect. Key informants noted that the 85 THB differential between an employer who adhered to the 2011 minimum wage of 215 THB and one who had raised it to 300 THB was enough that employers feared losing even registered migrant workers who were legally bound to that employer. Employers therefore proactively complied with the new requirements.

Figure 1. Daily wage primary seafood-processing migrant workers in Samut Sakhon in 2011-2012



Source: DPU

As Figure 1 shows, some migrants working in primary processing in Samut Sakhon received daily wages either above or below 300 THB. This was due to their employers' practice of a full-time equivalent payment policy to comply with the 300 baht minimum wage. While this analysis was based primarily on Samut Sakhon, follow-up phone calls with a representative from the provincial labor office in Nakhon Si Thammarat and two employers in Surat Thani confirmed that they observed similar practices. In

estimating the effect of the change in minimum wage on this report’s findings, it is important to note that the data collected contained wage payments made prior to the new minimum wage policy, and therefore included some payments that were purposely increased in advance of the policy. The wage data collected were therefore more likely to overestimate the daily wage of workers in the three provinces studied; this is particularly the case for irregular workers. These overestimations would likely range from very small to moderate, however, with minimal effect on the findings.

Data and Surveys

For both TDRI and PSU studies, a household survey was first conducted (Q1) that surveyed all households in the selected clusters (screening). This screening identified households in which children were economically active or working, for inclusion in the in-depth survey.

DPU data came from a household survey among migrants in Samut Sakhon, and therefore, children themselves may not have been interviewed directly; a parent or guardian was asked to provide information for each household member.

For TDRI and PSU, the “working children” sample is thus drawn from the Household listing Q1: only households that specified that their children were “studying and working” or “working” were followed up for Q2 and Q3. For DPU, the information for “working children” presented in this report is drawn from the household survey. The surveys and target populations are summarized in Table 3 below.

Table 3. Surveys and target populations

Dataset	Survey	Survey content	Target populations
TDRI, PSU (2012)	Q1	Household listing -> identify households with working children, then administer Q2 to working children	Thai households – Samut Sakhon, Surat Thani, Nakhon Si Thammarat, Songkhla Migrant households – Samut Sakhon, Songkhla only*
	Q2	Economically Active (EA) children	Economically Active (EA) children
	Q3	Parents/Guardians of Economically Active children	Parents/Guardians of Economically Active children
DPU (2013)	A	Household survey	Migrant households, Samut Sakhon

*However, in Songkhla there was no time to administer Q2 to working migrant children

Part II analyzes data from the Q2 survey of the TDRI and PSU studies, as well as the Survey A, conducted by DPU, for children aged 5-17 years.

The objectives are as follows:

1. Describe characteristics of working children, with a focus on those in shrimp and seafood industries.
2. Conduct appropriate descriptive analysis of working children sub-groups.
3. Focus on schooling and effects of work on school attendance.
4. Explore violence, injuries, and health service access among working children.
5. Describe proportions of the samples falling under ILO and Thai MOL definitions of child labor.

The term “working children” refers to the more technical term “children in employment” or “children engaged in economic activities.” The term “child labor” refers to working children after considering age, weekly working hours, and whether or not the child is engaged in hazardous work following the framework for statistical identification of child labor 5-17 years old by the 18th ICLS Resolution on Statistics concerning child labor.¹⁰

Qualitative Follow-on Research

Parts II and III of the report include data collected through qualitative methods. Focus group discussions and key informant interviews were used to collect supplementary information on issues identified in the quantitative analysis. Semi-structured interviews and unstructured interviews were conducted, and thematic analysis was then used to identify recurring issues. Supplementary, documentary research was also conducted to enhance understanding of the issues.

For Part III, which focuses on the decision to send children to school or work, participants were selected through purposive sampling. The six major groups of participants are shown in Figure 2. Participants were selected based on their ability to directly or indirectly influence the decision to send a migrant child to school or work. These respondents also possessed information that shed light on the interconnections among relevant issues.

The choice of whether to conduct a focus group discussion or interview depended on the availability of participants. In general, focus group discussions were employed when collecting data from migrant parents, migrant children, and community leaders. Interviews were used to collect data from such key informants as NGO representatives, government officials, employers, and education providers.

Several follow-up phone calls were also made to key informants for further clarifications during the write-up phase. Table 4 provides details on participants by province and group.

Figure 2. Participants classified by groups



¹⁰ FAO, *The State of World Fisheries and Aquaculture 2012*, 71. International Labour Organisation, *Report III - Child labour statistics. ILO, 18th International Conference of Labour Statisticians* (Geneva: ILO, 2008).

International Labour Organisation, International Programme on the Elimination of Child Labour (ILO-IPEC), *Baseline Surveys on Child Labour in Selected Areas in Thailand (Samut Sakhon, Surat Thani, Songkhla and Nakhon Si Thammarat), Summary of findings* (Thailand: ILO-IPEC, 2014).

Table 4. Details on participants by province

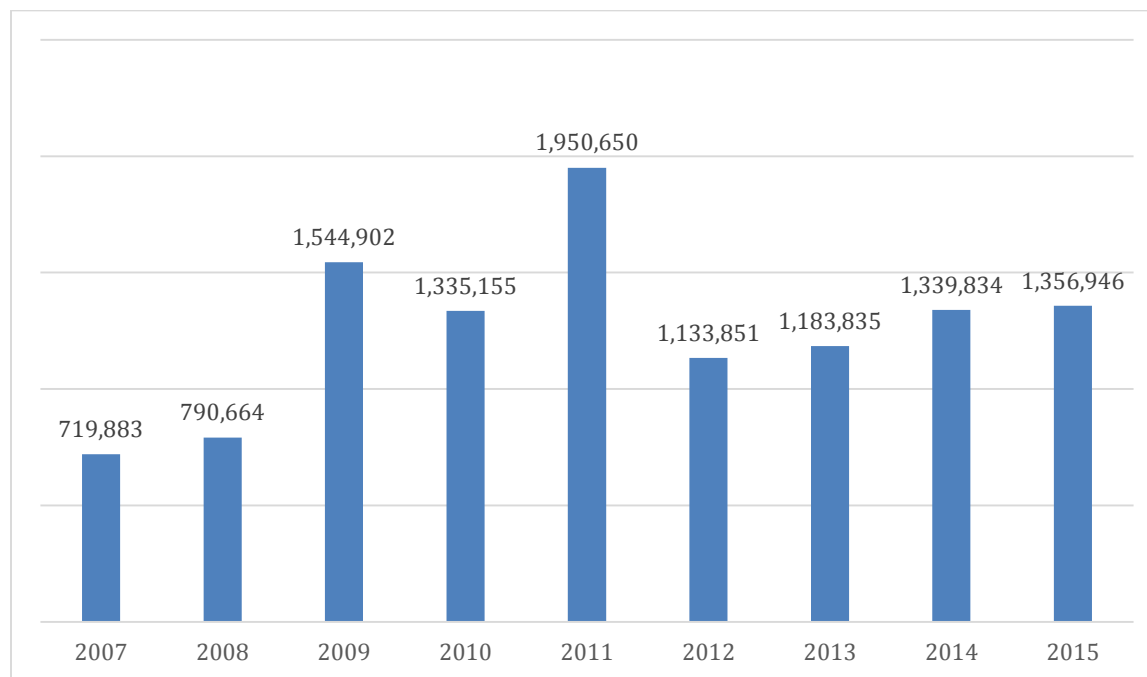
Participants	Province		
	Samut Sakhon	Surat Thani	Nakhon Si Thammarat (Kanom district)
Migrants	8 parents 7 children	6 parents 3 children	4 parents 5 children
Community leaders	3 community leaders	3 community leaders	-
NGOs	3 representatives from LPN	2 representatives from Raksthai	2 representatives from Raksthai
Local Authorities	3 representatives from Provincial Office of Labour Protection and Welfare 3 representatives from local health offices 1 representative Provincial Employment Office	4 representatives from local health offices 1 representative from Provincial Social Security Office 1 representatives from Provincial Office of Labour Protection and Welfare	4 representatives from local health offices 1 representative from Provincial Labour Office
Employers	4 employers from seafood-related enterprises	2 employers from seafood-related enterprises	2 employers from seafood-related enterprises
Education providers	3 teachers for Wat Thep Norarat School	-	-
Total number of participants	35	22	18

Immigrant Labor and the Thai Labor Market

Over the past four years, the number of registered migrants in Thailand has increased by approximately 74,000 annually. There are approximately 1.37 million registered migrants in Thailand today. Ministry of Labour (MOL) data on registered migrants are shown in Figure 3. The migrant population peaked in 2007, diminished significantly in 2012,¹¹ and has gradually increased to its present level.

¹¹ The significant reduction in registered migrants from 2011 to 2012 was the result of events in Myanmar that served as “pull factors” for migrants from Myanmar to return to their home country. First, the release of Aung San Suu Kyi signaled to Myanmar citizens that their country might begin opening up politically and economically. As the Myanmar government showed increasing signs of openness, foreign direct investment from the United States,

Figure 3. Number of registered migrants in Thailand



Source: Ministry of Labour (2014)

There is a high concentration of immigrant labor in four industries—food processing, food services, construction, and farming—which reflects the combination of relatively low wage scales and less desirable working conditions that discourages Thais from working in these industries. Of 1.3 million registered immigrant workers in 2014, 1.2 million, or 88 percent, were unskilled labor. Immigrant workers from Myanmar account for 70 percent of all immigrant workers and 79 percent of the total unskilled immigrant labor force in Thailand.¹²

The Department of Employment has estimated that there are an additional 1.3 to 2 million undocumented immigrant workers in Thailand, bringing the total immigrant labor force to approximately three million.¹³

A number of sources indicate that Thailand has a labor shortage in key industries, including the seafood processing industry, as a result of Thailand’s slowing birth rate over the past 10 years and Thai workers’ avoidance of “3D” jobs.¹⁴ The Thailand Development Research Institute (TDRI) has estimated that Thailand needs 2.5 to 3 million migrant workers to support the economy.¹⁵ Notwithstanding this demand, government policies that restrict regular labor migration perpetuate the labor shortage problem in Thailand’s seafood industry and pose challenges to its resolution.

Europe, and Asia began to flow into the country, creating greater economic opportunity. Concurrently, Myanmar was selected as host for the 2013 SEA Games, creating an immediate need for a workforce to build facilities for the Games. These improved economic prospects led a number of Myanmar migrants to return home.

¹² Office of Foreign Workers Administration, *Statistical Report on Number of Registered Immigrant Worker in Thailand 2014* (Thailand: Ministry of Labour, 2014).

¹³ Thai PBS, “Two Million Foreign Workers Illegally Work in Thailand,” *Thai PBS*, June 19, 2014, accessed 23rd May, 2015.

¹⁴ 3D: Dirty, Dangerous, and Demeaning

¹⁵ <http://thaipublica.org/2014/06/tdri-suggestion-foreign-workers/>

Thailand’s emergence as a leader in global seafood export in recent decades has generated a high demand for labor in primary seafood processing activities (such as peeling, deheading, and deveining of shrimp and removing fish skin and bones). Thais have eschewed this work due to poor working conditions (e.g., dirty and foul-smelling), long hours standing or squatting, unstable employment (often day labor with significant seasonal variation in demand), and compensation close to minimum wage. As a result, there is a significant unskilled labor shortage in the seafood industry that is increasingly filled by migrant workers whose limited skills confine their employment options to work that is poorly paid and physically demanding.

Focal Provinces: Samut Sakhon, Surat Thani, and Nakhon Si Thammarat

This study focuses on three coastal provinces that serve as major hubs for seafood processing: Samut Sakhon, on the Gulf of Thailand coast immediately southwest of the capital Bangkok; Surat Thani, on the east coast of the Gulf of Thailand midway down Thailand’s panhandle; and Nakhon Si Thammarat, on the same coast, south of Surat Thani. These three provinces account for a significant percentage of Thailand’s seafood and shrimp processing industries and are home to large migrant labor communities. Table 5 provides an overview of the three provinces in terms of wealth, income per capita, and the value of the fishery sector as a percentage of the Gross Provincial Product (GPP). Samut Sakhon ranks the highest in all of these, followed by Surat Thani and Nakhon Si Thammarat. The GPP of each of the two southern provinces—Surat Thani and Nakhon Si Thammarat—is about half that of Samut Sakhon.

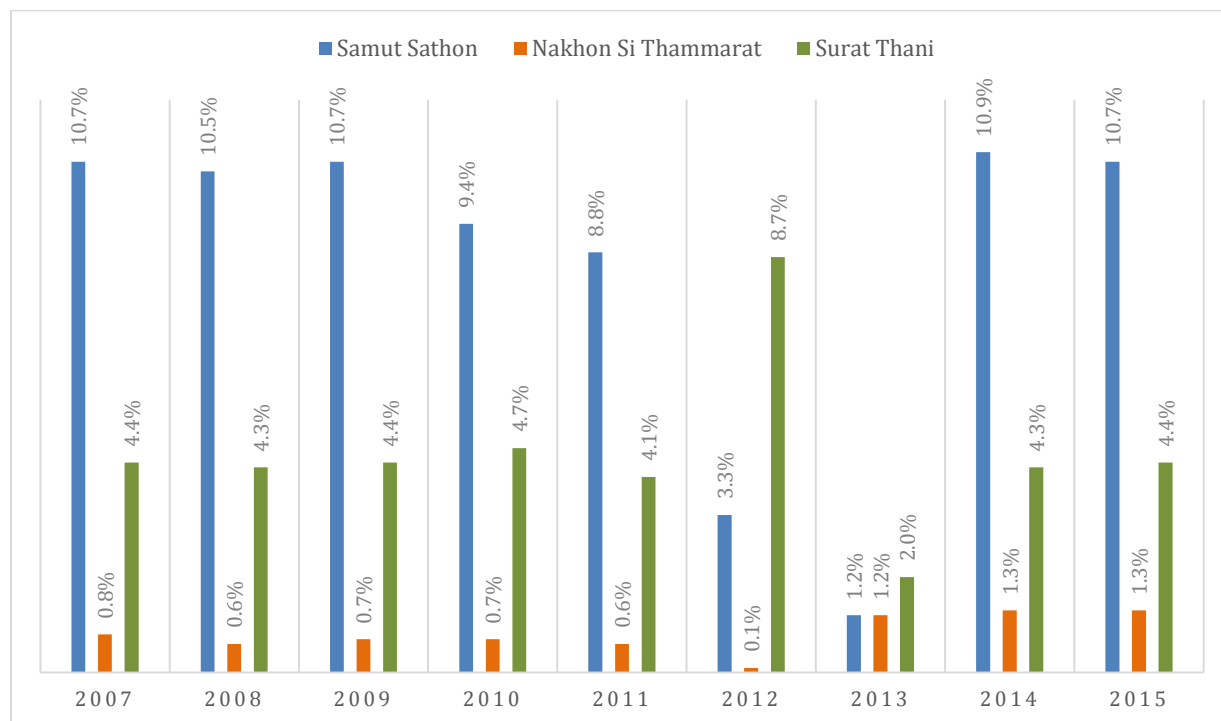
Table 5. Gross provincial product (GPP) and GPP per capita in 2013

	Samut Sakhon	Surat Thani	Nakhon Si Thammarat
Gross provincial product (GPP, in Million Baht)	319,401	164,835	155,877
GPP per capita (Baht)	351,150	161,230	105,593
Value of fishery sector as a percentage of GPP (%)	8.2	4.5	7.8

Source: NESDB (2013) and calculation based on NESCB (2013)

Samut Sakhon hosts approximately 10 percent of Thailand’s registered migrants. The respective provincial percentage shares of Samut Sakhon, Surat Thani, and Nakhon Si Thammarat are shown in Figure 4.

Figure 4. Share of migrants by province



Source: Calculation based on Ministry of Labour data (2014)

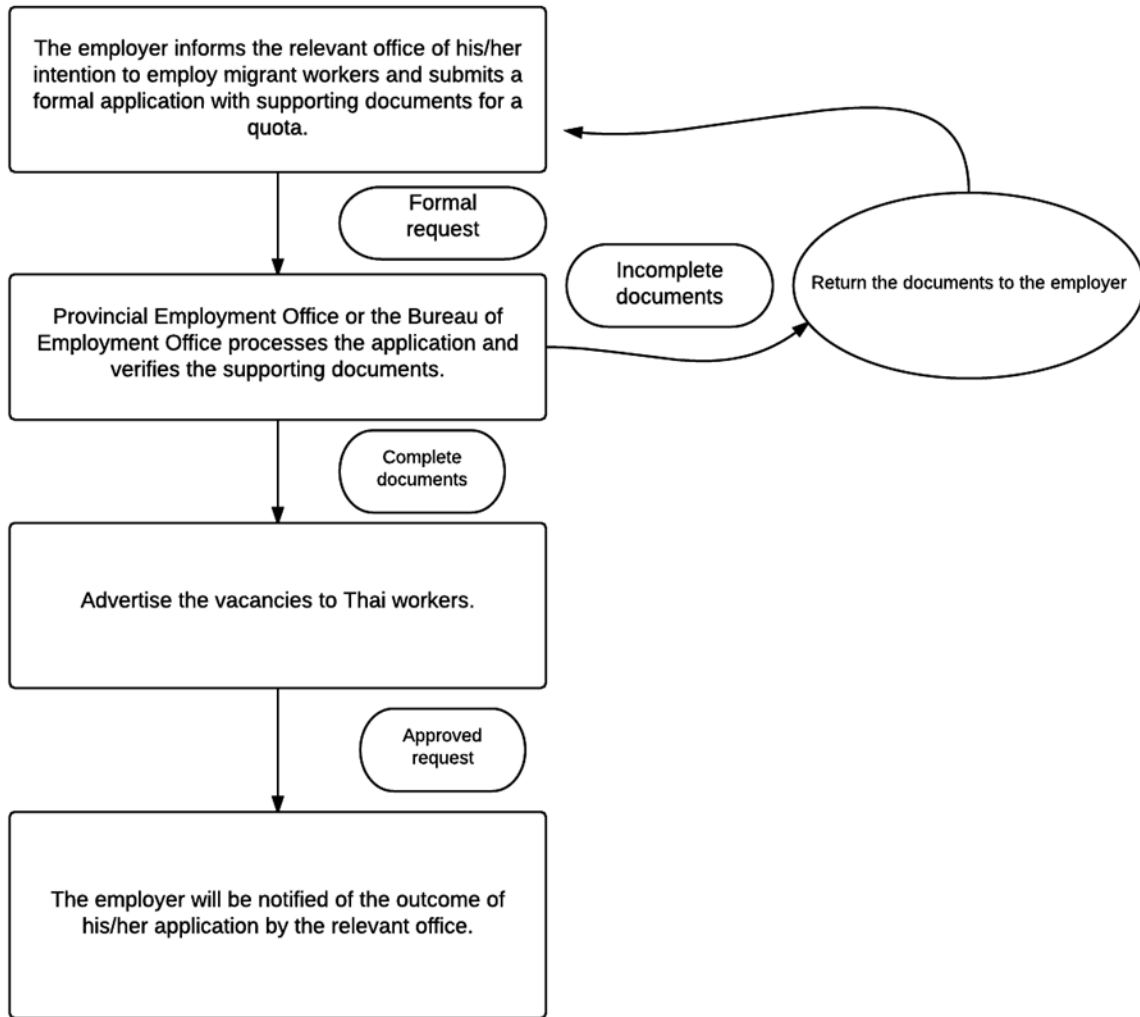
The Migrant Registration Process under Memoranda of Understanding

There are four steps involved in employing formal migrant workers.¹⁶ First, a prospective individual or firm must inform a Provincial Employment Office or one of the 10 Bureau of Employment offices in Bangkok of the employer’s intention to hire migrant workers. This contact must be initiated with the Employment Office where the enterprise is registered. In response to this request, the employer receives a “quota,” or maximum number of workers the employer may hire. Second, the employer submits a formal employment request form to the Employment Office. Third, the prospective employer submits a request for permission to work on behalf of the prospective worker. The final step is the submission of a formal request for a work permit. The processing time for the application is approximately two months from the day of submission. The maximum duration of employment per permit is four years, but permits can be renewed one month after the date of expiry. Figure 5 summarizes the migrant registration process, based on information from the Office of Foreign Workers Administration.

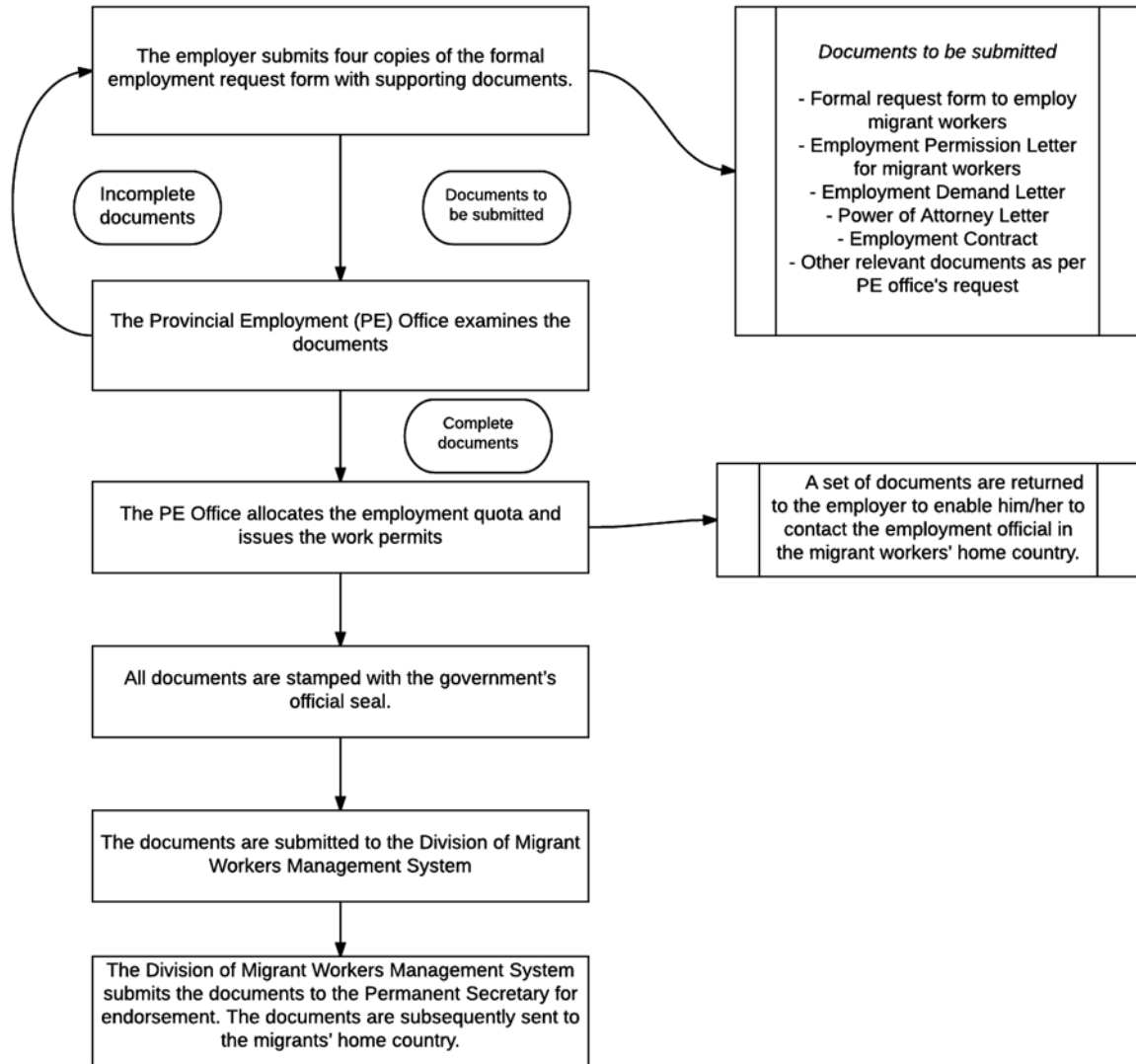
¹⁶ Office of Foreign Workers Administration, *Statistical Report on Number of Registered Immigrant Worker in Thailand 2014*.

Figure 5. Migrant registration process

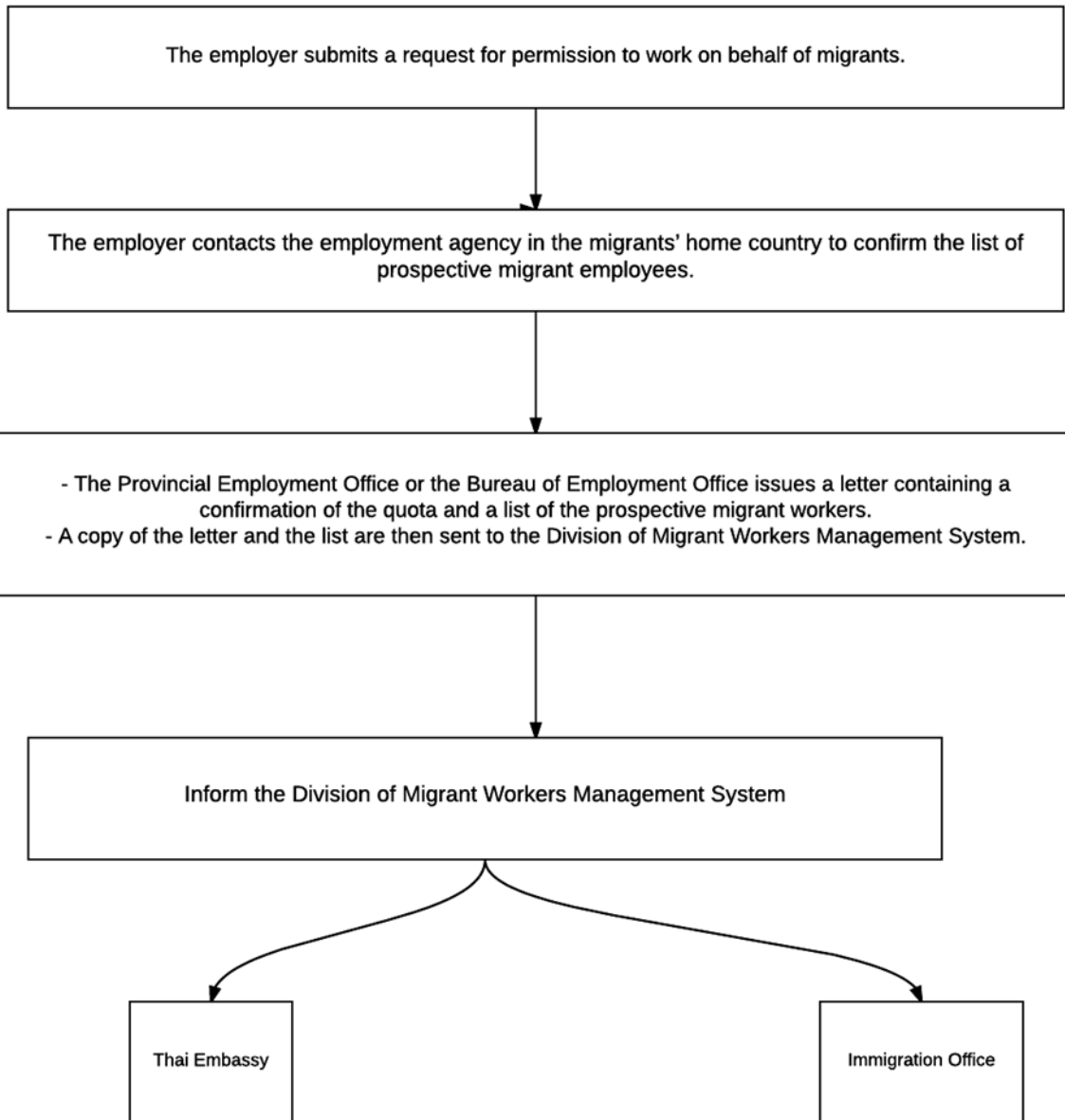
Step 1: Request / Apply for a Quota



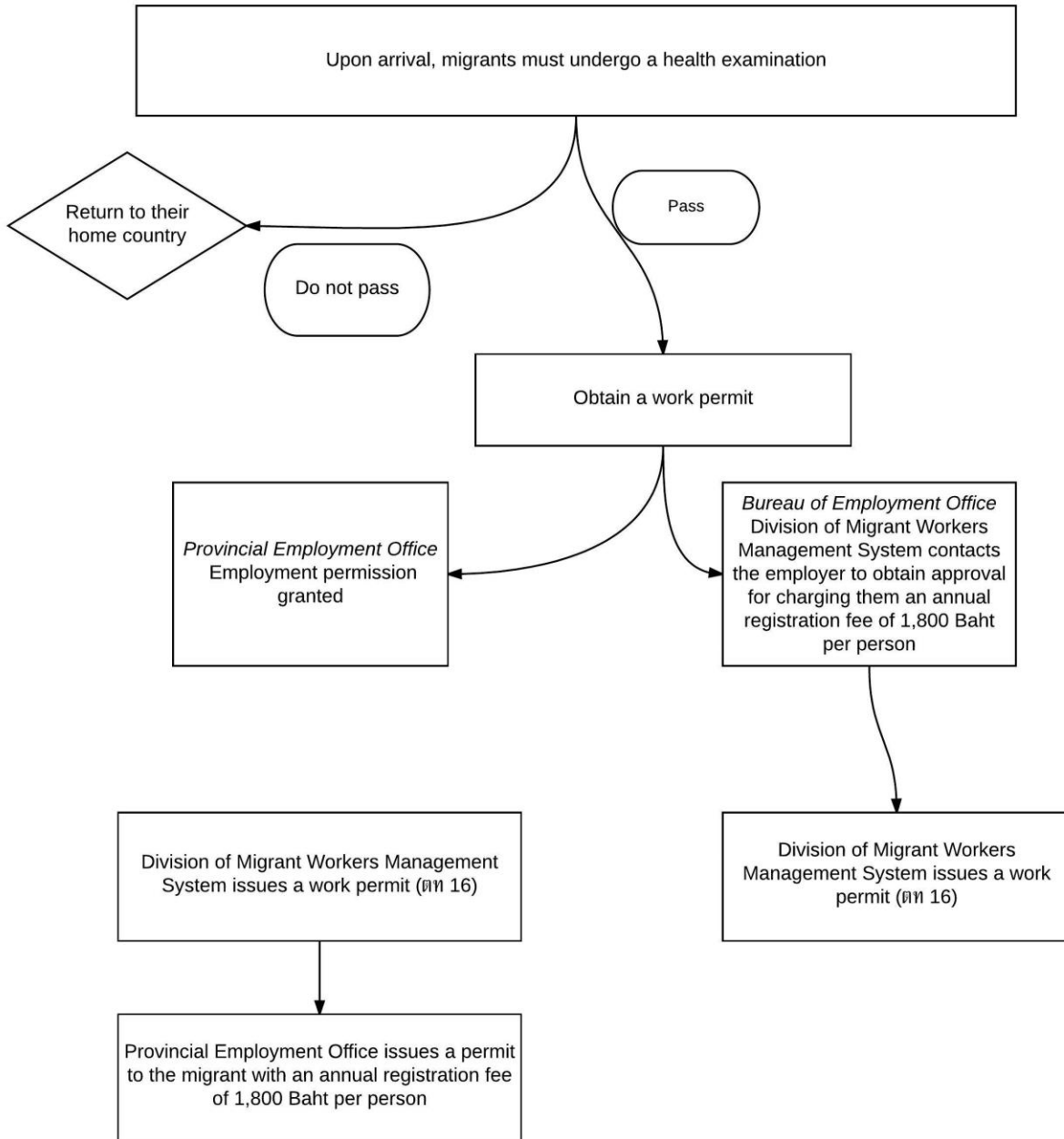
Step 2: Formal Request Submission



Step 3: Employer requests permission to work on behalf of migrant workers



Step 4: Migrant application for a work permit



A typical memorandum of understanding (MOU) arrangement allows a migrant to remain in Thailand for four years, with the permit renewable after a one-month break out of the country. If an employer would like to continue to employ the migrant worker after the permit expires, there is a good chance that the permit will be renewed. However, the 3D nature of the work that many of these migrants perform means that such long-term employment may be difficult. A local government official working on labor issues in southern Thailand noted:

It is true that migrants' permits can be renewed. Typically, if the employer is willing to continue employing them, then there should not be any problem with renewal. But the types of work these migrants are doing can be quite demanding. When they get old, become pregnant, or fall ill, the employer might not want to re-employ them.

Child Labor Definitions

The following sections describe variations in the definition of child labor among different international and domestic agencies, and the definition followed for purposes of this study and report.

ILO Definition

The ILO defines “child labor” as work in conditions that “deprive children of their childhood, their potential, and their dignity, and that [are] harmful to physical and mental development.” It refers to work that is mentally, physically, socially, or morally dangerous and harmful to children, and that interferes with their schooling by depriving them of the opportunity to attend school, obliging them to leave school prematurely, or requiring them to attempt to combine school attendance with excessively long and heavy work.

“Child work,” on the other hand, includes all paid and unpaid work for the household or for the market, including both full-time and part-time work. Participation in household activities on a regular basis and for several hours a day to relieve adults, for a wage, is also included in this definition. This term was designed to include work that ILO deems “light work,” such as home-based labor, domestic work, and farming.

This report follows the 18th ICLS Resolution on Statistics concerning child labor for coding and analysis of data. The term “working children” used in this report refers to the more technical terms “children in employment” or “children engaged in economic activities.” The term “child labor” refers to working children after considering age, weekly working hours, and whether or not the child is engaged in hazardous work following the framework for statistical identification of child labor among 5- to 17-year-olds by the ICLS Resolution.¹⁷

When analyzing the three datasets, child labor was coded positively according to the ILO definition as follows:

- Ages 13 to 14: working 15 or more hours/week = child labor
- Ages 5 to 12: working one or more hours/week = child labor
- Any age (5 to 17): working 48 or more hours/week = child labor in hazardous work

¹⁷ ILO, *Report III - Child labour statistics*. ILO IPEC, *Baseline Surveys on Child Labour in Selected Areas in Thailand (Samut Sakhon, Surat Thani, Songkhla and Nakhon Si Thammarat)*.

Hazardous work is defined as working 48 or more hours per week.

Permissible work is defined as:

- Ages 13-14: light work = up to 14 hours
- Ages 15-17: regular work = up to 48 hours

For light work and regular work, only children in those specific age groups are included in the denominator. In combination, children in light and regular work make up the permissible work category.

Thai Ministry of Labour (MOL) Definition

Section II.3.2 also considers the data within the context of the Thai legal framework, as this report endeavors to make policy recommendations for the Thai government.

Thailand has ratified all key international conventions concerning child labor: *ILO Convention No. 138* on the minimum age for admission to employment and work; *ILO Convention No. 182 on the Worst Forms of Child Labour*; *The United Nations Convention on the Rights of the Child (UN CRC)*; *The UN CRC Optional Protocol to the Convention on the Rights of the Child on the involvement of children in armed conflict*; *UN CRC Optional Protocol on the Sale of Children, Child Prostitution, and Child Pornography*; and the *Palermo Protocol on Trafficking in Persons*.¹⁸

Thailand's *1998 Labor Protection Act (LPA)* outlines conditions for the employment of young workers. Children below the age of 15 are prohibited from working in Thailand, with the implication that any individual under 15 years of age who is working is classified as child labor. Child labor is coded positively for:

- Anyone under 15 years of age who is working at least one hour per week
- OR: Ages 15-17 and working in hazardous work
- OR: Ages 15-17 and working more than 48 hours/week
- OR: Ages 15-17 and working between 10:00 p.m. and 6:00 a.m.

Section 47:

An employer shall not require a young worker under 18 years of age to work between 10:00 p.m. and 6:00 a.m. unless written permission is granted by the Director General or a person entrusted by them.

Section 49:

1. Metal smelting, blowing, casting, or rolling
2. Metal pressing
3. Work involving heat, cold, vibration, noise, or light of an abnormal level which may be hazardous
4. Work involving hazardous chemical substances as prescribed in the Ministerial Regulations
5. Work involving poisonous microorganisms which may be a virus, bacterium, fungus, or any other germs
6. Work involving poisonous substances, explosive or inflammable material, other than work in a fuel service station
7. Driving or controlling a forklift or crane

¹⁸United States Department of Labor (DOL), *Findings on the Worst Forms of Child Labor* (USA: Department of Labor, 2013), 3. <http://www.dol.gov/ilab/reports/child-labor/findings/2013TDA/thailand.pdf>

8. Using an electric or motor saw
9. Work that must be done underground, underwater, in a cave, tunnel, or mountain shaft
10. Work involving radioactivity
11. Cleaning machinery or engines while in operation
12. Work which must be done on scaffolding 10 meters or more above the ground
13. Other work as prescribed in the Ministerial Regulations

Source: (MOL Thailand, 1998)

In addition, the Home Workers Protection Act extends the child labor laws to informal and home-based settings in which children under the age of 15 are prohibited from engaging in hazardous forms of labor as defined in Thai labor laws.¹⁹

Research Definition

For purposes of the TDRI and Prince of Songkla University (PSU) studies, hazardous work is coded positively by answering “yes” to any of the following criteria:

1. Working in a wet and/or dirty place
2. Working with dangerous tools (knives, etc.)
3. Working with fire, gas, and/or flames
4. Working continuously for more than eight hours/day
5. Working in a dusty environment
6. Working in a noisy environment or vibration
7. Working in extreme temperature environment (e.g., cold or heat)
8. Working between 10:00 p.m. and 6:00 a.m.
9. Working with chemicals (pesticides, glues, etc.)
10. Other hazard

These items were designed by the TDRI and Prince of Songkhla University (PSU) research teams to correspond with Section 47 and items 1-13 in Section 49 of the Labour Protection Act (1998).

¹⁹ Ministry of Labour Thailand, *Home-Workers Protection Act B.E. 2553* (Thailand: Department of Labour Protection and Welfare, Ministry of Labour, 2010), Section 20. See also Ministerial Regulation No. 6 B.E. 2541 (1998) and Ministerial Regulation concerning Labour Protection in Sea Fishery Work B.E.2557 (2014), in effect from December 30, 2014. The Regulation prohibits the employment of persons under 18 years of age, and provides for the protection of employees on fishing vessels that have one or more employees, including: minimum hours of rest (not less than 10 hours in any 24-hour period and not less than 77 hours in any 7-day period); required records of employment and documentation of payment of wages and holiday pay in Thai language; required written contracts; arrangements for the annual presentation of employees to labor inspectors; and the provision of drinking water, toilets, and medical supplies.

Part I. Thailand's Canned Tuna and Shrimp Value Chains

Part I provides an overview and comparative analysis of the canned tuna and shrimp value chains to enhance our understanding of the business model in these sectors, including the costs and labor conditions at various steps in the chain. This analysis includes a mapping of the key categories of activities, the organization of each value chain, and the main actors in the chain and their interactions, relationships with authorities, and labor issues. Part I examines labor issues throughout each of the value chains and includes a discussion of the ways in which the canned tuna and shrimp processing sectors have improved labor standards, as well as areas of remaining vulnerability.

The value chain analyses of the canned tuna and shrimp sectors can be used as an analytical tool by public authorities to better understand how to maximize value in the efficient allocation of resources while respecting international standards for labor conditions. This implies working closely with industry associations, labor representatives, workers, community members, and other key stakeholders in the canned tuna and shrimp processing industries.

This detailed analysis of these sectors also provides a backdrop for the discussion that follows in Parts II and III on labor conditions and social and economic challenges faced by migrant children working in Thailand's shrimp and seafood processing sectors.

1. Overview of the Canned Tuna Value Chain

1.1 Thailand in the Global Canned Tuna Industry

The canned tuna market is a global one, with international trade accounting for approximately 65 percent of the global production output. Canned tuna products are largely produced in developing countries to take advantage of low labor costs and proximity to fishing grounds. Processed tuna products are destined for markets in developed countries, particularly the United States (US) and European Union (EU). Thailand ranks number one in the world in canned tuna production, and its production of approximately 692,870 tons, or USD \$1.1 billion, accounts for more than half of the global trade.

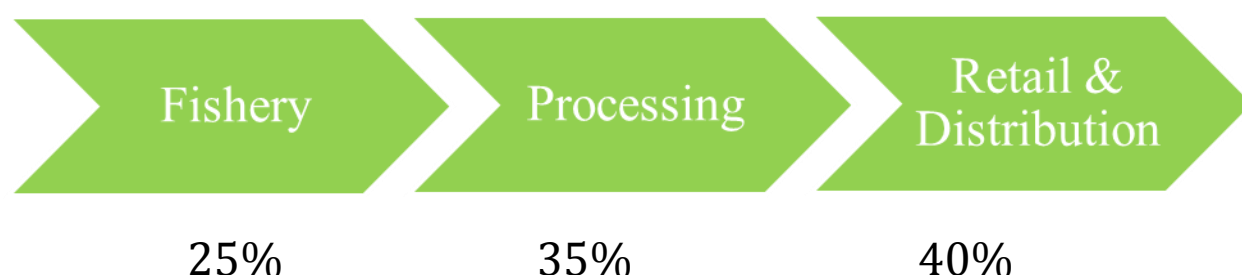
The Thai canned tuna industry is export-oriented, with approximately 95 percent of its total production destined for overseas markets. As canned tuna processing is a labor intensive industry, Thailand has taken advantage of its access to low-cost, skilled labor from neighbouring countries, particularly Myanmar. The industry employs about 200,000 workers directly and indirectly throughout its value chain. It is estimated that approximately 60 percent of them are migrant workers, with the majority from Myanmar. The processing facilities are largely concentrated in Samut Sakhon and Songkhla, which are close to the supply of fish and where labor is concentrated. Field interviews showed no difference in terms of processing efficiency and wages between foreign and Thai workers in this industry. This high proportion of immigrant labor can be explained by the fact that Thai workers are not attracted by the generally hard working conditions that prevail in the seafood processing industry.

The global canned tuna value chain can be divided broadly into three parts: fishery, processing, and retail and distribution, as shown in Figure 6. The fishery part consists of two steps: fishing, and the movement of tuna from fishing vessels to tuna traders (before it reaches the processing facilities). The processing part includes loining and canning. The loining step is when the whole fish is pressure cooked, cleaned, and cut into loins. This primary process is labor intensive. The second part is canning, which involves cutting loins into pieces and packing them in cans. The retail and distribution element includes

transporting canned tuna products to overseas retailers and distributors before it finally reaches end consumers. Canned tuna products are mainly sold under national and regional brands, as well as privately labeled products.²⁰

In Figure 6, the value distribution (based on gross margin in each step) has been calculated from data collected from Thai Union Frozen (TUF) and Sea Value, the major canned tuna processors in Thailand. The canned tuna processing capacity of these two Thai firms exceeds 60 percent of Thai canned tuna exports, or approximately 30 percent of global trade. Representing 40 percent of value creation, retail and distribution appears as the highest value-added step in the value chain, followed by processing (35 percent of value creation) and fishing (25 percent). A detailed analysis of each element is presented in the sections that follow.

Figure 6. The distribution of value along the chain based on difference in gross margin



Source: Estimate from data provided by the industry

1.2 The Fishing and Tuna Trading Sector

This first component of the value chain begins with the catching of live fish by different types of fishing vessels and continues through the sale of raw tuna to processors by a few dominant trading companies. This section covers two main activities, fishing and tuna trading.

Fishing

There are six main species of tuna in the world: (1) skipjack (*Katsuwonus pelamis*), (2) yellowfin (*Thunnus albacares*), (3) bigeye (*Thunnus obesus*), (4) albacore (*Thunnus alalunga*), (5) northern bluefin (*Thunnus thynnus*), and (6) southern bluefin (*Thunnus maccoyi*). Among these, skipjack, yellowfin, and albacore are used for canned tuna production. Albacore is regarded as the premium variety for canned tuna, while bigeye and bluefin are widely used for raw meat products and sashimi, due to their larger size and higher fat content. Skipjack is the most common catch, accounting for 50 percent of global catches by

²⁰ Elizabeth Havice, Amanda Hamilton, Liam Campling. “Tuna Markets (Update on Spanish tuna industry),” *FFA Fisheries Trade News* 3, 2010. Helga Josupeit, *World Tuna Trade Challenges and Opportunities. Seychelle Tuna Conference Mahé* (Seychelles: FAO, 2010). Makoto Peter Miyake, Patrice Guillotreau, Chin-Hwa Sun, Gakushi Ishimura, *Recent Developments in the Tuna Industry: Stocks, Fisheries, Management, Processing, Trade and Markets* (Rome: FAO, 2010).

weight. It is followed by yellowfin (30 percent), bigeye (10 percent), albacore (7 percent), and bluefin (3 percent). Sixty-four percent of the global tuna catch comes from the Pacific Ocean, 25 percent from the Indian Ocean, and 11 percent from the Atlantic Ocean.²¹

From 1950 to 2014, the global tuna catch rose from approximately one million to approximately five million tons. The rapid increase in total catches between 1970 and 1978 was a result of the expansion of fishing areas to the eastern Atlantic and the development of new offshore fishing grounds in the eastern Pacific. Due to the highly migratory characteristics of tuna, fishing for the large-scale tuna canning industry requires a significant capital investment and continuous technological advances. Over the past few decades, tuna fishing has become globalized and industrialized, as evidenced by the increasing size and improved technology of fishing fleets around the world. The technological advancement and physical development of fishing equipment has played a crucial role in the rapid rise in total catches and increases in productivity. These advances have focused on improving fishing efficiency, decreasing catching time, and reducing labor input.²²

Direct labor cost accounts for 50 to 60 percent of total fishing cost, compared with only seven to eight percent of tuna processing cost. Fishing is an extremely labor-intensive part of the canned tuna value chain. Direct labor cost from fishing activities includes costs such as wages, crew transport, insurance, and meals on board. To reduce direct labor cost, many fishing companies from high-income countries such as Japan, Taiwan, South Korea, and Thailand have replaced their local fishing crews with foreign crews from countries that have lower wages, such as China, Myanmar, and Cambodia.²³ Workers on Thai fishing vessels are primarily Burmese, followed by Cambodian and Laotian workers.²⁴

Global tuna fishing activity comprises a large number of small and medium fishing operators in different regions. Local players in small island countries such as Vanuatu and Kiribati take advantage of close proximity to fishing grounds and restrictions on foreign vessels operating in national exclusive economic zones (EEZs). There are also some large operators who secure government licenses that allow them to run tuna fishing fleets across national borders (including in EEZs). They obtain fishing rights based on pre-arranged licenses with local governments. The presence of large numbers of small and medium fishing operators has resulted in a lack of bargaining power for vessel operators in this part of the value chain. A majority of them rely on integrated global traders such as FCF Fishery Company Ltd, Itochu, and Tri-Marine for access to the global market.

Integrated Tuna Trading System

Tuna trading is the most concentrated part of the value chain, with trading highly concentrated in the hands of a few players who control the market and influence activities throughout the value chain. Three

²¹ James Joseph, *Managing Fishing Capacity of The World Tuna Fleet* (USA: FAO, 2003). Peter Miyake Makoto, *A Brief History of the Tuna Fisheries of the World* (Japan: FAO, 2010). Oceanic Development, *The European Tuna Sector Economic Situation, Prospects and Analysis of the Impact of the Liberalisation of Trade* (Belgium: European Commission, 2005).

²² Miyake, *Managing Fishing Capacity of the World Tuna Fleet*.

²³ Miyake, *Managing Fishing Capacity of the World Tuna Fleet*. Peter Miyake Makoto. "A Brief History of the Tuna Fisheries of the World," in *Second Meeting of the Technical Advisory Committee of the FAO Project "Management of Tuna Fishing Capacity: Conservation and Socio-economics 15-18 March 2004*, ed. William Bayliff, Morena, Juan Ignacio De Leiva, Jacek Majkowski, (Spain: FAO, 2005), FAO Fisheries Proceedings No. 2.

²⁴ Sompong Sakeow, Patima Tangpratchakoon, *Brokers and Labor Migration from Myanmar: A Case Study from Samut Sakorn* (Thailand: Labour Rights Promotion Network, 2009).

powerful trading firms, FCF Fishery Company Ltd from Taiwan, Itochu Corporation from Japan, and Tri-Marine from the US, control more than half of the global trade in cannery-grade tuna. Their combined supplies account for 75 to 80 percent of the Thai market—the largest market for cannery-grade, whole-rounded tuna.²⁵ Thai fishing vessels contribute only a very small part of this supply. In 2013, domestic tuna fishing accounted for only approximately 20,000 tons, compared with one million tons of imported cannery-grade tuna.²⁶

The three major trading companies control a significant share of the global tuna supply through contractual agreements with small and medium-sized vessel operators. They provide operating funds for fishing vessels, and in return, vessel operators are obliged to supply their catch to these trading firms. Integrated traders also provide contracted manufacturing services to retailers and brand owners. They use their extensive logistical network to supply raw fish to manufacturers and to obtain canned tuna products from them. Through their control of many parts of the value chain, integrated traders have stronger bargaining positions than either contracted fishing vessels or contracted manufacturers. These trading firms have extensive global outlets for whole-rounded tuna and loins.²⁷

1.3 The Canned Tuna Processing Sector

In recent years, the global canned tuna processing sector has undergone extensive structural change. While most processing formerly occurred in developed countries (the US, Japan, and European countries), today most processing occurs in developing countries, so that companies can benefit from low labor cost and close proximity to tuna sources. Developing countries such as Thailand and Ecuador, whose share of the 2011 global canned tuna export market were 53 percent and 13 percent, respectively, have become major players in the processing sector. Processing is the most labor-intensive element of the canned tuna value chain, and as a result, the processing facilities are mainly concentrated in countries which have low labor cost. Thailand has taken advantage of its access to low-cost, skilled labor from neighboring countries to become the preferred hub for good quality and cost-effective canned tuna production. The industry relies heavily on immigrant workers, who represent an estimated 60-70 percent of the 80,000 total workers in the canned tuna processing sector.

Although firms from developing countries are leading the global canned tuna processing market, their activities are largely limited to supplying low-value-added, unbranded products to existing firms in developed countries. Despite their lack of manufacturing capability, firms from developed countries retain control of the added value through their national, regional, and global brands, distribution networks, and retail channels.

Processing Steps

Tuna is delivered frozen to processing plants, either as whole fish or tuna loins. At the plant, fish are sorted by size and weight for optimized processing. Tuna are then thawed and steam cooked under pressure for the easy removal of skin and bones. While various machines have been introduced to improve productivity, loining—the removal of skin and bones—must be done manually. This step

²⁵ Miyake, *Managing Fishing Capacity of the World Tuna Fleet*.

²⁶ Based on expert estimates during fieldwork.

²⁷ Veniana Qalo, “Globalisation at a Crossroad,” *Small States Digest*, 29th July, 2010. Liam Campling, Elizabeth Havice, Vina Ram-Bidesi, *Pacific Island Countries, the Global Tuna Industry and the International Trade Regime* (Solomon Islands: Fisheries Forum Agency, 2007).

requires skilled workers: an experienced worker can produce an edible meat yield up to 10 percent greater than an inexperienced worker. Loining is the most labor-intensive stage of tuna processing, and accounts for up to 80 percent of the processing labor cost. Tuna loining differs from the other food processing, where machinery can be applied, because of the significant variation in shape and size of wild tuna.²⁸ Cleaned loins are mechanically packed for heat sterilization. The ready-to-eat, canned tuna portions are then packaged and labeled for global distribution.

Consolidation in the Tuna Canning Industry

Beyond the practice of locating canneries close to tuna fishery sources and low-cost labor, many firms have considered increasing economies of scale to reduce their production cost. Sharing national, regional, and global brands, R&D activities, and distribution networks can significantly reduce production costs and increase a firm's competitive advantage.

The growing global market and the increasing dispersion of the various activities have led to a surge in processing, marketing, and transportation costs. The rising cost of investments required by companies are engendering mergers and acquisitions among leaders in the industry, allowing these companies to reduce their average production costs and compete for access to consumers. This consolidation trend can be observed in various markets around the world. In the US, the top three firms—Bumble Bee, StarKist and Chicken of the Sea—hold approximately 75 percent of the market by volume and 85 percent by value. Similarly, in the EU the combined sales by volume of the five leading companies (Bolton Group, StarKist, Isabel Conservas Garavilla, Albacora Group, and Jealsa) account for approximately 50 percent of the market, with the combined sales by volume of the top 10 companies accounting for approximately 72 percent of the market.²⁹ The rise of major processing firms in developing countries has also contributed to this consolidation trend.

2. Interaction among Players in the Tuna Value Chain

2.1 Market Concentration in Different Parts of the Value Chain

This section considers the concentration in the main activities of the canned tuna value chains, including fishing, trading, and processing activities, as outlined in Table 6. Concentration and value added are highest in the trading and retail components and lowest in fishing. Figure 7 summarizes key characteristics of the canned tuna value chain, with the highest level of skill and scale of labor highest at the processing stage of the value chain.

²⁸ Compare tuna, for instance, with farmed chicken. Advances in breeding, feed production, and farming techniques have made the size and shape of the chicken uniform. Machinery can be designed and set to handle chicken of a specific size and shape to give higher processing efficiency.

²⁹ Campling et al., *Pacific Island Countries, the Global Tuna Industry and the International Trade Regime*. Miyake, *Managing Fishing Capacity of The World Tuna Fleet*. Oceanic Development, *The European Tuna Sector Economic Situation*.

Table 6. Market concentration in each part of the global canned tuna value chain

Sector	Key Concentration Character	Concentration Level
Fishing	Many local fishing vessels around the world. They are mainly contracted to provide tuna to integrated traders.	Low
Trading	Dominated by three global players.	High
Processing	Several local processors produce for brand owners, integrated traders, and retailers. A few processors with global brands.	Medium
Distribution	Several large players control part of the market. Many small and medium-sized firms in the market.	Medium
Retail	Many large players control their own retail outlets. Very concentrated at national level for developed country markets.	High

Figure 7. Summary of key characteristics of the canned tuna value chain



Concentration	Low	High	Medium	Medium	High
Value added	Low	High	Medium	Medium	High
Labor intensive	Yes	No	Yes	No	Yes
Skill of labor	Moderate	N/A	High	N/A	N/A
Scale of labor	Medium	Low	High	Medium	Medium

Global tuna fishing is dominated by a large number of small and medium fishing operators in different regions around the world. These local players take advantage of close proximity to fishing grounds and restrictions on foreign vessels operating in national EEZs. In addition to small and medium operator dominance, a few large operators run their own tuna fishing fleets across national borders. For example, Donwon, a large player from South Korea, has an extensive network of fishing vessels supplying its large processing facilities in different locations, including South Korea, Ecuador, and American Samoa. Donwon currently owns StarKist, the largest canned tuna brand in the US market. They obtain fishing rights based on pre-arranged licenses with local governments. The diversity of vessel operators has resulted in a general lack of bargaining power among vessel operators in this part of the value chain. Accordingly, a majority of them rely on integrated global traders, including FCF, ITOCHU, and Tri-Marine, to access the global market.

The relationship between fishing vessels and integrated traders is based on contractual agreements through which traders provide financial support and necessary supplies such as food, equipment, and oil to fishing vessels via their extensive networks of fishing ports around the world. In exchange, traders receive a continuous supply of tuna. Through their logistical networks, these integrated traders extend their operations into contract manufacturing of various tuna products for retailers and brand owners. Their processing capacity is determined by their own facilities as well as contractual agreements with small and medium-sized manufacturers. Accordingly, they connect not only fishing operators to processors, but also processors to retailers and brand owners. The top three traders together control more than half of the global trade in cannery-grade tuna. These integrated players act as core firms, controlling a significant part of the value chain and exerting power throughout it. The only exceptions are their lack of brand ownership and retail networks.

The tuna processing part of the value chain is occupied by a large number of small and medium-sized processors. These processors lack the scale and resources to extend their operations to other parts of the value chain and participate in higher-value-added activities. They rely on integrated traders, brand owners, and retailers for access to the market. Such processing companies, which are generally located in developing countries, are operating on decreasing margins as a result of the strict control of the value chain that large, powerful traders, brand owners, and retailers are exerting; however, some large domestic processors (including TUF and Sea Value from Thailand, as well as Dongwon from South Korea) have defied this trend. They have succeeded in doing so as a result of consolidation in their local markets, to which they have contributed. Consolidation has enabled them to acquire necessary scale and scope to move up the value chain, achieving fishing capacity, overseas distribution, and international brands.

2.2 Structure and Distribution of Value along the Chain

In addition to the large, global retailers, integrated traders and large processors are considered core firms in the seafood processing industry: they function as powerful actors in the global canned tuna value chain.

From a calculation of value distribution based on gross margin as shown in Figure 6, retail and distribution comprises the most value-added component of the value chain (40 percent). Retail and distribution is controlled by a few large retailers. The commodity status of canned tuna products has made it difficult for processors to bargain with large retail chains. This, together with the introduction of private-label products, provides excessive bargaining power to retailers, enabling them to extract most of the value in the retail and distribution portion of the chain. In an effort to mitigate the power of retailers and to capture more value, processors are now expanding into retail and distribution activities by obtaining leading brands and distribution networks. TUF and Sea Value are examples of processors from developing countries that have successfully expanded into retail and distribution.

Although both integrated traders and large processors act as core firms, incorporating different activities into their operations, their businesses vary considerably. Integrated traders incorporate most activities through external coordination. The contractual structure provides these traders flexibility in managing the fluctuation in price of raw materials and processed products. Global processors, in contrast, control various activities through

internal coordination. Their extended businesses are largely the result of mergers and acquisitions. For example, TUF acquired leading US brands including Chicken of the Sea and Bumble Bee, and European brands John West and Petit Navire. TUF also acquired a major US distributor, Empress International. The leading processors all have their own national, regional, or global brands, while none of the integrated traders (FCF Fishery, ITOCHU, or Tri-Marine) possess any international brands.

3. Thailand in the Global Canned Tuna Value Chain

The Thai canned tuna industry is controlled by a small group of 18 local companies. These 18 players are all members of Thai Tuna Industry Association (TTIA). All of them interact with the three global, integrated traders (FCF, ITOCHU, and Tri-Marine) for their supply of cannery-grade tuna. FCF, ITOCHU, and Tri-Marine control approximately 70 to 80 percent of the tuna supply in Thailand and approximately half of the global supply. They source this tuna supply from vessels registered in the countries identified in Table 7.

Table 7. 2014 Thai imports of frozen whole round tuna from the world by volume and value

No.	Country	Quantity (Tons)	Value (million USD)	Percentage Share	
				Quantity	Value
World		692,879	1,110	100.00%	100.00%
Top 10		576,783	922	83.24%	83.06%
1	Taiwan	149,656	239	21.60%	21.53%
2	U.S.A.	114,684	170	16.55%	15.32%
3	Vanuatu	45,268	69	6.53%	6.22%
4	Indonesia	49,301	85	7.12%	7.66%
5	Japan	48,316	94	6.97%	8.47%
6	China	52,184	83	7.53%	7.48%
7	S.Korea	40,975	64	5.91%	5.77%
8	Marshall	27,078	39	3.91%	3.51%
9	Kiribati	26,960	40	3.89%	3.60%
10	Maldives	22,361	39	3.23%	3.51%
Other		116,096	188	16.76%	16.94%

Source: www.moc.go.th, prepared by Thai Tuna Industry Association

The majority of the local processors are OEM suppliers; only TUF has its own global brands. These OEM products are bound for global brands and private label brands of major retailers in the US, Europe, Australia, and Japan. The export markets are outlined in Table 8.

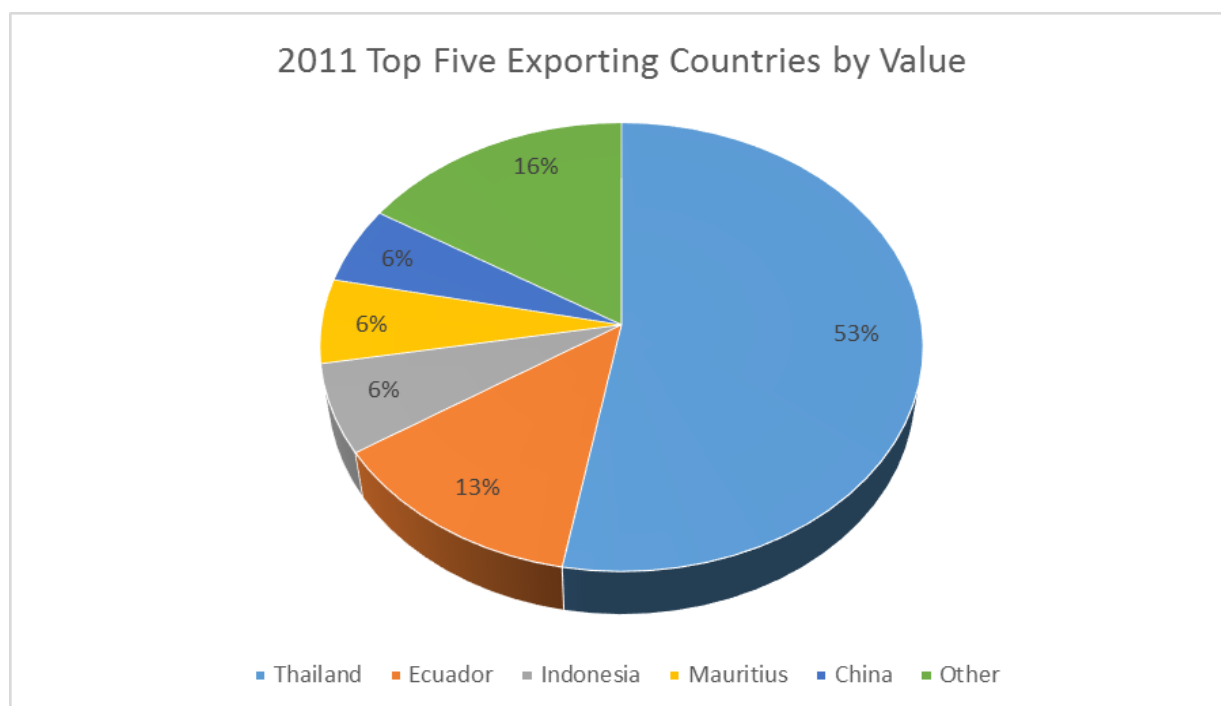
Table 8. 2014 Thai exports of tuna products to the world by volume and value

No.	Country	Quantity (Tons)	Value (million USD)	Percentage Share	
				Quantity	Value
World		692,870	1,110	100%	100%
Top 10		576,783	922	83.24%	83.06%
1	Taiwan	149,656	239	21.60%	21.53%
2	U.S.A.	114,684	170	16.55%	15.32%
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Other		116,096	188	16.76%	16.94%

Source: www.moc.go.th, prepared by Thai Tuna Industry Association

According to 2011 data, Thailand is the largest global exporter of canned tuna products, accounting for approximately 53 percent of global exports. Thailand is followed by Ecuador (13 percent), Indonesia (7 percent), Mauritius (6 percent), and China (6 percent). This data is presented in Figure 8.

Figure 8. 2011 Top five exporting countries by value



Source: World Trade daily

3.1 Thai Canned Tuna Companies

Table 9 lists all Thai canned tuna companies on the basis of their respective production levels. Two conglomerates, TUF and Sea Value, produce the largest share of canned tuna for the local and global market—approximately 60 percent of local production and 30 percent of global production.

Table 9. Thai tuna processors by production size

Production Size	Company	Share of Local Production	Share of Global Production
Large	Thai Union Group - Thai Union Frozen Products Public - Thai Union Manufacturing - Songkhla Canning Public	35%	20%
	Sea Value Group - Unicord - I.S.A. Value	25%	10%
Medium	Chotiwat Manufacturing	10%	5%
	Southeast Asian Packaging and Canning (King Fisher)	6-8%	2-3%
	Asian Alliance International	6-8%	2-3%
	Pattaya Food	6-8%	2-3%
Small	Global Frozen Food (Thailand)	3-4%	1-2%
	Golden Prize Canning	3-4%	1-2%
	MMP International	3-4%	1-2%
	RS Cannery	3-4%	1-2%
	Siam International Food	3-4%	1-2%
	S.K. Foods	3-4%	1-2%
	S.P.A. International Food Group	3-4%	1-2%
	Tropical Canning Public (Thailand)	3-4%	1-2%
P.B. Fishery Products	3-4%	1-2%	

4. Overview of the Thai Shrimp Value Chain

4.1 Thailand in the Global Shrimp Industry

It is estimated that the global production of shrimp, both caught in open water and farmed, is approximately six million tons per year, with 45 percent (or 2.6 million tons) exported. The top 10 shrimp exporting countries are Madagascar, Honduras, India, Ecuador, China, Vietnam, Indonesia, Argentina, Thailand, and Bangladesh.³⁰ Import markets for shrimp are concentrated in only three regions: the US, Japan, and Europe. These regions account for more than two-thirds of the global shrimp trade.

³⁰ Food and Agriculture Organization (FAO), *The State of World Fisheries and Aquaculture 2008* (Rome: FAO, 2008).; John Ward, Charles Adams, Wade Griffin, Richard Woodward, Mike Haby, James Kirkley, *Shrimp Business Options: Proposals to Develop a Sustainable Shrimp Fishery in the Gulf of Mexico and South Atlantic* (USA: NOAA, 2004). International Labour Organization (ILO), *Thailand's Shrimp and Seafood Industry – a World Leader* (Thailand: ILO, 2012). Food and Agricultural Organization (FAO), *Fishstat Plus, Total Fishery Production, 1950-2008* (Rome: 2009d).

The global shrimp trade has expanded significantly over the past decades in response to increased demand in countries with improved economic conditions and as a result of growing aquaculture production. Shrimp aquaculture has expanded rapidly around the world, particularly in Asia, Africa, and Central and South America.³¹ Indeed, shrimp farming's share of total production has increased from five percent in 1980 to approximately 60 percent today.³² The global shrimp trade is now valued at approximately USD \$10 billion and represents 16 percent of the global seafood trade.

The increasing popularity of farmed shrimp in global trade is attributable to several factors: (1) more consistent quality of farm-raised products, (2) more consistent supply (in comparison with wild-catch production, which fluctuates seasonally), (3) the ability to control species and size in a farm-based system, and (4) the current trend towards vertical integration of farming systems within shrimp processing companies, which enables these companies to better respond to consumer needs. On the other hand, aquaculture operations are unable to economically produce larger shrimp. Consumer preference makes these products valuable in some markets, and there remains a small market for caught shrimp.³³

Advances in farming techniques and the subsequent rise in production of farmed shrimp have contributed not only to the significant rise in global shrimp production and trade of farmed shrimp, but also to a marked decline in the export price of shrimp. For example, with the expansion of the trade from approximately 400,000 tons in 1980 to 1.8 million tons in 2003, the price of shrimp fell from USD \$7.04 per kilogram to USD \$3.23 per kilogram in that same period. Despite this, shrimp remains the most important internationally traded seafood commodity in terms of value, and one of the most valuable exports in a number of tropical developing countries.³⁴

While over 100 countries export substantial quantities of shrimp, the global trade is dominated by the top 10 largest shrimp producing countries. China is the largest producer of shrimp globally (see Table 10). However, given China's large domestic demand for shrimp, the country is only the fifth-largest exporter of shrimp products. Smaller countries such as Madagascar, Honduras, and Ecuador rank higher as global exporters due to their small domestic markets (see Table 11).

Table 10. Global farmed shrimp production

Country	2008 farm production (tons)	2012 farm production (tons)	2013 farm production (tons)
China	1,268,074	1,800,000	1,200,000
Thailand	507,500	600,000	250,000
Indonesia	408,346	390,000	650,000
Vietnam	381,300	500,000	500,000
Ecuador	150,000	240,000	310,000

Source: Ferdouse, 2014 and FAO, 2009b

³¹ FAO, *The State of World Fisheries and Aquaculture 2008*. Food and Agricultural Organization (FAO), *The State of World Fisheries and Aquaculture 2006* (Rome: FAO, 2006). Robert Gillett, "Global Study of Shrimp Fisheries," *FAO Fisheries Technical Paper* (Rome: FAO, 2008). Food and Agricultural Organization (FAO), *The State of World Fisheries and Aquaculture 1995* (Rome: FAO 1995). Ward et al, *Shrimp Business Options Proposals to Develop a Sustainable Shrimp Fishery in the Gulf of Mexico and South Atlantic*. Food and Agricultural Organization, *The State of World Fisheries and Aquaculture 2004* (Rome: FAO, 2004)

³² The two major types of farmed shrimp are white-leg shrimp and giant tiger prawn.

³³ FAO, *The State of World Fisheries and Aquaculture 2008*. Ward et al, *Shrimp Business Options Proposals to Develop a Sustainable Shrimp Fishery in the Gulf of Mexico and South Atlantic 2004*. Gillett, *Global Study of Shrimp Fisheries*. Walter R Keithly, Pawan Poudel, *The Southeast U.S.A. Shrimp Industry: Issues Related to Trade and Antidumping Duties* (Chicago: The University of Chicago Press, 2008).

³⁴ Gillett, *Global Study of Shrimp Fisheries*. FAO, *The State of World Fisheries and Aquaculture 2008*. Food and Agricultural Organization, *Fishstat Plus, Fisheries Commodities Production and Trade, 1976-2007*. (Rome: FAO, 2009c).

Until the outbreak of Early Mortality Syndrome (EMS) in 2012, Thailand was the top producer and exporter of shrimp for over a decade. The outbreak has cost the Thai industry more than THB 100 billion in export value, and the country has not yet recovered in terms of production and export volume. Thailand's export of shrimp products peaked in 2011 with approximately 380,000 tons, valued at USD \$3.56 billion. Shrimp accounted for 69 percent of Thailand's total seafood exports that year.³⁵ The outbreak of EMS reduced the export volume to merely 98,151 tons in 2013.³⁶

Notably, three members of ASEAN (Vietnam, Indonesia, and Thailand) account for 13.1 percent of global shrimp exports, or approximately one eighth of the global trade. As formal, regional economic integration under the ASEAN Economic Community (AEC) 2015 approaches, there is an opportunity for these three ASEAN members to work in concert to improve standards, further develop the industry, and add greater value to the domestic and regional economies.

Table 11. The top ten exporting countries of shrimp products by volume (tons) in 2013

Exporting Country	Volume (Tons)	Percentage Share
Madagascar	749,944	28.5%
Honduras	235,075	8.9%
India	232,035	8.8%
Ecuador	149,094	5.7%
China	134,363	5.1%
Vietnam	134,254	5.1%
Indonesia	112,969	4.3%
Argentina	91,258	3.5%
Thailand	98,151	3.7%
Bangladesh	50,857	1.9%
Top 10 countries	1,988,000	77.1%
Total	2,627,198	

Source: ITC Trade Map

4.2 The Thai Shrimp Industry and its Value Chain

Shrimp is one of Thailand's most important agro-food exports. In past decades, Thailand has been one of the world's largest exporters of shrimp products. The shrimp industry and its supporting industries employ more than one million workers, a significant share of the 35 million total national workforce. The industry directly employs approximately 700,000 workers, 80 percent of whom are migrant workers. Most of these migrant workers are from Myanmar, with smaller numbers from Cambodia and Lao PDR. Local shrimp industry activities cover production of shrimp breeding lines, feed production, farming, processing, and exporting. Approximately 50 percent of total shrimp production is for domestic consumption, and the remaining 50 percent is processed as frozen, canned, chilled, and other products for export to the US, EU, Japan, and other markets.³⁷

As Figure 9 shows, retail and distribution account for the highest value added at 45 percent. Thirty percent of value is created in processing, and 25 percent in farming and trading. The high proportion of value added in retail and distribution is due to the commodity status of most shrimp products. Frozen and chilled shrimp products from different sources are similar and are generally sold as private label or unbranded products. Given

³⁵ Thailand's total seafood exports in 2011 were valued at USD 5.16 billion.

³⁶ FAO, *The State of World Fisheries and Aquaculture 2008*. Gillett, *Global Study of Shrimp Fisheries*.

³⁷ These estimates were provided by private sector experts with direct knowledge of and involvement in Thailand's seafood industry during key informant interviews for this study. An Office of Industrial Economics report estimates 826,657 workers in the Thai fishery industry. http://www.thaifita.com/trade/study/imtgt_chap5-4.pdf

this lack of branding or other differentiation factors, it is difficult for shrimp producers and exporters to bargain with retailers.

Figure 9. Distribution of value along the chain based on difference in gross margin



Source: Estimate from data provided by industry experts

A detailed analysis of each part of the chain is presented in the sections that follow. The Thai shrimp value chain can be divided into: (1) farming, (2) trading, (3) primary processing by small contract manufacturers, and (4) secondary processing. Case studies of two Thai seafood companies will also be presented to give a clearer picture of the current state of Thai firms in the global shrimp value chain.

Global Shrimp Farming

Despite the rapid increase in shrimp farming in the past, the number of farming operations has recently declined significantly. Small-scale farmers, in particular, face difficulties complying with the more stringent requirements set by export markets. Their scale is insufficient to acquire the necessary equipment and competence to compete effectively with large players. Globally, the shrimp farming sector is moving toward full integration with other parts of the value chain. A large number of shrimp farms are now becoming part of largely integrated shrimp companies that operate not only processing and marketing units but also hatchery, feed mill, and grow-out facilities. Such integrated operations enable these companies to guarantee that their products meet tight regulations from import markets, while increasing the flexibility and cost-effectiveness of their operations.³⁸

Shrimp Farming in Thailand

Thailand has long been a leading producer of farmed shrimp. At the peak of production in 2012, Thailand produced approximately 600,000 tons of shrimp, equal to half of China's production. The excessive, uncontrolled growth of Thai shrimp farming, however, led to an outbreak of EMS, which has caused sharp reductions in production. In 2014, Thailand produced only 200,000 tons of shrimp.³⁹ EMS has not only stemmed production, but has also led farmers to introduce new breeds, such as white-leg shrimp, that have higher resistance to local diseases. Whereas 80-90 percent of shrimp farmed in Thailand in 2002 were tiger prawn, today 95 percent are white-leg shrimp. This change has resulted in significant reductions in production cost and increased productivity, which together promise increased production in the years to come.

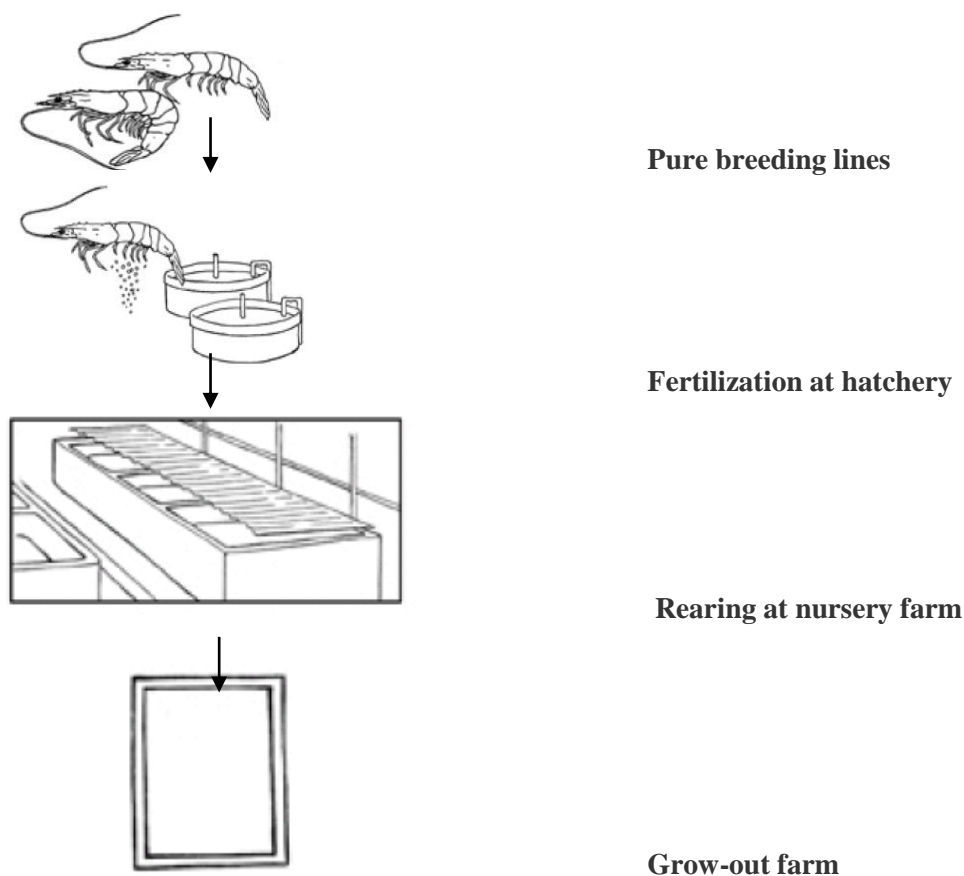
³⁸ FAO, *The State of World Fisheries and Aquaculture 1995*. FAO, *The State of World Fisheries and Aquaculture 2006*. FAO, *The Role of Aquaculture in Sustainable Development* (Rome: FAO, 2007).

³⁹ Until the outbreak of EMS, domestic demand accounted for only 15 percent of the total 600,000 tons of shrimp produced, or around 90,000 tons. The reduction in shrimp production due to EMS has brought total production to about 200,000 tons. The domestic supply has remained constant, while the exported amount has decreased to approximately half of Thailand's total shrimp production.

The farming portion of the shrimp value chain is as follows: (1) shrimp are cross-bred at the hatchery using different parent generations; (2) nauplii⁴⁰ are reared at a nursery farm for two to three weeks; (3) shrimp are sold to commercial farms; (4) shrimp are grown at commercial farms for several months until they reach the desired size.

From the 1970s to the late 1990s, wild shrimp were used to produce offspring for shrimp farms. By the late 1990s, however, domestication and genetic selection programs could provide more consistent supplies of high quality, disease free and/or resistant shrimp. This led to the foundation of the intensive shrimp farming industry globally. Shrimp farming is outlined in Figure 10. The male and female breeding stocks are allowed to breed in pairs. The female is isolated and spawns in a separate tank to minimize disease transmission. Nauplii are isolated, disinfected with iodine, and transferred to the rearing farm. They remain there for 20-30 days until reaching the desired size, 0.2-0.5 g per shrimp. They are then transferred to intensive grow-out farms for three to five months, where they remain until they reach marketable size, 16-26 g per shrimp. Intensive farming enables farmers to produce 203 crops per year.⁴¹

Figure 10. Shrimp production cycle⁴²



The global shrimp breeding industry is relatively diversified, with several small- and medium-scale breeders in different regions around the world. A decade ago, Thailand mainly imported pure breeding lines from overseas breeders, particularly breeders in the US for white-leg shrimp, and Taiwan for tiger prawns. Recently, major

⁴⁰ Nauplii are the free-swimming, first stage of the shrimp larva.

⁴¹ Food and Agricultural Organization, *Cultured Aquatic Species Information Programme Penaeus Vannamei* (Rome: FAO, 2009a).

⁴² Adapted from Food and Agricultural Organization [FAO], 2009a

Thai shrimp processors Charoen Pokphand Foods (CPF) and Thai Union Frozen (TUF) have developed capacity in the production of breeding stocks and maintaining pathogen-free, pure, white-leg breeding lines. The companies acquired this specific expertise through joint ventures with key breeders in the US.

The local breeders together produce approximately 60,000 breeding stocks annually, including 15,000 female stocks and 45,000 male stocks. It is estimated that around 40 percent of parental generation shrimp are produced by two major players, while the remaining 60 percent are supplied by a large number of small and medium-sized local players. Sixty thousand breeding stocks produce approximately 60 billion offspring annually. The offspring are first distributed to approximately 1,000 nursery farms, and after two to three weeks, they are sent to approximately 10,000 grow-out farms. There they are raised for the approximately 90 days required to reach marketable size. There are approximately 30,000 registered farms, of which only 10,000 are actively operating. These grow-out farms are registered for Good Aquaculture Practice (GAP) with the Department of Fishery and subjected to continual monitoring.

Despite the existence of large numbers of small and medium-sized breeders, the industry is moving toward consolidation, since maintaining and breeding from a pool of pure breeding lines requires a significant amount of ongoing investment. Accordingly, larger players with sufficient scale producing disease-resistant and faster-growing shrimp have a significant advantage. In particular, the integration of contracted farms and breeding businesses within larger integrated players such as CPF provides these players with consistent demand for their breeding products.

Trading

There are currently approximately 30,000 licensed farms in Thailand, with about 10,000 of these in operation. Shrimp farms are situated in coastal regions, as well as several inland areas. This geographical diversification is made possible by advances in farming techniques that reduce the need for culturing shrimp in seawater.

Farmed shrimp are passed to the market in two ways. Seventy percent of farmed shrimp are purchased by traders/brokers at farm auctions. Traders then sell the shrimp directly to processors or to the wholesale and retail markets. The remaining 30 percent of production is sold at auction directly from farm to factory. A small number of powerful traders are in a position to exert pressure on both farms and processors. This is particularly the case for traders who extend credit and provide loans to small farms and processors. In general, however, contract farming is not popular among farmers or processors due to price fluctuations and the low level of trust between parties.

It is estimated that about 90,000 to 100,000 tons of shrimp per year are sold for domestic consumption via traders' networks. Shrimp for domestic consumption are distributed to wholesale and retail sellers as raw and semi-processed products. Semi-processed products involve the use of migrant labor for sorting shrimp by hand and simple processing (including peeling and head removal). The sorting of shrimp is conducted by migrant workers at the farm site immediately after shrimp are removed from the water. Their work is overseen by the traders who hire them by the hour or per task. Simple processing is carried out by small contract manufacturers (*long*) or by the traders themselves. The lack of regulation or enforcement of the rules and conditions that bind small contract manufacturers has resulted in a high prevalence of undocumented labor in these labor-intensive operations. Processing will be discussed in more detail in the next section.

Processing

There are currently 185 registered shrimp processing facilities in Thailand, operated by approximately 100 processors. Seventeen of these are large-scale processing sites operated by major players such as CPF, TUF-Pac Food, Rubicon Resources, Surapol Food, and Thai Union, while the vast majority (168 factories) are small and medium-sized facilities. One hundred and twenty-six factories focus on the production of chilled and frozen shrimp for export, while the others produce more complex, ready meal products such as shrimp wonton soup, prawn fried rice, and crumbed prawn. Most of Thailand's exported shrimp undergoes only simple

processing, which generates relatively low value added. About 45 percent of the exported shrimp are sold raw with simple processing, while 40 percent are cooked, and only 15 percent undergo further processing to generate higher value added.

There are several reasons behind this low value creation. First, in most export markets, shrimp is usually consumed at restaurants or food service outlets. This results in high demand for simple, low-value-added, chilled, frozen, and cooked shrimp products for food service outlets rather than ready-to-eat processed shrimp products for end consumers. Second, Thai processors lack market knowledge for supplying products that meet overseas market demand. In particular, the diversification of consumer preferences around the world tends to prevent small and medium-sized processors in developing countries from developing specific market knowledge to produce products that meet demand.

5. Institutional Issues in the Global Shrimp Industry

Since shrimp and shrimp products are susceptible to spoilage or contamination, the safety of shrimp products remains an important concern for importing countries. To comply with trade and market access requirements for these countries, shrimp producers and the governments of shrimp exporting countries have established codes of practice, certification, and traceability schemes. These requirements have also led importing and exporting countries to harmonize standards and protocols and certification of products and processors. Besides these collective actions towards universal standards, strict import regulations (non-tariff barriers) may be used as tools to facilitate underlying policy objectives, including protection of domestic industries and restriction of market access.⁴³

Many shrimp producing countries are supporting the formation of industrial clusters for cooperation and information exchange across different sections of the value chain. The stakeholders involved include farmers, processors, retailers, and national and local government agencies. A broad recognition that policies are more effective when all stakeholders participate in decision-making and regulation processes has led governments to build national capacities to assist producers and processors in complying with mandatory food safety regulations, while empowering farmers and their associations to assume greater self-regulation. This cooperation is not limited to the domestic sphere, but also extends to international and regional associations. These associations function not only as points of contact for sharing and exchanging information, but also as mechanisms for collective lobbying. Many of these cooperation networks have contributed to the development of the industry and its international trade. They contribute through improving the management of the sector and promoting better standards of practice at the farm, processing, and marketing levels.⁴⁴

Looking toward the future of shrimp farming, reduction of resource availability, stricter environmental regulations, pressures to improve labor standard requirements, and increasing demand are forcing the shrimp farming sector to modernize. The sector has responded vigorously by improving its productivity through the use of scientific and technological developments. The reduction in feed-to-meat conversion rate,⁴⁵ faster growth, and disease-resistant pure breeding lines are some examples of these developments. With increasing demand and restricted resource availability, science and technology will continue to be a main driving force for increased shrimp farming output.

⁴³ FAO, *Cultured Aquatic Species Information Programme Penaeus Vannamei*. FAO, *The Role of Aquaculture in Sustainable Development*.

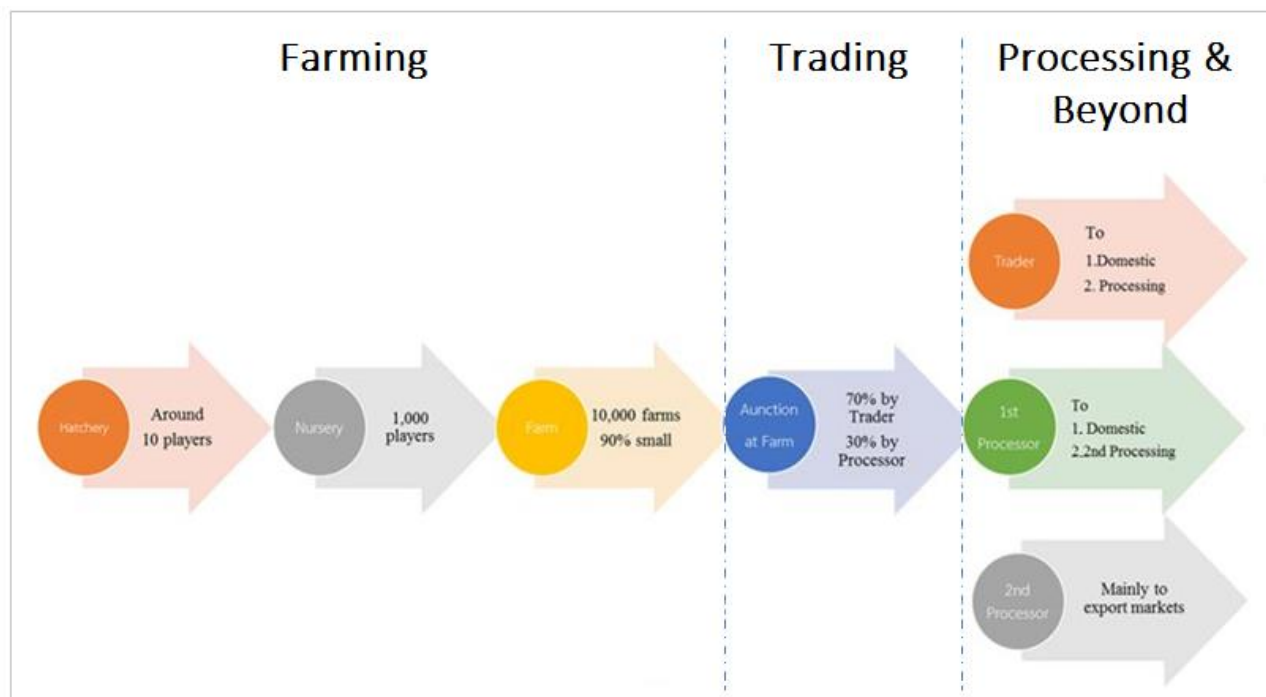
⁴⁴ Ward et al, *Shrimp Business Options Proposals to Develop a Sustainable Shrimp Fishery in the Gulf of Mexico and South Atlantic*. Gillett, *Global Study of Shrimp Fisheries*. FAO, *Cultured Aquatic Species Information Programme Penaeus Vannamei*.

⁴⁵ The feed-to-meat conversion rate is the ratio between volume of feed consumed by livestock and volume of meat produced.

6. Interaction among Players in the Value Chain

This section outlines key parts of the shrimp value chain, including farming, trading, and processing. A diagram of the Thai shrimp industry is presented in Figure 11.

Figure 11. Structure of the Thai shrimp industry



Farming

There are three steps in the farming component of the value chain: hatchery, nursery, and grow-out farm. In Thailand, a few large players dominate the hatcheries, including CPF and TUF. Power is concentrated in a few players who have the ability to maintain good breeding lines and to cross-breed shrimp stock for the industry. This is due to the sophisticated requirements for breeding and growing shrimp up to the nauplii stage before the nauplii are sold to nursery farms. Over 1,000 such farms are dispersed across the country, taking advantage of their proximity to grow-out farms. There are approximately 10,000 grow-out farms in Thailand, 90 percent of which are small farms with one to five ponds, with the rest consisting of medium and large farms.

Trading

There are approximately 1,000 traders/brokers (Thai term: *Phae Pla*) operating around the country. Their function is to accumulate supply by buying auctioned shrimp at farms before sorting them and distributing them to processors and sellers in wholesale and retail markets. A few powerful traders/brokers dominate the market with extensive power, providing financial support to small farms, as well as to small primary and secondary processors. They lend money to farmers to fund a new batch of shrimp culture, with the agreement that the farmers will supply them with cultured shrimp at the end of the process. This practice allows them to maintain a stable supply of shrimp for their business and to control this supply. These traders also have extensive networks with primary and secondary processors that supply the domestic wholesale and retail markets. In some cases, traders exert power over small processors by providing them with credit and loans.

Some traders also act as primary processors, conducting simple tasks such as removal of shells before delivery to factory or market.

Processors

Processing can be divided into two stages: primary processing by small processors, and secondary processing mainly by export processors. Simple processing is conducted by small contract processors who work closely with traders and export processors. There are approximately 1,000 small processors across the country, with 582 located in Samut Sakhon (as of 2012),⁴⁶ and the rest spread across the country, with high concentrations in Songkhla and Ranong. More than half of the 582 processors are micro and small enterprises. Micro enterprises (1-5 workers) account for 14 percent, small enterprises (6-24 workers) for 43 percent, medium enterprises (25-50 workers) for 18 percent, and large enterprises (over 50 workers) for 25 percent.⁴⁷ Of the 582 primary processors in Samut Sakorn, only 100 are GMP-certified by the DOF. This GMP certification allows them to provide processed materials for export processors.

Secondary processors/exporters are responsible for contracting primary processors, storing the product, and exporting the product to overseas markets. It is estimated that there are approximately 100 secondary processors/exporters in the Thai shrimp industry. With their greater bargaining power, the secondary processors/exporters can influence small processors in primary processing. The increase in regulatory requirements from overseas importers has pressured export processors to request their contracted primary processors to improve their standards of operation in accordance with requirements.

Despite the strong pressure that export processors exert over contracted primary processors to improve their manufacturing standards, several processors focus primarily on products bound for the domestic market, which do not require the strict standards of export markets. Without pressure by export processors, these domestically focused processors have less incentive to comply with good manufacturing standards. Moreover, some secondary processors export to less regulated markets, including developing countries in Asia and Africa. In the circumstances, these secondary processors have little incentive to pressure their contractors to improve standards.⁴⁸ It should be noted that there is no observable difference in wages between local workers and registered migrant workers.⁴⁹ However, the hidden nature of irregular employment means that employers do not necessarily abide by a clear set of rules and regulations for work conducted by these individuals. As a result, undocumented migrant workers are prone to exploitation by employers and corrupt public authorities. This problem indicates a need for authorities to step up their efforts on law enforcement and eliminate irregular labor practices.

Retail

Local shrimp products are sold in both domestic and overseas markets (at a 50/50 percent rate by volume). Standards for the domestic market are substantially lower than those for the overseas market. Foreign buyers have clearly exerted substantial influence on the local supply chain, pressuring exporters to improve their supply chain in accordance with required international standards. Players that focus mainly on the domestic market have less incentive to exert strong control or influence over their supply chain to improve standards.

⁴⁶ An industry mapping of primary processing in Samut Sakhon found that the industry employs approximately 18,289 workers, of whom about 12,300, or 67 percent, are migrant workers. Dhurakij Pundit University Research Center, International Labor Organization, *Technical Report: Enterprise Mapping of Primary Seafood Processing Industry in Samut Sakhon Province* (unpublished) (Thailand: DPU-ILO, 2012), 22.

⁴⁷ <http://www.fisheries.go.th/thgflp/index.php/15-action-plan/31-4-primary-processing-shrimp-and-seafood-enterprises>

⁴⁸ Information provided by industry experts during key informant interviews for this study.

⁴⁹ Employers interviewed for this study generally indicated that undocumented workers receive the same pay rate as documented workers; the shortage of labor in the industry enables them to demand an equal wage. While hiring undocumented workers may save employers on costs such as social security, doing so may also incur other costs, such as bribes, associated with having an undocumented workforce.

This is especially the case for players who supply to traditional retail channels in the domestic market, such as fresh food markets and restaurants. At the same time, the rising importance in Thailand of modern trade platforms such as hypermarkets, supermarkets, and discount stores may provide an opportunity for public authorities and society to pressure the modern trade platform to gradually improve the standards of its shrimp supply chain.

The power relationship among different players in the value chain is summarized in Table 12.

Table 12. Power relationships in the shrimp value chain

Sector	Characteristics of Power Relationship
Farming	<ul style="list-style-type: none"> ▪ A few hatchery farms with high power relationships with the rest of the farming sector. ▪ Many local grow-out farms with low bargaining power. Several nursery farms.
Trading	<ul style="list-style-type: none"> ▪ Many players across the country. ▪ Some with very high power due to their financial strength and access to large network of processors and sellers across the country.
Processing	<ul style="list-style-type: none"> ▪ Approximately 1,000 small primary contractors with low bargaining power. ▪ Several key export processors exert power throughout the value chain.
Distribution	<ul style="list-style-type: none"> ▪ Domestic distribution is largely in the hands of trader/brokers who have access to sellers in wholesale and retail markets. Overseas distributors have medium-to-high bargaining power as they have access to a network of buyers.
Retail	<ul style="list-style-type: none"> ▪ Domestic market is very diverse, and modern retailers are an emerging power. Foreign market is controlled by large retailers and international restaurant chains.

7. Labor in the Shrimp Supply Chain

According to industry leaders and observers, an insufficient supply of Thai workers reflects the reputation of the sector as one of undesirable working conditions. Consequently, the Thai seafood industry is largely supported by immigrant workers, most of whom are from Myanmar. The following estimates are derived from crossing-referencing and corroborating information collected from interviews of key informants and key players in the industry. Industry experts estimate that approximately 700,000 workers are directly involved in the Thai shrimp industry. The total workforce, including both direct and indirect workers, is estimated at as high as one million. This includes 300,000 to 400,000 workers employed by approximately 100 secondary processors/exporters; 100,000 workers employed by approximately 1,000 small contract manufacturers; 50,000 workers employed by traders; 150,000 workers employed on 10,000 grow-out farms; 10,000 workers employed on 1,000 nursery farms; and fewer than 1,000 workers in a small number of hatchery farms. It is estimated that 60 to 70 percent of these workers are immigrant laborers.⁵⁰ Table 13 outlines the distribution of labor along the value chain.

⁵⁰ These numbers are estimates provided by Thai seafood industry experts who served as key informants for this study.

Table 13. The current distribution of players and labor force along the value chain

Activities	Number of Players	Number of Workers
Hatchery Farm	Around 10-20	Around 1,000
Nursery Farm	Around 1,000	Around 10,000
Grow-out Farm	Around 10,000	Around 150,000
Trader/Broker	Around 1,000	Around 50,000
Small Contract Processor (Long)	Around 1,000	Around 100,000
Export Processor	Around 100	Around 300,000 to 400,000

Source: Estimates from expert interviews. Estimates for workers include both Thai and foreign workers (registered and unregistered).

Key informant interviews with industry experts indicate that approximately one-fourth of migrant workers currently working in the industry are unregistered. Unregistered workers are concentrated in labor-intensive activities and in firms that are less exposed to international networks and pressure, including farming, sorting shrimp, and simple processing under small contract manufacturers. Primary processing is the most labor-intensive part of the shrimp value chain. Labor concerns related to primary processing operations include the irregular nature of work, lack of standards requirements by buyers, and lack of formal regulation by the authorities due to the informal status of these production units. Secondary processing in factories is subject to stricter standards requirements by overseas buyers and regulation by authorities; as a result, there is better control of labor standards. For instance, overseas buyers require processors to obtain various certifications for the production line. Production is also subjected to continuous monitoring and auditing by overseas buyers and their representative agencies.

7.1 Monitoring and Oversight

To ensure that Thai shrimp exports comply with strict standards required by overseas markets, Thailand has put in place a number of regulations and monitoring mechanisms. All actors involved in shrimp farming need to obtain an operating license from the Department of Fisheries (DOF). The importation of parental generations and the transport of breeding stocks within the country require authorization by DOF. Grow-out farms are required to register and obtain a Code of Conduct (CoC) certified license. Moreover, these farms also need to be certified by DOF for Good Aquaculture Practice (GAP). CoC is a certification for shrimp farming that focuses primarily on food safety and environmental protection. GAP extends further by imposing stricter requirements on 10 different issues, including (1) registered location, (2) farm management and animal welfare, (3) use of chemicals and medicine, (4) appropriate waste management, (5) energy sources and fuel, (6) farm sanitation, (7) harvest and post-harvest handling prior to distribution, (8) labor and welfare, (9) social and environmental responsibilities, and (10) traceability. GAP is becoming a key requirement from buyers. Under GAP, certified farms are required to comply with labor standard requirements, such as employing only legal workers and providing up-to-standard welfare. With regard to shrimp trading, traders/brokers are required to obtain specific licenses for trading cultured shrimp. Processors are required to obtain shrimp processing licenses from the DOF; they are also subject to facilities inspection by DOF. Export processing factories also need to be registered and monitored by the Department of Industrial Works (DIW), Ministry of Industry. Various processing and manufacturing standards such as ISO are also under the administration of the Ministry of Industry, while food sanitary standards such as HACCP are under the control of DOF. The registration and certification system with DOF is quite exhaustive in order to provide traceability throughout the supply chain.

Although farms are required to register and be licensed, it is difficult for the DOF to monitor them, as there are 10,000 active farms across the country. In practice, there are also unregistered farms that only culture shrimp when the market conditions are right. These are very difficult to account for. Some farmers also raise shrimp together with tilapia to reduce the cost of feed. These practices make up a considerable part of total shrimp farming for Thailand's domestic market. Without control under GAP, these farms are more likely to employ undocumented workers and provide below-standard welfare for them.

Despite the fact that both primary and secondary processors are subject to government licensing, secondary processors are the most likely to comply with the requirements. Primary processors are largely outside of the control of the authorities, given the informal and small-scale nature of their work. These small contractors range in size from a few people to close to 100 workers. Their processing operations are often conducted in informal, unregulated facilities. A significant proportion of these supply solely to the domestic market (and therefore are not influenced by the pressure of export processors to improve standards).

8. Comparing the Canned Tuna and Shrimp Value Chains

In terms of labor conditions and social welfare standards, the Thai canned tuna industry is different from other seafood value chains in Thailand, as it is an export-oriented industry in which 95 percent of production is bound for export and only five percent for domestic consumption. The pressure from overseas buyers has compelled Thai canned tuna processors to maintain high standards of processing. The requirements extend beyond the sanitary conditions of the product to include labor conditions and environmental controls. Moreover, the Thai canned tuna industry is highly consolidated, with 18 players, all of whom are members of the Thai Tuna Industry Association (TTIA). The supply of raw tuna is itself controlled by only three integrated traders: FCF, Itochu, and Tri-Marine.

In contrast to the canned tuna industry, the Thai shrimp industry is highly diverse, with a large number of players operating in different parts of the value chains. They include more than 10,000 grow-out farms, several hundred traders, approximately 1,000 primary contract processors, and more than 100 export processors. This diversity has made it very difficult for Thai government authorities to regulate all entities. In addition, Thai shrimp production is divided into two parts, with 50 percent of production bound for export and another 50 percent supplying the domestic market. In response to pressures from overseas buyers and the governments of importing countries, export processors have taken steps to improve their value chain, exerting their authority and influence over different entities in the chain and forcing them to improve their standards. However, the lack of clear regulation and standards enforcement in the processing of shrimp products, together with the absence of pressure from overseas markets, gives rise to various problems in the industry. In particular, the exploitation of immigrant labor is a key issue. The differences between these two value chains, and their implications for labor issues, are summarized in Table 14 below.

Table 14. Main differences between canned tuna and shrimp value chains

Key issue	Canned Tuna	Shrimp
Ratio, Export : Domestic	95 : 5	50 : 50
Concentration in the global industry	High concentration in global tuna trading business and overseas retail business that drive standards throughout the chain.	High concentration in overseas retail business that pressures Thai export processors to maintain high standards. Low concentration and lack of pressure for maintaining high standards in the domestic retail business.
Diversity in the local value chain	Very low diversity, only 18 canned tuna processors.	Highly diversified in all parts of the value chain
Outcome on labor issue	High	Low to medium

Three major factors that distinguish the canned tuna industry from the shrimp industry have helped to improve labor standards in that industry: consolidation in the sector, ease of control by authorities, and export orientation. The Thai canned tuna industry is relatively consolidated in different parts of the value chain. For instance, in the primary processing unit (the most labor-intensive part of the value chain), there are only 18

canned tuna processors, compared with approximately one thousand in the shrimp industry. In the canned tuna sector, there are a few dominant players capable of controlling their value chains effectively. Their resources and capabilities allow them to satisfy various international requirements as demanded by importing countries. They also exert strong control and influence over other actors in the value chain to comply with regulations and laws. This consolidation—which contrasts with the dispersed nature of the shrimp sector—has made it easier for authorities to monitor and control different actors in the value chain. In addition, 95 percent of the Thai canned tuna product is bound for export, as compared with only 50 percent of processed shrimp. This strong export orientation drives compliance with international labor standards. All of these factors have contributed to the success of the industry in improving labor standards.

8.1 Case Studies: Thai Union Frozen (TUF) and Sea Value’s Rubicon

The following case studies of Thai Union Frozen (TUF) and Sea Value’s Rubicon offer a window into the workings of Thai conglomerates that produce both canned tuna and shrimp. These large corporations have demonstrated better capacity (in part linked to resources) in complying with global labor standards. These large firms benefit from economies of scale that enable them to upgrade production in compliance with global standards. Their successes suggest that these conglomerates’ interaction with global buyers enables them to learn from good global practice and to make these good practices integral to their competitiveness. In particular, TUF has direct ownership of various global brands, such as Chicken of the Sea and John West, with global visibility, and therefore has more incentive to take coordinated action across the corporation to upgrade its value chain, in part to maintain its reputation worldwide. The acquisition of these global brands has thus led the company to improve its labor standards in Thailand and elsewhere. In the case of Sea Value, association with the global brand Bumble Bee is helping the company to upgrade its value chain in accordance with international standards.

Thai Union Frozen (TUF)

Thai Union Frozen (TUF), a leading seafood processor and brand owner, is one of Thailand’s most successful companies. TUF is the world’s largest supplier of canned tuna, and currently controls approximately 20 percent of the global canned tuna market. It operates as a fully integrated company, with its businesses ranging from upstream operations such as a shrimp hatcheries and farming, feed production, and tuna fishing, to downstream operations such as processing, distribution, and branding. It derives approximately half of its revenue from unbranded products and another half from its own branded products. Approximately half of the company’s revenue is from its tuna businesses, and the other half is from other seafood businesses such as processed shrimp and pet food. The company expanded into pet food production in order to add more value to its businesses by effectively utilizing by-products from its seafood processing.⁵¹ Ninety percent of TUF’s revenue is generated from international operations. Its major overseas markets include the US (50 percent), Japan (30 percent), and Europe (20 percent). In 2014, the company employed more than 35,000 workers and generated THB 121.4 billion, or approximately USD 4.07 billion, in revenue.⁵²

Over the past two decades, TUF has aggressively expanded its operations through mergers that have consolidated its position in the Thai canned tuna processing industry. In 1998, TUF merged with Songkhla Canning. The company then merged with another canned tuna processor, Thai Ruamsin Pattana, in 1999. These mergers enabled TUF to expand its processing capacity, revenue, and profit by approximately 30 percent. In 2003, TUF expanded further by acquiring Empress International, a major seafood distributor in the US. Through this acquisition, the company established the Xcellent brand for its business-to-business market. Empress currently supplies seafood products to leading restaurant chains in the US, including the Darden group, which operates more than 2,000 restaurants around the world under brands such as Red Lobster and Olive Garden. In July 2010, TUF acquired MW Brands, one of the largest seafood processors in Europe. MW

⁵¹ Thai Union Frozen, *Annual Report 2009* (Thailand: TUF, 2010a). Thai Union Frozen, *Annual Report 2010* (Thailand: TUF, 2011). Thai Union Frozen, *Annual Report 2014* (Thailand: TUF, 2015).

⁵² Based on 2014 average exchange rate at 29.76 THB/USD

Brands is a vertically integrated business headquartered in Paris. In 2009, the total revenue of MW Brands was USD \$582 million, with USD \$732 million in assets. Its revenue is approximately one-fourth of TUF's, which had approximately USD \$2.0 billion in revenue, USD \$100 million in profits, and USD \$1.1 billion in total assets at the end of FY 2009.⁵³ In 2014, TUF continued to expand globally by acquiring the second largest brand in the US market, Bumble Bee. It is now one of the leaders in the global seafood industry.

TUF is also the largest player in the Thai shrimp industry, controlling approximately half of the exports of shrimp products from Thailand. The company is a result of several mergers and acquisitions. A recent acquisition is Pacfood, one of the top five shrimp exporters in Thailand. The company has also acquired Empress International to support overseas distribution. In addition, TUF has taken advantage of its acquired global canned tuna brands to brand its shrimp products. The TUF shrimp value chain is outlined in Figure 12.

Sea Value's Rubicon

Sea Value was formed in 2004 by three major Thai seafood processors: Thailand Fishery Cold Storage Plc., Wales & Co. Universe Ltd., and the Chanthaburi Seafood Group. The formation was the result of long-established personal and business relationships among the owners of the three companies. Previously, these three companies, together with a US partner, established Rubicon Resources, which distributes their seafood products in the US. The formation of Sea Value is an important development for Thailand's processed seafood industry, as it has furthered the trend of consolidation. The newly formed company has emerged as one of the leading seafood companies in the world, with approximately USD \$1.0 billion in total revenue. Sea Value's main export products are canned tuna and shrimp. Sea Value is one of Thailand's leading exporters of shrimp products, with nine processing facilities in Thailand.⁵⁴

After the formation of Sea Value, the company pursued an aggressive expansion strategy. The company acquired canned tuna processing capabilities through the acquisition of two major canned tuna companies in Thailand: Narong Canning Co., Ltd., and Unicord Public Co., Ltd. Sea Value also became a major shareholder in another canned tuna processing company, Siam International Food Co., Ltd. The combined processing capacity of the group and its subsidiary is approximately 2,000 tons of tuna per day. This positions the company as one of the largest canned tuna processors in the world, and the second-largest player in Thailand after TUF.⁵⁵

In 2006, the company secured a partnership with Bumble Bee, the second-largest canned tuna company by sales in the US market. Bumble Bee agreed to purchase a 10 percent share in Sea Value. Through this partnership, Bumble Bee agreed to source its semi-processed tuna loin as well as canned tuna products from Sea Value. This contract allows the company to expand its market base and reduce fluctuation of demand.⁵⁶

The formation of Sea Value from three major seafood companies has enabled the new company to thrive in the current business environment. This consolidation has allowed the three seafood companies to reach a scale sufficient to compete with global players. Prior to creating Sea Value, these three companies formed Rubicon Resources, a distributor in the US. This joint venture takes advantage of the synergy, expanded scale, and available capital to expand in the US seafood market. This long-established position allows Sea Value to distribute its seafood products, mainly shrimp and canned tuna, to the wider US market. Rubicon is now one of

⁵³ Ploy Ten Kate, Quentin Webb, "UPDATE 3-Thai Tuna Firm TUF Hooks Big One with MW Brands Buy," *Reuters*, 28th July, 2010. Thai Union Frozen, *Disclosure of Information Concerning the Acquisition of Assets of Thai Union Frozen Products Public Company Limited (Schedule 1)* (Thailand: TUF, 2010b).

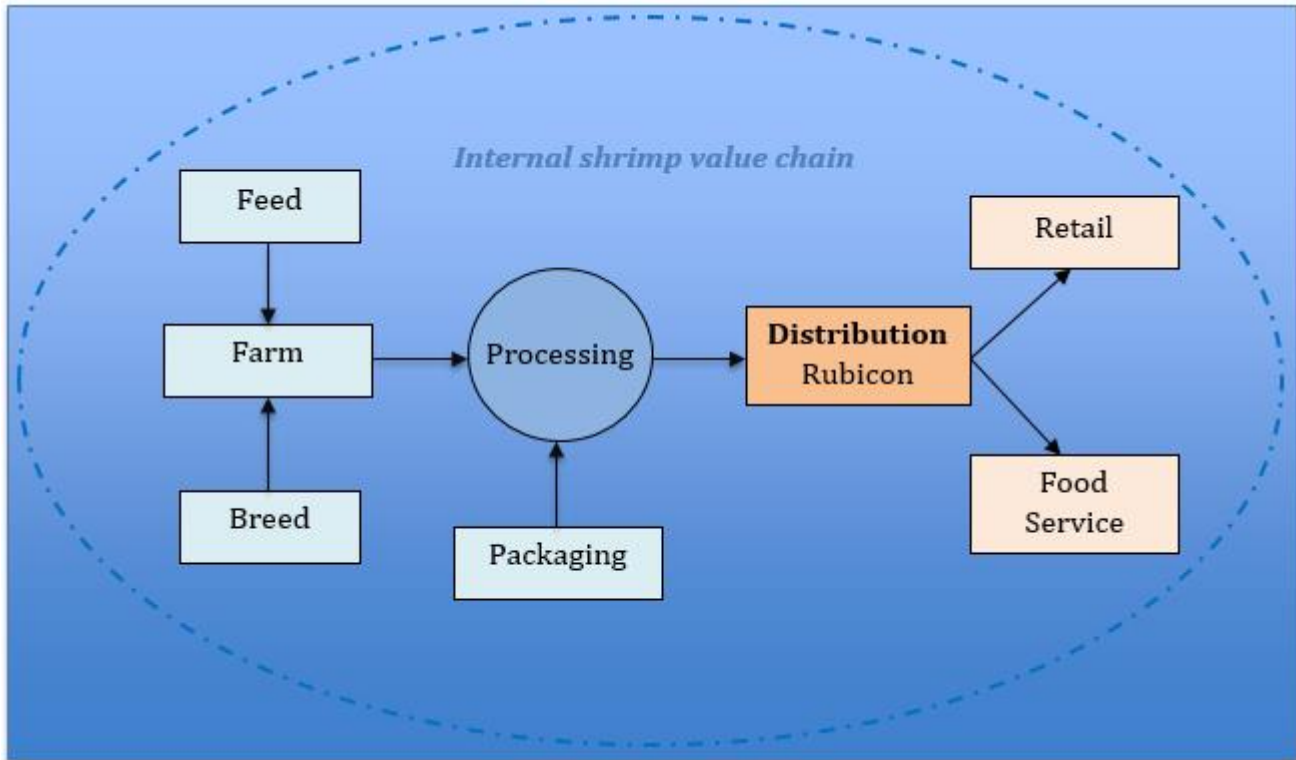
⁵⁴ Prachachart Durakij, "The Formation of Indo-Thai Fishery Value," *Prachachart Durakij*, 28th May, 2007. Sea Value, *Sea Value Europe BV: Company profile* (Thailand: Sea Value, 2010a). Sea Value, *Sea Value Thailand: Company profile* (Thailand: Sea Value, 2010b).

⁵⁵ Prachachart Durakij, *The Formation of Indo-Thai Fishery Value*. Sea Value, *Europe BV: Company profile*. Sea Value, *Sea Value Thailand: Company Profile*.

⁵⁶ Prachachart Durakij, *The Formation of Indo-Thai Fishery Value*.

the top 10 seafood distributors, with access to major food services and large supermarket chains in the US. Figure 12 outlines the shrimp value chain of Sea Value.

Figure 12. The shrimp value chain of Sea Value



Part II. Work, Education, and Health among Working Children

Building on the value chain analysis of Thailand’s shrimp and canned tuna sectors in Part I, Part II takes a closer look at the profile of migrant children working in Thailand’s shrimp and seafood processing industries. Through a quantitative analysis of survey data collected by the TDRI, PSU, and DPU research teams, as well as follow-up qualitative research under this project in migrant communities, Part II presents detailed information on children’s employment and working conditions, schooling and the effects of work on education, health and occupational hazards, and children’s aspirations. Where relevant, findings are broken down by gender, age, province, and industry (children working in shrimp and seafood processing versus children working in other industries) in order to highlight key areas for future interventions.

It is hoped that this data will prove useful to policymakers and practitioners who seek to better understand the profile and situation of migrant children working in Thailand’s shrimp and seafood processing industries. In addition, it is hoped that this data will provide an empirically grounded starting point for targeted interventions by government, NGOs, and private sector stakeholders who wish to ensure that migrant children have access to education as guaranteed under Thai law, and that those of working age work in safe conditions.

1. Working children

1.1 Sample description

Across the TDRI and PSU studies, the majority of working children sampled (58.0 percent) were aged 15-17, with 21.1 percent aged 13-14 and 20.9 percent aged 5-12.⁵⁷ By province, the TDRI Samut Sakhon and Surat Thani samples included more older children, with 77.8 percent of the Samut Sakhon sample consisting of children aged 15-17. Songkhla province had the highest proportion of 13- to 14-year-olds in the sample (25.0 percent), as well as the highest proportion of 5- to 12-year-olds (32.6 percent), as presented in Table 14.

The DPU study (data shown in Table 15) focused only on migrant children, and included information for equal proportions of children aged 5-12 and 15-17 (45.5 percent and 44.3 percent, respectively).

Table 15. Age groups by province, whole sample

Study	Province	Age groups			TOTAL
		5-12 years	13-14 years	15-17 years	
TDRI	Samut Sakhon [^]	24 (7.3%)	49 (14.9%)	256 (77.8%)	329 (100.0%)
	Surat Thani	5 (7.5%)	16 (23.9%)	46 (68.7%)	67 (100.0%)
PSU	Nakhon Si Thammarat	31 (22.0%)	31 (22.0%)	79 (56.0%)	141 (100.0%)
	Songkhla	146 (32.6%)	112 (25.0%)	190 (42.4%)	448 (100.0%)
	TOTAL[^]	206 (20.9%)	208 (21.1%)	571 (58.0%)	985 (100.0%)
DPU	Samut Sakhon*	254 (45.5%)	57 (10.2%)	247 (44.3%)	558 (100.0%)

*Migrant household survey

[^]1 missing for age

Source: TDRI, PSU, DPU

Among children in the shrimp and seafood industries, age distribution differed by province. In Songkhla, children in shrimp/seafood were represented in similar proportions for each age group. In Samut Sakhon and Surat Thani, the 15-17 age group were the majority of shrimp/seafood workers at 77.8 percent and 73.9 percent, respectively. In the DPU study in Samut Sakhon, the majority of shrimp/seafood workers were aged 15-17 (87.7 percent).

Table 16. Age groups by province among children in the shrimp/seafood industries

Study	Province	Age groups			TOTAL
		5-12 years	13-14 years	15-17 years	
TDRI	Samut Sakhon [^]	9 (7.1%)	19 (15.1%)	98 (77.8%)	126 (100.0%)
	Surat Thani	2 (8.7%)	4 (17.4%)	17 (73.9%)	23 (100.0%)
PSU	Nakhon Si Thammarat	19 (18.5%)	25 (24.3%)	59 (57.3%)	103 (100.0%)
	Songkhla	71 (32.3%)	65 (29.6%)	84 (38.2%)	220 (100.0%)
	TOTAL[^]	101 (21.4%)	113 (23.9%)	258 (54.7%)	472 (100.0%)
DPU	Samut Sakhon* [#]	7 (4.5%)	12 (7.7%)	136 (87.7%)	155 (100.0%)

*Migrant household survey

7 missing for sector

[^]1 missing for age

Source: TDRI, PSU, DPU

[#]only children who were available for work in past 7 days were asked which sector they worked in.

Across all child workers, Nakhon Si Thammarat and Songkhla had more males represented in the 15-17 and 5-12 age groups than females, the inverse being true for Samut Sakhon and Surat Thani.

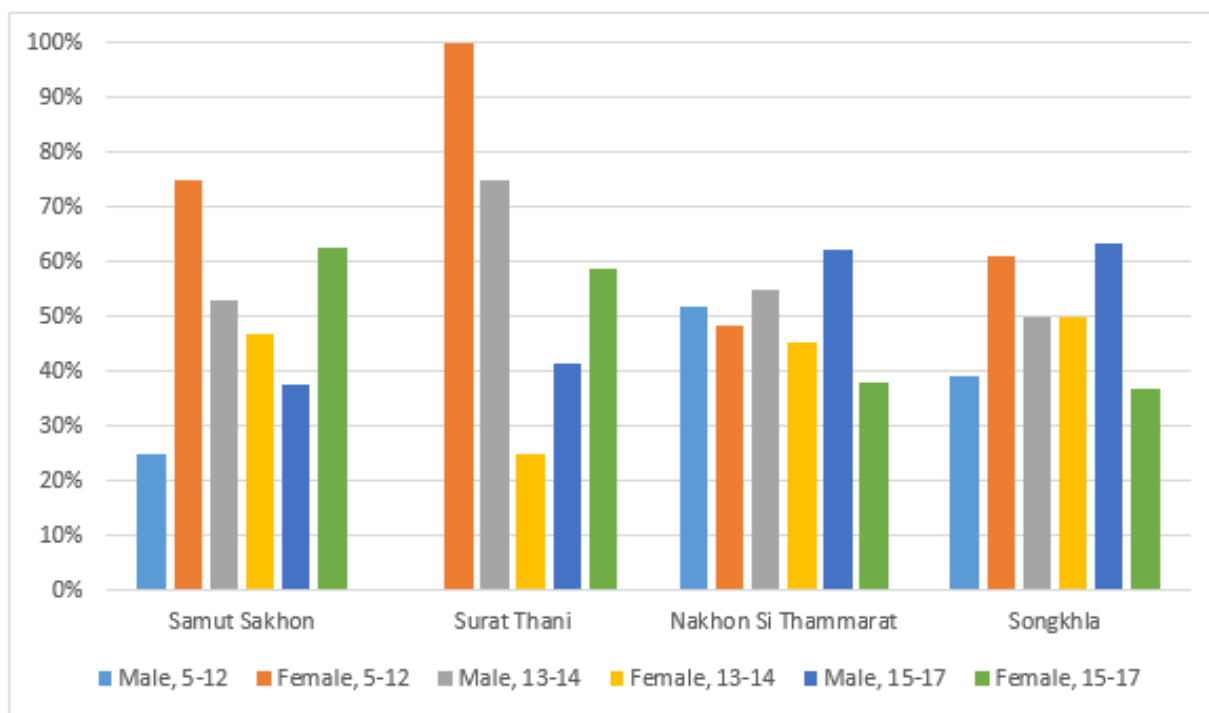
⁵⁷ Please note that small sub-sample sizes, particularly for Surat Thani, limit interpretation of findings for some variables.

Table 17. Age and sex distribution by province, whole sample

	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon*								
Male	6	25.0	26	53.1	95	37.4	127	38.8
Female	18	75.0	23	46.9	159	62.6	200	61.2
Surat Thani								
Male	-	-	12	75.0	19	41.3	31	46.3
Female	5	100.0	4	25.0	27	58.7	36	53.7
Nakhon Si Thammarat								
Male	16	51.6	17	54.8	49	62.0	82	58.2
Female	15	48.4	14	45.2	30	38.0	59	41.8
Songkhla								
Male	57	39.0	56	50.0	120	63.2	233	52.0
Female	89	61.0	56	50.0	70	36.8	215	48.0
Total	206	100.0	208	100.0	571	100.0	985	100.0

*1 missing Source: TDRI, PSU

Figure 13. Age and sex distribution of children in the shrimp/seafood industries, by age, sex (N=985)



*1 missing Source: TDRI, PSU Figure 13 is associated with Table 17

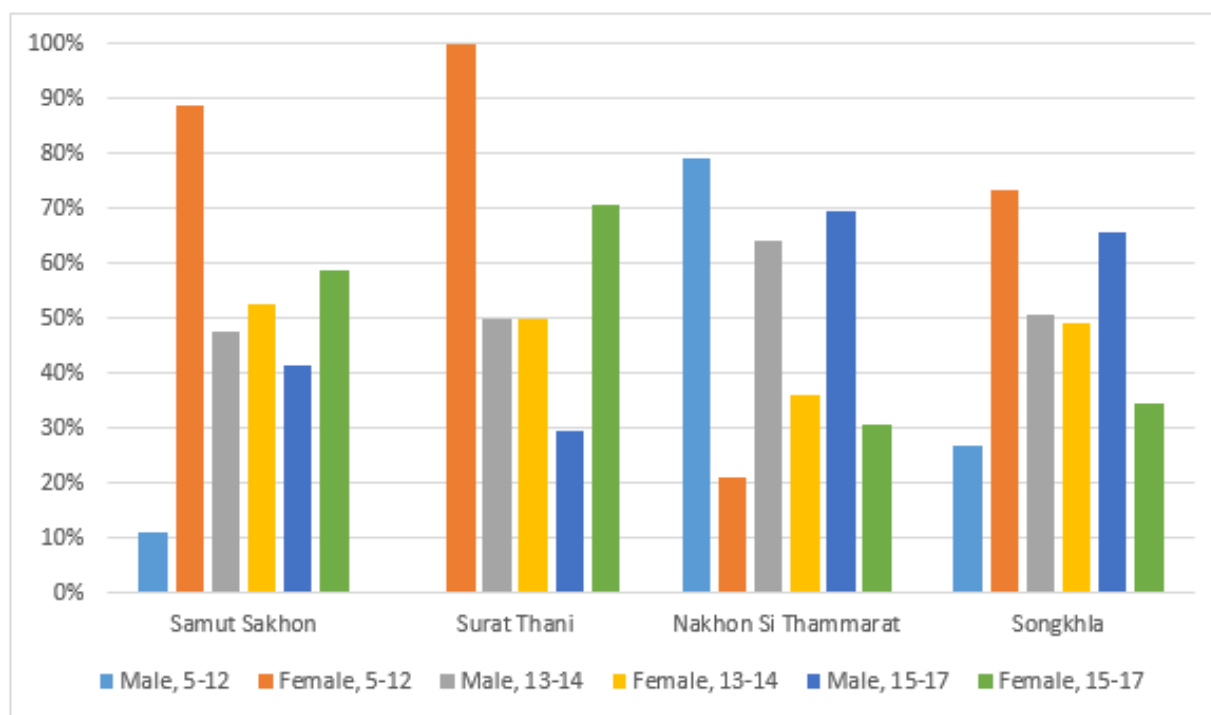
Among children in the shrimp/seafood industries, Nakhon Si Thammarat had more males than females in all age groups. Songkhla and Samut Sakhon saw greater proportions of females compared to males in the 5-12 age group.

Table 18. Age and sex distribution by province among children in the shrimp/seafood industries

	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon*								
Male	1	11.1	9	47.4	40	41.2	50	40.0
Female	8	88.9	10	52.6	57	58.8	75	60.0
Surat Thani								
Male	-	-	2	50.0	5	29.4	7	30.4
Female	2	100.0	2	50.0	12	70.6	16	69.6
Nakhon Si Thammarat								
Male	15	79.0	16	64.0	41	69.5	72	69.9
Female	4	21.0	9	36.0	18	30.5	31	30.1
Songkhla								
Male	19	26.8	33	50.8	55	65.5	107	48.6
Female	52	73.2	32	49.2	29	34.5	113	51.4
Total	101	100.0	113	100.0	257	100	471	100.0

*1 missing Source: TDRI, PSU

Figure 14. Age and sex distribution by province among children in the shrimp/seafood industries



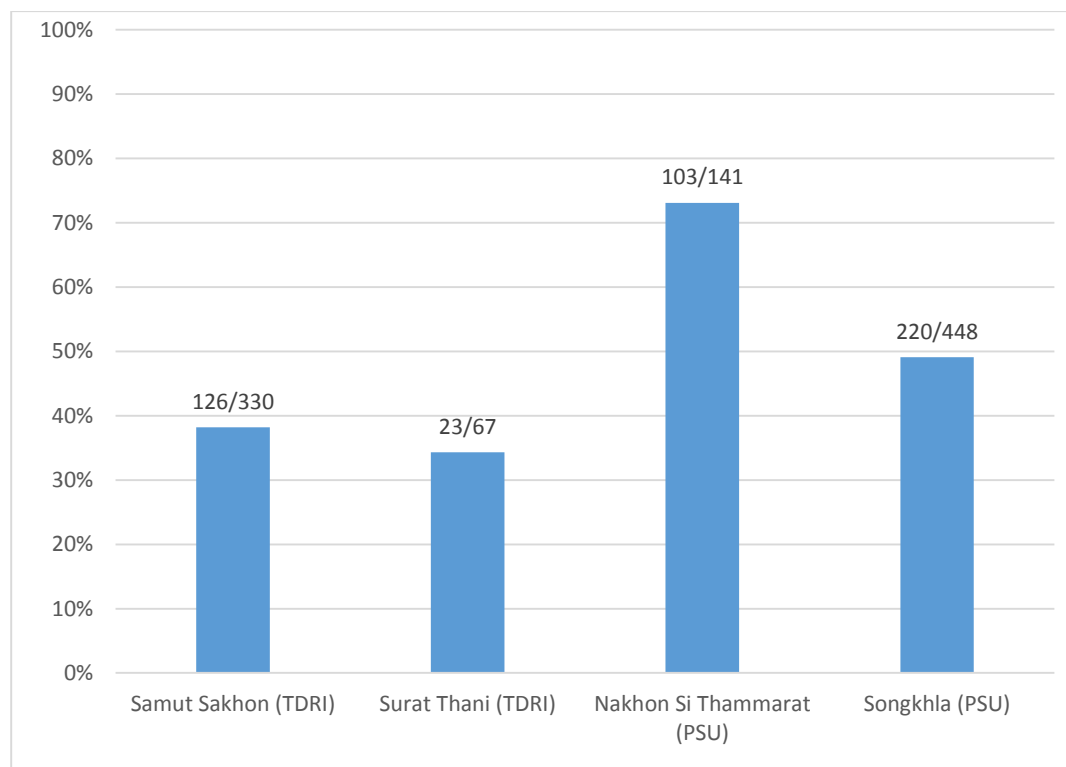
*1 missing Source: TDRI, PSU

Figure 14 is associated with Table 18

By province and study, the DPU migrant children and the PSU Nakhon Si Thammarat samples included higher proportions of children in the shrimp or seafood industries (76.0 percent [data not shown] and 73.1 percent [Figure 15], respectively) than in other provinces. Relatively low proportions of children sampled in Samut

Sakhon⁵⁸ and Surat Thani were working in the shrimp or seafood industries (38.2 percent and 34.3 percent, respectively). This likely reflects the employment patterns of these migrant children’s parents (and of migrant workers in those provinces more generally). In Samut Sakhon, significant proportions of migrants work in industries other than seafood processing. According to DPU’s survey, approximately 60 to 65 percent of those aged 18 and over were working in seafood processing, while more than a third of migrants were working in other industries. Similarly, in Surat Thani, significant proportions of migrants worked outside the seafood processing industry, particularly in agricultural work on rubber plantations. In Nakhon Si Thammarat and Songkhla, migrants are primarily employed in seafood-related work.

Figure 15. Proportion of child workers among all workers in the shrimp/seafood industries, by province



*Migrant household survey, 7 missing Source: TDRI, PSU

Table 19. Age and sex distribution of Thai and migrant children in Samut Sakhon, TDRI

	Thai, N (%)			Migrant, N (%)			Total N (%)
	Male	Female	Total	Male	Female	Total	
5-12	4 (25.0%)	12 (75.0%)	16 (100.0%)	2 (25.0%)	6 (75.0%)	8 (100.0%)	24 (7.3%)
13-14	19 (55.9%)	15 (44.1%)	34 (100.0%)	7 (46.7%)	8 (53.3%)	15 (100.0%)	49 (14.9%)
15-17	61 (42.7%)	82 (57.3%)	143 (100.0%)	34 (30.6%)	77 (69.4%)	111 (100.0%)*	256 (77.8%)*
Total	84 (43.5%)	109 (56.5%)	193 (100.0%)	43 (32.1%)	91 (67.9%)	134 (100.0%)*	329 (100.0%)*

*1 missing Source: TDRI

⁵⁸ Thailand Development Research Institute (TDRI), *The Demand for Immigrant Labour in Agriculture, Fishing, Seafood Processing and Construction*. (Thailand: TDRI, 2008).

By sex, there were similar age distributions among Thai and migrant children. Among migrant children, a higher proportion were female (67.9 percent) than among Thai children (56.5 percent), as shown in Table 19.

Table 21 demonstrates the difference in age and sex distribution in the shrimp/seafood industries. In the 13-14 age group, 63.6 percent of migrant shrimp/seafood workers were female, compared to 37.5 percent among Thai shrimp/seafood workers, where males were more represented. However, in the 15-17 age group, there were more females among Thai seafood/shrimp workers (64.1 percent) than among migrant seafood/shrimp workers (54.2 percent).

As noted above, a large proportion of the overall DPU sample were aged 5-12 (45.5 percent) and 15-17 (44.3 percent), meaning that the DPU sample yielded more information on younger (migrant) children than did the TDRI data. However, as with TDRI data for Samut Sakhon, 13- to 14-year-olds are less represented, comprising 10.2 percent of the sample. In the DPU study, migrant girls were slightly more represented, overall (54.5 percent) and in each age group, than migrant boys (Table 20).

Table 20. Age and sex distribution of migrant children in Samut Sakhon, DPU

Age group	Male, N (%)	Female, N (%)	Total, N (%)
5-12	124 (48.8%)	130 (51.2%)	254 (45.5%)
13-14	26 (45.6%)	31 (54.4%)	57 (10.2%)
15-17	104 (42.1%)	143 (57.9%)	247 (44.3%)
Total	254 (45.5%)	304 (54.5%)	558 (100.0%)

Source: DPU

Among migrant shrimp and seafood workers only, the TDRI and DPU data included few 5- to 12-year-olds overall, but similar sex distributions for age groups 13-14 and 15-17.

Table 21. Age and sex distribution of migrant children in Samut Sakhon, TDRI

	Thai, N (%)			Migrant, N (%)			Total N (%)
	Male	Female	Total	Male	Female	Total	
5-12	-	2 (100.0%)	2 (100.0%)	1 (14.3%)	6 (85.7%)	7 (100.0%)	9 (7.2%)
13-14	5 (62.5%)	3 (37.5%)	8 (100.0%)	4 (36.4%)	7 (63.6%)	11 (100.0%)	19 (15.2%)
15-17	14 (35.9%)	25 (64.1%)	39 (100.0%)	26 (44.8%)	32 (54.2%)	58 (100.0%)*	98 (77.6%)*
Total	19 (38.8%)	30 (61.2%)	49 (100.0%)	31 (40.8%)	45 (59.2%)	76 (100.0%)*	125 (100.0%)*

*1 missing Source: TDRI

Table 22. Age and sex distribution of migrant children in the shrimp/seafood industries in Samut Sakhon, DPU

Age group	Male, N (%)	Female, N (%)	Total, N (%)
5-12	4 (57.1%)	3 (42.9%)	7 (4.5%)
13-14	5 (41.7%)	7 (58.3%)	12 (7.7%)
15-17	57 (41.9%)	79 (58.1%)	136 (87.7%)
Total	66 (42.6%)	89 (57.4%)	155 (100.0%)

Source: DPU

Overall in the DPU study, 17.9 percent of migrant children were born in Thailand, and 82.1 percent were born in Myanmar (data not shown). As may be expected, higher proportions of younger children were born in Thailand compared to older children. Among 5- to 12-year-olds, 29.9 percent were born in Thailand, compared to 15.8 percent among 13- to 14-year-olds, and 6.1 percent among those aged 15-17 (data not shown). The remaining proportions of each age group were born in Myanmar.

Participants were asked if children in their household held a Tor Ror 38/1⁵⁹ or Thai passport/ID. Among all children, 58.0 percent had a Tor Ror, with twice as many aged 15-17 having one (79.8 percent) compared to those aged 5-12 and 13-14 (around 40 percent). During focus group discussions, respondents noted that it was more important for older children to have documentation, as these children spend more time outside the home, including at work and traveling to and from work. Because police and local officials conduct random inspections in workplaces and on roads, parents felt that having documentation for older children was necessary as protection from fines and possible deportation.

While the Tor Ror is no longer in use, these data are significant for what they say about documentation held or lack thereof.

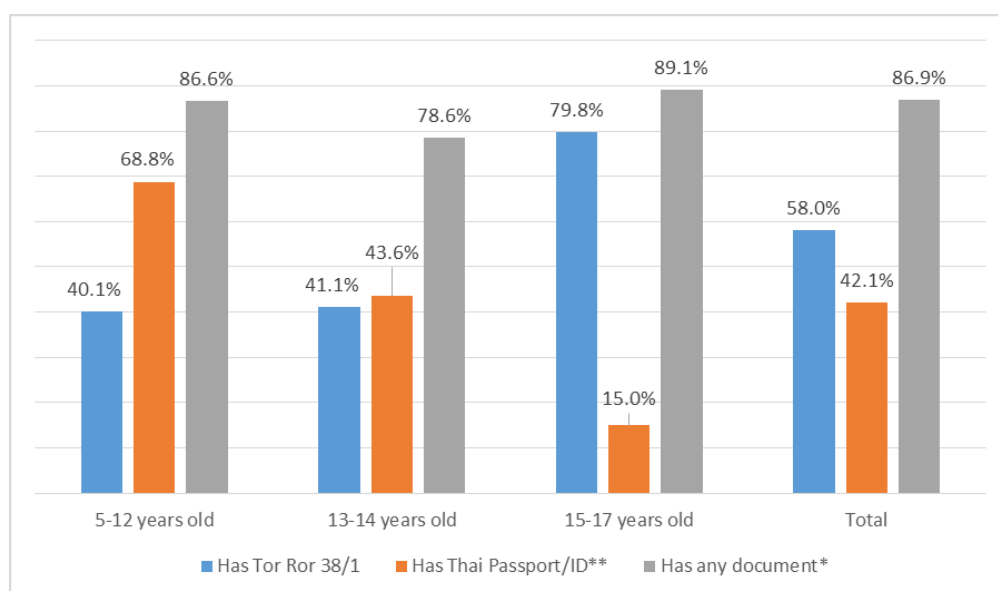
Documentation

Table 23. Documents held by migrant children by age group, DPU

Age group	Has Tor Ror 38/1		Has Thai passport/ID		Has any document*			
	N	%	N	%	Yes	%	No	%
5-12	99	40.1	170	68.8	214	86.6	33	13.4
13-14	23	41.1	24	43.6	44	78.6	12	21.4
15-17	197	79.8	37	15.0	220	89.1	27	10.9
Total	319*	58.0	231**	42.1	478	86.9	72	13.1

*8 missing **9 missing Source: DPU

Figure 16. Documents held by migrant children, by age



*8 missing **9 missing Source: DPU Figure 16 is associated with Table 23

⁵⁹ The Tor Ror 38/1 was a temporary residence ID card (no longer in use) for migrant workers and their families.

By age group, similar proportions of 5- to 12-year-olds and 15- to 17-year-olds did not possess any documents (13.4 percent and 10.9 percent, respectively); however, one in five of those aged 13-14 did not possess any documents. Interviewees noted that parents tend to send children aged 13-14 back to Myanmar so that when they reach the age of 15, they will be able to come work in Thailand legally. Knowing that their children would be sent home soon, they would be less likely to spend the money for proper documentation. This age group also had the most stark gender difference: among girls aged 13-14, 90.0 percent (n=27/30) had documents, compared to just 65.4 percent (n=17/26) among 13- to 14-year-old boys (data not shown).

Among migrant children in shrimp and seafood, much higher proportions in all age groups are observed to have some form of ID compared to all children. As presented in Table 24, the majority of children in the shrimp and seafood industries possessed a Thai passport or ID (91.6 percent), compared to just 42.1 percent (Table 23) in the overall sample of migrant children. This is largely due to international trade issues that prompted the local government and local seafood processing businesses to be more discrete about employing unregistered migrants. The past two Ministers of Labour have also made significant efforts to increase the oversight of the seafood sector in order to reduce the use of child labor and unregistered migrants in the seafood value chain.

Table 24. Documents held by migrant children in the shrimp/seafood industries by age group, DPU

Age group	Has Tor Ror 38/1		Has Thai passport/ID		Has any document			
	N	%	N	%	Yes	%	No	%
5-12	5	71.4	6	85.7	7	100.0	-	-
13-14	10	83.3	10	90.9	11	91.7	1	8.3
15-17	119	87.5	125	91.9	128	94.1	8	5.9
Total	134	86.5	141*	91.6	146	94.2	9	5.8

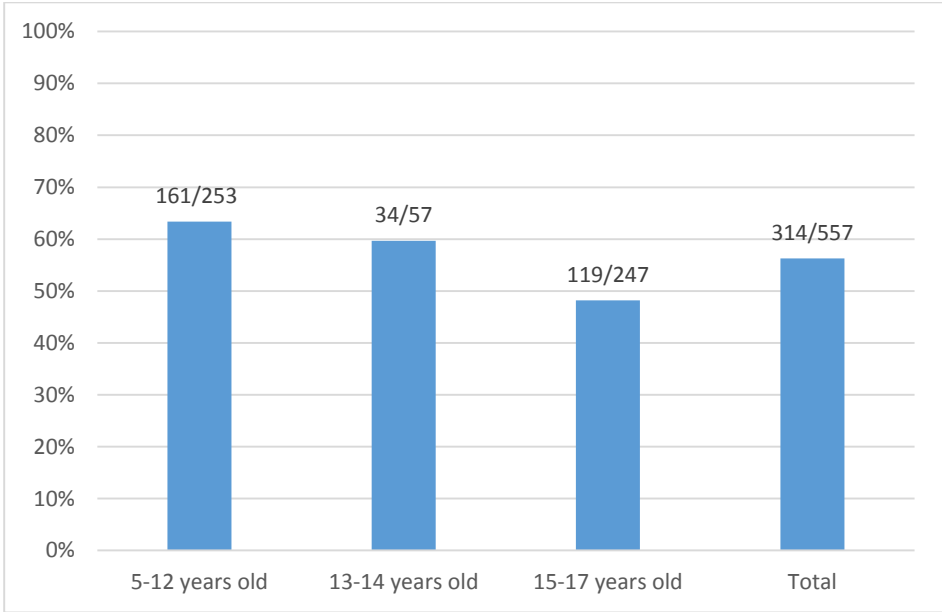
*1 missing Source: DPU

In further exploring these research findings, key informant interviews in Samut Sakhon revealed that some migrants from Myanmar use false certification (obtained through brokers) to obtain jobs. They noted two reasons why migrants use fake identification. First, some migrants from remote areas of Myanmar do not possess an authentic birth certificate (as their home was far from the registration office, and their parents never officially registered the birth); when these migrants apply to work in Thailand, they procure a false birth certificate to submit for the process. Migrants noted that some also procure false certificates in order to “prove” that children are of legal working age. Prospective employers are then presented with a document showing that the child is 15 or older. Focus group discussions in Surat Thani and Nakhon Si Thammarat revealed that the use of false certification was rare in these provinces. This may be due to the substantial investment required for the production of false certification (to purchase equipment, for example). In the South, where numbers of migrants are relatively smaller than in Samut Sakhon, such an investment would be less likely to be profitable. Statistics from the Office of Foreign Workers Administration indicated that in 2014, there were 146,070 registered migrants in Samut Sakhon, compared with 57,798 in Surat Thani and 17,797 in Nakhon Si Thammarat.

Local representatives of the Ministry of Labour in Samut Sakhon noted that the recent migrant registration initiatives should reduce the use of false certificates.

Thai Language Facility

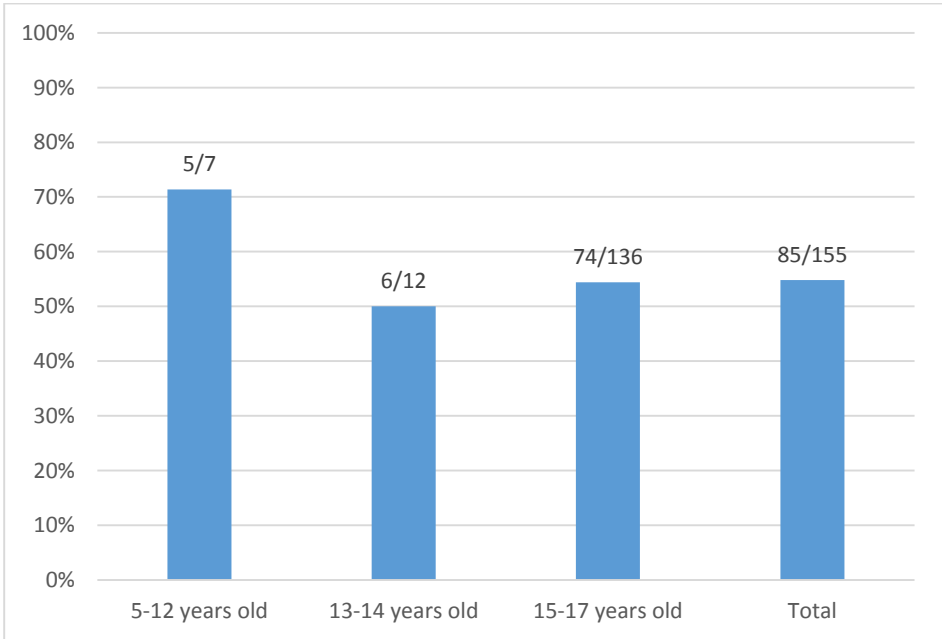
Figure 17. Migrant children who speak Thai (N=557)



Source: DPU

Among all migrant children, 56.3 percent (n=314/557) could speak Thai. Higher proportions of younger children could speak Thai compared to older children, with 63.4 percent of 5- to 12-year-olds speaking Thai compared to around 48.2 percent of 15- to 17-year-olds (Figure 17). Among shrimp/seafood migrant child workers only, similar proportions to the overall migrant children sample spoke Thai (Figure 18).

Figure 18. Migrant children in shrimp/seafood industries who speak Thai, by age (N=155)



Source: DPU

1.2 Work

Sector

As presented in Table 25, approximately one-third of working children in Samut Sakhon and Surat Thani were employed in the shrimp or seafood industries, while three-quarters of working children in Nakhon Si Thammarat were employed in these sectors. The higher percentage of children employed in shrimp and seafood processing in Nakhon Si Thammarat can be explained in part by the GPP share of fishery in Nakhon Si Thammarat, which is approximately twice as high as that of Surat Thani (see Focal Provinces section). It can be expected, then, that a greater proportion of economically active children would be engaged in this activity.

Table 25. Industry by province

	Industry									
	Shrimp		Seafood		Shrimp or seafood*		Other		Total	
	N	%	N	%	N	%	N	%	N	%
Samut Sakhon	64	19.4	62	18.8	126	38.2	204	61.8	330	100.0
Surat Thani	4	6.0	19	28.4	23	34.3	44	65.7	67	100.0
Nakhon Si Thammarat**	-	-	-	-	103	73.0	38	27.0	141	100.0
Songkhla**	-	-	-	-	220	49.1	228	50.9	448	100.0
Total	-	-	-	-	472	47.9	514	52.1	986	100.0

*Not included in row totals

**Breakdown by shrimp/seafood not available

Source: TDRI, PSU

Two patterns emerge across provinces: (1) Older children were more likely to work, and (2) the proportion of males and females was about the same when they reached the legal working age of 15-17 (Table 26).

In addition, the data shows that a greater proportion of children aged 15-17 in Samut Sakhon were employed. Migrant parents in Samut Sakhon confirmed that children of working age were expected to work to help contribute to the family income. They noted that, because the work did not require high-level skills, additional years of schooling would not generate enough of an increase in earnings to offset the opportunity cost of sending a 15- to 17-year-old child to school.

Table 26. Whether job relates to the shrimp/seafood industries by province, age and sex

	Shrimp or seafood industry*							
	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon**	9	7.2	19	15.2	97	77.6	125	100.0
Male	1	2.0	9	18.0	40	80.0	50	100.0
Female	8	10.7	10	13.3	57	76.0	75	100.0
Surat Thani	2	8.7	4	17.4	17	73.9	23	100.0
Male	-	-	2	28.6	5	71.4	7	100.0
Female	2	12.5	2	12.5	12	75.0	16	100.0
Nakhon Si Thammarat	19	18.4	25	24.3	59	57.3	103	100.0
Male	15	20.8	16	22.2	41	56.9	72	100.0
Female	4	12.9	9	29.0	18	58.1	31	100.0
Songkhla	71	32.3	65	29.5	84	38.2	220	100.0
Male	19	17.7	33	30.8	55	51.4	107	100.0
Female	52	46.0	32	28.3	29	25.7	113	100.0
Total	101	21.4	113	24.0	257	54.6	471**	100.0

*Other industries excluded from denominator **1 missing Source: TDRI, PSU

Among those working in shrimp and seafood, over half (54.6 percent) were aged 15-17. Among 15- to 17-year-olds in Songkhla, twice as many males (51.4 percent) as females (25.7 percent) were working in the shrimp and seafood industries. But in the 5-12 age group, almost three times as many females (46.0 percent) as males (17.7 percent) were working in shrimp or seafood.

Table 27 shows that more than half of migrant children surveyed were employed in the shrimp and seafood industries, whereas about one fourth of Thai children were employed in these industries. Among migrant children in the DPU survey, 76.0 percent (n=155/204, 7 missing) worked in the shrimp or seafood industries, while the remaining 24.0 percent worked in other industries (data not shown). Two main reasons were given by parents and employers in Samut Sakhon for the high percentage of migrant children employed in these industries. First, parents who worked in the shrimp and seafood industries frequently brought their children to the workplace because they had no one to provide day care. Second, the nature of the work that migrants performed in these industries was manual labor that could be learned relatively quickly. Children tended to learn this skill while observing their parents at work and while helping them in the workplace. Once they were able to perform this work, these migrant children would be more likely to take on work in this industry when they got older.

Migrant and Thai children comparison, Samut Sakhon

Table 27. Whether job relates to the shrimp/seafood industries among Thai and migrant children, TDRI

Whether job relates to shrimp/seafood	Thai		Migrant	
	N	%	N	%
Yes, it relates only to shrimp industry	13	6.7	51	37.8
Yes, it relates to seafood industry	36	18.7	26	19.2
No, it relates to other industry	144	74.6	58	43.0
Total*	193	100.0	135	100.0

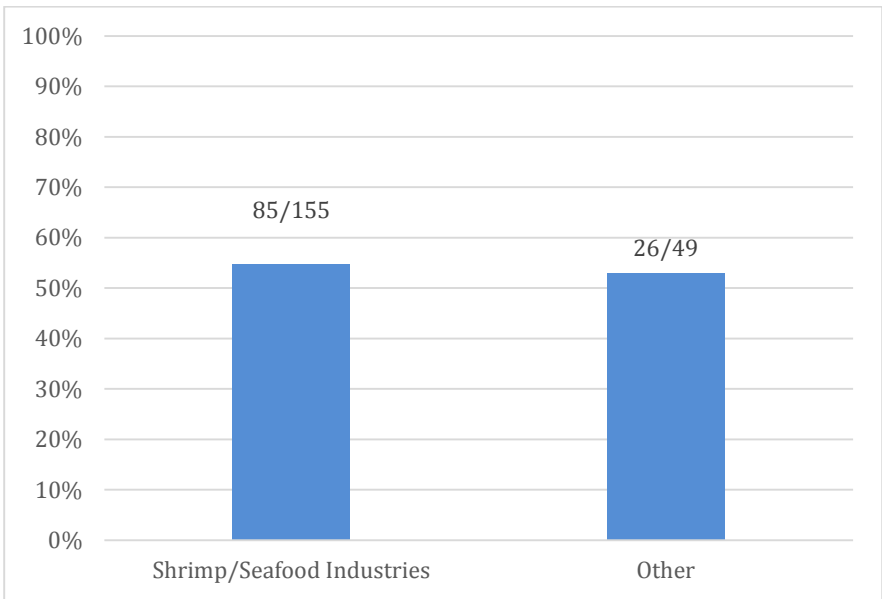
*2 missing Source: TDRI

Over half of migrant children (57.0 percent) worked in the shrimp industry (37.8 percent) or the seafood industry (19.2 percent), whereas Thai children were mostly working in other industries (74.6 percent).

Among migrant children in the DPU survey, 76.0 percent (n=155/204, 7 missing) worked in the shrimp or seafood industries, with the remaining 24.0 percent in other industries (data not shown).

Similar proportions of migrant children in shrimp and/or seafood spoke Thai (54.8 percent) compared to migrant children in other industries (53.1 percent). A slightly higher proportion of children in the shrimp/seafood industries had documents (94.2 percent) than in other industries (83.7 percent).

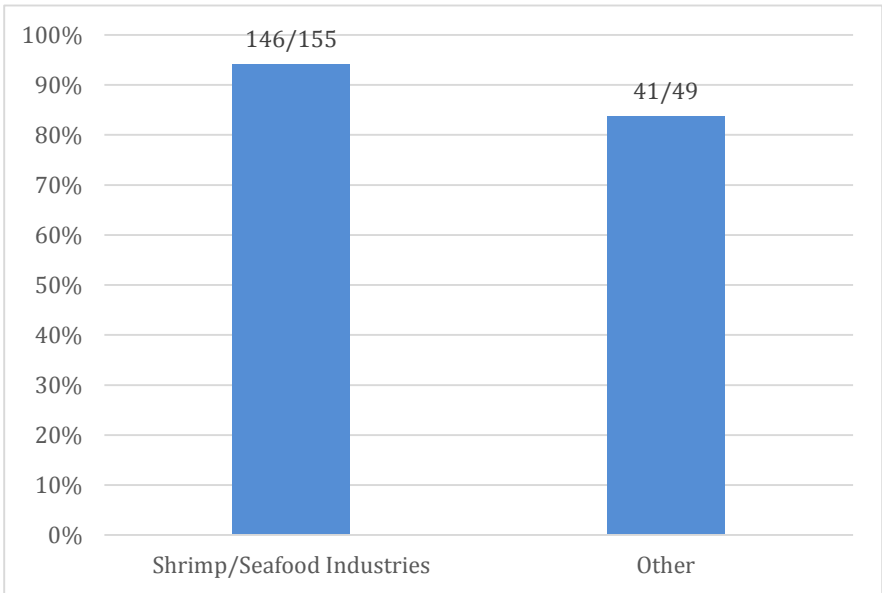
Figure 19. Migrant children in the shrimp/seafood industries who speak Thai



*7 missing

Source: DPU

Figure 20. Migrant children in the shrimp/seafood industries with documentation



*7 missing

Source: DPU

The effects of speaking Thai or having a legal document (a proxy for having migrated to Thailand through regular channels) on employment in shrimp and seafood processing industries are demonstrated in Figures 19 and 20. Similar proportions of migrant children in shrimp and seafood spoke Thai (54.8 percent) compared to migrant children in other industries (53.1 percent). A slightly higher proportion of children in shrimp and seafood had documents (94.2 percent) compared to children in other industries (83.7 percent). By and large, the ability to speak Thai did not increase children’s propensity to work in the shrimp and seafood processing industries.

Employee status

Table 28 demonstrates that one-third of all children in the shrimp/seafood industries were daily wage employees (38.3 percent). Samut Sakhon had the highest proportion of daily wage employees (63.7 percent). Nearly half of all respondents (41.7 percent) were unpaid family workers, mostly in Songkhla, where 59.6 percent of children worked unpaid for their family businesses.

Among those employed, the daily wage payment was the most common employment arrangement. Interviews with employers and migrants provided two main reasons for this. First, the nature of production in these sectors varies significantly from day to day, depending on the availability of inputs. Daily arrangements allow employers to adjust the number of migrants employed relative to daily inputs as a way to keep costs down. Second, migrants expressed a preference for having a constant stream of income, rather than having to wait for a weekly or monthly salary

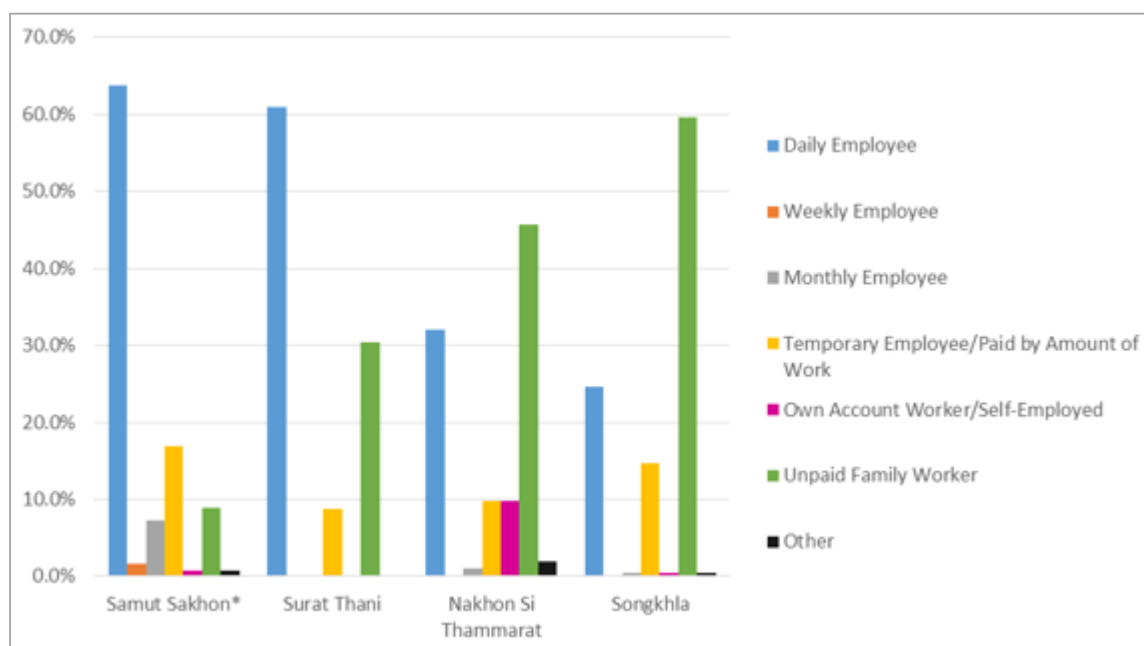
Table 28. Employee status by province among children in the shrimp/seafood industries

	Employee status									
	Samut Sakhon		Surat Thani		Nakhon Si Thammarat		Songkhla		Total	
	N	%	N	%	N	%	N	%	N	%
Daily employee	79	63.7	14	60.9	33	32.0	54	24.6	180	38.3
Weekly employee	2	1.6	-	-	1	1.0	-	-	3	0.6
Monthly employee	9	7.3	-	-	-	-	1	0.5	10	2.1
Temporary employee/paid by amount of work	21	16.9	2	8.7	10	9.7	32	14.6	65	13.8
Own account worker/self-employed	1	0.8	-	-	10	9.7	1	0.5	12	2.6
Unpaid family worker	11	8.9	7	30.4	47	45.6	131	59.6	196	41.7
Other	1	0.8	-	-	2	1.9	1	0.5	4	0.9
Total	124*	100.0	23	100.0	103	100.0	220	100.0	470*	100.0

*2 missing

Source: TDRI, PSU

Figure 21. Employee status among migrant children in the shrimp/seafood industries



*2 missing Source: TDRI, PSU
Figure 21 is associated with Table 28

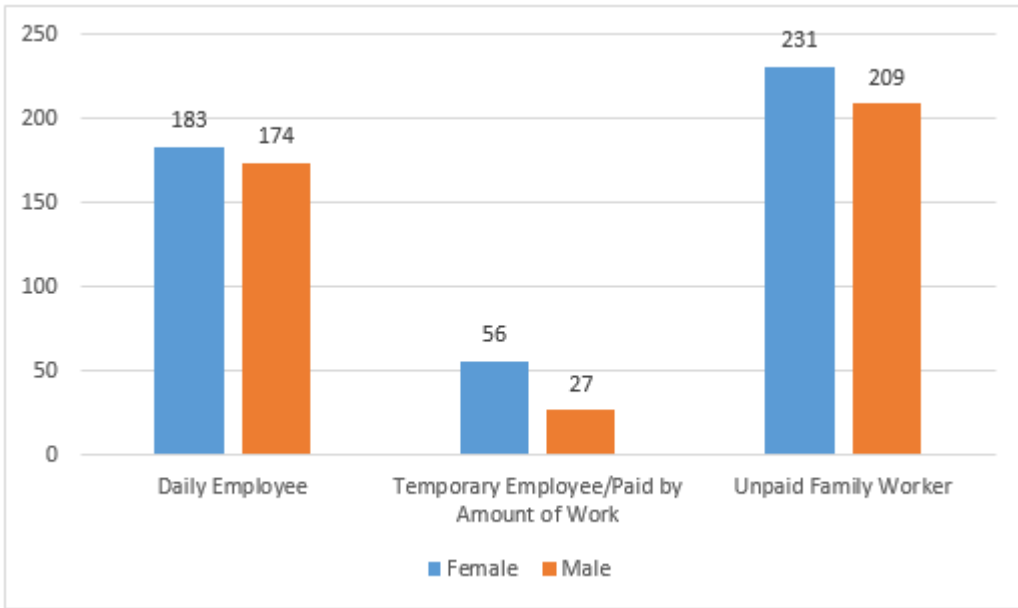
Among 15 home-based workers in shrimp/seafood processing in Samut Sakhon and Surat Thani, most (73.3 percent) were unpaid family workers. Interviews with migrant parents revealed that there were more opportunities for home-based work in the southern provinces, an arrangement that allowed migrants to look after their children and to supervise them. In Samut Sakhon, in contrast, work arrangements were more formalized, with migrants having to work in a *long* or factory. Interviews in Samut Sakhon revealed that employers in that province preferred to have migrants work onsite, because employers could more closely monitor work, and because employers would not have to transport raw material to different locations for processing. There is a more constant stream of raw material in Samut Sakhon, so employers can incentivize workers to work onsite by providing regular employment and in-kind benefits. Also, because the industry is more consolidated in Samut Sakhon, it is more difficult for individual contractors or home-based workers to gain access to raw material there: to do so, home workers would need to bid for raw material at Talae Thai market, or wait until the market's closing time to buy what remains. During the low season, this could be a particular challenge.

Table 29. Employee status among home-based child workers in the shrimp/seafood industries, Samut Sakhon and Surat Thani

	Samut Sakhon		Surat Thani		Total	
	N	%	N	%	N	%
Daily employee	2	28.6	2	25.0	4	26.7
Unpaid family worker	5	71.4	6	75.0	11	73.3
Total	7	100.0	8	100.0	15*	100.0

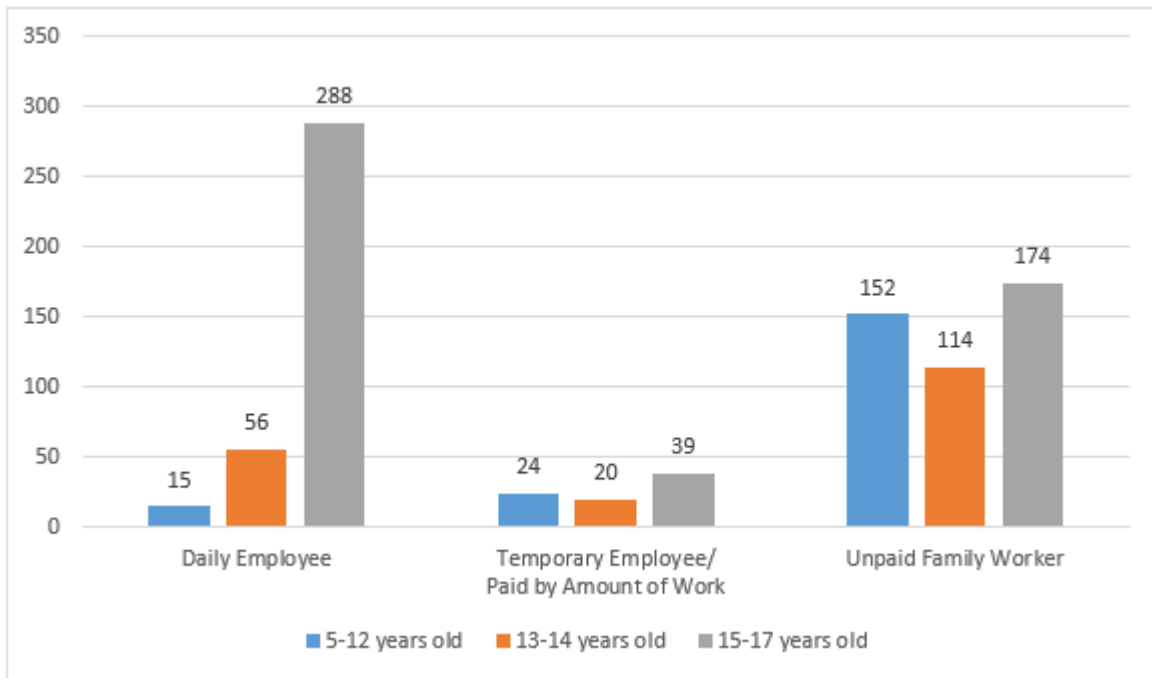
*6 missing Source: TDRI

Figure 22. Selected employee status by sex



2 missing for sex Source: TDRI, PSU
 These are the number values, not the percentages

Figure 23. Selected employee status by age



Source: TDRI, PSU
 These are the number values, not the percentages

By age group, a much higher proportion of 15- to 17-year-olds were daily wage employees (50.7 percent) compared to 13- to 14-year-olds (27.2 percent) and 5- to 12-year-olds (7.3 percent), as shown in Table 30. Younger children were more likely to be unpaid family workers than older children, with approximately 75 percent of children in the age group 5-12 claiming to be working as unpaid family workers, compared to 55.3 percent among 13- to 14-year-olds and 30.6 percent among 15- to 17-year-olds.

Table 30. Employee status by age group

	Employee status							
	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Daily employee	15	7.3	56	27.2	288	50.7	359****	36.7
Weekly employee	2	1.0	3	1.5	4	0.7	9	0.9
Monthly employee	1	0.5	1	0.5	32	5.6	34	3.5
Temporary employee/paid by amount of work	24	11.7	20	9.7	39	6.9	83	8.5
Own account worker/self-employed	8	3.9	10	4.9	19	3.4	37	3.8
Unpaid family worker	152	73.8	114	55.3	174	30.6	440	44.9
Other	4	1.9	2**	1.0	12***	2.1	18	1.8
Total	206	100.0	206**	100.0	568***	100.0	981*	100.0

*5 missing

**2 missing

***3 missing

****1 missing for age

Source: TDRI, PSU

In Surat Thani and Nakhon Si Thammarat, slightly higher proportions of females than males were daily wage employees, while in Songkhla, 15.4 percent of females and 31.8 percent of males worked for a daily wage (data not shown). Higher proportions of girls in Samut Sakhon (19.2 percent) and Songkhla (71.2 percent) were unpaid family workers than boys in those provinces (12.9 percent and 57.5 percent, respectively). The inverse was true in Surat Thani and Nakhon Si Thammarat, where higher proportions of males were unpaid family workers than females—for example, 45.8 percent of females compared to 57.5 percent of males in Nakhon Si Thammarat (data not shown).

By age and sex, similar proportions of males and females in each age group were unpaid family workers. Table 31 shows that females in the age group 5-12 were three times more likely to have temporary employment than males (15.8 percent and 5.1 percent, respectively); in the 13-14 age group, the ratio jumps to 4 to 1 (16.7 percent and 3.6 percent, respectively).

Table 31. Selected employee status by sex, age

	Daily employee		Temporary employee/paid by amount of work		Unpaid family worker	
	N	%	N	%	N	%
5-12 years						
Male	9	11.4	4	5.1	58	73.4
Female	6	4.7	20	15.8	94	74.0
13-14 years						
Male	33	30.0	4	3.6	60	54.6
Female	23	24.0	16	16.7	54	56.3
15-17 years*						
Male	132	47.0	19	6.8	91	32.4
Female	154	54.0	20	7.0	83	29.1

*2 missing for sex

Source: TDRI, PSU

Employment Contracts

Children were asked whether they had a contract and, if so, of what type (Table 32).⁶⁰ Among shrimp/seafood workers, 69.6 percent responded that they did not have a contract, followed by 27.1 percent who had verbal contracts. Very few children (3.2 percent) had written contracts.

Table 32 illuminates significant differences across provinces. No working children in Nakhon Si Thammarat (N=46) had a contract of any kind, written or verbal, and high proportions of children lacked contracts across surveyed areas in the South. Samut Sakhon province had the highest proportion of children with verbal contracts at 57.4 percent, compared to 17.4 percent in Surat Thani and few in Songkhla. Older children were more likely to have a contract of some kind than younger children.

Higher proportions of boys did not have contracts (76.6 percent) than girls (64.5 percent). However, girls were more likely to have verbal contracts than boys. By industry, more children in shrimp or seafood work had no contract (69.6 percent) than children in other industries (59.3 percent.)

The relatively high number of children in shrimp or seafood work without a contract is attributable to a number of factors. These include the relative sophistication of the industry and the low bargaining power of young workers. Another reason for the lack of formal contracts is that parents who bring their children to work may do so without the initial intention of employing them. Once these children are at the workplaces, they may be asked to help with some tasks and receive some payment from the employer for their “help.”

Table 32. Type of contract by province, age, industry, sex[^]

Province*	Verbal contract		Written contract		No contract		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon	70	57.4	6	4.9	46	37.7	122	100.0
Surat Thani	4	17.4	-	-	19	82.6	23	100.0
Nakhon Si Thammarat	-	-	-	-	46	100.0	46	100.0
Songkhla	2	2.3	3	3.4	84	94.4	89	100.0
Age*								
5-12	3	9.4	-	-	29	90.6	32	100.0
13-14	13	23.2	-	-	43	76.6	56	100.0
15-17	60	31.3	9	4.7	123	64.5	192	100.0
Sex*								
Male	27	21.8	2	1.6	95	69.6	124	100.0
Female	48	31.0	7	4.5	100	64.5	155	100.0
Industry								
Shrimp or seafood	76	27.1	9	3.2	195	69.6	319	100.0
Other	123	38.6	7	2.2	189	59.3	280	100.0
All shrimp/seafood workers*	76	27.1	9	3.2	195	69.6	280	100.0

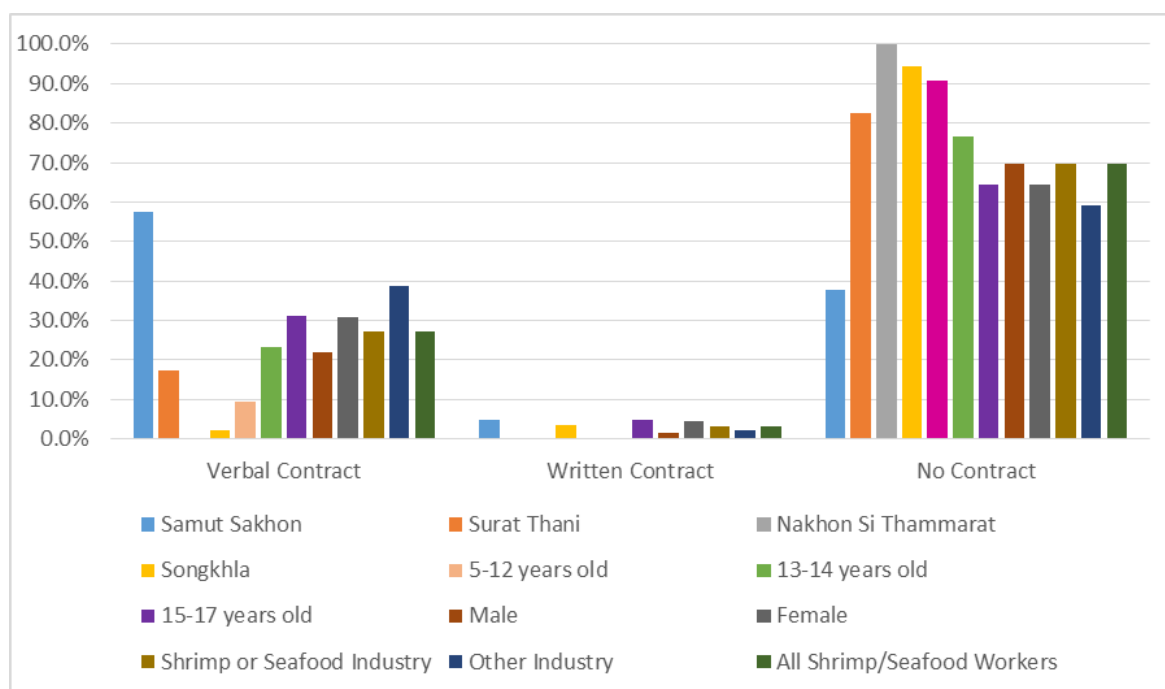
*Among shrimp/seafood workers only

[^]192 missing

Source: TDRI, PSU

⁶⁰ Surveyors asked, “What is your type of contract?” with “verbal contract,” “written contract,” and “no contract” as options. The TDRI report does not include additional information about how respondents defined “verbal contract” versus “no contract,” and this is a limitation in the data.

Figure 24. Workers with written, verbal, and no contracts in the shrimp/seafood industries (N=280)



*Among shrimp/seafood workers only ^192 missing Source: TDRI, PSU
 Figure 24 is associated with Table 32

Working hours

This section examines working hours for children in the shrimp and seafood processing industries in the target provinces, including a detailed analysis of hours worked per week by age, gender, and province, as well as information on when those working hours occurred.

According to Thailand’s *Labour Protection Act (1998)*, children aged 15-17 are legally allowed to work, but must not work over 48 hours per week. The ILO similarly considers work among children aged 15-17 permissible as long as it does not go beyond 48 hour per week. In addition, the ILO considers “light work” (up to 14 hours per week) by children aged 13-14 permissible. To illuminate children’s working hours along these lines of permissible and non-permissible work, the data that follows has been presented with age data broken down into categories of 5-12, 13-14, and 15-17 years of age, and with weekly working hours broken down into categories of under 14 hours per week, 14-48 hours per week, and over 48 hours per week.

Tables 33 through 35 show hours worked weekly by migrant children in the shrimp and seafood processing industries in the target provinces, and the accompanying figures show the mean and range of these working hours. Table 36 and the subsequent discussion provide information on children working above the legal limit of 48 hours per week. This section concludes with a discussion of the times of day in which sampled children were working.

Table 33. Hours worked weekly by province

Hours	Samut Sakhon		Surat Thani		Nakhon Si Thammarat and Songkhla		Total	
	N	%	N	%	N	%	N	%
14 and below	52	17.2	20	35.7	141	30.9	213	26.1
15-48	218	71.9	29	51.8	232	50.8	479	58.7
Above 48	33	10.9	7	12.5	84	18.4	124	15.2
Total	303	100.0	56	100.0	457*	100.0	816	100.0

*132 children in Nakhon Si Thammarat/Songkhla had no fixed hours, excluded from total column

Source: TDRI, PSU report

By province, Nakhon Si Thammarat and Songkhla had the highest proportion of children working above the legally permitted 48 hours/week (18.4 percent), followed by Surat Thani (12.5 percent) and Samut Sakhon (10.9 percent), as shown in Table 33. The majority of children in Samut Sakhon (71.9 percent) were working between 15 and 48 hours/week, compared to half of children in Surat Thani (51.8 percent) and in Nakhon Si Thammarat and Songkhla combined (50.8 percent).

Table 34. Hours worked weekly among shrimp/seafood workers in Samut Sakhon, Surat Thani*

Hours	Samut Sakhon		Surat Thani		Total	
	N	%	N	%	N	%
14 and below	3	2.7	4	23.5	7	5.4
15-48	87	77.7	10	58.8	97	75.2
Above 48	22	19.6	3	17.7	25	19.4
Total	112	100.0	56	100.0	129*	100.0

*20 missing Source: TDRI

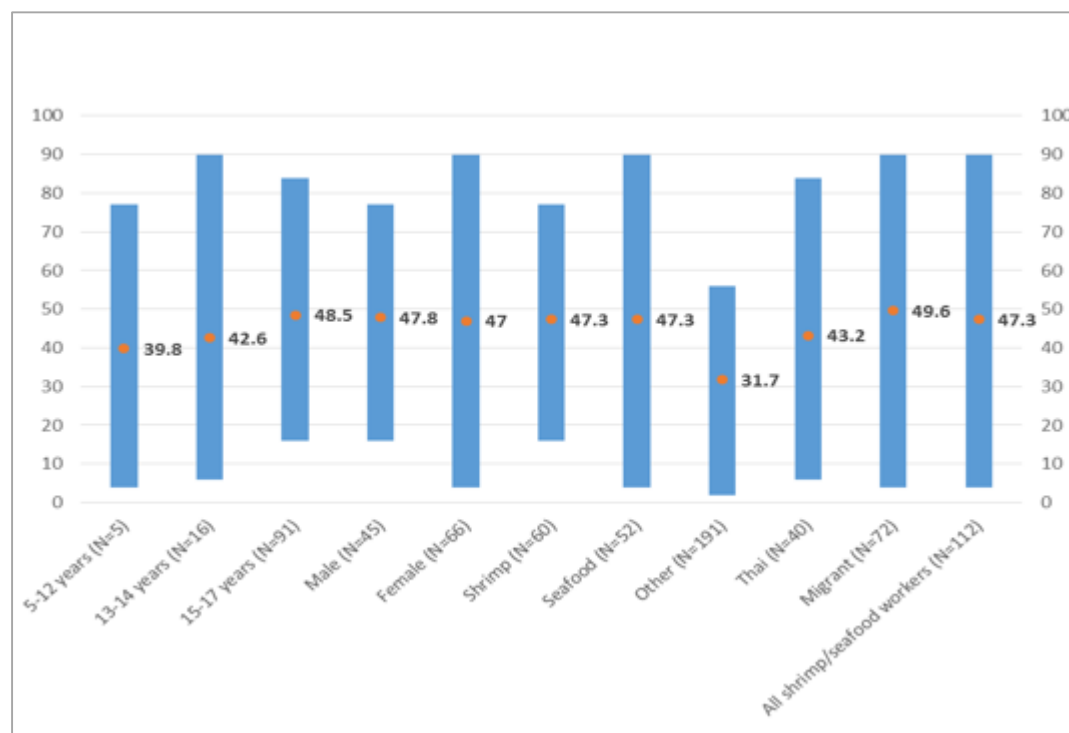
Among shrimp/seafood workers in Samut Sakhon and Surat Thani, three-quarters (75.2 percent) were working between 15 and 48 hours per week, with one in five working more than 48 hours a week. Respondents suggested three possible explanations for these long hours. First, employers often expect youth of working age to work alongside adults. Thus, if the adults worked overtime at nine hours per day, six days a week, the youths' total hours would exceed 48. It is also possible that young workers are pressured to work long hours and do not feel they can go against their employer's wishes. Finally, it is also possible that younger children have less output per hour, and since payment is based on the quantity of seafood processed, youths may have to work longer to achieve the same output as an adult.

Table 35. Hours worked weekly in Samut Sakhon and Surat Thani by age, sex, industry

	Hours worked weekly							
	Samut Sakhon				Surat Thani			
	N	Mean	SD	Range	N	Mean	SD	Range
Age group*								
5-12 years	5	39.8	26.4	4 – 77	2	6	0	-
13-14 years	16	42.6	25.0	6 – 90	3	22.3	9.3	12 – 30
15-17 years	91	48.5	10.7	16 – 84	12	38.8	20.5	4 – 84
Sex*								
Male	45	47.8	12.7	16 – 77	5	28.8	17.2	12 – 56
Female	66	47.0	15.7	4 – 90	12	33.4	22.8	4 – 84
Industry								
Shrimp	60	47.3	10.4	16 – 77	2	30	0	-
Seafood	52	47.3	18.1	4 – 90	15	32.3	22.3	4 – 84
Other	191	31.7	17.7	2 – 56	39	28.8	21.5	2 – 98
Status*								
Thai	40	43.2	15.4	6 – 84	-	-	-	-
Migrant	72	49.6	13.5	4 – 90	-	-	-	-
All shrimp/seafood workers	112	47.3	14.4	4 – 90	17	32.0	20.9	4 – 84

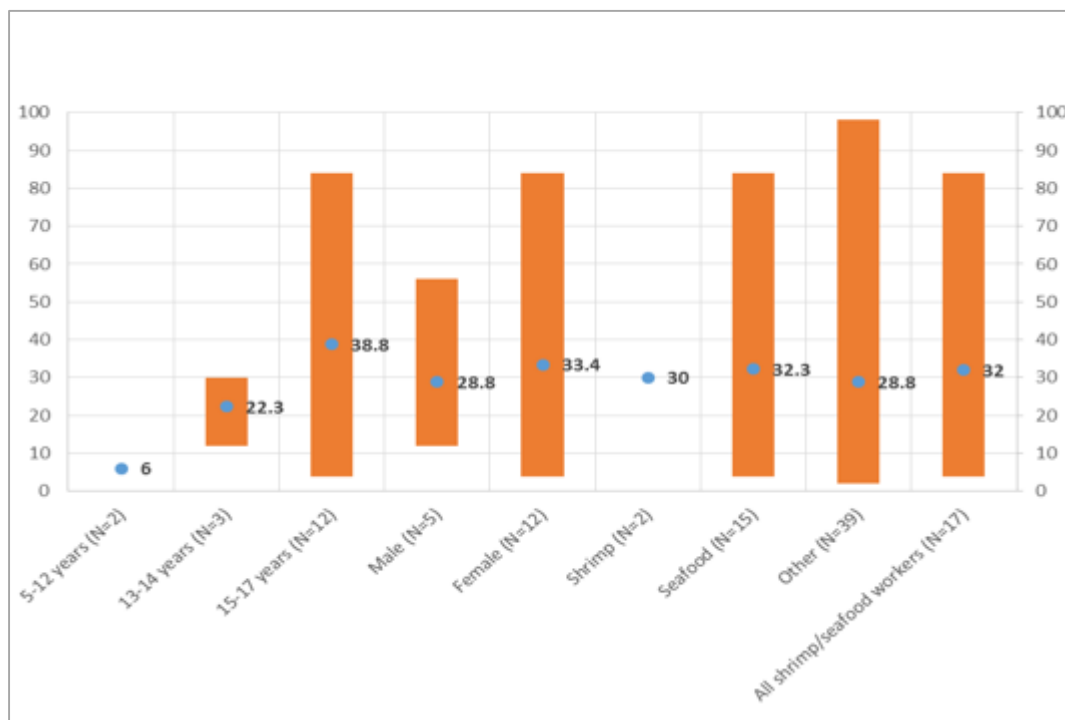
*Among shrimp/seafood workers only Source: TDRI, no data available from PSU

Figure 25. Mean and range of hours worked weekly among shrimp/seafood workers in Samut Sakhon



Among shrimp/seafood workers only Source: TDRI, no data available from PSU
 Figure 25 is associated with Table 35

Figure 26. Mean and range of hours worked weekly among shrimp/seafood workers in Surat Thani



Among shrimp/seafood workers only
Figure 26 is associated with Table 35

Source: TDRI, no data available from PSU

According to the ILO, surveyed children had difficulty estimating the total number of hours worked weekly for the following reasons: nearly all work is informal, with no employment contract; the most common work is day labor and subcontract piece work, which is highly variable; coastal fishing is dependent on the weather and sea conditions; family businesses do not have fixed hours; and in some cases, the duration of children’s work depends on the nature of the work or a parent’s request.⁶¹

Among children in shrimp/seafood industries who could recall their hours, older children were working longer hours than younger ones in Samut Sakhon and Surat Thani. Females were working five hours longer than males on average in Surat Thani. According to Table 35, those in the seafood or shrimp industries in Samut Sakhon were working much longer hours (47.3 hours/week on average, SD 18.1 and 10.4, respectively) than children in those industries in Surat Thani (32.3 and 30 hours/week, respectively, SD 22.3 and 21.5). It is also notable that 39.6 percent (n=142/359) of children in the shrimp and seafood industries in Samut Sakhon and Surat Thani worked exactly 48 hours per week; employers were thus engaging children at the maximum number of hours allowable by law.

With regard to the greater number of hours worked by migrant children compared with Thais, follow-up interviews with teachers, NGOs, parents, and migrant children revealed two reasons for migrants’ longer hours overall. First, there was an expectation that young children who remained at home would contribute to the family through home-based work (together with parents). Second, those older migrants who could find work outside the home generally took on work equivalent to an adult, including full-time or overtime hours. Thai children, in contrast, were subject to mandatory education until the age of 15. For those Thai children who needed to find work to help support their family, there were ample part-time and full-time opportunities in other comparatively cleaner and more comfortable working sectors.

⁶¹ ILO IPEC, Baseline Surveys on Child Labour in Selected Areas in Thailand, 13

Table 36. Children working more than 48 hours/week by industry in Samut Sakhon and Surat Thani

Industry	N	%
Shrimp	8	20.0
Seafood	17	42.5
Other	15	37.5
Total	40	100.0

Source: TDRI, no data available from PSU

Among all child workers in Surat Thani and Samut Sakhon, 40 children were working over 48 hours a week. Among them, 42.5 percent were in the seafood industry, 37.5 percent in other industries, and 20.0 percent in the shrimp industry. Most of the children working over 48 hours a week were in Samut Sakhon (82.5 percent, n=33/40) and in the 15-17 age group (85.0 percent, n=34/40). Twenty individuals were found to be working 60 or more hours/week (data not shown).

Migrant children worked much longer hours per week (on average, 47 hours/week, SD 13.1) than Thai children (30 hours/week, SD 18.1) (data not shown).

The TDRI survey team noted that many children in primary processing or factory work were able to precisely recall their working hours, as their workplaces would have a clock-in and clock-out time. Nonetheless, it is not clear whether the children were giving a true account of their actual working time, as those who indicated that they worked for 48 hours may have been instructed to do so by their employers. This is because employers who allowed children to work beyond 48 hours would be violating Thailand’s child labor laws as stipulated in the *Labour Protection Act (1998)*.

By way of follow-up to the survey results, the research team discussed these findings with parents, children, community leaders, and NGOs in the three provinces and asked them to comment on the high working hours among migrant children. Respondents noted that working children in their communities frequently worked as many hours as adults and gave three reasons for this:

First, respondents noted that migrant parents who work in peeling sheds and informal sites routinely bring children as young as five years of age to their worksites so they can supervise them during the day. Over the course of the day, children might help at intervals with tasks such as passing equipment to workers, procuring, lifting, and sorting raw materials, and simple processing. Since these children spend the same number of hours at the worksites as their parents do, their “working hours” are reported as identical to those of adults. Respondents noted that not all of this time was spent working, but that children frequently played onsite as adults worked.

The second explanation given for children’s long working hours was that those children who worked at all were those who did so because they needed income; as a result, their working hours were long. This explanation is substantiated by our analysis of the reasons given for not attending school among non-school-going children working in the shrimp and seafood industries: 56.3 percent of children reported needing to work for income (Figure 37). In particular, they noted that children of legal working age (15-17) were expected to work alongside adults and complete the same tasks as adults. They worked a full, eight-hour shift, and since employers typically allow their workers to work up to six days per week, many working children in this category chose to work for the maximum allowable time. It should be noted that 39.6 percent of respondents (n=142/359) in the TDRI survey reported working precisely 48 hours exactly per week.⁶²

⁶² TDRI, *The Demand for Immigrant Labour in Agriculture*, 57 (Fig 4.13, 4.14)

The third explanation given was applicable to children engaged in home-based work. In the areas surveyed, there were a number of families in which one parent worked outside the home (for example, a father who worked on a fishing vessel) and the other parent worked at home while looking after the children. This home-based work arrangement, made through a local seafood supplier, would involve peeling shrimp and other simple seafood processing at home. Adults and children would collaborate on this home-based work, which, depending on the availability of raw materials and number of people working at home, could be as long as 8-10 hours per day during peak season. Respondents noted that such work would begin at 5:00 a.m. and extend until the work was completed. In the low season (March to September), working hours could be as short as one hour, with work conducted two to three days per week. From September to December, high season for shrimp, work could extend to 10 hours a day, seven days a week. Given the seasonal nature of this work (and the resultant irregular opportunity for income generation), many migrants work as many hours as possible during high season.

Migrant and Thai children comparison, Samut Sakhon

Findings in the TDRI data (Table 35) for migrant children in the shrimp/seafood industries are similar to those in the DPU data (Table 37). Migrant children were working very long hours: a mean of 50.4 hours/week, similar to the 49.6 hours/week worked among migrant children in the TDRI data. Children aged 15-17 had worked on average two hours longer (50.7) than younger children in the past seven days. Among the seven children in the shrimp/seafood industries with no documents, mean working hours were extremely long at 68.3 hours/week, compared to children in those industries with documents (49.4 hours/week).

Table 37. Working hours among migrant children by age group, documents, language ability, industry, DPU

	N who could specify hours	Mean number of hours worked per week	Standard Deviation (hours)	Range (hours)
Age group[^]				
5-12	7	48.3	4.1	42 – 56
13-14	11	48.2	3.2	42 – 56
15-17	128	50.7	10.5	30 – 98
Documents[^]				
Has documents	139	49.4	8.3	48 – 98
No documents	7	68.3	20.0	30 – 90
Language ability[^]				
Speaks Thai	78	49.1	9.5	30 – 98
Does not speak Thai	68	51.7	10.3	30 – 90
Industry				
Shrimp or seafood	146	50.4	9.9	30 – 98
Other	48	53.9	11.3	28 – 91
All shrimp/seafood workers[^] **	146	50.4	9.9	30 – 98

*Among children who had worked in the past 7 days

**9 missing

Source: DPU

[^]Shrimp/seafood workers only

Figure 27. Mean and range of weekly hours worked by children in the shrimp/seafood industries

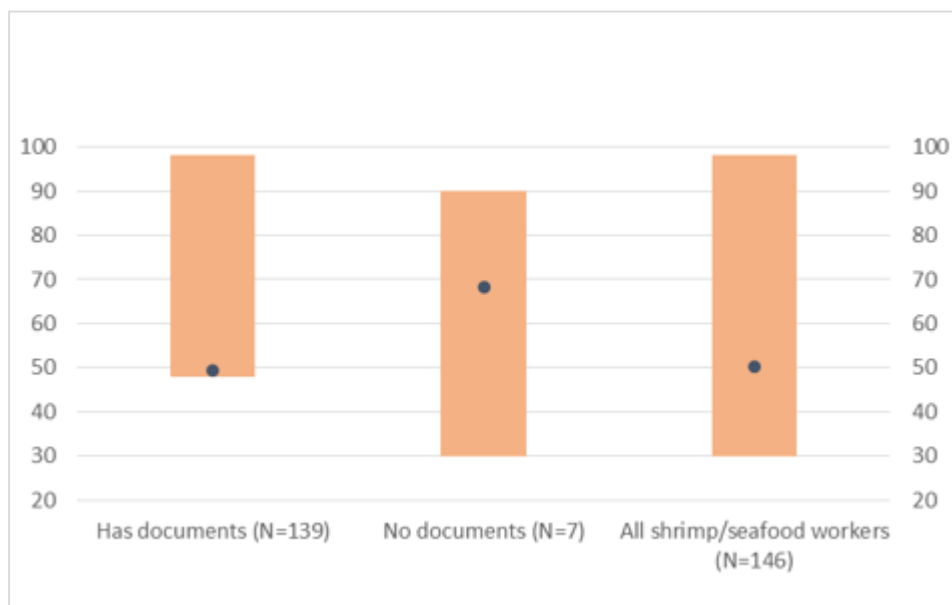


Figure 27 is associated with Table 37

Children who spoke Thai and those who did not speak Thai were working similar mean hours/week. Table 37 shows that children in seafood/shrimp were working slightly fewer hours on average (50.4 hours) than those in other sectors (53.9 hours).

Time of Day Worked

Among children in Surat Thani who could recall their start and end times of work (n=18), the most commonly reported hours worked were between 8:00 a.m. and 5:00 p.m. (n=7). In Nakhon Si Thammarat, where there were 87 working children who could recall their start and end times, the most commonly reported working times were 6:00 a.m. to 4:00 p.m., 7:00 a.m. to 2:00 p.m., and 8:00 a.m. to 5:00 p.m. (n=4, respectively). Among children who could recall their working times in Songkhla (n=220), the most commonly reported shifts were 8:00 a.m. to 9:00 a.m. (n=13), 6:30 a.m. to 11:30 a.m. (n=9), 8:00 a.m. to 5:00 p.m. (n=8), and 5:00 a.m. to 8:00 a.m. (n=8).

Generally, children appeared to be working either morning shifts or evening shifts for a few hours at a time, which suggests that educational interventions designed to allow children to attend a morning or afternoon session of school would be most accessible. However, a few children (n=19) were working full days, from 8:00 a.m. to 5:00 p.m. Of great concern are the 122 children who reported working between 10:00 p.m. and 6:00 a.m., in contravention of the *Thai Labour Act* (please see the occupational hazards section for more detail).

Wages

Thailand has a nationwide minimum daily wage of THB 300 per day for full-time work. Most migrant workers in the shrimp and seafood processing industry, however, work for a “piece rate” based on the amount of seafood processed that day. Key informants in Nakhon Si Thammarat indicated that workers in that province are generally paid four baht per kilo of shrimp peeled. The tables and figures that follow provide calculations

of hourly pay based on survey responses about amounts earned by children who had worked in the seafood and shrimp industry during the previous seven days.⁶³

Children in the shrimp and seafood industries were paid almost the same amount per hour in Samut Sakhon (34.7 baht, SD 11.0) and Surat Thani (31.8 baht, SD 14.2). As may be expected, older children were generally paid more than younger children. Females were paid more than males in Samut Sakhon—35.2 baht (SD 12.8) and 33.6 baht (SD 8.0), respectively—although the inverse was true in Surat Thani, where males earned more than females (39.8 baht, SD 19.4 and 26.1 baht, SD 5.5, respectively). Children in the seafood industry were paid slightly more per hour than those in the shrimp and other industries. In the TDRI study, migrant children were paid less (33.6 baht, SD 10.0) than Thai children (36.6 baht, SD 12.5).

Table 38. Hourly pay in Samut Sakhon and Surat Thani by age, sex, industry

	Pay per hour (baht)							
	Samut Sakhon				Surat Thani			
	N	Mean	SD	Range	N	Mean	SD	Range
Age group*								
5-12 years	2	7.4	2.3	6 – 9	-	-	-	-
13-14 years	16	27.8	15.3	9 – 77	3	23.9	4.3	19 – 28
15-17 years	91	36.5	8.9	0 – 58	9	34.5	15.6	19 – 69
Sex*								
Male	44	33.6	8.0	19 – 46	5	39.8	19.4	21 – 69
Female	64	35.2	12.8	0 – 77	7	26.1	5.5	19 – 31
Industry								
Shrimp	59	34.0	9.7	0 – 58	2	19.2	0	-
Seafood	50	35.4	12.5	8 – 77	10	34.4	14.4	4 – 84
Other	151	29.7	26.6	0 – 231	20	30.4	10.3	13 – 58
Status*								
Thai	38	36.6	12.5	0 – 77	-	-	-	-
Migrant	71	33.6	10.0	6 – 58	-	-	-	-
All shrimp/seafood workers*	109	34.7	11.0	4 – 90	12	31.8	14.2	19 – 69

*Among children in shrimp/seafood industries only

Source: TDRI, no data available from PSU

Migrant and Thai children comparison, Samut Sakhon

In the DPU survey, wage rates among migrant children were extremely low, with children working in the shrimp/seafood industries receiving on average 6.6 baht/hour. Counter-intuitively, children who spoke Thai were paid slightly less per hour (6.0 baht) than those who did not speak Thai (7.2 baht). Children with documents were paid slightly more than children without documents. By industry, similar amounts were received per hour. Older children were paid more than younger children.

Anecdotally and in qualitative work, the DPU survey team found that migrant children reported being given small amounts of money for snacks and similar items by factory bosses. This indicates that their work was

⁶³ Please see the section entitled “The Impact of Changes in the Minimum Wage” for a more detailed discussion of the data in this section.

treated very informally, in the nature of “helping out” parents, rather than children being considered formal, salaried employees. The children were also not working with the same intensity as adults and not in the same main jobs.

Table 39. Wage per hour among migrant children by age group, documents, language ability, industry, DPU*

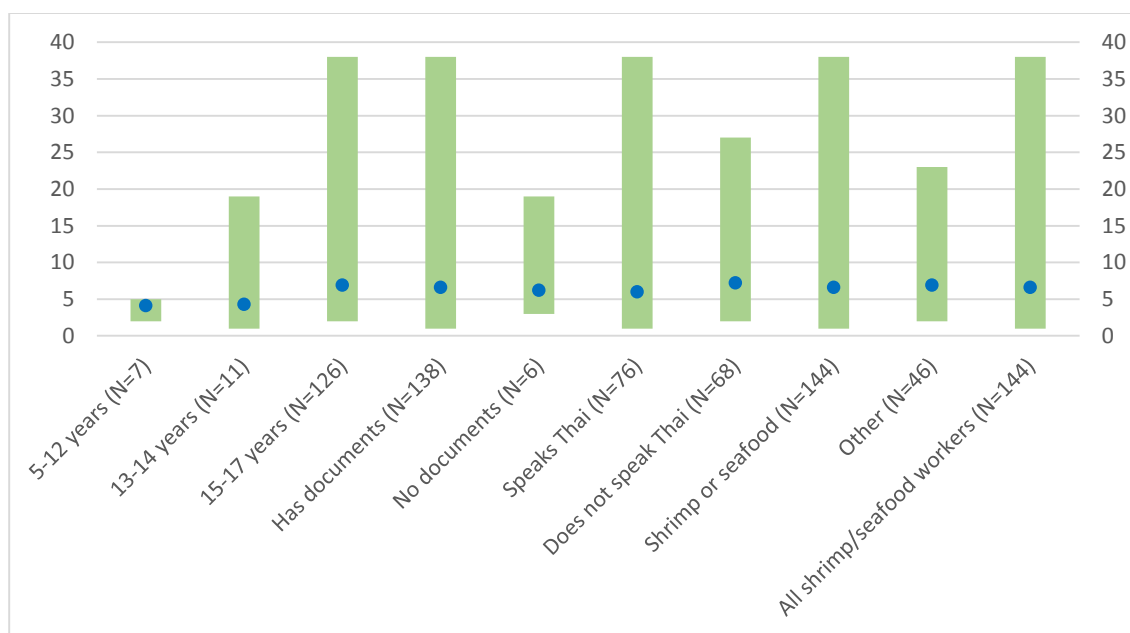
	N who could specify wage	Mean number amount received per hour (baht)	Standard Deviation (baht)	Range (baht)
Age group^				
5-12	7	4.1	1.2	2 – 5
13-14	11	4.3	5.0	1 – 19
15-17	126	6.9	7.5	2 – 38
Documents^				
Has documents	138	6.6	7.3	1 – 38
No documents	6	6.2	6.5	3 – 19
Language ability^				
Speaks Thai	76	6.0	7.4	1 – 38
Does not speak Thai	68	7.2	7.0	2 – 27
Industry				
Shrimp or seafood	144	6.6	7.2	1 – 38
Other	46	6.9	6.3	2 – 23
All shrimp/seafood workers^	144	6.6	7.2	1 – 38

*Among children who had worked in the past 7 days

Source: DPU

^Among shrimp/seafood workers only

Figure 28. Mean and ranges of wages per hour declared by migrant children, DPU*



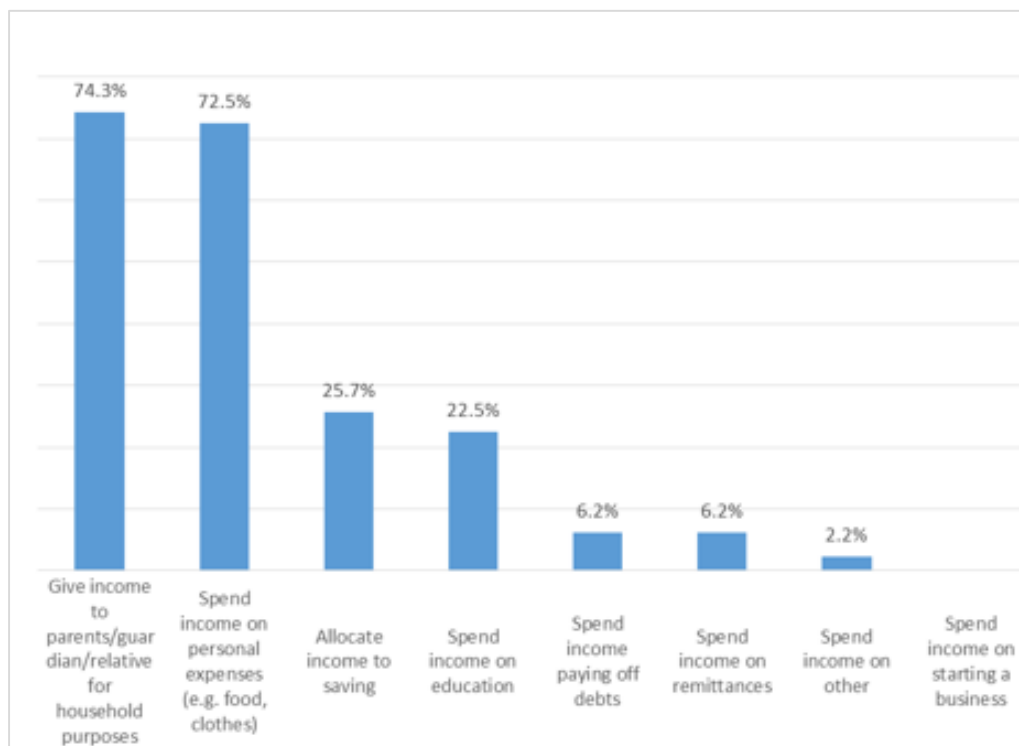
*Among children who had worked in the past 7 days

Source: DPU

Figure 28 is Associated with Table 39

Children were also asked how they spent their income. Most children in the shrimp/seafood industries (74.3 percent) passed their income to parents or relatives for household purposes, while 22.5 percent were spending their income on education. Children spending on education were mostly Thai, as explained below. Three-quarters of children were spending their wages on personal expenses, and one in four children were allocating their wages to savings.

Figure 29. How income is spent by children in the shrimp/seafood industries



Multiple responses possible, totals sum > 100% Source: TDRI, PSU

Responses by migrant and Thai children working in the shrimp/seafood industries in Samut Sakhon were strikingly different. Among migrant children, the most commonly reported expenditure was passing income to parents or relatives for household purposes (79.7 percent), followed by spending income on personal expenses (44.6 percent). Among Thai children, three-quarters (73.2 percent) were spending income on personal expenses, followed by 56.1 percent giving money to parents or relatives. Only three migrant children in the sample (4.1 percent) were spending on education, compared to seven Thai children (17.1 percent).

Interviews with migrant parents corroborated the findings that about two-thirds of working children’s income would go towards household expenses. Parents noted that resource-pooling at the household level was a common practice, particularly for low-income households. Migrant parents in Samut Sakhon offered the following hierarchy for how money would ideally be allocated: (1) household consumption, (2) utilities, (3) saving and paying off debt, (4) children’s education, and (5) other.

Table 40. How income is spent among Thai and migrant children in the shrimp/seafood industries in Samut Sakhon

	Thai		Migrant	
	N	%	N	%
Give income to parents/guardian/relative for household purposes	23	56.1	59	79.7
Spend income on education	7	17.1	3	4.1
Spend income on personal expenses (e.g., food, clothes)	30	73.2	33	44.6
Allocate income to saving	10	24.4	7	9.5
Spend income paying off debts	1	2.4	3	4.1
Spend income on remittances	1	2.4	13	17.6
Spend income on starting a business	-	-	-	-
Spend income on other	-	-	-	-

*Multiple responses possible, totals may sum >100%

Source: TDRI

Work location

Table 41. Work location among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani

Work location	Samut Sakhon N=126		Surat Thani N=23		Total N=146	
	N	%	N	%	N	%
Fishing boat	5	4.0	6	23.1	11	7.4
Hatchery/farm	-	-	1	3.9	1	0.7
Trader	1	0.8	3	11.5	4	2.7
Processing factory	59	46.8	2	7.7	61	40.9
Primary processing	37	29.4	6	23.1	43	28.9
Frozen storage	19	15.1	-	-	19	12.8
At family dwelling	7	5.6	8	30.8	15	10.1
Other	6	4.8	-	-	6	4.0

*Multiple responses possible, totals may sum >100%

Source: TDRI, no data available from PSU

Table 42. Work location among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla

Work location	Nakhon Si Thammarat & Songkhla N=323	
	N	%
Fishing boat	120	37.2
Hatchery/farm	30	9.3
Trader	60	18.6
Processing factory	15	4.6
Primary processing	46	14.2
Frozen storage	-	-
At family dwelling	52	16.1
Other	-	-

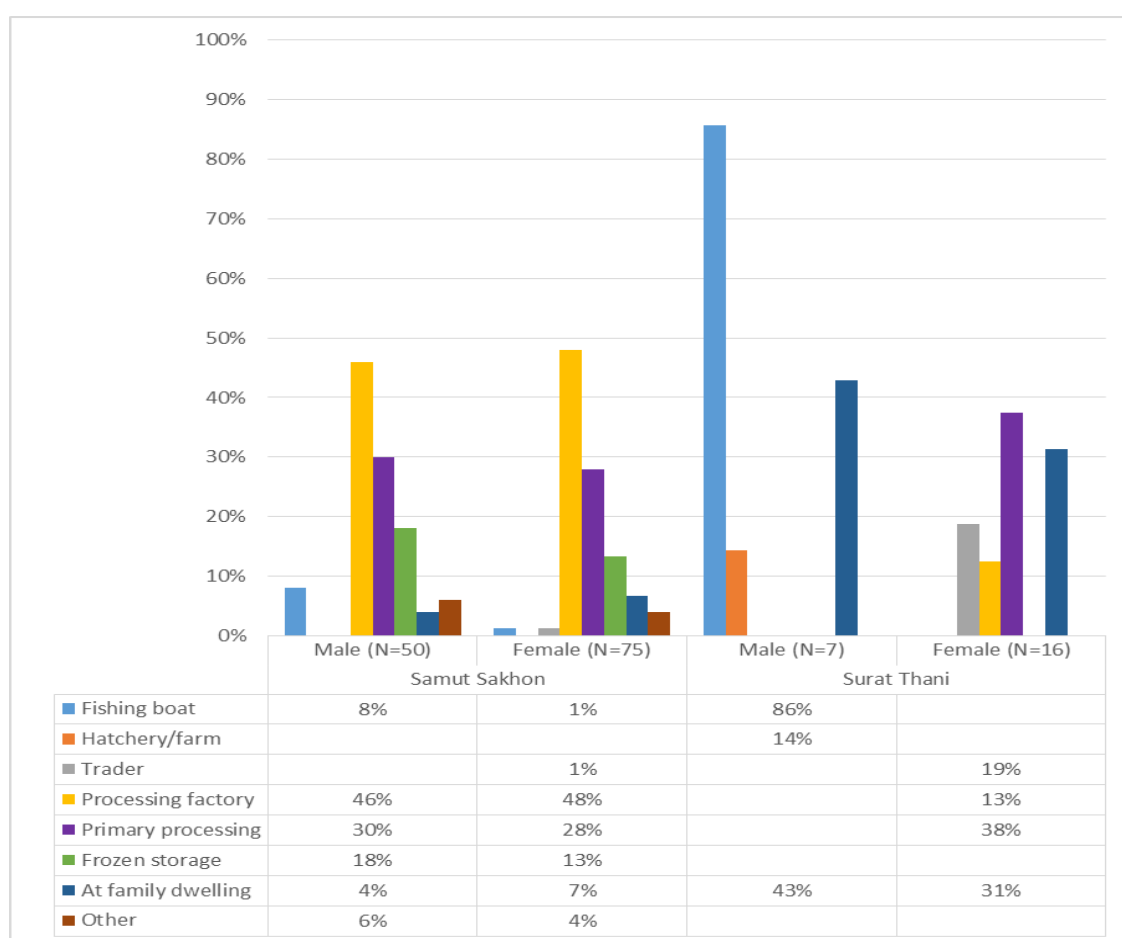
*Single response question

Source: PSU report

Work locations differed greatly by province. In Samut Sakhon, half of children (46.8 percent) were in processing factories, and 29.4 percent were in primary processing. In Surat Thani, almost a third of children were working at home (30.8 percent), and 23.1 percent were working on fishing boats and in primary processing, respectively (Table 41). In Nakhon Si Thammarat and Songkhla, over a third of children (37.2 percent) were working on fishing boats in coastal fisheries, and one in five were working as traders (18.6 percent).

Fishing boat workers were mostly male in Samut Sakhon and Surat Thani (data not available for Nakhon Si Thammarat and Songkhla). In Samut Sakhon, similar proportions of males (46.0 percent) and females (48.0 percent) were working in processing factories and in primary processing (male-30.0 percent, female-28.0 percent).

Figure 30. Work location among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani, by sex



*Multiple responses possible, totals may sum >100%

Source: TDRI, no data available from PSU

By age groups in Samut Sakhon and Surat Thani (data not shown), just 11 children aged 5-12 were working in shrimp or seafood industries, with nine of them working in primary processing. Among the 23 children aged 13-14, a third (n=8/23) were working in primary processing, with one in five (n=5/23) working in processing factories. Among 115 children aged 15-17, most (48.7 percent, n=56/115) were working in processing factories, followed by 22.6 percent (n=26/115) in primary processing and 16.5 percent (n=19/115) in frozen storage. Among the 11 fishing boat workers, eight were aged 15-17, and three were aged 13-14 (the latter including one female).

Migrant and Thai children comparison, Samut Sakhon

In the Samut Sakhon TDRI study overall, nearly half of children (46.8 percent) were working in a processing factory, with almost a third (29.4 percent) at a primary processing site. In the DPU survey, processing factories and primary processing were also the main work locations for migrant children. Forty-four percent were working in processing factories, with 29.1 percent in primary processing and 12.6 percent in frozen storage.

Table 43. Work location among migrant children in the shrimp/seafood industries, DPU

Location*	N	%
Processing factory	67	44.4
Primary processing	44	29.1
Frozen storage	19	12.6
Other	10	6.6
Fishing boat	5	3.3
Catching	4	2.7
Farm	1	0.7
Trader	1	0.7
Total	151	100.0

*4 missing Source: DPU

Tasks at work

One-third of all children (34.9 percent) working in the shrimp or seafood industries in Samut Sakhon and Surat Thani were conducting processing-related work, although these children were mostly in Samut Sakhon, where 38.9 percent were doing processing work. Similar proportions of children in both provinces were sorting shrimp and seafood products by size, with 16.1 percent overall doing this work. No children in Surat Thani were taking products to the freezer or cleaning shrimp/seafood products, compared to 7.9 percent and 7.1 percent, respectively, among children in Samut Sakhon.

Table 44. Tasks at work among those in the shrimp/seafood industries in Samut Sakhon and Surat Thani

Task	Samut Sakhon N=126		Surat Thani N=23		Total N=149	
	N	%	N	%	N	%
Feeding	-	-	2	8.7	2	1.3
Cleaning hatchery or shrimp pond	-	-	-	-	-	-
Catching shrimp or seafood	2	1.6	9	39.1	11	7.4
Sorting shrimp and seafood products by size	20	15.9	4	17.4	24	16.1
Weighing	4	3.2	2	8.7	6	4.0
Taking and lifting shrimp/seafood products to freezer	10	7.9	-	-	10	6.7
Cleaning shrimp/seafood products	9	7.1	-	-	9	6.0
Processing related	49	38.9	3	13.0	52	34.9
Take shrimp and seafood products for sun drying	9	7.1	-	-	9	6.0
Packaging	11	8.7	7	30.4	18	12.1
Other task	14	11.1	3	13.0	17	11.4

*Multiple responses possible, totals may sum >100%

Source: TDRI, no data available from PSU

A higher proportion of boys than girls were doing processing work in Samut Sakhon (44.0 percent and 34.7 percent, respectively). One in four girls were sorting shrimp and seafood products by size in Samut Sakhon, compared to one in 25 boys. One in 10 boys were cleaning shrimp/seafood products in Samut Sakhon, compared to one in 20 girls. Small sub-sample sizes limit meaningful interpretation for Surat Thani, but we can see that all seven boys were involved in catching shrimp or seafood, compared to one in 10 girls. In Surat Thani, girls were more likely to perform packaging work (37.5 percent) compared to boys (14.3 percent).

Table 45. Tasks at work among those in shrimp/seafood industries in Samut Sakhon and Surat Thani by sex

Task	Samut Sakhon				Surat Thani			
	Male N=50		Female N=75		Male N=7		Female N=16	
	N	%	N	%	N	%	N	%
Feeding	-	-	-	-	-	-	2	12.5
Cleaning hatchery or shrimp pond	-	-	-	-	-	-	-	-
Catching shrimp or seafood	2	4.0	-	-	7	100.0	2	12.5
Sorting shrimp and seafood products by size	2	4.0	18	24.0	2	28.6	2	12.5
Weighing	3	6.0	1	1.3	2	28.6	-	-
Taking and lifting shrimp/seafood products to freezer	9	18.0	1	1.3	-	-	-	-
Cleaning shrimp/seafood products	5	10.0	4	5.3	-	-	-	-
Processing related	22	44.0	26	34.7	-	-	3	18.8
Take shrimp and seafood products for sun drying	2	4.0	7	9.3	-	-	-	-
Packaging	5	10.0	6	8.0	1	14.3	6	37.5
Other task	6	12.0	8	10.7	1	14.3	2	12.5

*Multiple responses possible, totals may sum >100%

Source: TDRI, no data available from PSU

By age groups (data not shown), 91 percent (10 of 11) of those aged 5-12 were in processing-related work. Among the 23 children aged 13-14, seven were doing processing work, while three were sorting products and packaging. Among 115 children aged 15-17, one-third (30.4 percent, n=35/123) were doing processing work, with 18.3 percent (n=21/123) sorting products.

Migrant and Thai children comparison, Samut Sakhon

In Samut Sakhon, tasks differed slightly between Thai and migrant children. Among 77 migrant children, 45.5 percent were working in processing-related tasks, followed by 23.4 percent who sorted shrimp and seafood products by size. Among 49 Thai children, 28.6 percent were in processing, and 18.4 percent selected the option “other” tasks (data not shown). Similarly, the majority of migrant children in the DPU survey were doing processing-related work (57.6 percent). Over 17 percent were cleaning shrimp and seafood products, with smaller proportions of children doing weighing, packaging, and other tasks.

Table 46. Tasks at work among migrant children in the shrimp/seafood industries, DPU

Task*	N	%
Processing related	83	57.6
Clean product	25	17.4
Other	13	9.0
Select product size	7	4.9
Weighing	7	4.9
Packaging	6	4.2
Take product to freezer	2	1.4
Farm related (e.g., feeding)	1	0.7
Total	144	100.0

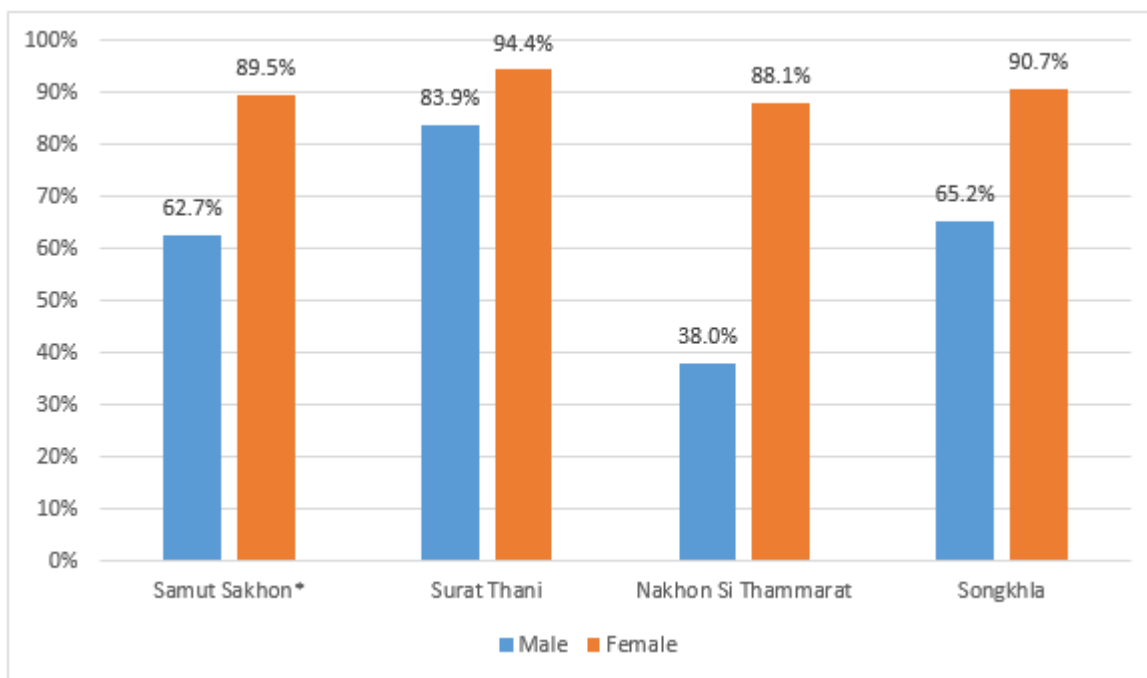
*11 missing

Source: DPU

Household work

A much higher proportion of girls in all provinces did household chores compared to boys, with 90.2 percent of girls doing chores, compared to 61.2 percent of boys (data not shown).

Figure 31. Proportion of males and females who normally do household chores



*2 missing

Source: TDRI, PSU

Overall, children aged 13-14 were spending more time on average on household chores—around 7.5 hours/week (SD 6.7)—compared to 5- to 12-year-olds (mean 6.2 hours, SD 4.7) and 15- to 17-year-olds (mean 5.9, SD 5.1). A possible reason for this is that 13- to 14-year-olds worked shorter hours than 15- to 17-year-olds in jobs outside the home, so they might help more at home as a result; however, many of them (77.8 percent) were currently in school (data not shown).

Table 47. Hours spent on household chores/week by province, age, sex

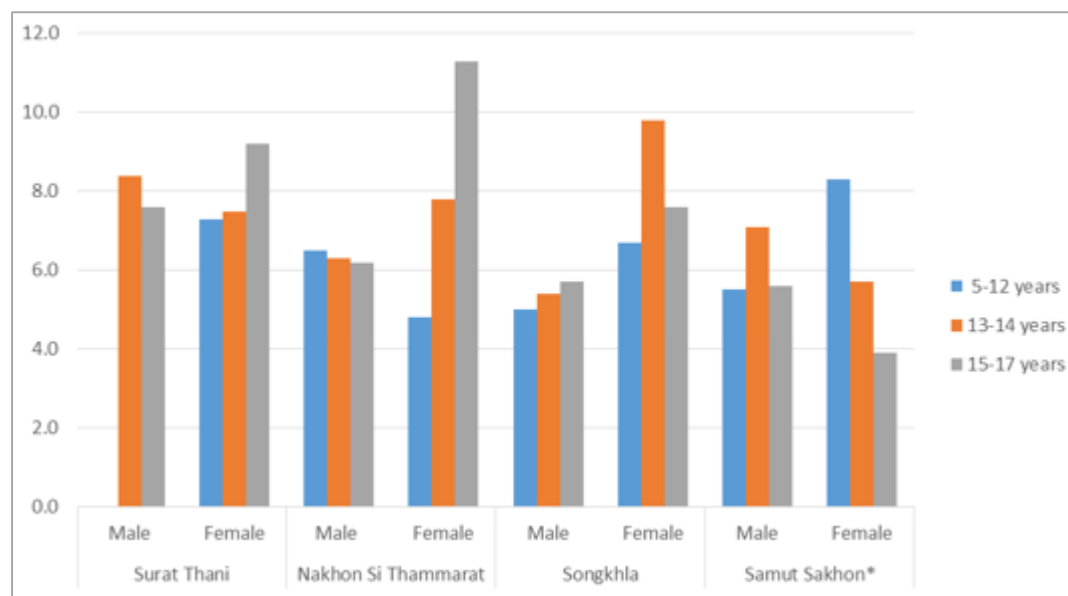
	5-12 years			13-14 years			15-17 years			Total		
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD
Samut Sakhon*												
Male	5	5.5	5.3	17	7.1	6	51	5.6	5.6	73	6.0	5.6
Female	13	8.3	5.7	20	5.7	4.3	136	3.9	4.1	169	4.4	4.4
Surat Thani												
Male	-	-	-	11	8.4	7.4	13	7.6	5.9	24	8.0	6.5
Female	5	7.3	6.4	4	7.5	4.7	24	9.2	5.4	33	8.7	5.4
Nakhon Si Thammarat												
Male	10	6.5	2.1	3	6.3	6.7	13	6.2	3.1	26	6.3	3.1
Female	10	4.8	3.9	10	7.8	2.7	20	11.3	5.2	40	8.8	5.1
Songkhla												
Male	45	5.0	3.7	40	5.4	4.2	63	5.7	4.1	148	5.4	4.0
Female	76	6.7	5.1	50	9.8	9.1	66	7.6	5.1	192	7.8	6.5
Total	164	6.2	4.7	155	7.5	6.7	388	5.9	5.1	707**	6.3	5.4

*2 missing

**Row total only

Source: TDRI, PSU

Figure 32. Mean number of hours per week spent on household chores



*2 missing

Source: TDRI, PSU

Figure 32 is associated with Table 47

There were some notable differences in time spent on household chores by sex and province. Among older children in Samut Sakhon, boys reported spending more time on chores than girls in the 13-14 and 15-17 age groups (e.g., boys aged 13-14 spent 7.1 hours/week (SD 6), compared to 5.7 hours (SD 4.3) among girls in the same age group) (Table 47). In Samut Sakhon, girls overall were working outside the home 1.5 hours less than boys each week. On average, girls worked 36.8 hours (SD 18.7), compared to 38.4 hours (SD 17.5) among

boys, in worksite locations similar to those in which boys worked. Girls also earned slightly more per hour (mean 34.3 baht, SD 24.8, median 33.7 baht) than boys (mean 27.8 baht, SD 15.0, median 28.9 baht) (data not shown).

Boys aged 5-12 in Nakhon Si Thammarat were spending on average 1.7 hours longer on chores per week compared to girls aged 5-12, but this difference was not reflected among older children. In fact, the biggest discrepancy in hours spent on household chores was among 15- to 17-year-olds in Nakhon Si Thammarat, where girls were spending twice the number of hours per week on chores (11.3, SD 5.2) as boys (6.2, SD3.1) (Table 47).

Table 48. Tasks in household chores by sex

	Male		Female		Total	
	N	%	N	%	N	%
Cleaning	232	79.7	415	90.2	649	86.2
Laundry	180	61.9	377	82.0	559	74.2
Cooking	112	38.5	222	48.3	334	44.4
Looking after family members or others	102	35.1	145	31.5	247	32.8
Other chores	23	7.9	12	2.6	35	4.7

*Multiple responses permitted, totals may sum >100%

*2 missing for sex

Source: TDRI, PSU

While tasks did not vary greatly by province, some differences were observed by sex. For example, higher proportions of girls reportedly performed all household tasks except looking after family members, with the latter task performed by a slightly higher proportion of boys (35.1 percent) compared to girls (31.5 percent).

Migrant and Thai children comparison, Samut Sakhon

In the TDRI survey, Thai and migrant children spent a similar mean number of hours on chores per week (4.7 hours and 5.0 hours, respectively) (data not shown). Among migrant children in the DPU survey, 13- to 14-year-olds had spent slightly longer hours on household chores in the past seven days compared to other age groups.

Table 49. Hours spent on household chores among migrant children by age group, DPU

	N who could specify hours	Mean number of hours spent on household chores in past 7 days	Standard Deviation (hours)
5-12	61	4.0	2.5
13-14	34	5.6	4.7
15-17	175	4.4	4.0
Total	270	4.4	3.8

*Among children who had carried out chores in the past 7 days

Source: DPU

1.3 Education

School attendance

Fifty-nine percent of children sampled were attending school or a non-formal education center; however, more than one in three children (40.7 percent) were not currently attending school.

Table 50. Whether attending school by province among children in the shrimp/seafood industries

	School attendance							
	Yes I'm attending school		Yes I'm attending a non-formal education center		No I'm not attending school		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon	26	20.6	1	0.8	99	78.6	126	100.0
Surat Thani	12	52.2	1	4.4	10	43.5	23	100.0
Nakhon Si Thammarat	68	66.0	4	3.9	31	30.1	103	100.0
Songkhla	160	72.7	8	3.6	52	23.6	220	100.0
Total	266	56.4	14	3.0	192	40.7	472	100.0

Source: TDRI, PSU

Samut Sakhon had the highest proportion of children not attending school (78.6 percent). Over one-third of children in Surat Thani (43.5 percent) were not in school, followed by nearly one-third of children in Nakhon Si Thammarat (30.1 percent) and one-quarter of children in Songkhla (23.6 percent). The inverse was true for each province with respect to children attending school, with Songkhla having the highest proportion of children in school (72.7 percent). Few children overall were attending a non-formal education center (3.0 percent). These results may reflect the fact that children, particularly in the 5-12 age group, are unlikely to know the difference between formal Thai school and informal education centers, and thus may have responded that they were attending Thai school rather than informal school.

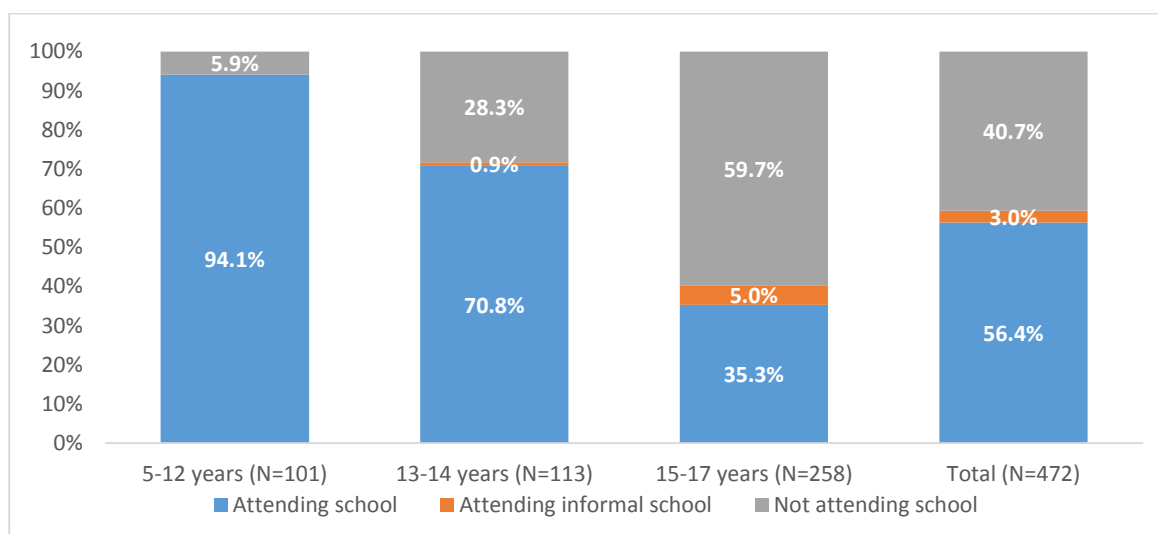
In all provinces, higher proportions of younger children were attending school compared to older children, who appeared less likely to be attending school. Among 5- to 12-year-olds, almost all (94.1 percent) were in school, compared to 70.8 percent of 13- to 14-year-olds and 35.3 percent of 15- to 17-year-olds. Over half of 15- to 17-year-olds were not attending school (59.7 percent).

Table 51. School attendance by age among children in the shrimp/seafood industries

Age group	Attending school		Attending informal school		Not attending school		Total	
	N	%	N	%	N	%	N	%
5-12 years	95	94.1	-	-	6	5.9	101	100.0
13-14 years	80	70.8	1	0.9	32	28.3	113	100.0
15-17 years	91	35.3	13	5.0	154	59.7	258	100.0
Total	266	56.4	14	3.0	192	40.7	472	100.0

*2 missing Source: TDRI, PSU

Figure 33. School attendance by age among children in the shrimp/seafood industries



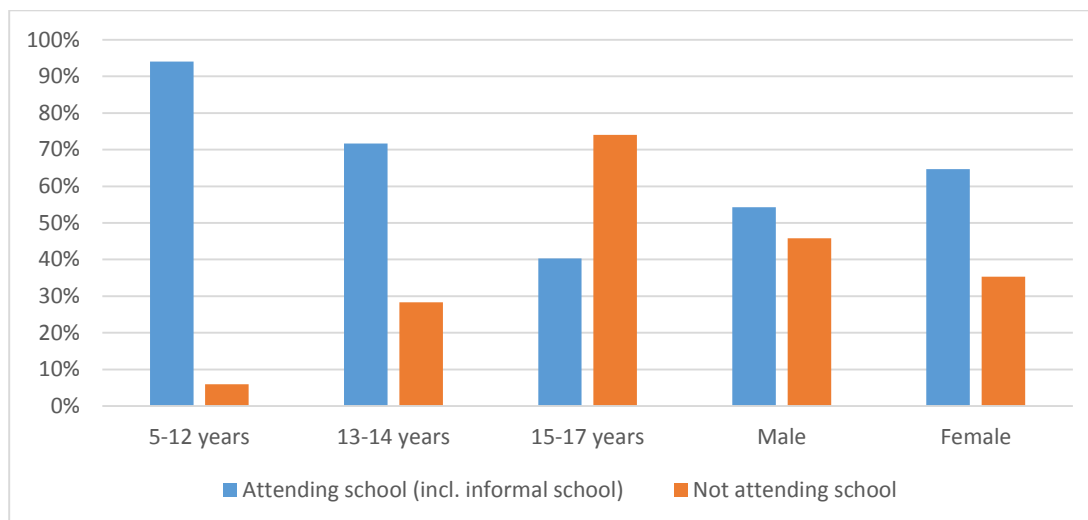
*2 missing Source: TDRI, PSU
Figure 33 is associated with Table 51

Table 52. School attendance by province, age among children in the shrimp/seafood industries

	School attendance							
	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon	9	100.0	19	100.0	98	100.0	126	100.0
Attending school	4/9	44.4	10	52.6	12	12.2	26	20.6
Attending informal school	-	-	-	-	1	1.0	1	0.8
Not attending school	5/9	55.6	9	47.4	85	86.7	99	78.6
Surat Thani	2	100.0	4	100.0	17	100.0	23	100.0
Attending school	2	100.0	1	25.0	9	52.9	12	52.2
Attending informal school	-	-	-	-	1	5.9	1	4.4
Not attending school	-	-	3	75.0	7	41.2	10	43.5
Nakhon Si Thammarat	19	100.0	25	100.0	59	100.0	103	100.0
Attending school	19	100.0	17	68.0	32	54.2	68	66.0
Attending informal school	-	-	-	-	4	6.8	4	3.9
Not attending school	-	-	8	32.0	23	39.0	31	30.1
Songkhla	71	100.0	65	100.0	84	100.0	220	100.0
Attending school	70	98.6	52	80.0	38	45.2	160	72.7
Attending informal school	-	-	1	1.5	7	8.3	8	3.6
Not attending school	1	1.4	12	18.5	39	46.4	52	23.6

*2 missing Source: TDRI

Figure 34. School attendance in all four provinces, by age, sex among children in the shrimp/seafood industries



*2 missing Source: TDRI, PSU
Figure 34 is associated with Table 52

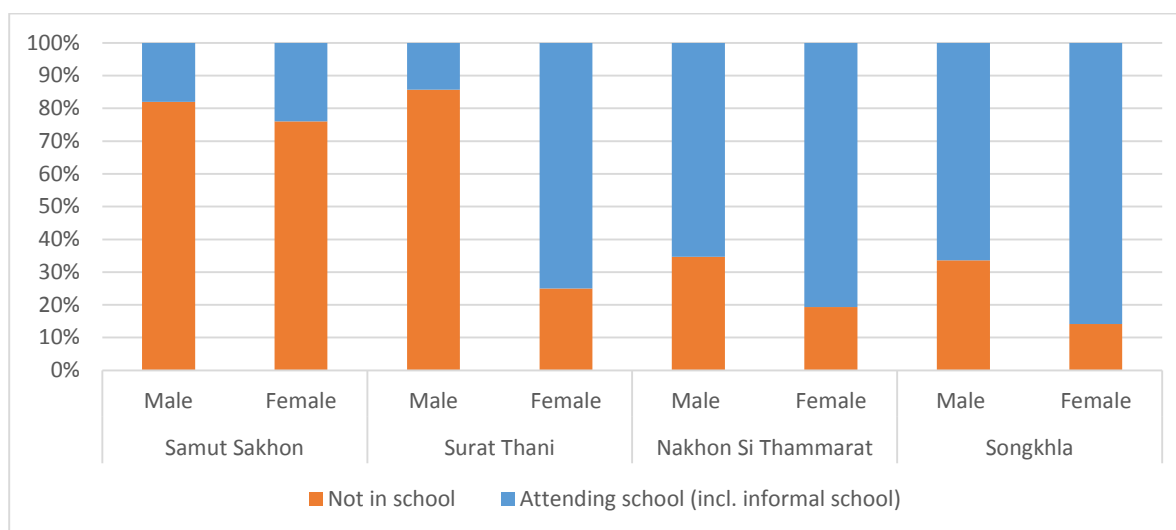
Overall, Samut Sakhon had the highest proportions of children not in school, including over half of 5- to 12-year-olds (55.6 percent). In the 15-17 age group, Samut Sakhon had the highest proportion not attending school (86.7 percent), followed by Songkhla (46.4 percent). The highest proportion of 15- to 17-year-olds attending school was observed in Nakhon Si Thammarat, where 54.2 percent were still in school, compared to half of 15- to 17-year-olds in Songkhla (45.2 percent) and Surat Thani (52.9 percent), and 12.2 percent in Samut Sakhon. Half of 13- to 14-year-olds were also not in school in Samut Sakhon (47.4 percent), compared to three-quarters of 13- to 14-year-olds in Surat Thani, 32.0 percent in Nakhon Si Thammarat, and 18.5 percent in Songkhla.

Table 53. School attendance by province, sex among children in the shrimp/seafood industries

	School attendance							
	Attending school		Attending informal school		Not in school		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon								
Male	9	18.0	-	-	41	82.0	50	100.0
Female	17	22.7	1	1.3	57	76.0	75	100.0
Surat Thani								
Male	1	14.3	-	-	6	85.7	7	100.0
Female	11	68.8	1	6.2	4	25.0	16	100.0
Nakhon Si Thammarat								
Male	44	61.1	3	4.2	25	34.7	72	100.0
Female	24	77.4	1	3.2	6	19.4	31	100.0
Songkhla								
Male	66	61.7	5	4.7	36	33.6	107	100.0
Female	94	83.2	3	2.6	16	14.2	113	100.0

Source: TDRI, PSU

Figure 35. School attendance by province, sex among children in the shrimp/seafood industries

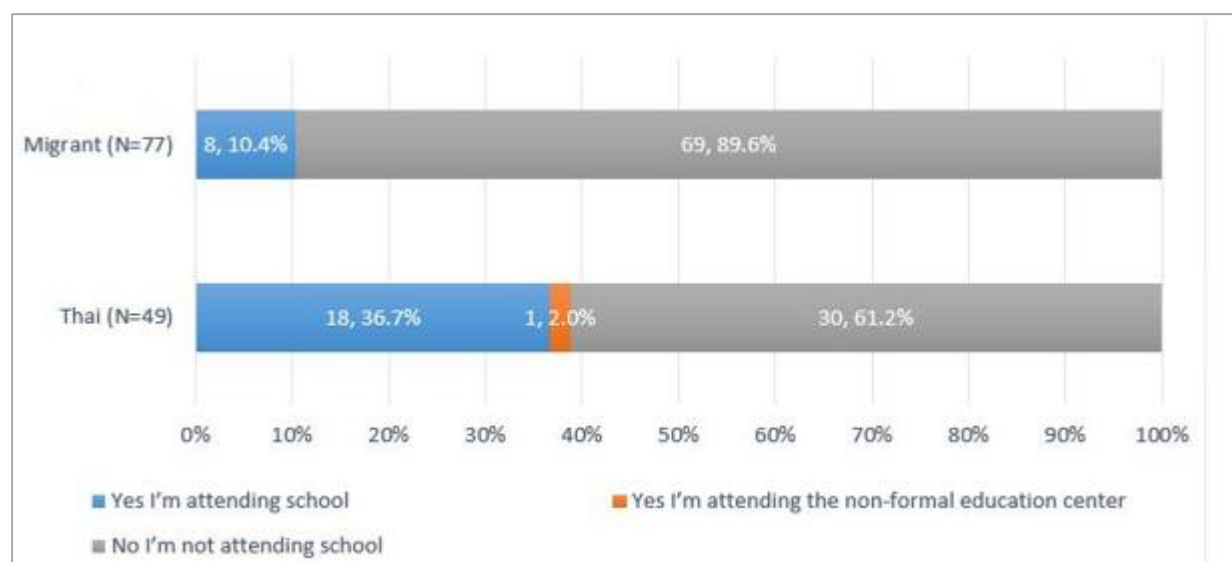


Source: TDRI, PSU

Figure 35 is associated with Table 53

Twice as many males as females were not attending school in Songkhla (33.6 percent and 14.2 percent, respectively). Over three times as many males as females were not attending school in Surat Thani (85.7 percent and 25.0 percent, respectively). In all provinces, higher proportions of females than males were attending school.

Figure 36. Reported school attendance among Thai and migrant children in the shrimp/seafood industries in Samut Sakhon

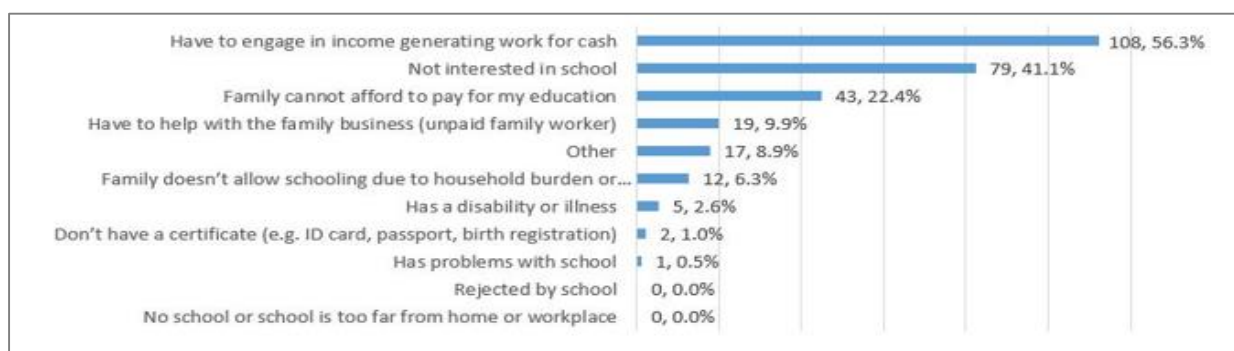


*1 missing

Source: TDRI

A higher proportion of migrant children than Thai children in the shrimp/seafood industries were not attending school, with 89.6 percent of migrant children not attending school, compared to 61.2 percent of Thai children.

Figure 37. Reasons children in the shrimp/seafood industries are not in school



*Multiple responses possible, totals will sum > 100%

Source: TDRI

Among non-school-going children in the shrimp/seafood industries, the main reason given for non-attendance was financial, with 56.3 percent of children needing to work for income. Strikingly, a full 41.1 percent stated that they were not interested in attending school. Five individuals had a disability or illness that prevented them from attending school.

There were great variations by province in the reasons cited for not attending school. Samut Sakhon saw the highest proportion (73 percent) compelled to work for income. In Nakhon Si Thammarat, a large proportion (58.1 percent) were not interested in school, compared to 50.0 percent of children in Songkhla and Surat Thani and 30.3 percent in Samut Sakhon. Nakhon Si Thammarat also had the highest proportion of children working as unpaid family workers (35.5 percent), compared to 9.6 percent in Songkhla, 10.0 percent in Surat Thani, and a much smaller proportion in Samut Sakhon. One-third of children in Nakhon Si Thammarat and Songkhla, respectively, indicated that their families could not afford to pay for their education, compared to 10.0 percent in Surat Thani and 14.1 percent in Samut Sakhon.

Table 54. Reasons for not attending school by province among children in the shrimp/seafood industries

Reason for not attending school	Samut Sakhon N=99		Surat Thani N=10		Nakhon Si Thammarat N=31		Songkhla N=52	
	N	%	N	%	N	%	N	%
Have to engage in income-generating work for cash	72	72.7	5	50.0	12	38.7	19	36.5
Not interested in school	30	30.3	5	50.0	18	58.1	26	50.0
Family cannot afford to pay for my education	14	14.1	1	10.0	11	35.5	17	32.7
Family doesn't allow schooling due to household burden or engaging in household chores	7	7.1	2	20.0	1	3.2	2	3.9
Have to help with the family business (unpaid family worker)	2	2.0	1	10.0	11	35.5	5	9.6
Don't have a certificate (e.g., ID card, passport, birth registration)	2	2.0	-	-	-	-	-	-
Have a disability or illness	1	1.0	-	-	-	-	4	7.7
No school, or school is too far from home or workplace	-	-	-	-	-	-	-	-
Rejected by school	-	-	-	-	-	-	-	-
Have problems with school	-	-	1	10.0	-	-	-	-
Other	7	7.1	1	10.0	5	16.1	4	7.7

*Multiple responses possible, totals will sum > 100%

Source: TDRI, PSU

Migrant and Thai children comparison in Samut Sakhon

Twice as many Thai children as migrant children indicated that they were not interested in attending school (46.7 percent and 23.2 percent, respectively), while twice as many Thai as migrant children reported that their families could not afford to pay for their education (23.3 percent and 10.1 percent, respectively).

Table 55. Reasons for not attending school among Thai and migrant children in the shrimp/seafood industries not in school currently in Samut Sakhon, TDRI

Reasons for not attending school	Thai (N=30)		Migrant (N=69)	
	N	%	N	%
Have to engage in income-generating work for cash	19	63.3	53	76.8
Not interested in school	14	46.7	16	23.2
Family cannot afford to pay for my education	7	23.3	7	10.1
Family doesn't allow schooling due to household burden or engaging in household chores	1	3.3	6	8.7
Have to help with the family business (unpaid family worker)	2	6.7	-	-
Don't have a certificate (e.g., ID card, passport, birth registration)	-	-	2	2.9
Have a disability or illness	1	3.3	-	-
No school or school is too far from home or workplace	-	-	-	-
Rejected by school	-	-	-	-
Have problems with school	-	-	-	-
Other	3	10.0	4	5.8

*Multiple responses possible, totals will sum > 100%

Source: TDRI

We now explore the education situation among migrant children in more detail, based on the DPU household survey.

Among working migrant children in the DPU survey, only 3.9 percent of children in the shrimp/seafood industries, a very low proportion, had ever attended school, compared to 12.2 percent of children working in other industries. Among the 192 migrant children who had never attended Thai school and who had worked in the past week, almost all (96.2 percent) cited having to work as the primary reason that they had never attended Thai school (Table 57).

Table 56. Ever attended school in Thailand among migrant children by age and industry, DPU

Ever attended school in Thailand	Shrimp/seafood industry*		Other industry		Total	
	N	%	N	%	N	%
5-12 years	1/7	14.3	-	-	1/7	14.3
13-14 years	1/12	8.3	2/6	33.3	3/18	16.6
15-17 years	4/136	2.9	4/43	9.3	8/179	4.5
Total	6/155	3.9	6/49	12.2	12/204	5.9

*7 missing

Table 57. Main reasons for never having attended school in Thailand among migrant children who worked in the past week in any industry, DPU

Main reason for never attending school in Thailand	N	%
Had to work	152	96.2
Other	2	1.3
Don't have 13 digit ID	2	1.3
Grew up/completed school elsewhere	2	1.3
School is too far away	-	-
Total	158*	100.0

*34 missing Source: DPU

At the same time, a large number of children (n=168) had both never attended school in Thailand and not worked in the past week. Among those children not studying or working, 37.3 percent cited having to work and 33.9 percent cited other reasons for never having attended school.

Table 58. Main reasons for never having attended school in Thailand among migrant children not studying or working, DPU

Main reason for never attending school in Thailand*	N	%
Had to work	44	37.3
Other	40	33.9
Don't have 13 digit ID	25	21.2
Grew up/completed school elsewhere	7	5.9
School is too far away	2	1.7
Total	118	100.0

*50 missing Source: DPU

By age group, among all children who had never attended school in Thailand (including those who worked in the past week and those not studying or working), one-third of migrant 5- to 12-year-olds cited not having the 13-digit ID as the primary reason for never having attended school in Thailand. Among children aged 13-14 and 15-17, most reported having to work (73.7 percent and 92.1 percent, respectively) as the main reason for never having attended school in Thailand.

Table 59. School attendance and reasons for not attending school among migrant children by age group, DPU

	Age group, N (%)			Total, N (%)
	5-12	13-14	15-17	
Never attended school in Thailand*	100 (40.6%)	28 (50.0%)	232 (93.9%)	360 (65.6%)
Main reason for never attending school**				
Grew up/completed school elsewhere	5 (6.9%)	1 (5.3%)	3 (1.6%)	9 (3.2%)
School is too far away	2 (2.8)	-	-	2 (0.7%)
Don't have 13 digit ID	23 (31.9%)	2 (10.5%)	2 (1.1%)	27 (9.6%)
Had to work	12 (16.7%)	14 (73.7%)	174 (92.1%)	200 (71.4%)
Other	30 (41.7%)	2 (10.5%)	10 (5.3%)	42 (15.0%)
Total	72 (100.0%)	19 (100.0%)	189 (100.0%)	280 (100.0%)

*9 missing **80 missing

Source: DPU

Among migrant children in the DPU survey, 31.0 percent (n=171/551, 7 missing) had at some time attended a non-formal education center in Thailand (data not shown). Recall that the majority of migrant children aged 15-17 (93.9 percent) had never attended formal Thai school or a non-formal education center, with just 5.7 percent having done so. Approximately one-half of those aged 5-12 (52.8 percent) and 13-14 (43.9 percent) had at some time attended an informal education center (data not shown).

Table 60. Ever attended Thai school among children in the shrimp/seafood industries by documents, DPU

	Has documents		Has no documents	
	N	%	N	%
Ever attended Thai school				
Yes	4/6	66.7	2/6	33.3
No	142/149	95.3	7/149	4.7
Total	146/155	94.2	9/155	5.8

Source: DPU

Among the six children in the shrimp/seafood industries who had at some time attended Thai school, four had legal documents, while two did not. Recall that a high proportion of children working in the shrimp/seafood industries had documents (94.2 percent). Here, we see that the majority who did not attend Thai school also had documents (95.3 percent). Recall also that many children cite other reasons for not attending school, the main one being having to work. This indicates that having documents alone is not enough to get children into school: children who cite needing to work likely need material or welfare support to encourage parents to enroll them in school.

Impact of home-based work and chores on school attendance and performance

The data did not show a clear pattern for how household labor affected school enrollment, attendance, or performance. Follow-up qualitative investigation through key informant interviews and focus group discussions also revealed mixed impacts. Generally, the effects of home-based work and chores on migrant children’s school attendance and performance seemed to be linked to parents’ perceptions of education, the extent to which parents were willing to balance their family’s workload with the educational commitments of their child, and the size of the migrant family. This section provides two case studies of migrant families’ efforts to balance their children’s chores and home-based work with schooling, with differing results.

Case study 1: Home-based work impacts school performance

Tun⁶⁴ and his wife have two children, a daughter aged 10 and a young son. Tun works in a peeling shed and occasionally helps with loading and unloading seafood at the Mahachai market early in the morning (1:00 a.m. to 4:00 a.m.). His wife works at a small seafood processing facility close to their home. Their daughter goes to school at Wat Sri Sutha Ram School, but is forced to miss class on occasion when Tun and his wife work overtime.

When interviewed, Tun and his wife indicated that earning money is their priority: on occasions when they must choose between their daughter’s school attendance and their own work, they choose the latter. Tun commented:

“My wife and I have two children. When we both have to work long hours (starting early in the morning), our daughter has to look after the baby. We know that if she misses too many classes, she will be unable to keep up, but we have no choice.”

⁶⁴ Names in these case studies have been changed.

Since both parents work, the majority of their family's household chores fall on the daughter. Tun and his wife estimated that their daughter spends approximately three to four hours a day doing household chores. This includes cleaning dishes, cooking, washing clothes (including her parents' work uniforms), cleaning up the house, and caring for the baby. They noted that these chores not only caused her to miss class, but also affected her school performance. Tun stated:

“On those days when there are a lot of household chores to do and both of us work overtime, all of the household work falls on our daughter. Sometimes when we come home late at night, we find her still cleaning up the dishes. By the time her household work is done, she is too tired to review her lessons or finish up her homework properly.”

Case study 2: Home-based work does not affect school performance

Min and his wife have an eight-year-old son who attends Wat Sri Sutha Ram School. His wife peels shrimp at home, taking in work from a local shed owner who processes shrimp for sale in Samut Sakhon, Bangkok, and other nearby provinces. When deciding whether to send their son to school, Min and his wife weighed their son's education against their need for help at home with home-based shrimp peeling and chores. Before sending their son to school, they discussed how to manage this trade-off. Both agreed that education was important for their son. Earning an educational qualification in Thailand would allow him to find better employment in the future than the processing work Min and his wife do now. They believe that if their son finds a job in a company employing Myanmar migrants, his Thai skills and educational qualifications will enable him to progress faster than his peers. Min noted:

“We know that we will earn less than before if we send our son to school, but we can make up for some of these losses during the first semester break in late September to October, which coincides with the high season for peeling. We consider the money that we don't earn as an investment in our son. Every baht we forsake means more baht our son will earn in the future.”

When school is in session, the family works together to complete the household chores, and Min and his wife try to keep their son's chores to a minimum so that he can concentrate on his studies. During the school year, their son helps by sweeping floors and cleaning clothes in the morning and then spends an hour or two in the afternoon helping with dishes and washing. He also helps with shrimp peeling, but the family makes an effort to keep his home-based workload at a level that enables him to review his lessons and do his homework. As Min explained:

“There is no point in sending him to school if he has no time to learn properly. Neither my wife nor I am educated, so we cannot help him with his homework. The best we can do is to make sure that he goes to school on a regular basis and that he has enough time to study on his own.”

1.4 Health and Occupational Hazards

Occupational hazards

The occupational hazards question was phrased in line with the provisions in the *Labour Protection Act (1998)*. Note that the results that follow should be interpreted in the context of the recent Ministry of Labour initiative to exercise strict scrutiny of child labor in fishing, hatcheries, farms, and seafood processing factories at all levels. Under this initiative, officials make random visits to seafood-related sites to inspect employment and safety conditions.

Survey data revealed differences in hazards by industry. Much higher proportions of children in shrimp or seafood, 25.9 percent, worked with fire, gas, or flames, compared to 12.7 percent in other industries. A quarter of children in shrimp and seafood, 23.3 percent, were also working in a wet or dirty place, compared to 7.6 percent in other industries. Follow-up interviews revealed that these hazardous working conditions also applied

to home-based work, with home-based work rendered more hazardous as a result of poor lighting conditions during the early morning and late evening working hours.

Table 61. Occupational hazards by industry

Hazard	Shrimp or seafood industry N=472		Other industry N=514		Total N=986	
	N	%	N	%	N	%
Working with fire, gas and/or flames	122	25.9	65	12.7	187	19.0
Working in a wet and/or dirty place	110	23.3	39	7.6	149	15.1
Working with dangerous tools (knives, etc.)	50	10.6	48	9.3	98	9.9
Working continually for more than 8 hours/day	53	11.2	33	6.4	86	8.7
Working in a dusty environment	19	4.0	67	13.0	86	8.7
Working in a noisy environment or vibration	25	5.3	40	7.8	65	6.6
Working in extreme temperature environment (e.g., cold or heat)	36	7.6	20	3.9	56	5.7
Working during 10:00 p.m. – 6:00 a.m.	88	18.6	34	6.6	122	12.4
Other hazard	33	7.0	6	1.2	39	4.0
Working with chemicals (pesticides, glues, etc.)	15	3.2	13	2.5	28	2.8

*Multiple responses possible, totals will sum > 100%

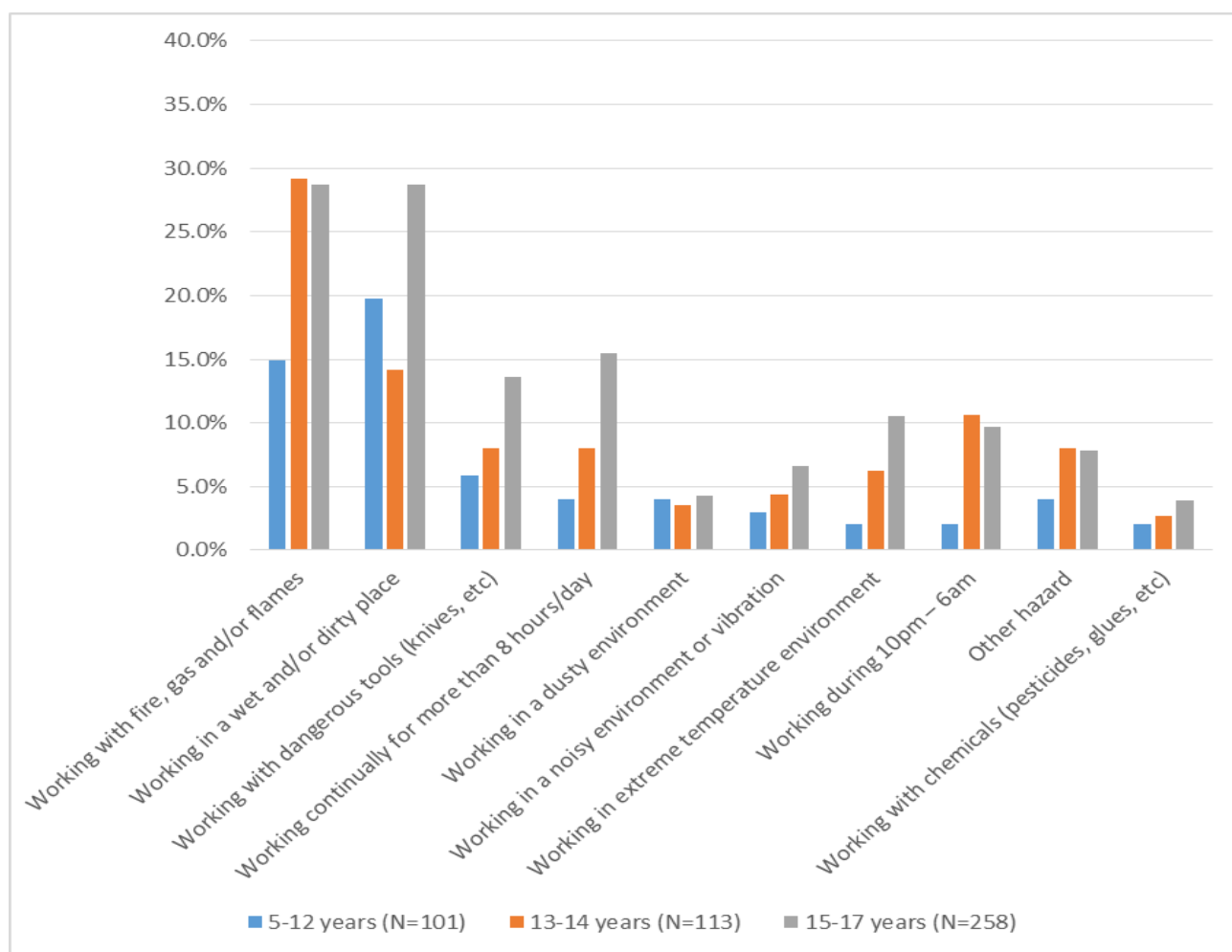
Source: TDRI, PSU

Of great concern are the 122 children who reported working between the hours of 10:00 p.m. and 6:00 a.m.⁶⁵ By industry, three times the proportion of children in shrimp and seafood were working during the night compared to other industry workers (18.6 percent versus 6.6 percent). Among those 122 children, 66.4 percent (n=81) were boys and 33.6 percent (n=41) were girls (data not shown). By age and sex, higher proportions of males were working during the night compared to girls in all age groups: for example, 18.9 percent (n=21) of males aged 13-14 worked these hours, compared to 11.3 percent (n=11) of girls in the same age group (data not shown). Nine children reported starting work at 3:00 a.m., with finishing times ranging from 6:00 a.m. to 12:00 p.m. One child reported working between 1:00 a.m. and 5:00 a.m. Older children appeared most likely to be working between 10:00 p.m. and 6:00 a.m., with 28.3 percent of children aged 13-14 working at those times, compared to 27.9 percent of 15- to 17-year-olds and 17.8 percent of 5- to 12-year-olds (Table 62).

Among children in the shrimp or seafood industries, almost twice as many 13- to 14-year-olds (29.2 percent) and 15- to 17-year-olds (28.7 percent) as 5- to 12-year-olds (14.9 percent) reported working with fire, gas, or flames. Generally, older children appear to be more exposed to workplace hazards of these and other kinds than younger children.

⁶⁵ Coded positively among children who answered yes to the question “Working between 10pm and 6am” or who could recall their working hours as falling within these times.

Figure 38. Occupational hazards among children in the shrimp/seafood industries



*Multiple responses possible, totals sum > 100%

Source: TDRI, PSU

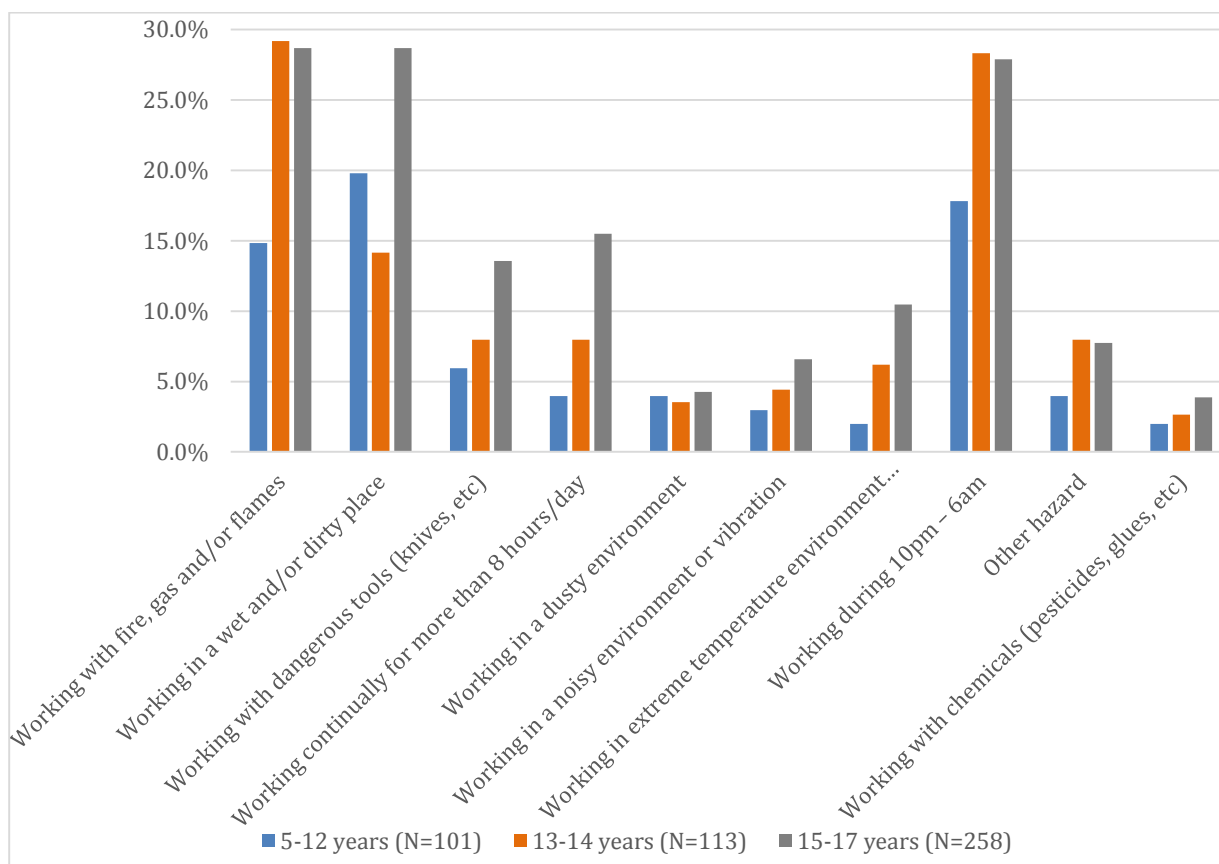
Table 62. Occupational hazards among children in the shrimp/seafood industries by age

Hazard	5-12 years N=101		13-14 years N=113		15-17 years N=258	
	N	%	N	%	N	%
Working with fire, gas, and/or flames	15	14.9	33	29.2	74	28.7
Working in a wet and/or dirty place	20	19.8	16	14.2	74	28.7
Working with dangerous tools (knives, etc.)	6	5.9	9	8.0	35	13.6
Working continually for more than 8 hours/day	4	4.0	9	8.0	40	15.5
Working in a dusty environment	4	4.0	4	3.5	11	4.3
Working in an environment of noise or vibration	3	3.0	5	4.4	17	6.6
Working in extreme temperatures (e.g., cold or heat)	2	2.0	7	6.2	27	10.5
Working during 10:00 p.m. – 6:00 a.m.	18	17.8	32	28.3	72	27.9
Other hazard	4	4.0	9	8.0	20	7.8
Working with chemicals (pesticides, glues, etc.)	2	2.0	3	2.7	10	3.9

*Multiple responses possible, totals will sum > 100%

Source: TDRI, PSU

Figure 39. Occupational hazards among children in the shrimp/seafood industries by age



*Multiple responses possible, totals will sum > 100%

Source: TDRI, PSU

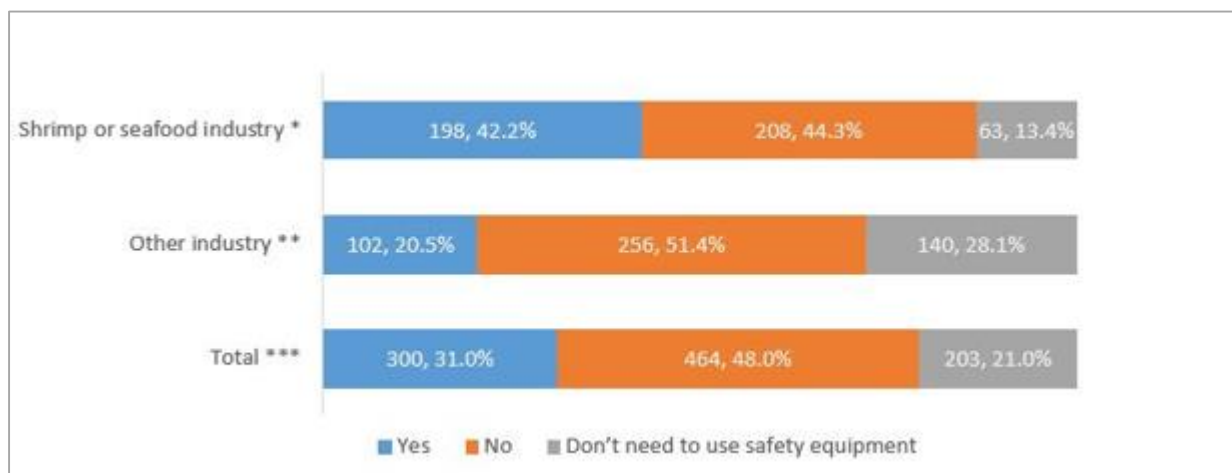
Children who were not self-employed or unpaid family workers were asked whether their employers allowed them to take a break during working hours (n=466, 56 missing) (data not shown). Ninety-five percent (n=442/466) were given breaks; however, one in 20 children (5.2 percent, n=24/466) were never allowed to take a break. Among these 24 children, 15 were in the shrimp and seafood industries, and nine were in other industries.

Personal Protective Equipment (PPE)

The *Occupational Safety, Health, and Environment Act (2011)* requires employers to provide standard personal protective equipment (PPE) to employees and to ensure that they use it (Section 22).

Survey respondents in the TDRI and PSU studies were asked whether they were provided with or wore any safety equipment or PPE (including suits, gloves, boots, and helmets) during work. Among all children, only 31.0 percent reported having PPE, while 48.0 percent reported not having it. One in five children stated that they did not need to use safety equipment.

Figure 40. Number of workers who were provided with or wore any safety equipment or protective equipment (PPE)



*3 missing

**16 missing

***19 missing

Source: TDRI, PSU

Twice the proportion of children in the shrimp and/or seafood industries, 42.2 percent, had PPE, compared to 20.5 percent in other industries in which children were employed. At the same time, high proportions of children reported not having any safety equipment—44.3 percent for shrimp/seafood and 51.4 percent in other industries. Given the occupational hazards that children face, as detailed above, the consequences of not having PPE can be serious.

Children across all industries who received safety equipment such as suits, boots, gloves, and helmets (n=300) were asked who provided it. Among all working children, two-thirds provided their own PPE, with three-quarters of children in shrimp and seafood providing their own safety equipment. Among children in other industries, a higher proportion reported that their employer provided PPE (32.4 percent), compared to children in the shrimp or seafood industries (18.7 percent).

Table 63. Who provides safety equipment by industry

	Shrimp or seafood industry		Other industry		Total	
	N	%	N	%	N	%
I provide the safety equipment myself	148	74.8	59	57.8	207	69.0
Employer provides safety equipment	37	18.7	33	32.4	70	23.3
Other	13	6.6	10	9.8	23	7.7
Total	198	100.0	102	100.0	300	100.0

Source: TDRI, PSU

Migrant and Thai children comparison, Samut Sakhon

High proportions of migrant children in shrimp/seafood industries reported using safety equipment (70.1 percent) compared to Thai children (52.1 percent).

Table 64. Possession of safety equipment among Thai and migrant children working in the shrimp/seafood industries in Samut Sakhon, TDRI

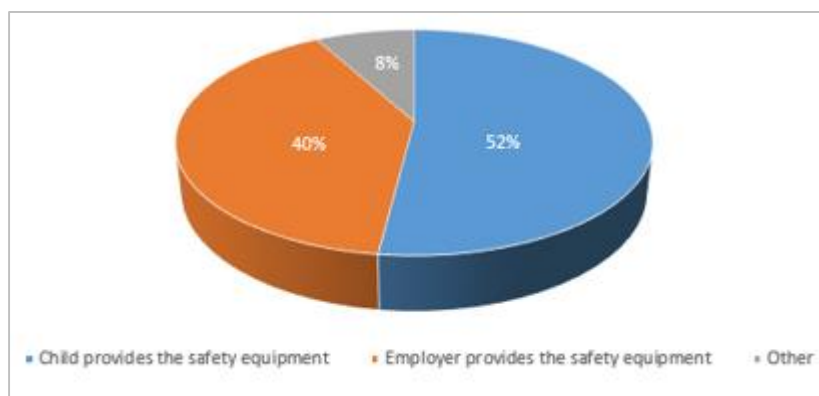
	Thai		Migrant	
	N	%	N	%
Yes	25	52.1	54	70.1
No	10	20.8	19	24.7
Don't need to use safety equipment	12	27.1	4	5.2
Total	47*	100.0	77	100.0

*1 missing

Source: TDRI

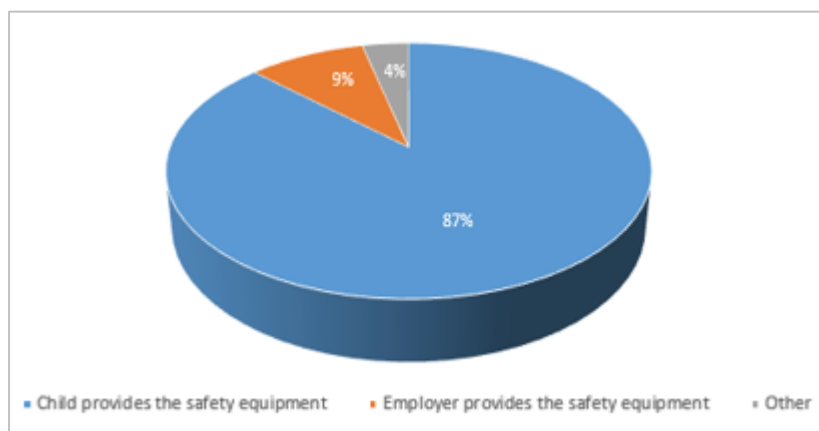
A much higher proportion of migrants (87.0 percent, [Figure 42]) than Thais (52.0 percent, [Figure 41]) working in the shrimp or seafood industries reported providing their own safety equipment.

Figure 41. Who provides safety equipment for Thai children working in the shrimp/seafood industries in Samut Sakhon



Source: TDRI

Figure 42. Who provides safety equipment for migrant children working in the shrimp/seafood industries in Samut Sakhon



Source: TDRI

Follow-up interviews with migrant parents who brought their children to their worksites noted that their employers expected parents to purchase protective equipment such as gloves and rubber shoes for the child. Migrant respondents working in larger and better quality *longs* stated that their employers provided them with

uniforms and protective equipment, and that, if their children were to work in such facilities, their work would be limited to simple tasks with no exposure to risk of injuries.

Respondents also noted that there were clear differences between companies supplying the domestic and international markets in terms of the provision of PPE. In factories processing seafood for export, workers were provided with sufficient protective equipment to meet international safety standards. In *longs* producing primarily for the domestic market, employers were not under as much pressure to meet safety standards, and were thus less inclined to offer protective equipment to their employees, including working children.

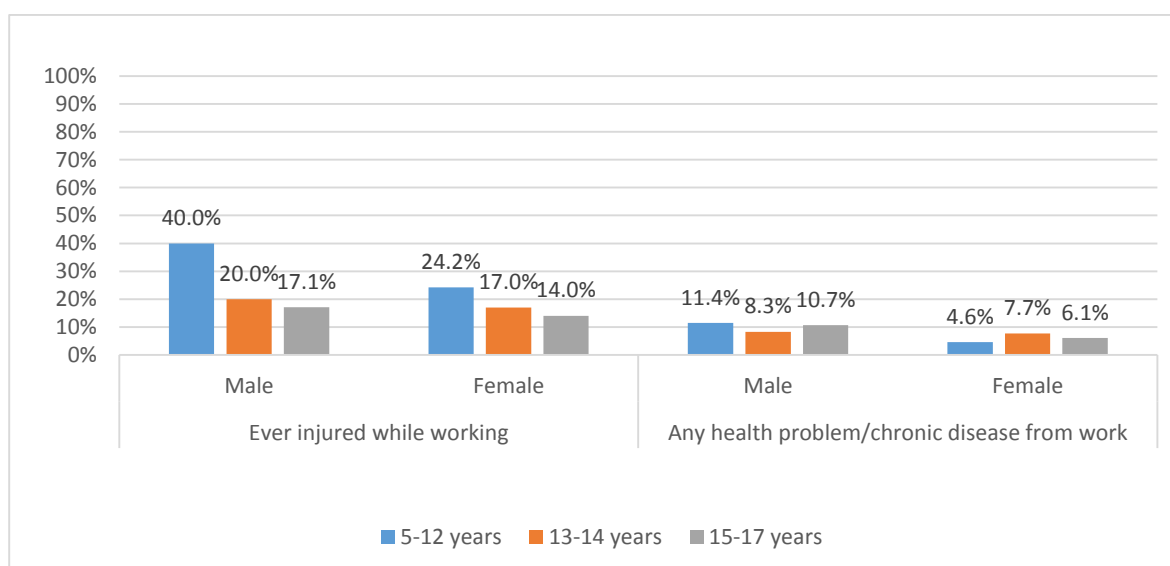
Follow-up interviews also revealed that the shortage of migrant workers over the past three years has led a number of employers who hired workers through the formal MOU process to provide them with additional in-kind benefits to keep them from leaving. These benefits have included protective equipment, lunch, a pack of rice on a regular basis, and an annual vacation trip.

Work-related injuries/health problems

As shown in Table 65, among children working in shrimp/seafood industries, one in five (19.4 percent) had been injured while working, while around one in 12 (8.1 percent) had suffered a work-related health problem or chronic disease. Across all age groups, boys appeared to be more likely to have incurred an injury than girls (21.3 percent and 17.6 percent, respectively) (data not shown). In general, boys take on riskier work that involves heavy lifting. Those who load and unload seafood usually work late hours, beginning around midnight and continuing through 2 to 4 a.m. Insufficient and irregular sleep may also contribute to injuries among such workers. Linked to this, a higher proportion of boys had experienced a health problem or chronic disease from work (10.2 percent) compared to girls (6.0 percent) (data not shown). Chronic health problems are very likely linked to injuries, particularly when injuries go untreated.

Strikingly, higher proportions of younger children, one in three, suffered injuries compared to older children overall. This may indicate that younger children are especially at risk of being injured at work.

Figure 43. Children in the shrimp/seafood industries who were ever injured or suffered health problems while working (N=468)



Source: TDRI, PSU

By industry, we see twice as many children in the shrimp/seafood industries having incurred injuries (one in five), compared to other industries (one in 12). For Samut Sakhon and Surat Thani, the breakdown is provided by the shrimp and seafood industries separately. Here, we observe that children in the seafood industry appear to be at greater risk of being injured (11.1 percent) or having a health problem (14.8 percent) compared to children in the shrimp industry (6.3 percent and 4.6 percent respectively).

Table 65. Ever incurred a work-related injury or health problem by industry

Industry	Ever injured while working		Any health problem/chronic disease from work	
	N	%	N	%
Shrimp/seafood	91/468	19.4	38/468	8.1
Shrimp*	4/64	6.3	3/65	4.6
Seafood*	9/81	11.1	12/81	14.8
Other	41/490	8.4	23/507	4.5

*TDRI data for Samut Sakhon/Surat Thani only Source: TDRI, PSU

Children who had suffered an injury or incurred a health problem from work were asked how serious their injury was. Among children in the shrimp and seafood industries, most (64.6 percent) did not require medical treatment; however, one in five children (20.8 percent) bought medicine on their own or with the support of family.

Among 14 children in shrimp/seafood industries who responded to the question about who pays for their medical treatment (nine missing, data not shown), seven reported that their parents paid (50.0 percent), and five paid for treatment themselves (35.7 percent). Two children received free healthcare under the Universal Health Coverage scheme (14.3 percent). None reported that their employers paid for their treatment.

Table 66. Severity of injury or health problem among children in the shrimp/seafood industries

	N	%
Not requiring medical treatment	62	64.6
Bought medicine by myself	20	20.8
Treated and released immediately	5	5.2
Stopped working temporarily	3	3.1
Hospitalized	5	5.2
Stopped working for > a month	1	1.0
Total	96*	100.0

*8 missing Source: TDRI, PSU

Migrant and Thai children comparison, Samut Sakhon

Among children injured in the shrimp and seafood industries in Samut Sakhon, a higher proportion of Thais (10.4 percent, n=5/48) sustained injuries compared to migrant children (8.1 percent, n=6/74, 1 missing). Among Thai children, 8.3 percent (n=4/48) had incurred a health problem from work, compared to 9.3 percent (n=7/75) of migrant children (data not shown).

Abuse during Work at Home or in the Workplace

Table 67. Experiences of abuse

Experiences of abuse	N	%
Employer/supervisor/colleague/parent ever shouted at you	142/986	14.4
Ever been physically abused by employer/supervisor/parents	14/986	1.4
Employer ever forced you to work overtime*	9/633	1.4
Ever been verbally abused	5/986	0.5
Ever worked overtime**	5/44	11.4
Ever received late payment*	2/633	0.3
Wages less than adults who work in the same position**	2/44	4.6
Does employer deduct wages when any mistake occurs*	1/633	0.2
Whether same welfare received as adults who work in same position**	1/44	2.3
Other exploitation/abuse experience*	1/633	0.2
Ever been physically abused by others (excl. employers/supervisor/parents)	-	-
Ever been sexually abused by employers/supervisors/colleagues/others	-	-

*353 missing **TDRI data for Samut Sakhon/Surat Thani only Source: TDRI, PSU

Few children reported experiencing abuse in the workplace or home environment. The most common form of abuse reported was being shouted at by a parent, supervisor, or colleague (14.4 percent). Among the 14 children who had experienced physical abuse, nine were boys and five were girls. Among the nine children who had been forced to work overtime, five were in shrimp/seafood and four were in other industries (data not shown).

Awareness

Table 68. Child protection law not known in Samut Sakhon and Surat Thani by industry, age

Industry	Samut Sakhon*		Surat Thani		Both provinces	
	N	%	N	%	N	%
Shrimp	47/60	78.3	4/4	100.0	51/64	79.7
Seafood	39/62	62.9	19/19	100.0	58/81	71.6
Other	91/199	45.7	43/44	97.7	134/243	55.1
Age ^						
5-12	8/9	88.9	2/2	100.0	10/11	90.9
13-14	14/19	73.7	4/4	100.0	18/23	78.3
15-17	64/94	68.1	17/17	100.0	81/111	73.0
Total**	86/122	70.5	23/23	100.0	109/145	75.2

^Among children in shrimp/seafood industries only *4 missing **Total for age

Source: TDRI, question not asked in PSU

There were striking differences in awareness of child protection laws between Samut Sakhon and Surat Thani. While many children in the shrimp and seafood industries in Samut Sakhon were not aware of child labor laws (70.5 percent), all children in those industries in Surat Thani were unfamiliar with such laws (100.0 percent). In Samut Sakhon, children in the shrimp industry appeared to be least aware of child protection laws, with 78.3 percent reporting that they did not know about them, compared to 62.9 percent among children in seafood and 45.7 percent in other industries. In Samut Sakhon, higher proportions of older children reported knowing about

child protection laws compared to younger ones. Among 5- to 12-year-olds, 88.9 percent did not know the law, compared to 73.7 percent among those aged 13-14 and 68.1 percent of 15- to 17-year-olds. In Samut Sakhon, a higher proportion of migrant children (78.7 percent) were unfamiliar with child protection laws compared to Thai children (57.5 percent) (four missing, data not shown).

Table 69. Who can provide assistance if work-related problems occur among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani

	N	%
Family members	78	52.4
Friends	50	33.6
No one	36	24.2
Government	10	6.7
NGO	8	5.4
Do not want suggestion from organization or others	7	4.7
Others	1	0.7

*Multiple responses possible, totals may sum > 100%

Source: TDRI

The question on assistance was asked differently in the TDRI and PSU studies, so they are presented separately here. Among children in shrimp/seafood industries in Samut Sakhon and Surat Thani, over half (52.4 percent) would turn to family members for help, followed by friends (33.6 percent). One in four children reported that they would have no one to turn to in the event of work-related problems. Around one in 20 children would seek help from the government or NGOs.

Among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla, 50.3 percent said they had no problems, and a third said they would turn to family members for help. One in 10 children did not know who they could turn to for help.

Table 70. Who can provide assistance if work-related problems occur among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla

	N	%
I have no problems	161	50.3
Family members	109	34.1
Friends	3	0.9
Other	1	0.3
Don't know	34	10.6
Do not want suggestion from organization or others	12	3.8
Total	320*	100.0

*3 missing

Source: PSU

Comparison of Migrant and Thai Children, Samut Sakhon

Table 71. Who can provide assistance if work-related problems occur in Samut Sakhon by status among children in the shrimp/seafood industries, TDRI

	Thai N=49		Migrant N=77	
	N	%	N	%
Family members	34	69.4	31	40.3
Friends	27	55.1	19	24.7
No one	6	12.2	22	28.6
Government	-	-	6	7.8
NGO	-	-	8	10.4
Do not want suggestion from organization or others	2	4.1	3	3.9
Others	-	-	1	1.3

*Multiple responses possible, totals may sum > 100%

Source: TDRI

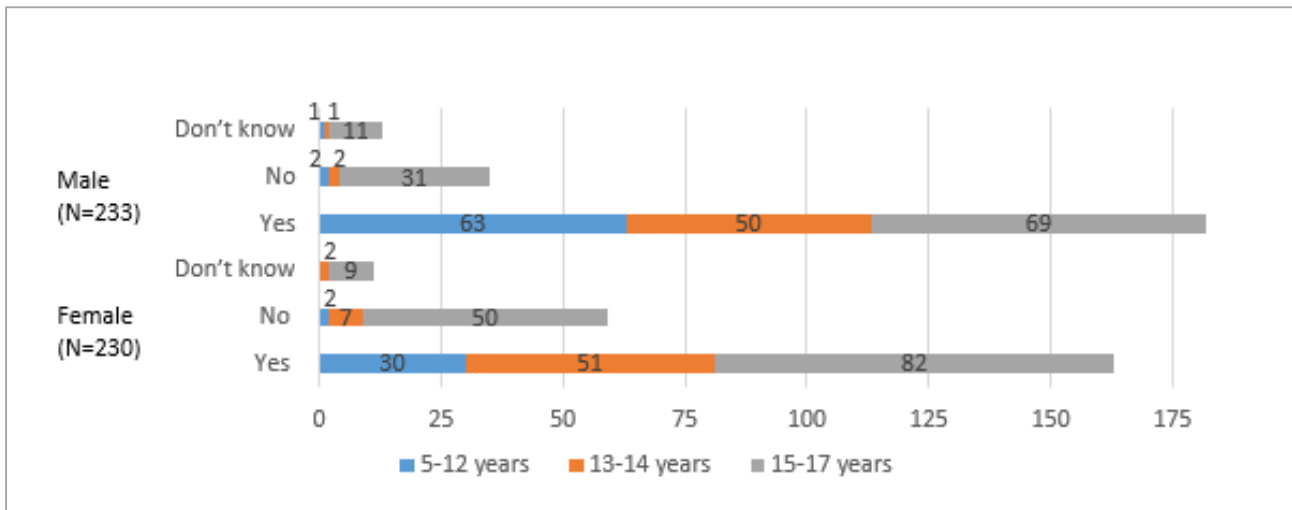
Higher proportions of Thai children in shrimp/seafood industries would ask family members for help, compared to migrant children (69.4 percent and 40.3 percent, respectively). One in 10 migrant children would approach NGOs for assistance, compared to no Thai children. A higher proportion of migrant children, 7.8 percent, reported that they would approach the government for help, compared to none of the Thai children.

1.5 Aspirations

Aspirations

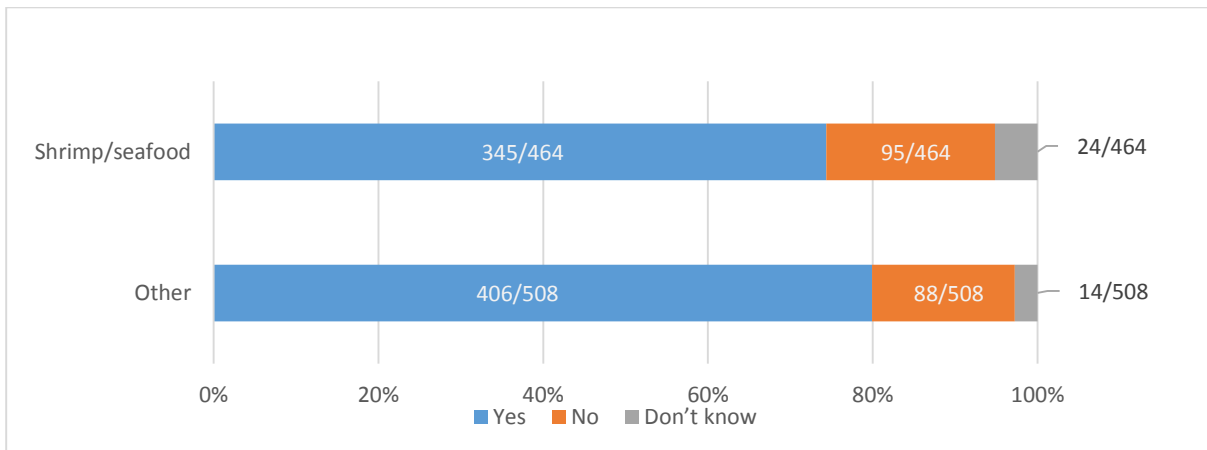
Of all children working in the shrimp and seafood industries surveyed (including children currently in school and those not in school), nearly all children aged 5-12 (93.8 percent of girls and 95.5 percent of boys) indicated that they wished to study. A gap emerges in the post-primary years, with fewer boys than girls in the 13-14 age group expressing an interest in studying (85.0 percent of boys compared with 94.3 percent of girls). In the 15-17 age group, where children are of legal working age, significantly lower proportions of children indicated an interest in continuing their studies, with 58.2 percent of boys and 62.2 percent of girls expressing this wish (Figure 44).

Figure 44. Number of children working in the shrimp/seafood industries who want to study by age, sex



Source: TDRI, PSU

Figure 45. Proportions of child workers in the shrimp/seafood industries who want to study



Source: TDRI, PSU

Of children not currently in school (Table 72), high percentages of those in the 13- to 14-year-old group indicated that they wished to study: 61.9 percent of boys and 72.7 percent of girls. These proportions decrease to 32.9 percent and 37.5 percent, respectively, for children of legal working age in the 15-17 age group. This suggests that there is space for a key intervention to help working children in the 13-14 age group enter or re-enter school (before they reach legal working age, when most choose work over school).

Table 72. Whether want to study by age, sex among children in the shrimp/seafood industries NOT currently studying (n=188)**

	Whether want to study							
	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Male	2	100.0	21	100.0	85	100.0	108	100.0
Yes	1	50.0	13	61.9	28	32.9	42	38.9
No	1	50.0	7	33.3	49	57.7	57	52.8
Don't know	-	-	1	4.8	8	9.4	9	8.3
Female	4	100.0	11	100.0	64	100.0	79	100.0
Yes	2	50.0	8	72.7	24	37.5	34	43.0

No	1	25.0	2	18.2	29	45.3	32	40.5
Don't know	1	25.0	1	9.1	11	17.2	13	16.5
Total*	6	100.0	32	100.0	149	100.0	187^	100.0

*excluding row totals for male/female **4 missing ^5 missing - 1 for age group, 4 for variable

Source: TDRI, PSU

Among those currently studying (Table 73), extremely high proportions of children in all age groups indicated that they would like to continue studying. One hundred percent of boys surveyed expressed this wish, while 98.4 percent of girls aged 5-12, 100 percent of girls aged 13-14, and 98.0 percent of girls aged 15-17 who were currently studying said that they would like to continue to do so. Given the extremely high levels of interest in continuing education among those who are already in school, and the substantial percentages who drop out after primary school and again upon turning 15, support services should be made available to children who are currently in school to help them navigate challenges associated with dropping out.

Table 73. Whether want to continue studying by age, sex among children in the shrimp/seafood industries currently studying (n=276)**

	Whether want to continue studying							
	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Male	30	100.0	39	100.0	56	100.0	125	100.0
Yes	29	96.7	38	97.4	54	96.4	121	96.8
No	1	3.3	-	-	1	1.8	2	1.6
Don't know	-	-	1	2.6	1	1.8	2	1.6
Female	62	100.0	42	100.0	47	100.0	151	100.0
Yes	61	98.4	42	100.0	45	95.7	148	98.0
No	1	1.6	-	-	2	4.3	3	2.0
Don't know	-	-	-	-	-	-	-	-
Total*	92	100.0	81	100.0	103	100.0	276**	100.0

*excluding row totals for male/female **4 missing Source: TDRI, PSU

When comparing children working in the shrimp and seafood processing sectors with children working in other industries (Table 74), similar percentages of children in school indicated that they would like to continue studying, and similar percentages of children not in school indicated that they would like to enter school. However, a significant portion of children who worked in shrimp and seafood processing and were not currently in school indicated that they were unsure of whether they wanted to enter school or not. This represents an opportunity among this group to raise awareness of migrant children's right to access school in Thailand, and of the benefits of education more generally.

Table 74. Whether want to study by industry and whether still in school

	Shrimp/seafood				Other industries			
	Not in school (n=188)**		Still in school (n=276)**		Not in school (n=152)*		Still in school (n=358)**	
	N	%	N	%	N	%	N	%
Yes	76	40.4	269	97.5	61	40.1	347	96.9
No	90	47.9	5	1.8	84	55.3	4	1.1
Don't know	22	11.7	2	0.7	7	4.6	7	2.0

Total	188	100.0	276	100.0	152	100.0	358	100.0
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*2 missing **4 missing Source: TDRI, PSU

When asked about opportunities of keenest interest to children, the most popular options were working full-time (46.9 percent) and the combination of attending school part-time and working part-time (28.2 percent). A few children (3.7 percent) wanted to find a better job than their current one. There were some differences by sex. Almost five times as many girls as boys wanted to go to school full-time (17.4 percent and 3.5 percent, respectively). Similar proportions of boys and girls wanted to combine part-time school and part-time work.

Table 75. What opportunities you would like to do most by sex among children in the shrimp/seafood industries

Opportunity	Male		Female		Total	
	N	%	N	%	N	%
Go to school full-time	8	3.5	40	17.4	48	10.4
School part-time and work part-time	62	26.8	68	29.6	130	28.2
Working full-time	109	47.2	107	46.5	216	46.9
Working with family business full-time	16	6.9	1	0.4	17	3.7
Working with family business part-time	11	4.8	1	0.4	12	2.6
Find a better job than present one	7	3.0	10	4.4	17	3.7
Other	18	7.8	3	1.3	21	4.6
Total	231	100.0	230	100.0	461*	100.0

*9 missing Source: TDRI, PSU

Figure 46. Opportunities that children working in the shrimp/seafood industries want to do most (male and female; N=461; 9 missing)

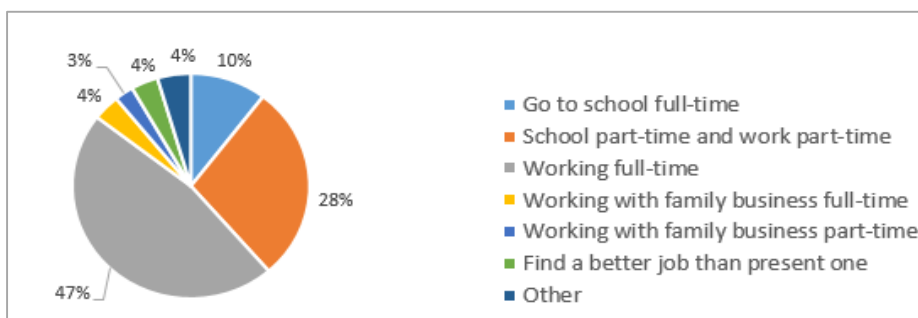


Figure 46 associated with Table 75

Source: TDRI, PSU

Comparison of Migrant and Thai Children, Samut Sakhon

Table 76. Whether want to continue study and opportunities you would like to do most among children in the shrimp/seafood industries in Samut Sakhon by status, TDRI

Whether want to continue study*	Thai		Migrant	
	N	%	N	%
Yes	29	60.4	24	32.4

No	18	37.5	34	46.0
Don't know	1	2.1	16	21.6
Total	48	100.0	130	100.0
Opportunity**				
Go to school full-time	3	6.3	8	10.7
School part-time and work part-time	23	47.9	17	22.7
Working full-time	14	29.2	41	54.7
Working with family business full-time	1	2.1	-	-
Working with family business part-time	-	-	-	-
Find a better job than present one	7	14.6	5	6.7
Other	-	-	4	5.3
Total	48	100.0	75	100.0

*4 missing **3 missing Source: TDRI

Among children in the shrimp/seafood industries, the majority of Thai children, 60.4 percent, wanted to continue their studies, compared to just 32.4 percent of migrant children. A much higher proportion of migrant children, 54.7 percent, reported wanting to work full-time, compared to 29.2 percent of Thai children. Half of Thai children, 47.9 percent, wanted to go to school part-time and work part-time, compared to 22.7 percent among migrant children.

Assistance needed

Children were asked whether they needed assistance. As TDRI permitted single responses and PSU permitted multiple responses to this question, the findings are presented separately below.

Table 77. Types of assistance needed among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla by age

Type of assistance	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Education	56	96.6	54	84.4	66	68.8	176	80.7
Vocational/skill training	3	5.2	10	15.6	15	15.6	28	12.8
Access to healthcare services	1	1.7	1	1.6	2	2.1	4	1.8
Legal aids	-	-	-	-	-	-	-	-
Social security	-	-	-	-	1	1.0	1	0.5
Employment-related aid	-	-	-	-	4	4.2	4	1.8
Accommodation/food	-	-	1	1.6	4	4.2	5	2.3
Hotline services	-	-	-	-	-	-	-	-
Microcredit	-	-	1	1.6	2	2.1	3	1.4
Remittance transfer service	-	-	-	-	1	1.0	1	0.5
Self-help group	-	-	-	-	-	-	-	-
Other	3	5.2	8	12.5	21	21.9	32	14.7

*Multiple responses possible, totals may sum > 100% Source: PSU

Education was by far the most commonly reported form of assistance required by children in shrimp/seafood industries in Nakhon Si Thammarat and Songkhla, particularly among younger children (e.g., 96.6 percent among 5- to 12-year-olds). Vocational skills training was requested by more children aged 13-14 and 15-17 (15.6 percent, respectively) than 5- to 12-year-olds (5.2 percent).

Table 78. Types of assistance needed most among children in the shrimp/seafood industries in Samut Sakhon and Surat Thani by age

Type of assistance	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Education	6	66.7	7	70.0	22	53.7	35	58.3
Vocational/skill training	-	-	2	20.0	7	17.1	9	15.0
Access to healthcare services	1	11.1	-	-	1	2.4	2	3.3
Legal aids	-	-	-	-	-	-	-	-
Social security	-	-	-	-	1	2.4	1	1.7
Employment-related aid	2	22.2	-	-	9	22.0	11	18.3
Accommodation/food	-	-	1	10.0	-	-	1	1.7
Microcredit	-	-	-	-	1	2.4	1	1.7
Self-help group	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total	9	100.0	10	100.0	41	100.0	60	100.0

Source: TDRI

As in the PSU study, education assistance was most commonly requested in Samut Sakhon and Surat Thani, particularly among 13- to 14-year-olds (70.0 percent) and 5- to 12-year-olds (66.7 percent). One in five of 13- to 14-year-olds and 15- to 17-year-olds were interested in vocational skills training. Among 15- to 17-year-olds, employment-related aid (18.3 percent) was also needed.

Comparison of Migrant and Thai Children, Samut Sakhon

Table 79. Types of assistance needed most in Samut Sakhon among Thai and migrant children in the shrimp/seafood industries, TDRI

Type of assistance needed*	Thai		Migrant	
	N	%	N	%
Education	23	62.2	12	52.2
Vocational/skills training	6	16.2	3	13.0
Access to healthcare	-	-	2	8.7
Social security	-	-	1	4.4

Employment related	6	16.2	5	21.7
Accommodation/food	1	2.7	-	-
Microcredit	1	2.7	-	-
Total	37	100.0	23	100.0

*4 missing

Source: TDRI

Education was the most commonly reported assistance needed by Thai children, with 62.2 percent requesting it, compared to 52.2 percent of migrant children. For both groups, the next most popular request was employment-related assistance, requested by 21.7 percent of migrant children and 16.2 percent of Thai children.

2. Child labor

2.1 Proportion of children in child labor according to ILO definition

Child labor was coded positively according to the definition from ILO as follows:

- Ages 13-14: working 15 or more hours/week = child labor
- Ages 5-12: working one or more hours/week = child labor
- Any age (5-17): working 48 or more hours/week = child labor in hazardous work

Hazardous work is defined as working 48 or more/hours a week.

Permissible work is defined as:

- Age 13-14: light work = up to 14 hours
- Age 15-17: regular work = up to 48 hours

For light work and regular work, only children in those specific age groups are included in the denominator. Combined, children in light and regular work make up the permissible work category.

For this section, only TDRI data for Samut Sakhon and Surat Thani, and DPU data for Samut Sakhon are presented. PSU data for working hours in Nakhon Si Thammarat and Songkhla was unavailable.

Table 80. Proportion of working children in the shrimp/seafood industries in child labor by province, age, sex (ILO), TDRI and DPU

	Child labor, including in hazardous work							
	5-12 years		13-14 years		15-17 years		Total	
	N	%	N	%	N	%	N	%
Samut Sakhon TDRI[^]								
Male*	1/1	100.0	8/8	100.0	10/36	27.8	19/45	42.2
Female**	4/4	100.0	6/8	75.0	7/54	13.0	17/66	25.8
Samut Sakhon DPU^{^^}								
Male*	4/4	100.0	4/4	100.0	17/53	32.1	25/61	41.0
Female++	3/3	100.0	7/7	100.0	15/75	20.0	25/85	29.4
Surat Thani								
Male+	-	-	-	-	1/4	25.0	1/5	20.0
Female++	2/2	100.0	2/2	100.0	2/8	25.0	6/12	50.0

[^]Thai and migrant children from children's survey

^{^^}Migrant children only from household survey

*5 missing **9 missing +2 missing ++4 missing #171 missing ##193 missing
Source: TDRI, DPU – data on working hours was unavailable from PSU

As all children aged 5-12 were working at least one hour a week, all were classified as child laborers. In all samples, children aged 13-14 appeared more likely to be classified as child labor. Among the 17 migrant children aged 13-14 in the DPU study, all children came under the ILO child labor definition. Higher proportions of boys fit the definition of child labor compared to girls in the 15-17 age group in Samut Sakhon⁶⁶—27.8 percent of boys versus 13.0 percent of girls—as well as in the DPU study, which saw high proportions of child labor in all age groups. In Surat Thani, however, higher proportions of girls compared to boys came under the child labor definition in the 13-14 and 15-17 age groups.

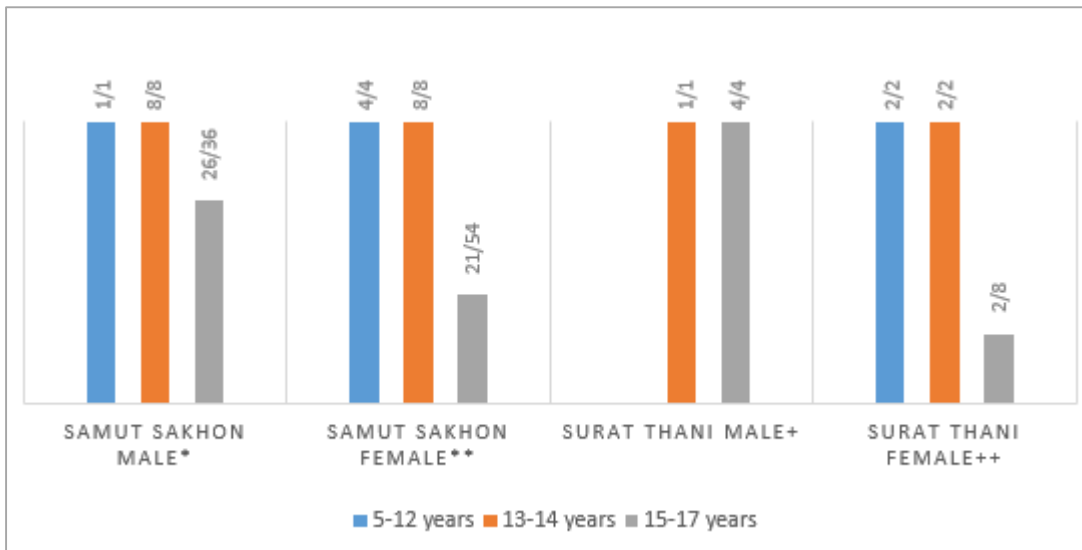
Table 81. Proportion of working children in child labor, hazardous work, and permissible work (ILO), Samut Sakhon by age, sex, industry, TDRI

	Child labor ^a		Hazardous work only ^b		Permissible work ^c	
	N	%	N	%	N	%
Age group^{^*}						
5-12	5/5	100.0	1/5	20.0	-	-
13-14	14/16	87.5	4/16	25.0	2/16	12.5
15-17	17/91	18.7	17/91	18.7	74/91	81.3
Sex^{^*}						
Male	19/45	42.2	11/45	24.4	26/44	59.1
Female	17/66	25.8	11/66	16.7	49/62	79.0
Industry						
Shrimp	17/60	28.3	8/60	13.3	43/59	72.9
Seafood	19/52	36.5	14/52	26.9	33/48	68.8
Other	41/190	21.6	11/190	5.8	149/175	85.1
All shrimp/seafood workers^{^*}	36/112	32.1	22/112	19.6	76/107**	71.0

a. Including in hazardous work b. working > 48 hours/week
c. The following is classified as permissible work – for age 13-14 <=14 hours, 15 -17 <= 48 hours
[^]Among children in shrimp/seafood industries only *14 missing **10 missing Source: TDRI

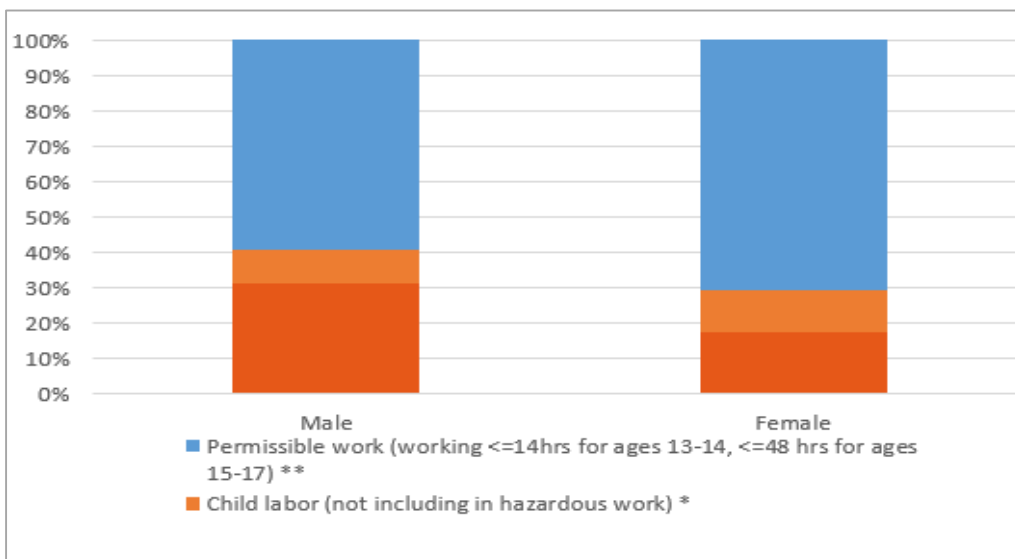
Figure 47. Proportion of migrant children among shrimp/seafood workers in different work conditions (ILO definition) in Samut Sakhon, by age

⁶⁶ TDRI. *The Demand for Immigrant Labour in Agriculture*.



*9 missing **16 missing Source: TDRI
 Figure 47 is associated with Table 81

Figure 48. Proportion of migrant children among shrimp/seafood workers in different work conditions (ILO definition) in Samut Sakhon, by sex



*9 missing **16 missing Source: DPU
 Figure 48 is associated with Table 81

Surat Thani had higher proportions of children working in shrimp/seafood industries in child labor (41.2 percent overall) (Table 82), compared to Samut Sakhon (32.1 percent) (Table 81). We also observed higher proportions of children in hazardous work in Samut Sakhon (19.6 percent overall [Table 81]) than in Surat Thani (17.7 percent). The majority of children aged 15-17 were in permissible work in both provinces—81.3 percent in Samut Sakhon and 75.0 percent in Surat Thani.

There were notable differences by sex. While in Samut Sakhon a greater proportion of boys were in child labor (42.2 percent) compared to girls (25.8 percent), the inverse was true in Surat Thani. There, over twice as many

girls (50.0 percent) were in child labor compared to boys (20.0 percent), although a greater proportion of boys were in hazardous work: 20.0 percent of boys worked more than 48 hours a week, compared to 16.7 percent of girls. This suggests that girls in Surat Thani may be more likely than boys to be child laborers, although boys are more likely to be in hazardous work; further research is needed to ascertain whether this is the case. Small sub-sample sizes for Surat Thani also limit the conclusions that can be drawn.

By industry, we also see that a high proportion of children in the seafood industry fell under the ILO child labor definition—35.6 percent of children in Samut Sakhon and 40.0 percent of children in Surat Thani—with many of these children falling under the definition of hazardous work, working more than 48 hours per week.

Table 82. Proportion of working children in child labor, hazardous work, and permissible work (ILO) in Surat Thani by age, sex, industry, TDRI

	Child labor ^a		Hazardous work only ^b		Permissible work ^c	
	N	%	N	%	N	%
Age group^{^*}						
5-12	2/2	100.0	-	-	-	-
13-14	2/3	66.7	-	-	1/3	33.3
15-17	3/12	25.0	3/12	25.0	9/12	75.0
Sex^{^*}						
Male	1/5	20.0	1/5	20.0	4/5	80.0
Female	6/12	50.0	2/12	16.7	6/10	60.0
Industry						
Shrimp	1/2	50.0	-	-	1/2	50.0
Seafood	6/15	40.0	3/15	20.0	9/13	69.2
Other	11/39	28.2	4/39	10.3	28/36	77.8
All shrimp/seafood workers^{^*}	7/17	41.2	3/17	17.7	10/15	66.7

a. Including in hazardous work b. working > 48 hours/week

c. The following is classified as permissible work - for age 13-14 <=14 hours, 15 -17 <= 48 hours

[^]Among children in shrimp/seafood industries only *6 missing Source: TDRI

In the DPU study, very high proportions of migrant children in the shrimp/seafood industries were in child labor and hazardous work in most categories, compared to the TDRI study in Samut Sakhon. For example, all children aged 13-14 were child laborers in the DPU study, compared to 87.5 percent in the same age group in the TDRI study (Table 81). At the same time, unlike in the TDRI study, where more children in shrimp and seafood were child laborers than those in other industries, the inverse was true among migrant children in the DPU study. Almost half (47.9 percent) of migrant children in other industries were child laborers, compared to

34.3 percent in the shrimp or seafood industries. One in four migrant children (23.3 percent) were doing hazardous work (working more than 48 hours work per week). As was the case in the TDRI study, all children aged 15-17 who were child laborers were also in hazardous work.

Table 83. Proportion of migrant working children in child labor, hazardous work, and permissible work (ILO) in Samut Sakhon by age, sex, documents, industry, DPU

	Child labor ^{a*}		Hazardous work only ^{b*}		Permissible work ^{c**}	
	N	%	N	%	N	%
Age group[^]						
5-12	7/7	100.0	1/7	14.3	-	-
13-14	11/11	100.0	1/11	9.1	0/11	-
15-17	32/128	25.0	32/128	25.0	96/128	75.0
Sex[^]						
Male	25/61	41.0	19/61	31.2	36/57	63.2
Female	25/85	29.4	15/85	17.7	60/82	73.2
Industry						
Shrimp/seafood	50/146	34.3	34/146	23.3	96/139	69.1
Other	23/48	47.9	18/48	37.5	25/48	52.1
All shrimp/seafood workers[^]	50/146	34.3	34/146	23.3	96/139	69.1

a. Including in hazardous work b. working > 48 hours/week
c. The following is classified as permissible work - for age 13-14 <=14 hours, 15 -17 <= 48 hours
[^]Among shrimp/seafood workers only *9 missing **16 missing
Source: DPU

Table 84. Proportion of working children in the shrimp/seafood industries in child labor, hazardous work, and permissible work (ILO) in Samut Sakhon by status, TDRI and DPU

	Child labor ^a		Hazardous work only ^b		Permissible work ^{c^}	
	N	%	N	%	N	%
Status*						
Thai	13/40	32.5	7/40	17.5	27/38	71.1
Migrant	23/72	31.9	15/72	20.8	49/69	71.0
Migrant**	50/146	34.3	34/146	23.3	96/139	69.1

a. Including in hazardous work b. working > 48 hours/week
c. The following is classified as permissible work - for age 13-14 <=14 hours, 15 -17 <= 48 hours
[^]10 missing for permissible work in TDRI data
*TDRI data only. 14 missing
**DPU data only. 9 missing for child labor/hazardous work, 16 missing for permissible work
Source: TDRI, DPU

In the TDRI study, we can compare migrants and Thai children working in the shrimp and seafood industries. A slightly higher proportion of Thai children were in child labor (32.5 percent) compared to migrant children (31.9 percent); however, among the migrant child laborers, more were in hazardous work (20.8 percent) compared to Thai children (17.5 percent). One-third of migrant children in the DPU study were child laborers (34.3 percent), while a slightly higher proportion of migrant children in the DPU study were in hazardous work (23.3 percent) compared to migrant or Thai children in the TDRI study.

For migrant children, the difference in proportions falling under child labor in the TDRI and DPU studies suggests that the children sampled in the TDRI study were better off than those sampled in the DPU study. Reasons for this could be linked back to the sampling strategy pursued by TDRI, which sampled according to outdated Thailand Standard Industrial Classification (TSIC) data on where the fishery industry was concentrated. It was found that the fishery industry had since shifted, along with many migrant families. The migrant communities that remained in those areas may have been more permanently settled or better off than those sampled in the DPU study, which were found to be more mobile.

Table 85. Hours worked/week and hourly pay by child labor (ILO) in Samut Sakhon and Surat Thani, TDRI

	Hours worked/week			Pay per hour (baht)		
	N	Mean	SD	N	Mean	SD
Child labor	95	42.7	23.1	69	23.6	12.3
Not child labor	263	34.0	16.5	222	34.2	22.2
Shrimp/seafood workers only	129	45.3	16.2	121	34.4	11.4

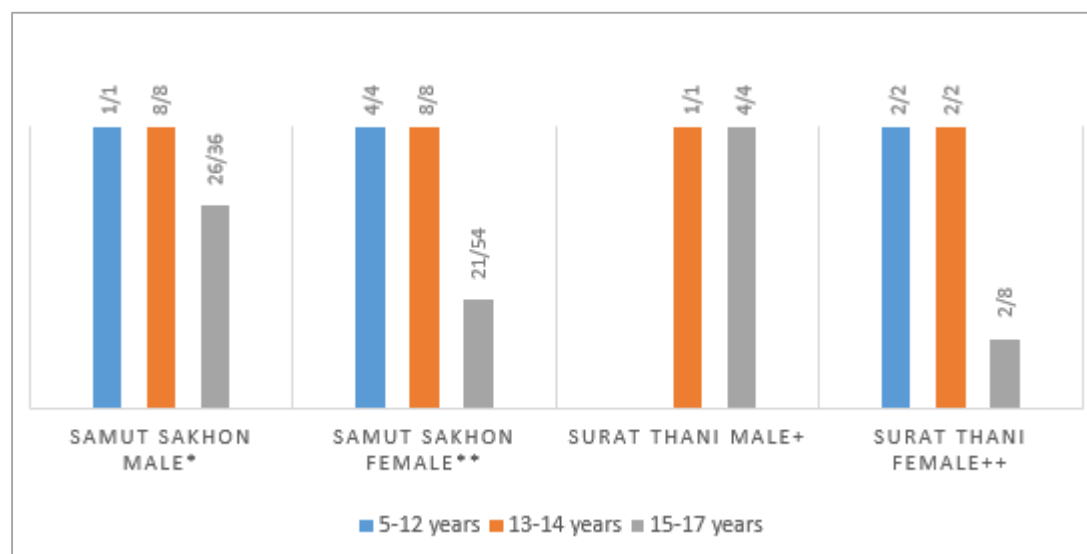
Source: TDRI

Child laborers worked on average eight hours more per week than non-child laborers. They were also paid less—a mean of 23.6 baht/hour (SD 12.3), compared to 34.5 baht/hour (SD 22.2) among non-child laborers. We can also see that children in the shrimp/seafood industries in Samut Sakhon and Surat Thani were working longer hours than the entire sample of children (all industries) who fall under child labor, at 45.3 hours per week versus 42.7 hours per week.

2.2 Proportion of children in child labor according to MOL definition

For this section, only TDRI data for Samut Sakhon and Surat Thani are presented. PSU data for working hours in Nakhon Si Thammarat and Songkhla were unavailable, and the DPU survey among migrant children in Samut Sakhon did not ask the questions on workplace hazards required to calculate child labor.

Figure 49. Proportion of working children in child labor



^Thai and migrant children from children’s survey

*5 missing

**9 missing

+2 missing

++4 missing

Source: TDRI

The proportion of the samples classified as child laborers was higher according to the MOL definition, because the LPA sets a higher threshold, with any child below 15 who is working classified as child labor. The MOL definition, based on the LPA, also takes into account the workplace hazards that children may experience. Many children experienced at least one hazard, which also contributes to the higher proportions classified as child labor compared to those under the ILO definition.

All 15- to 17-year-old boys working in shrimp/seafood industries in Surat Thani were child laborers, compared to one-quarter of girls (25.0 percent) and 72.2 percent of boys in the same age group in Samut Sakhon. One-half the proportion of girls aged 15-17 (38.9 percent) in Samut Sakhon were child laborers, compared to 72.2 percent of boys there.

Table 86. Proportion of working children in child labor (MOL) in Samut Sakhon and Surat Thani by age, sex, industry, status, TDRI

	Samut Sakhon*		Surat Thani**	
	N	%	N	%
Age group[^]				
5-12	5/5	100.0	2/2	100.0
13-14	16/16	100.0	3/3	100.0
15-17	47/91	51.7	6/12	50.0
Sex[^]				
Male	35/45	77.8	5/5	100.0
Female	33/66	50.0	6/12	50.0
Status[^]				
Thai	25/40	62.5	-	-
Migrant	43/72	59.7	-	-
Industry				
Shrimp or seafood	68/112	60.7	11/17	64.7
Shrimp	32/60	53.3	½	50.0
Seafood	36/52	69.2	10/15	66.7
Other	80/190	42.1	32/39	82.1
All shrimp/seafood workers[^]	68/112	60.7	11/17	64.7

[^]Among children in shrimp/seafood industries only

*14 missing **6 missing Source: TDRI

As with the ILO definition, a very high proportion of 13- to 14-year-olds fell under the MOL child labor definition—100.0 percent in Surat Thani and Samut Sakhon. By industry, we also observe that child labor was very high in the seafood industry—69.2 percent in Samut Sakhon and 66.7 percent in Surat Thani. The majority of children in other industries in Surat Thani (82.1 percent) were also child laborers.

Table 87. Hours worked/week and hourly pay by child labor (MOL) in Samut Sakhon and Surat Thani, TDRI

	Hours worked/week			Pay per hour (baht)		
	N	Mean	SD	N	Mean	SD
Child labor	191	36.8	21.2	148	28.5	22.3
Not child labor	167	35.6	15.8	143	35.0	18.5
Shrimp/seafood workers only	129	45.3	16.2	121	34.4	11.4

Source: TDRI

Across all industries, child laborers under the MOL definition worked on average an hour more per week than non-child laborers. They were also paid less—a mean of 28.5 baht/hour (SD 22.3), compared to 35.0 baht/hour (SD 18.5) among non-child laborers. However, shrimp/seafood workers worked longer hours than child laborers in all industries—45.3 hours per week versus 36.8 hours per week.

Part III. Choosing Education or Work

1. Perceptions of Education vs. Work among Migrants Sampled

Myanmar was the sending country for the vast majority of migrants surveyed for this report; however, some data were also obtained on migrants from Laos PDR and Cambodia. There were significant differences in perceptions of education among Myanmar migrants from different ethnic groups and within the different migrant communities in Thailand. This section provides a snapshot of perceptions of education among these groups.

1.1 Migrants from Myanmar

When asked about trade-offs between work and education, migrants from Myanmar noted repeatedly that their primary reason for migration to Thailand was work. They chose Thailand as their preferred destination for three principal reasons. First, it was comparatively easier to secure a work permit in Thailand than in other prospective destination countries, such as Malaysia or Australia. In addition, given the country's proximity to their home country, the cost of migrating to Thailand was considerably lower. Migrants were able to afford the associated costs by drawing on personal savings, selling property, or borrowing money from local lenders. Given the better earning prospects in Thailand compared with Myanmar, migrants considered the costs incurred as an up-front investment in their economic future.

Second, Thailand offered better access to basic social services, especially health and education. These sentiments were captured through focus group interviews. As a migrant in Samut Sakhon stated:

“When I was small, I could not go to school because it was too far and I had no means of getting there. When someone in the family fell ill, we had to rely on local treatment, which did not guarantee a cure. Here in Thailand, at least I know that we will get real medicine, go to real hospitals or clinics, and be taken care of by a qualified person.”

Another migrant who sent her child to the learning center in Samut Sakhon commented:

“If my child were in Myanmar right now, he would be raised by our family. But because we didn't have the opportunity to get much education, he wouldn't be able to learn from us. It was a curse that kept our family in poverty for generations. Our move to Thailand not only gave us an opportunity to earn, but also an opportunity for our child to learn. Maybe he can break this curse if we can afford to keep him in school long enough.”

Third, geographical proximity allowed migrants from Myanmar and other neighboring countries to visit their relatives in Myanmar more frequently than if they were to migrate to more distant countries. Maintaining ties to family and culture was viewed as keenly important—on par with having decent pay. Thailand allowed for both of these.

Geographical proximity also emerged in the interviews as a determining factor for the size of migrant communities in Thailand. The easier it was to migrate to a particular area of Thailand, the more people would do so. Migrant workers felt more secure in larger migrant communities and benefitted from a certain degree of social and moral support when needed. For example, if a migrant worker needed to fulfill an extended work period, he could leave a child at his neighbor's home for temporary care. A person who contracted a fever or other minor illness could be left at home with a neighbor to watch over them. In addition, in larger migrant communities, specialized grocery stores and markets were available in the immediate neighborhood, making shopping more convenient.

While the above sentiments reflect statements from Myanmar migrants across all three communities, there were also some observable differences among migrants in different provinces. These are discussed below.

Samut Sakhon

The majority of migrants to Samut Sakhon were members of the Mon community, and most Mon migrants in Thailand work in seafood-related industries. Given the high concentration of the seafood processing industry in Samut Sakhon, there were more employment opportunities, better earning prospects, and greater access to welfare support for these migrants. Three types of educational arrangements were available in the province: Burmese-only schools, Burmese schools with some Thai language instruction, and formal Thai schools. For migrant families that were aware of the combination of employment and education opportunities available to their children, decisions on whether to send their children to school or to work were based on trade-offs between the two. Two steps were involved in making such decisions. The first was to assess whether an education opportunity was available, following which the consequences of sending a child to school would be considered. The considerations weighed by families were captured in an interview with migrant parents in Samut Sakhon:

“When we heard from our neighbor that their child went to a learning center, my husband and I got together to discuss whether we should send our daughter to school too. We knew that our incomes were sufficient for us to live, but the question was to consider the consequences. We had some savings, and I heard that it was not costly to send her to the learning center. Thus, the only thing left to consider was how this decision would affect the way we did our housework. This had to be done before and after school. Some work would get done on the weekend. But we could afford these minor consequences because we had to start work at the same time as school started anyway.”

Surat Thani

Migrants to Surat Thani province were engaged in one of two major types of work. The first was work in seafood-related industries, especially off-shore fisheries. This type of work was carried out solely by men. Women tended to remain at home, where they assumed home-based work to earn supplementary income, such as removing chili stems, or primary seafood processing. Some of these women also found work at nearby restaurants, grocery stores, rubber plantations, palm plantations, and basic agricultural processing factories.

During field visits to the province, it was noticed that there were not many children aged seven to 14. Follow-up interviews with local NGOs and community leaders found that parents send their children back to Myanmar to stay with grandparents or other relatives, and remit earnings to support them on a monthly basis. This arrangement reflected the nature of work, which required both fathers and mothers to be away for extended periods of time. For example, a fishing boat could be at sea for more than a week, with fathers bound to travel to Kanom, Nakhon Si Thammarat, to board the boats. In the case of mothers, work at rubber plantations began as early as 2:00 to 4:00 a.m., and required a parent to travel some distance from the community.

Two types of educational arrangements were available to migrant children in Surat Thani: Burmese-only school and formal Thai school. However, migrant families in Surat Thani did not express as strong a desire to educate their children in Thailand as did those in Samut Sakhon. In interviews with migrants and local NGOs, it was found that migrants to Surat Thani preferred to send their children back to Myanmar to study. This would typically occur when children reached the age of five to seven. These children would later return to Thailand at the age of 12 to 13, where they would help with household work and perform some home-based work. Upon reaching the age of 15, they were expected to work.

Kanom, Nakhon Si Thammarat

Kanom is a major fishing port and migrant labor destination. Some migrants commute to Kanom, while others choose to live in the area for convenience. A small community of Myanmar migrants lives a short distance from the pier. Most males in the community work on fishing boats, while women migrants work at the pier and in home-based shrimp peeling. Women migrants also assume responsibility for household affairs while men were away at sea.

Interviews revealed that some employers in the area provide accommodation, pay for medical services, and sponsor opportunities for children's education. They also make payments on a monthly basis (rather than providing a daily or weekly wage) to ensure that migrant workers complete a full month's worth of work rather than abandoning their work mid-month to work for other employers. As one employer noted:

"It involved quite an effort to bring them to Thailand. I consider this a business investment. If they are not happy working for me and run away, then my investment goes to waste. Providing for their basic needs and sending their children to school helps to reduce the risk of losing migrant workers. We give monthly payments rather than daily or weekly payments to make sure that they will remain with us for at least another month."

1.2 Migrants from Lao PDR and Cambodia

Lao PDR migrants in the three provinces were hired to work in both seafood and non-seafood industries. Because the Lao language is similar to Thai (particularly to Thailand's northeastern dialect), they could be more easily employed as maids or work in restaurants, hotels, and construction sites than could migrants from Myanmar or Cambodia. Those who worked as maids or in restaurants and hotels preferred not to bring their families with them to Thailand. Those who worked at construction sites were the most mobile group, since they had to relocate to new project sites as soon as their current project no longer required their service. They were more likely to bring their families to live with them, since their employers provided accommodations near the project sites. Due to the mobile nature of this work, their children did not have access to education.

Discussions with migrants and local NGOs in Surat Thani and Nakhon Si Thammarat found that migrants from Laos PDR placed a high value on their children's education; however, because they were bound to move on a regular basis and their children often did not have proper registration documents, it was difficult to send their children to school in Thailand. Parents who could afford to send their children back to Laos to study did so. When these children reached 15 years of age, they tended to work rather than to further their education.

A small number of Cambodian migrants were also living in the two southern provinces and working on fishing boats. They generally came to Thailand without their families and so did not provide information on children's work and education.

2. Formal and Informal Education in the Communities Studied

There were three types of schools available to migrant children in the communities studied during the field research: Burmese schools with some Thai language instruction, formal Thai schools, and non-formal education programs provided by the Department of Non-Formal Education. Each type of school was characterized by a distinct educational modality. The challenges and opportunities associated with each educational modality will be discussed below.

2.1 Burmese Language School

In these schools, Burmese is used as the language of instruction, and the coursework is based on the Burmese curriculum. Wat Thep Norarutt, a Burmese school run by an NGO in Samut Sakhon that was visited by the research team, is one of the largest such schools in Thailand. Wat Thep Norarutt is well-known among migrant families in Samut Sakhon, as the school enables migrant children to stay on track with their peers in Myanmar. In particular, the school prepares students for the national exams in Myanmar and helps ensure that these children can easily transition into the Burmese education system when they return to Myanmar. Such ease of transition is seen as critical, since these families generally view their time in Thailand as limited (given the four-year limit for migrant workers that was in place until recently).

In particular, parents who planned to return to Myanmar (or who planned to send their children back to live with relatives) favored these schools because they imparted the values and cultural heritage of their home country. This was seen as important in abetting their children's integration into Burmese society. This was

especially the case for children who would be sent to live with family members who had never been to Thailand. As one mother who had already sent a child back to Myanmar noted:

“We were worried about sending our child back home. He would be living with relatives he had never met. Everything would be new to him. At least if he had some language and cultural background, going home would not be as difficult. His ability to speak the language also helped him catch up with his new class in Myanmar.”

The increasing popularity of this school is evidenced by its enrollment numbers, which grew from 150 students in 2013 to 250 students in 2014. To meet demand, the center is planning to expand from primary education to include the first and second year of secondary education. One of the teachers at the center commented on the potential that this educational model has to encourage parents to send their children to school rather than work:

“It is easier to convince migrant parents to send their children to our center [than to a Thai school]. All we have to say is that we have a Myanmar learning center that teaches children the subjects they would learn in their home country. What we have to understand is that Myanmar migrants do value education if they see it as the right education for their children.”

These comments highlight the value placed on both education and cultural heritage by Myanmar migrants. Comments by key informants suggest that migrants would be more likely to send their children to school if they felt that their family and home country values would be reinforced in the classroom. In particular, some migrants noted that they were concerned about their children adopting Thai behaviors considered unacceptable from a Burmese perspective (such as boys and girls holding hands publicly), particularly in cases where families were planning to send children back to Myanmar.

One challenge, however, is that many families ultimately stay in Thailand for long periods of time—such longer-term migration will likely increase with recent changes in the migrant registration process that require only one month out of the country before a migrant’s work visa can be renewed. If these children are educated in Burmese but ultimately remain in Thailand, they will be at risk of falling through the cracks in the educational system. The research suggests, then, that this educational modality is most appropriate for those migrant children who are in Thailand short term and who have clear plans to return to Myanmar while they are in the primary or early secondary school levels.

A second challenge associated with the Burmese language school was the lack of resources and staff, as it was privately funded and run by an NGO.

2.2 Community-based School

This school, which is located within the Myanmar migrant community in Kanom, Nakhon Si Thammarat, is situated adjacent to the fishing pier where many of the children’s fathers work, and a one-minute walk from the homes where migrant children live. The location of this school makes it easy for children to walk to school on their own and for parents (particularly those engaged in home-based work) to pick up smaller children from school. It also facilitates educational access for children who help their parents peel shrimp at home in the mornings—it is a short walk to school after peeling work has been completed.

The center uses a mixture of Burmese and Thai instruction, but the majority of instruction is conducted in Burmese by a teacher from Myanmar. Thai language instruction is provided with the objective of enabling students to ultimately transition to formal Thai schools. However, Thai instruction is provided for just one hour per day on a volunteer basis by a Thai teacher, making sustainability and impact a challenge.

Parents noted, however, that even if children did not achieve the level of Thai skill that would enable them to enroll in formal Thai schools, the attainment of basic Thai was of significant value to them. Thai skills enabled these children to help their families with everyday tasks such as shopping in the market. Moreover, Thai proficiency increased these children’s chances of securing employment in Thailand in the future.

When asked whether parents would send their children to the community-based school, a key issue parents raised was the school's enrollment fees. Interviews with local NGO representatives and migrant community members revealed that not all migrants in the community enrolled their children in the center. Enrollment fees of 250 baht per year (about 8 USD) were cited as an obstacle by many. For migrants who earn just enough to cover their daily spending, this amount was considered unaffordable. Since undocumented migrants generally earned less than documented migrants, this group was disproportionately affected by these fees, and those children were less likely to be enrolled in school. As noted in a follow-up interview with an NGO staff member in Kanom:

“250 baht is less than the daily minimum wage in Thailand. For migrants who work legally, it is easy to afford this fee. But for undocumented migrants, every baht counts. They face the daily challenge of earning enough money to feed their family. For the poorest migrants, education is considered a luxury, not a necessity.”

2.3 Formal Thai School

All children in Thailand, regardless of nationality or status, have the right to attend formal school. For migrant children, the advantages of attending formal Thai school include better employment prospects, as well as improved prospects for furthering their education. Since migrant children in formal Thai schools are assessed using the same benchmarks as Thai children, their educational qualifications are recognized by Thai employers as well as institutions of higher education. For parents who would like their children to eventually seek employment in Thailand, then, formal Thai schooling offers the best foundation of the three school types reviewed. This advantage was reflected in a focus group discussion with migrant parents in Samut Sakhon. One parent who sent her child to a Thai school noted:

“We would like to stay and work in Thailand for as long as possible. There are more opportunities here. For us, the best employment prospects are either to move up to a supervisory position or to start a small shop. If our daughter can obtain Thai educational qualifications, she will be able to find employment in many sectors and many places. Her life will not be limited to a factory in Samut Sakhon. She can go to Bangkok to work at a hotel or a restaurant. And if she finishes her secondary education and gets a vocational degree, she might be able to become an interpreter.”

Another parent said:

“When our son reaches 15, we would like him to work. But we would also like him to continue his education. I have heard about migrant children who work during the weekdays and attend informal school during the weekend and receive good educational qualifications in this way. I think that if my son can speak, read, and write Thai [prior to entering the workforce when he is 15], he will be able to take advantage of this option without compromising his ability to earn supplemental income. That is why we are trying to keep him in school until he is 15.”

While parents noted the advantages of formal Thai schooling in terms of the child's employment prospects and potential to transcend some of the boundaries experienced within migrant communities (for instance, by taking on work outside the sectors where migrants are overwhelmingly employed, or by moving to cities beyond the migrant hubs), migrants also described a number of concerns they had with sending their children to formal Thai schools. First, parents expressed a fear that their children would lose their social and cultural connection to their home country. Parents were concerned not only that this would make it difficult for children to reintegrate upon return to Myanmar, but also that this cultural shift would lead to conflict within the family and to a generational rift between migrant parents and children. Parents also expressed concern over the cost of formal education. While the Thai government subsidizes basic education for all children, there are out-of-pocket expenses associated with school attendance. Schools often require students to buy supplementary educational materials related to school lessons. Such costs can amount to 5,000 to 7,500 baht (150 USD to 250 USD) per year. For a migrant family with two children in school, the combined expenses would be equivalent to a month of income for one working parent.

Respondents noted that migrants often do not anticipate the extent of these expenses when they enroll their children in school, but that such expenses can lead them to pull one or more children out of school once such expenses begin to accumulate.

Parents also noted a concern with the fact that migrant children are generally made to enter Thai formal schools at the first-grade level, even when they are several years older than their Thai peers. Parents, administrators, and NGO leaders all commented on the problems associated with this practice. Parents were concerned that their children would feel embarrassed that they were being aligned with much younger children in terms of educational ability and attainment. Teachers noted the difficulty in teaching a class that was mixed in this way. And some respondents pointed out cases in which the older children excelled in school (in part because they were substantially older than their peers), and noted that this led to pushback and resentment among Thai parents.

Community leaders also stated that such resentment was particularly marked when school resources were spread thinly. A community leader in Samut Sakhon stated:

“If you have a lot of migrant students in school, every time you ask parents to contribute to or participate in a school activity, you have to put in a lot of effort to convince them. [They ask] why they should contribute when part of their contribution goes to migrants rather than their own children.”

Respondents also noted that the incentive structure for teachers and school administrators tended to undermine migrant children’s access to formal Thai education. When a school accepts a large number of migrant children whose native language is not Thai, the school’s overall standardized test scores may dip. Principals of such schools are less likely to be promoted, and so there is a disincentive to take on migrant students.

3. Understanding the Decision: Education vs. Work

Qualitative fieldwork in Samut Sakhon, Surat Thani, and Nakhon Si Thammarat suggests that several factors influence a migrant family’s decision to send a child to school rather than to work. These include: higher socioeconomic status, access to transitional education programs, employer sponsorship, positive perceptions of education, and prospects of remaining in Thailand in the future. Factors leading families to favor work over school include: employment opportunities for the child, household commitments such as younger children who need to be cared for, parental mobility, and the likelihood that the child will return to Myanmar. Table 88 summarizes these findings, and the details of how these factors influence decisions are explained below.

Table 88. Determinants of schooling and work decision

Effect	Factors	Effect on schooling decision	Effect on decision to work
Pulling children towards education	Higher socio-economic status	Positive	Negative
	Access to transitional education	Positive	Negative
	Employer sponsorship	Positive	Negative
	Perception on education	Positive	Negative
	Future prospect to remain in Thailand	Positive	Negative
Pulling children away from education	Employment opportunity	Negative	Positive
	Household commitment	Negative	Positive
	Parental mobility	Negative	Positive
	Prospect of sending the children back to Myanmar	Negative	Positive

3.1 Factors Supporting School Enrollment among Migrant Children

Higher Socioeconomic Status

A family's decision to enroll a child in school requires that a portion of household resources be directed towards the child's education. More affluent households were more readily able to set aside funds to cover this expense. For poorer families, not only was the cost of schooling an issue, but so was the opportunity cost of schooling a child who could be working to support the family (financially or through unpaid work at home). A parent in Samut Sakhon who said that he could not afford to send his daughter to school noted:

“We know that education is important. But sending her to school means we have to spend money [on school], and we cannot afford that. Nowadays, we barely make it from week to week. Even if school were free, someone would have to take on her responsibilities [at home]. I cannot do that, because an hour away from work for me means less money for all of us at the end of the day.”

Access to Transitional Education

Parents in Samut Sakhon who were sending their children to school at the time of our interviews noted that informal education programs, including early-age learning centers, weekend classes offered by NGOs, and occasional educational activities provided by schools in the area had helped their children perform better in school and therefore encouraged them to allow their children to continue studying. Teachers noted that migrant children who had gone through transitional education programs prior to transferring to Thai schools were very committed students and exhibited a strong sense of belonging to local communities and an appreciation for the opportunity to study together with Thais.

Employer-Sponsored Education

Some employers in Samut Sakhon initiated contact with early learning centers and schools on behalf of their employees' children. A number of employers also provided financial aid and educational materials to migrant children whose parents worked for them. Sponsorship typically ended, however, when the employee's child completed sixth grade. Given that migrant students are typically older than Thai children in the same cohort, these students generally had reached age 12-15 when such support ended. Upon completing sixth grade, these children were more likely to seek employment than to go on to secondary school.

Positive Perception of Education

The vast majority of migrant parents and children interviewed had positive attitudes about education. Many parents indicated that they would send their children to school in the absence of economic and household pressures. A child from Samut Sakhon who was enrolled in school at the time of the interview summarized this trade-off:

“I know that education will help me get a better job and earn more money. If I go to school, my opportunities will not be limited; I won't have to work in the same job my parents are doing. If I study and graduate from a Thai school, then I can get a job in a restaurant, a hotel, or even start my own business. I want to study so that I can have jobs like these. But I wouldn't object if my father and mother asked me to leave school for work. Cash today is preferable to cash in the future anyway.”

It should be noted here that parents and children who took part in this study were contacted through local NGOs and migrant community leaders; their views were therefore not representative of all migrants' perceptions of education. When they were asked whether everyone they knew shared the same sentiments

towards education, many said that the sentiment was not universal. Some migrants, especially those struggling to earn enough for their daily expenses, saw less value in education.

Prospect of Remaining in Thailand in the Future

Migrants who were confident that they would be able to remain in Thailand for an extended period of time were more inclined to send their children to school. This was particularly true of those migrants who knew they would remain in Thailand at least until their children reached the working age of 15, as they viewed schooling as important in ensuring that their teenage children would have better employment prospects. In addition, if their children are able to find employment, parents can remain in Thailand to accompany them (even after their own employment contract has ended). As noted by a migrant in Samut Sakhon:

“Sending my son to school is a kind of insurance. With education, it will be easier for him to find work in Thailand. If he gets to stay in Thailand, we can stay too—even after my current employer no longer needs me.”

3.2 Factors Leading Migrant Children to Work

Employment Opportunity

All migrant parents interviewed indicated that their primary reason for being in Thailand was to work. They knew that their time in the country would be limited to the four years allowed under the MOU (unless their permit was renewed), so they focused on maximizing their earnings. For parents with children of working age, nearly all respondents indicated that these children would be expected to work to contribute to the family income—particularly since children aged 15-17 were generally working in roles similar to adults, at adult-level salaries. In cases where parents were involved in home-based work such as shrimp peeling, a number of respondents noted that they engaged children in home-based work for some part of the day in order to supplement the family income.

Debt

A significant number of migrant families incurred debt during the process of migrating to Thailand. Some used land or other belongings as collateral to borrow money from local lenders to cover the fees associated with migration. Loans through such informal entities generally involved substantial interest rates.

Debt was noted as a factor leading families to engage children in work. Debt was also cited as a factor that led families to move suddenly (in an effort to evade lenders). Such sudden moves had an impact on children’s education by pulling them from their current school or making them go underground where they would not have access to school.

Parental Mobility

Although work permits tie migrants to particular employers, some migrants change jobs once they are in Thailand if they see better job prospects (or want to leave a particularly bad job). This change results in a loss of legal status. As a result, migrants who leave their formal positions may move frequently to avoid the police and their previous employer. Such mobility leads children to be taken from school and can lead parents to keep children at home in the new location for fear of being caught. Children in such families are at high risk of remaining home without schooling, or helping their undocumented parents work.

Limited Correlation between Education and Earning Power

The majority of migrant workers surveyed were hired to perform repetitive manual work requiring only basic skills that could be acquired on the job. Many noted that sending their children to school beyond the early grades would not enable them to increase their earning potential significantly. A migrant parent in Samut Sakhon noted:

“Holding a primary or secondary school certificate does not give my child any advantage, because what counts is how many kilos my child can produce per hour. That’s why I see no point in keeping him in school once he can communicate in Thai. The prospect of him helping us to earn extra income is too irresistible.”

A statistical analysis by Thipbharos and Lounkaew (forthcoming) found that the ability to speak Thai increases the average daily wage of a migrant who works in seafood-related industries by about 1.54 percent, and writing skills increases the average daily wage by 0.54 percent. For those working in non-seafood industries, the ability to speak Thai increases average daily wage by 0.48 percent, and writing ability increases it by 3.2 percent. For a person working at a peeling shed who earns 300 baht per day, then, the ability to speak Thai would increase the day’s earnings to 304.5 baht. In contrast, one hour of extra work would add another 50-60 baht to that person’s daily wage.

Moreover, opportunities for migrants to be promoted beyond the supervisory level were extremely limited. A parent in the same focus group stated:

“We know that our days here are limited. We decided to move here to earn enough money so that when we go back home we can live comfortably. Earning prospects here are good, but employment promotion here is limited. The best you reach is the supervisory level. That’s just one level above where we are now.”

NGO representatives who participated in key informant interviews agreed that migrants’ earning power was not significantly impacted by additional schooling. They did note, however, that education and Thai skills could enable migrants to secure jobs that were considered “lighter” and more desirable, such as recording and checking inventory, serving as a supervisor to other migrant workers, and serving as a translator for the employer. Positions of this kind not only enable migrants to avoid dangerous and dirty work, but also bring them a measure of added respect and stature among their peers.

Household Commitments

In households with multiple children, the need for childcare was a key factor leading parents to keep children, particularly girls, home from school. Parents in all three provinces gave consistent explanations, stating that one of the older children had to take on the responsibility of looking after the younger ones. As most of these families had a child of working age (15 or above), the typical age for such a caregiver was 12. The responsibility to take care of younger dependents therefore fell on the second child; if that child happened to be a girl, it would be more likely that she would have to remain home to care for younger dependents.

Prospect of Child’s Return to Myanmar

It is customary for migrants from Myanmar to send their children back to Myanmar when they are approximately five to seven years of age. There were three main reasons for sending their children back: first, to establish connections with family members and relatives in the home country; second, to reduce spending on consumption and other household expenses in Thailand for children not yet of working age; third, to increase the potential number of hours that adults could work per week by lessening the childcare burden. Having no dependents at home also allowed parents greater flexibility in working hours, including evenings and weekends.

Part IV. Policy Recommendations

Recommendations on Labor Issues in the Seafood Processing Industry

Recommendations for Policymakers:

Increase the focus on labor issues within the validation and oversight process: Currently, Thailand’s laws and standards—including the Code of Conduct (COC) certified license, Good Agriculture Practice (GAP), and Hazard Analysis and Critical Control Point (HACCP) certification—focus primarily on sanitary requirements, food safety, and environmental protections. There is little concern for labor standards. Policymakers should make a concerted effort to improve labor standards within the validation and regulation process, with a particular focus on law enforcement and workplace inspection. In addition, under the existing Good Labour Practices (GLP) programme, the Thai Government’s leadership of the Task Force chaired by the Ministry of Labour (MOL) and Department of Fisheries (DOF) should include more regular meetings to encourage active application of the prescribed practices. GLP Task Force members (representing Thai industrial associations, trade unions, and NGOs; the ILO in its technical advisory capacity; and buyers in an observer capacity) should use GLP as a guideline for appropriate labor practices and good labor conditions, making compliance with GLP a competitive advantage for Thailand.

Close gaps in registration requirements: Due to restrictive immigration laws, entering the workplace legally is a costly and time-consuming process. During the registration process, the labor broker is the first person that prospective migrant workers encounter. Ensuring that labor brokers are fair and ethical will go a long way toward closing gaps in the registration process. Labor brokers should support and help workers through the duration of employment in Thailand, including through the provision of, or referral to, legal consultations, as well as through support for securing health insurance and facilitating access to social welfare. The labor broker should be monitored through licensing by the Department of Employment (DOE) to enforce fair treatment of migrant workers, with any breaches leading to fines or license revocation.

Simplify the registration and national verification processes: Given the large number of unregistered migrants currently working in Thailand, it is essential to simplify the migrant registration and national verification processes to ensure that irregular migrants be brought into regular status. In parallel, employers should be encouraged to employ regular migrants through greater monitoring and oversight.

Improve efforts to tighten the supply chain to encourage unregistered migrants to register and be monitored: The highly fragmented nature of the seafood processing industry has made it difficult to establish and maintain standards. Moreover, the development of an enforcement mechanism that reaches every part of the industry has been a particular challenge. Over 10,000 registered shrimp farms, thousands of registered, small contract manufacturers, and about a thousand trader/brokers operate at any given time. Although businesses in most parts of the seafood supply chain are required to register and obtain licenses from authorities such as the Department of Fisheries and the Department of Industrial Works, there are gaps in regulation. Many players who should be registered are not. In the case of shrimp farming, these actors are also dispersed across wide geographic areas, making regulatory oversight an enormous task for authorities. To counter this challenge, efforts should be made to tighten the shrimp supply chain, looking to the canned tuna sector as a model. Consolidation in the shrimp supply chain would reduce the available number of workplaces for unregistered entities, encouraging undocumented migrants to register, and enabling better oversight of these businesses.

Legal avenues must be more accessible to potential migrant workers with respect to cost and processing time: The procedures for migrating through legal channels should be reviewed and streamlined by the governments of Thailand and neighboring countries, in consultation with social partners, identifying which documents and what steps are duplicative or unnecessary. Regular migration must also offer better protection from the risks of migration to make legal migration a more attractive prospect. In promoting regular migration and regularization, approaches to influencing behavioral change must be considered; for example, influencing the opportunities, attitudes, and motivations of the major stakeholders.

Ensure compliance of subcontracted employers with labor standards: If subcontracting agencies employ migrant workers, the Thai government should ensure that they bear statutory responsibilities/liabilities as employers under the relevant labor laws, including the Alien Working Act, the Labour Protection Act (1998), the Social Security Act, and the Workmen's Compensation Act.

Focus efforts to improve labor conditions in primary processing in Samut Sakhon first: Since more than half of primary processors are based in Samut Sakhon, it may be economical to focus initial efforts on this area. Samut Sakhon is the center of the seafood business in Thailand, with the majority of traders, primary processors, and secondary processors in the area. Samut Sakhon is connected to Bangkok, which is the center of domestic demand and a transportation hub for seafood exports.

Ensure awareness of the Thai government's commitment to equal treatment with regard to labor protection: It is essential to widely disseminate the Thai government's commitment to provide equal treatment with regard to labor protection, under the Labour Protection Act (1998), regardless of nationality and legal status.

Support services should be accessible to migrants: The Thai government and the governments of migrant-sending countries should provide support services and cooperate with NGOs and trade unions, to establish channels through which to disseminate information on policies and procedures, and to facilitate migrants' access to services, including complaint mechanisms. These support services can also include measures to introduce/expand programs to support integration, develop language and other skills, and build support networks for migrants.

Ensure effective coordination among government departments involved in migration management: The committees managing labor migration in sending countries and in Thailand should include representatives from all key government departments involved in migration management, including labor, immigration, health, and social welfare. It is essential that the needs and concerns of workers and employers be reflected in committee meetings, including by guaranteeing social dialogue and consultation with workers' and employers' organizations and NGOs, both prior to and subsequent to meetings.

Strengthen collection and dissemination of data on migrant workers: Data on migrant workers should be strengthened through greater interagency collaboration at the national and subnational levels, and harmonized with data from sending countries. This includes the regular exchange of labor market information, administrative records on regular migration through the MOU and the registration/nationality verification processes, data on deportations and irregular migration, and analysis of trends and patterns. Processes for correcting discrepancies in data should be established. Procedures should be in place to ensure that data collected and shared feeds into a system of dialogue and review around policies, procedures, and the MOUs themselves. The categories of data collected could be made more specific to allow for further analysis (e.g., migration of women and men into specific sectors, migration to and from different provinces).

Raise awareness of the value of migrant labor: Research on the role of migrant labor and the value it adds to the Thai canned tuna and shrimp value chains can help raise public awareness of the value of migrant labor in these sectors and the negative impact a shortage of such labor would have on the Thai economy. Raising awareness of this issue can help support broader public acceptance of, and openness to, migrant communities.

Recommendations for Non-Government Stakeholders:

International buyers should be more vigilant and engage more directly with their suppliers to help them implement international standards, including for labor: Independent monitoring of the implementation of GLP standards will encourage businesses to comply with a set of criteria that ensure safe labor conditions for all. Involving international buyers in multipartite meetings in which international buyers, national businesses, national and local authorities, workers' representatives, and NGOs participate could lead to commonly agreed-upon steps to upgrade the Thai seafood industry. International buyers that operate in Thailand should implement the same level of standard requirements for both domestic and international markets.

NGOs should implement programs that promote GLP standards among small businesses: As multi-stakeholders in the GLP taskforce develop guidelines for GLP standards across the fisheries industry, opportunities will be created for greater collaboration among the public and private sectors and civil society. Small business owners in particular can benefit from programs designed to increase their knowledge and awareness of GLP. Working in collaboration with industry associations and government agencies, NGOs could also assist small businesses in ensuring that their labor practices comply with international standards. Additionally, the benefits of compliance should be made apparent, given that international concern about Thailand's labor conditions in the fisheries industry continues to increase.

Develop the capacity of SMEs working in shrimp processing to improve their labor conditions: The lack of concentration in the shrimp industry, and the large number of MSMEs in the sector, make it difficult for authorities and large companies to monitor labor conditions throughout the value chain. NGOs could work more closely with larger companies and public authorities to reach out to micro and small enterprises and help them build their capacity to understand and implement labor conditions that align with international standards. NGOs could support this effort by moderating meetings aimed at providing relevant information to MSMEs, organizing visits to larger companies that are implementing higher standards, helping small enterprises adapt these standards to their technical and financial capacity and scale, and providing trainings and technical support to implement better standards.

Conduct additional research on the topic of hazardous work among children and adolescents in Thailand: Additional research on hazardous work among children is needed to enhance our understanding of this subject. This study could draw only limited conclusions from the existing datasets, as survey items for the question on hazardous work were limited to 10 items based on Thailand's Labour Protection Act and were not specific by industry. Future research should include a wider range of occupational hazards specific to the shrimp and seafood sectors, such as: whether children are working on fishing boats; whether they are working on unstable or heavy work platforms; and whether they have survival equipment. Additional items on the physicality of the work should also be included (such as whether repeated bending or lifting is required) in order to assess the full extent of hazardous conditions by industry.

Encourage employers to ensure that children aged 5-14 are not engaged in work:⁶⁷ This study found that high proportions of young working children—one in three—suffered injuries while working. In cases where parents bring young children to worksites, business owners should ensure that these children are in safe environments and not conducting work. Ideally, parents should bring children to day care or school rather than to their worksites.

Employers should pay for the brokerage and registration fees of migrant workers: As part of efforts to close gaps in the registration process, the brokerage and registration fees of migrants should be paid by employers. This will reduce the potential for debt bondage and other vulnerabilities.

Ensure that children 15-17 have access to an advocate for work-related problems: Among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla, one in 10 children did not know who they could turn to for help with work-related problems, and one in four said they had no one to turn to for such problems. Private sector employers can help address this issue by identifying a point person for workers to turn to within the workplace, and NGOs can provide similar assistance at the community level.

⁶⁷ Thailand's 1998 Labor Protection Act (LPA) outlines conditions for the employment of young workers. Children below the age of 15 are prohibited from working in Thailand, with the implication that any individual under 15 years of age who is working is classified as child labor. Child labor is coded positively for:

- Anyone under 15 years of age who is working at least one hour per week
- OR: Ages 15-17 and working in hazardous work
- OR: Ages 15-17 and working more than 48 hours/week
- OR: Ages 15-17 and working between 10:00 p.m. and 6:00 a.m.

Recommendations for Multi-Stakeholder Efforts:

Establish a regional forum for improved regional value chain management in the seafood sector: A regional forum including government, the private sector (producers as well as domestic and international buyers), international organizations, and NGOs would provide a platform for the discussion of best practices in management and oversight in support of improved labor conditions across the value chain.

Recommendations on Migrant Education

Recommendations for Policymakers:

Migrant children should have access to early childhood education centers: The Ministry of Social Development and Human Security supports childcare centers located in every *tambon* (sub-district). Migrant children should be encouraged to enroll in such centers, and the local budget should be adjusted to accommodate these children. Conveniently located early learning centers can induce migrant parents to send their children to school rather than bring them to their worksites. Such centers will also help ease the burden of childcare that is currently falling on adolescent siblings and leading them to drop out of school. If centers are not within walking distance of migrants' homes, free transportation to the centers should be provided for all children. Ideally, centers should be open from early morning until evening, so that parents who need to work an early shift or overtime can do so. Early and/or late hours might be supported through NGO or private sector engagement. Migrant children should be encouraged to begin early learning centers when they are three to four years old. Starting school at an early age will help ensure that these children become proficient enough in Thai to enter formal Thai schools at the first grade level with their peers. Enrolling with their peers will also increase the chance that they will stay in school.

When migrant children enter formal Thai schools, they should be placed with their age peers: To support better integration of migrant students into formal Thai schools, school administrators should transition migrant children into classrooms with Thai children who are close to their own age (rather than requiring all migrant children to begin at primary one, regardless of age). Special tutoring arrangements should be set up to support this transition. Prior to entering a formal Thai school, migrant children should be provided with Thai language training and tutoring on key aspects of the curriculum. Once the migrant child is in school, the child should be provided with ongoing tutoring to help him or her catch up to the class.

School fees should be kept low: While all children have access to education in Thailand regardless of registration status, this research found that the children of undocumented migrants were less likely to enroll in school, as their families had lower incomes than documented migrants and were therefore less able to pay fees. Fees associated with school attendance should be kept low so as not to exclude these children.

Ensure that part-time schooling is available for migrant children, particularly those in the 15-17 legal working age group: When children were asked about opportunities of greatest interest to them, the most popular options were working full-time (46.9 percent) and the combination of attending school part-time and working part-time (28.2 percent) (Table 75). Of children not currently in school, 32.9 percent of boys and 37.5 percent of girls aged 15-17 indicated that they would like to go to school (Table 72). Part-time classes and vocational school offer excellent opportunities for these children to continue their education while working (as opposed to dropping out to work full time). Flexible educational modalities for children aged 13 and above can encourage these children to stay in school beyond the transition to junior high, when many are currently dropping out in favor of work. Such educational programs should be tailored to the needs of working children and include information on labor rights, life skills, and communication skills.

Establish school-based vocational training programs for children aged 13-14: Migrant parents who were confident that they would remain in Thailand until their children reached the working age of 15 were more inclined to send their children to school, as they viewed schooling as a means of improving their teenage children's employment prospects. Providing vocational training linked to market needs (and if possible, to

employment at age 15) would provide a strong incentive for parents to keep their children in school. Such a program could also help employers fill positions in key areas where there is a labor shortage. Moreover, high proportions of 13- to 14-year-olds who were not currently in school indicated that they wished to study: 61.9 percent of boys and 72.7 percent of girls (Table 72).

Consider establishing a government-run education fund for migrant children: Given the importance of school attendance as a means of stemming child labor, the government should consider having employers pay into a fund supporting migrant education in Thailand as part of their application to bring migrant workers into the country. The education fund could subsidize the operation of centers providing transitional education to migrants and helping them effectively integrate into the formal Thai system.

Support bilateral cooperation on educational equivalency: As part of the MOU process, efforts should be made to establish a clear framework for educational equivalency between migrant-sending countries and Thailand. Educational equivalencies should ensure that migrants and their children have access to recognized credentials so that those who are currently in school can continue to study upon migration, and those who have completed a degree will have a recognized qualification.

Ensure that education provided to migrants is of high quality: High-quality education is essential for human development and the development of productive citizens. Moreover, high-quality education supports better student retention rates and is therefore an important incentive for migrant families to choose education over work for school-age children. Regular and standardized monitoring and evaluation of teachers of migrant children will help ensure quality.

Support services should be made available to children currently in school with the goal of their continuing education: Given the extremely high levels of interest in continuing their education among those who are already in school (Table 73) and the substantial percentages who drop out after primary school or upon turning 15, support services should be made available to children in school to help them navigate challenges associated with dropping out. Attention should be paid to the key factors, detailed in Table 88, that tend to draw children away from education, including household commitments, employment opportunities, and parental mobility.

Recommendations for Non-Government Stakeholders:

Increase education and advocacy in migrant communities: Thailand recently implemented a change in the registration process, allowing migrant workers to renew their work permit after a brief period out of the country. Our research suggests that this holds enormous potential for reducing child labor. Many of the migrant respondents who did not send their children to school noted that they were focused on the short-term accumulation of income, as their time in Thailand was limited. By giving migrants the assurance that they can stay in Thailand long-term (as long as they continue to have productive working relationships with their employers), these migrants will be far more invested in a life in Thailand for themselves and their children. This assurance can have a significant effect on migrant parents' willingness to send their children to primary school (to ensure that their children learn Thai) and to secondary or vocational school (to ensure they have marketable skills for employment in Thailand). NGOs can encourage this positive development through advocacy programs in migrant communities that encourage parents to choose education over work for their children.

Conduct outreach on the right to education and its benefits among working children aged 13-17: A significant portion of older children working in shrimp and seafood processing who were not currently in school indicated that they were unsure whether they wanted to enter school; this represents an opportunity among this group to raise awareness of migrant children's right to access school in Thailand, and of the benefits of education more generally.

Support the transition of migrant children into Thai schools: NGOs and the private sector can help support the successful transition of migrant children into Thai schools in a number of ways. NGOs can help identify teachers who speak both Thai and Burmese to serve as tutors for children as they prepare to enter the formal

Thai school system and for a period of time after their transition. NGOs can also work together with government to help train these teachers to meet the specific needs of migrant children who are entering the Thai school system for the first time (including language and curriculum support). The private sector can support these efforts through financial support for teachers' salaries and other fees associated with tutoring arrangements.

Support improved relations and understanding between Thais and migrants: NGOs and the private sector can support better educational and social outcomes for migrant children by working to increase mutual understanding among Thais and migrants living in the same community. Community-based activities that promote understanding of, and respect for, both cultures, as well as a sense of investment in a shared community, will provide an important foundation on which to build successful educational interventions for migrant children.

Provide financial assistance and/or incentives to migrant families to keep children in school: Employers of migrant workers should consider providing financial and other incentives to facilitate migrant children's enrollment and ongoing schooling. Migrant parents who received school subsidies from their employers indicated that this support made them more likely to keep their children in school. It also enabled employers to retain long-term workers in an increasingly competitive labor market. Incentives can include:

- School uniforms
- Learning materials
- Teacher salaries
- School equipment
- Classroom space
- Free transportations from migrant communities to learning centers or schools
- Free lunch
- Financial rewards in the form of scholarships for migrant children who perform well in schools

Recommendations for Multi-Stakeholder Efforts:

Establish a multi-stakeholder platform to address challenges related to migrant education:

Government, NGO, and private sector stakeholders should come together to establish a multi-stakeholder platform to address challenges related to migrant education. The platform should support coordination on roles and responsibilities for implementing the recommendations in this report, and other actions in support of improved access and quality of migrant education.

Annex

1. Summary of Quantitative Findings

The following is a summary of findings from the quantitative data analysis in Part II:

Sample

Participants included 985 working children aged 5-17 from the TDRI and PSU studies conducted in Samut Sakhon, Surat Thani, Nakhon Si Thammarat, and Songkhla, and 558 migrant working children aged 5-17 in the DPU study conducted in Samut Sakhon. This report focuses on children in the shrimp/seafood industries, of whom there were a total of 472 (47.9 percent) in the TDRI and PSU studies (Table 25) and 155 (76.0 percent) in the DPU study (data not shown).

The migrant and Thai children in the shrimp/seafood industry comparisons are drawn from the TDRI Samut Sakhon sample, with 49 (39.2 percent) Thai children and 76 (60.8 percent) migrant children. Supplementary information for migrant children in these industries is provided from the DPU study.

Participant sex and age

In the TDRI and PSU studies, participants in the shrimp and seafood industries included 101 (21.4 percent) 5- to 12-year-olds, 113 (23.9 percent) 13- to 14-year-olds, and 258 (54.7 percent) 15- to 17-year-olds. In the DPU study, seven (4.5 percent) were aged 5-12, 12 (7.7 percent) aged 13-14, and 136 (87.7 percent) aged 15-17 (Table 16).

Among children in the shrimp/seafood industries, Nakhon Si Thammarat had more males than females in all age groups. Songkhla and Samut Sakhon saw greater proportions of females compared to males in the 5-12 age group.

Industry

The DPU migrant children sample in Samut Sakhon and the TDRI Nakhon Si Thammarat sample included higher proportions of children in the shrimp or seafood industries (76.0 percent [data not shown] and 73.1 percent [Figure 15], respectively) than in Samut Sakhon (TDRI) (38.2 percent) and Surat Thani (34.3 percent) (Table 25).

Migrant children

By sex, there were similar age distributions among Thai and migrant children in the TDRI study. Among migrant children, 67.9 percent were female, compared to 56.5 percent among Thai children (Table 19).

As shown in Table 24, 91.6 percent of children in the shrimp/seafood industries possessed a Thai passport or ID, compared to just 42.1 percent among the overall sample of migrant children in the DPU study. Among all migrant children, 56.3 percent could speak Thai (Figure 17). Among shrimp/seafood migrant children only, 54.8 percent spoke Thai (Figure 19).

EDUCATION

School attendance

Among children in shrimp/seafood industries, 56.4 percent were attending school or a non-formal education center; however, over one in three children (40.7 percent) were currently not attending school (Table 51).

Samut Sakhon had the highest proportion of children not attending school (78.6 percent). Over one-third of children in Surat Thani (43.5 percent) were not in school, followed by 30.1 percent of children in Nakhon Si Thammarat and 23.6 percent in Songkhla. The inverse was true for each province, respectively, with Songkhla having the highest proportion of children in school (72.7 percent) (Tables 50 and 52).

In all provinces, almost all 5- to 12-year-olds (94.1 percent) were in school, compared to 70.8 percent of 13- to 14-year-olds and 35.3 percent of 15- to 17-year-olds. Over half of 15- to 17-year-olds were not attending school (59.7 percent) (Table 51).

In the TDRI Samut Sakhon study, 89.6 percent of migrant children were not attending school, compared to 61.2 percent of Thai children (Figure 36).

Reasons for not attending school

Among children in the shrimp/seafood industries not in school, 56.3 percent of children reported needing to work for income. Over 40 (41.1) percent were not interested in attending school, while one in five children reported that their families could not afford to pay for school.

In the TDRI Samut Sakhon study, twice as many Thai as migrant children in the shrimp/seafood industries were not interested in attending school (46.7 percent and 23.2 percent, respectively), while twice as many Thai as migrant children reported that their families could not afford to pay for their education (23.3 percent and 10.1 percent, respectively) (Table 55).

Among migrant children in the shrimp/seafood industries in the DPU study, just 3.9 percent had ever attended school, compared to 12.2 percent of children in other industries (Table 56), while 96.2 percent cited having to work as the main reason for never having attended Thai school (Table 57). A large proportion (30.1 percent) of migrant children who had worked in the past week had never attended Thai school. Among them, 37.3 percent cited having to work, and 33.9 percent cited other reasons for never attending school (Table 58).

Thirty-one percent of migrant children in the DPU study had attended a non-formal education center in Thailand. Nearly 94 (93.9) percent of migrant children aged 15-17 had never attended formal Thai school, and just 5.7 percent had received non-formal education (data not shown). Of those aged 5-12 and 13-14, 52.8 percent and 43.9 percent, respectively, had attended an informal education center (data not shown).

WORK

Sector

Three-quarters (73.0 percent) of children in Nakhon Si Thammarat were working in the shrimp or seafood industries, followed by 49.1 percent in Songkhla, 38.2 percent in Samut Sakhon, and 34.4 percent in Surat Thani (Table 25).

Over half of migrant children worked in the shrimp or seafood industries (57.0 percent), whereas Thai children were mostly working in other industries (74.6 percent) in the TDRI study (Table 27). Among migrant children in the DPU study, 76.0 percent worked in the shrimp or seafood industries, with 24.0 percent working in other industries (data not shown).

In the DPU study, similar proportions of migrant children in shrimp/seafood spoke Thai (54.8 percent) compared to migrant children in other industries (53.1 percent). A slightly higher proportion of children in the shrimp/seafood industries had formal documents (94.2 percent), compared to children in other industries (83.7 percent) (Figures 19 and 20).

Employee status

Among all children in the shrimp/seafood industries, 38.3 percent were daily wage employees. Samut Sakhon had the highest proportion of daily wage employees (63.7 percent). 41.7 percent of children were unpaid family workers, mostly in Songkhla, where 59.6 percent of children worked unpaid for their family businesses (Table 28).

In all provinces, slightly higher proportions of females than males were daily wage employees, except in Songkhla, where 15.4 percent of females and 31.8 percent of males worked for a daily wage. By age and sex, similar proportions of males and females in each age group were unpaid family workers (data not shown). Among 5- to 12-year-olds, three times as many females as males were temporary employees (15.8 percent and

5.1 percent, respectively), and four times as many females as males were temporary employees among 13- to 14-year-olds (16.7 percent and 3.6 percent, respectively) (Table 31).

Contracts

Among shrimp/seafood workers, 69.6 percent did not have a contract, followed by 27.1 percent who had verbal contracts. Very few children (3.2 percent) had written contracts (Table 32).

There were significant differences across provinces. No working children in Nakhon Si Thammarat (n=46) had a contract, written or verbal. Samut Sakhon province had the highest proportion of children with verbal contracts (57.4 percent), compared to 17.4 percent in Surat Thani and few in Songkhla. Older children were more likely to have a contract than younger children. Higher proportions of boys (76.6 percent) than girls (64.5 percent) did not have contracts, with girls seemingly more likely to have verbal contracts than boys. Nearly 70 (69.6) percent of children in shrimp or seafood work had no contract, compared to 59.3 percent of children in other industries (Table 32).

Working hours

By province, among all children, Nakhon Si Thammarat and Songkhla had the highest proportion of children working above the legally permitted 48 hours/week (18.4 percent), followed by Surat Thani (12.5 percent) and Samut Sakhon (10.9 percent) (Table 33).

As exhibited in Table 35, those in the seafood or shrimp industries in Samut Sakhon were working much longer hours (47.3 hours/week on average) than children in those industries in Surat Thani (32.3 and 30 hours/week, respectively).

Among children in the shrimp/seafood industries, migrant children were working around six hours/week longer on average than Thai children (49.6 hours and 43.2 hours, respectively [Table 35]). In the DPU study (Table 37), migrant children were working a mean of 50.4 hours/week. Migrant children aged 15-17 had worked an average of two hours longer (50.7 hours/week) than younger children in the past seven days.

Wages

As shown in Table 38, older children were paid more than younger children. Females were paid more than males in Samut Sakhon (35.2 baht and 33.6 baht/hour, respectively) although the inverse was true in Surat Thani, where males were paid more than females (39.8 baht and 26.1 baht, respectively). Children in the seafood industry were paid slightly more per hour (35.4 baht) than those in the shrimp (34.0 baht) and other industries (29.7 baht).

In the TDRI study, among those in the shrimp/seafood industries, migrant children were paid less (33.6 baht) than Thai children (36.6 baht). In the DPU study, wage rates were extremely low—children working in the shrimp/seafood industries received on average 6.6 baht/hour (Table 38).

Children were asked how they spent their income. Most children in the shrimp/seafood industries (74.3 percent) passed their earnings to parents or relatives for household purposes, while 22.5 percent spent their income on education (Figure 29). More than 72 (72.5) percent of children spent their wages on personal expenses, while 25.7 percent allocated their wages to savings. Among migrant children, just 4.1 percent spent income on education, compared to 17.1 percent among Thai children (Table 40).

Work venue

Work locations differed greatly by province. In Samut Sakhon, 46.8 percent worked in processing factories, and 29.4 percent worked in primary processing. In the Surat Thani, 30.8 percent were working at home, and 23.1 percent were working on fishing boats and in primary processing, respectively. In Nakhon Si Thammarat and Songkhla, 37.2 percent were working on fishing boats in coastal fisheries, and 18.6 percent worked as traders (Table 42).

Fishing boat workers were mostly male in Samut Sakhon and Surat Thani (data not available for Nakhon Si Thammarat and Songkhla). Similar proportions of males and females were working in processing factories

(male - 46.0 percent, female - 48.0 percent), and in primary processing (male - 30.0 percent, female - 28.0 percent) in Samut Sakhon (Figure 30).

Tasks at work

Nearly 35 (34.9) percent of children working in the shrimp or seafood industries in Samut Sakhon and Surat Thani were conducting processing-related work, while 16.1 percent of children in both provinces were sorting shrimp and seafood products by size (Table 44).

According to Table 45, a higher proportion of boys than girls were doing processing work in Samut Sakhon (44.0 percent and 34.7 percent, respectively). One in four girls were sorting shrimps and seafood products by size in Samut Sakhon, compared to one in 25 boys. Girls were more likely to be found doing packaging work (37.5 percent) compared to boys (14.3 percent) in Surat Thani.

Household work

A much higher proportion of girls did household chores in all provinces compared to boys, with 90.2 percent of girls doing chores, compared to 61.2 percent of boys (Table 48).

Overall, children aged 13-14 were spending more time on average on household chores, around 7.5 hours/week, compared to 5- to 12-year-olds (6.2 hours) and 15- to 17-year-olds (5.9 hours) (Table 47). A possible reason for this is that 13- to 14-year-olds work shorter hours than 15- to 17-year-olds in jobs outside the home, so they may help more at home as a result. However, 77.8 percent of 13- to 14-year-olds were currently in school. It is not clear how longer hours spent doing household work among 13- to 14-year-olds impacts schooling.

HEALTH AND OCCUPATIONAL HAZARDS

Occupational hazards

Much higher proportions of children in shrimp or seafood worked with fire, gas, or flames (25.9 percent), compared to 12.7 percent in other industries. 23.3 percent of children in shrimp and seafood were also working in a wet or dirty place, compared to 7.6 percent in other industries (Table 61).

Among children in the shrimp or seafood industries, almost twice as many 13- to 14-year-olds (29.2 percent) and 15- to 17-year-olds (28.7 percent) as 5- to 12-year-olds (14.9 percent) reported working with fire, gas, or flames. Generally, older children appear to be more exposed to workplace hazards than younger children (Figure 38).

Personal Protective Equipment

Among all children, 31.0 percent reported having safety equipment or personal protective equipment (PPE), while 48.0 percent reported not having it. One in five children reported not needing to use safety equipment (Figure 40).

Twice the proportion of children in the shrimp/seafood industries had PPE (42.2 percent) than in other industries (20.5 percent). In shrimp and seafood, 74.8 percent of children provided their own safety equipment, compared to 57.8 percent of children in other industries. Among children in other industries, a higher proportion reported that their employer provided PPE (32.4 percent) than among children in shrimp or seafood industries (18.7 percent) (Table 63).

Seventy percent of migrant children in shrimp/seafood industries reported using safety equipment, compared to 52.1 percent of Thai children (Table 64). A much higher proportion of migrants (87.0 percent [Figure 42]) than Thais (52.0 percent [Figure 41]) working in the shrimp or seafood industries reported providing their own safety equipment. Reasons for this difference are unknown.

Work-related injuries/health

Among children in shrimp/seafood industries, 19.4 percent had been injured while working, and 8.1 percent had at some time developed a health problem or chronic disease from work (Table 64). In all age groups, boys

appeared more likely to have incurred an injury than girls (21.3 percent and 17.6 percent, respectively) (data not shown). Overall, higher proportions of younger children had sustained work-related injuries compared to older children. This may indicate that younger children are especially at risk of being injured at work, which may be due to them receiving less or no training due to their often-informal working status.

Twice as many children in the shrimp/seafood industries had incurred injuries (19.4 percent) than in other industries (8.4 percent). In Samut Sakhon and Surat Thani, children in the seafood industry appear to be at greater risk of being injured (11.1 percent) or having a health problem (14.8 percent) compared to children in the shrimp industry (6.3 percent and 4.6 percent respectively) (Table 65).

Among injured children in the shrimp and seafood industries in Samut Sakhon, a higher proportion of Thai children (10.4 percent) had sustained injuries than migrant children (8.1 percent) (data not shown).

Abuse

Few children reported experiencing abuse at home or in the workplace. The most common form of abuse was being shouted at by a parent, supervisor, or colleague (14.4 percent) (Table 67). Among the 14 children who had been physically abused, nine were boys and five were girls. Among the nine children who had been forced to work overtime, five were in shrimp/seafood and four were in other industries (data not shown).

Awareness

There were striking differences in awareness of child protection law between Samut Sakhon and Surat Thani. 70.5 percent of children in the shrimp and seafood industries in Samut Sakhon did not know about child labor laws, compared to 100.0 percent of children in Surat Thani. In Samut Sakhon, children in the shrimp industry appeared to have the least awareness of child protection laws, with 78.3 percent reporting that they were not familiar with legal protections, compared to 62.9 percent among children in seafood and 45.7 percent in other industries. Among 5- to 12-year-olds, 88.9 percent did not know the law, compared to 73.7 percent among those aged 13-14 and 68.1 percent of 15- to 17-year-olds. In Samut Sakhon, a higher proportion of migrant children (78.7 percent) did not know child protection law compared to Thai children (57.5 percent [data not shown]).

Among children in shrimp/seafood industries in Samut Sakhon and Surat Thani, 52.4 percent would turn to family members for help if they faced a problem at work, followed by friends (33.6 percent). Twenty-four percent of children reported that they would have no one to turn to in the event of work-related problems (Table 69).

Among children in the shrimp/seafood industries in Nakhon Si Thammarat and Songkhla, 50.3 percent said they had no problems, and 34.1 percent would turn to family members for help. 10.6 percent of children did not know who they could turn to in the event of work-related problems (Table 70).

Ten percent of migrant children would approach NGOs for assistance, compared to no Thai children. Interestingly, 7.8 percent of migrant children reported that they would approach the government for help, compared to none of the Thai children (Table 71).

ASPIRATIONS

Aspirations

Almost all children aged 5-12 wanted to continue their studies, with 93.8 percent of boys and 95.5 percent of girls wishing to do so. At age 13-14, fewer boys than girls wished to continue studying (85.0 percent and 94.3 percent, respectively). At age 15-17, similar proportions of girls and boys wanted to continue studying (62.2 percent and 58.2 percent, respectively). As children grow older, and if they are already working, they may see less value in continuing with school (Figure 44).

Of children not currently in school (Table 72), high percentages of those in the 13-14 year old group indicated that they wished to study: 61.9 percent of boys and 72.7 percent of girls. This suggests that there is space for a

key intervention to help working children in the 13-14 age group enter or re-enter school (before they reach legal working age, when most choose work over school).

For those currently studying (Table 73), extremely high proportions of children in all age groups indicated that they would like to continue studying. One hundred percent of boys surveyed expressed this wish, while 98.4 percent of girls aged 5-12, 100 percent of girls aged 13-14, and 98.0 percent of girls aged 15-17 who were currently studying said that they would like to continue to do so.

When asked about opportunities they would like to do most, 46.9 percent wanted to work full-time, and 28.2 percent wanted to attend school part-time and work part-time. 3.7 percent wanted to find a better job than their current one. Almost five times as many girls as boys wanted to go to school full-time (17.4 percent and 3.5 percent respectively). Similar proportions of boys and girls wanted to go to school part-time and work part-time (Table 75).

Among children in the shrimp/seafood industries, 60.4 percent of Thai children wanted to continue their studies, compared to just 32.4 percent of migrant children. A much higher proportion of migrant children reported wanting to work full-time (54.7 percent), compared to Thai children (29.2 percent). Forty-eight percent of Thai children wanted to go to school part-time and work part-time, compared to 22.7 percent among migrant children (Table 76).

Assistance needed

Education was by far the most commonly reported form of assistance required by children in shrimp/seafood industries in Nakhon Si Thammarat and Songkhla, particularly among younger children (96.6 percent among 5- to 12-year-olds). Vocational skills training was requested by more children aged 13-14 and 15-17 (15.6 percent, respectively) than aged 5-12 (5.2 percent) (Table 77).

Education assistance was also commonly requested in Samut Sakhon and Surat Thani, particularly among 13- to 14-year-olds (70.0 percent) and 5- to 12-year-olds (66.7 percent). 20.0 percent of 13- to 14-year-olds and 17.1 percent of 15- to 17-year-olds were interested in vocational skills training. Among 15- to 17-year-olds, 18.3 percent needed employment-related aid (Table 78).

Education was the most commonly reported assistance needed by Thai children, with 62.2 percent requesting it, compared to 52.2 percent of migrant children. For both groups, the next most popular request was employment-related assistance, with 21.7 percent of migrant children and 16.2 percent of Thai children requesting this (Table 79).

CHILD LABOR

ILO definition

The term “child labor” refers to working children after considering age, weekly working hours, and whether or not the child is engaged in hazardous work following the framework for statistical identification of child labor 5- to 17-years-old by the 18th ICLS Resolution on Statistics concerning child labor⁶⁸.

Surat Thani had higher proportions of children working in shrimp/seafood industries in child labor overall (41.2 percent) than Samut Sakhon (32.1 percent) (Tables 81 and 82). Higher proportions of children were in hazardous work in Samut Sakhon (19.6 percent) than in Surat Thani (17.7 percent).

There were interesting differences by sex. While a greater proportion of boys were in child labor (42.2 percent) than girls (25.8 percent) in Samut Sakhon, the inverse was true in Surat Thani (Figure 48). There, over twice as many girls (50.0 percent) were in child labor as boys (20.0 percent), although a greater proportion of boys were in hazardous work—20.0 percent of boys worked more than 48 hours a week, compared to 16.7 percent of girls. This suggests that girls in Surat Thani may be more likely to be child laborers than boys, although boys

⁶⁸ ILO, Report III - *Child Labour Statistics*. ILO IPEC, *Baseline Surveys on Child Labour in Selected Areas in Thailand*.

are more likely to be in hazardous work. Further research is needed to conclusively ascertain whether this is the case. Small sub-sample sizes for Surat Thani also limit the conclusions we can draw (Table 82).

A high proportion of children in the seafood industry fell under the ILO definition of child labor—35.6 percent of children in Samut Sakhon (Table 81) and 40.0 percent of children in Surat Thani (Table 82)—with many of these children falling under the definition of hazardous work: working more than 48 hours a week.

In the DPU study, 34.3 percent of migrant children in the shrimp/seafood industries were in child labor, and 23.3 percent were in hazardous work (Table 84).

In the TDRI study, 32.5 percent of Thai children in the shrimp/seafood industries were in child labor, compared to 31.9 percent of migrant children. However, more migrant child laborers were in hazardous work (20.8 percent) than Thai children (17.5 percent). For migrant children, the difference in the proportion of child labor in the TDRI and DPU studies suggests that the children sampled in the TDRI study were better off than those sampled in the DPU study (Table 84).

Child laborers worked on average eight hours more per week than non-child laborers. They were also paid less—a mean of 23.6 baht/hour, compared to 34.5 baht/hour among non-child laborers. Children in the shrimp/seafood industries in Samut Sakhon and Surat Thani were working longer hours than the entire sample of children (all industries) considered child labor—45.3 hours per week versus 42.7 hours per week, respectively (Table 85).

MOL definition

The proportion of the samples classified as child laborers was higher under the MOL definition, because the LPA sets a higher threshold, classifying any child below 15 who is working as child labor. The MOL definition, based on the LPA, also takes into account the workplace hazards that children may experience. Many children experienced at least one hazard, which also contributed to the higher proportions classified as child labor compared to the ILO definition.

Among children in the shrimp/seafood industries, 60.7 percent in Samut Sakhon and 64.7 percent in Surat Thani were child laborers (Table 86).

One hundred percent of 15- to 17-year-old boys working in shrimp/seafood industries in Surat Thani were child laborers, compared to 25.0 percent of girls there and 72.2 percent of boys in the same age group in Samut Sakhon. Of girls aged 15-17 in Samut Sakhon, 38.9 percent were child laborers, compared to 72.2 percent of boys there (Figure 49).

As with the ILO definition, a very high proportion of 13- to 14-year-olds fell under the MOL child labor definition—100.0 percent in Surat Thani and Samut Sakhon. Child labor was very high in the seafood industry—69.2 percent in Samut Sakhon and 66.7 percent in Surat Thani. The majority of children in other industries in Surat Thani (82.1 percent) were also child laborers (Table 86).

Across all industries, child laborers under the MOL definition worked an hour more per week on average than non-child laborers. They were also paid less—a mean of 28.5 baht/hour (SD 22.3), compared to 35.0 baht/hour (SD 18.5) among non-child laborers. However, shrimp/seafood workers worked longer hours than children in all industries in child labor—45.3 hours per week versus 36.8 hours per week (Table 87).

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