Thailand: Improving Migration Policy Management with Special Focus on Irregular Labour Migration:

Analysis of Thai Labour Market

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by

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Executive Summary

Analysis of Thai Labour Market

Thailand experienced rapid economic growth from the mid-1980's to the early 1990's. Growth rates between 1990 and 1995 averaged 8-9 percent per annum. However, the regional economic crisis in 1997 had significant impacts on the labour market. This study provides an analysis of the Thai labour market, including the long-run trends and the impact of the crisis, with an emphasis on five selected sectors permitted to employ irregular migrants.

The population of Thailand is currently 63 million persons and is growing at one percent a year. Declining population growth and a reduction in the labour force participation rate has been observed for some time and will possibly impose a restriction on the expansion of the labour supply in the future. Improving educational level of the workforce will also contribute to a shortage of particular categories of labour.

Before the economic crisis, rapid economic growth was associated with a strong demand for labour, especially in the industrial sector. Employment in industry increased by more than two million persons between 1990 and 1995. This demand was satisfied both by new entrants to the labour force and by the people previously employed in agriculture. The rate of unemployment was stable at around 1-2 percent of the workforce. After the 1997 financial crisis, conditions in the Thai labour market changed swiftly, and the impacts still remain in the market. Total employment was suddenly reduced by one million between 1997 and 1999. The decline in the industrial sector alone was more than one million workers, with some absorbed by agriculture. The unemployment rate increased sharply from 0.88 percent in the third quarter of 1997 to 4.78 percent in the first quarter of 1998. During the 3rd quarter of 2000, there were 32.83 million employed persons, 48 percent of whom were in agriculture and another 18 percent in industry. The unemployment rate stood at 4.95%. Most of the unemployed held only the primary education level, but those having higher education than the lower secondary level faced the highest unemployment rate.

The farming sector (excluding rice farming) contributed around 2.6 percent of the total GDP in 1998, which has steadily declined over the last few decades. The sector employed between 5-7 million Thais in 2000, with the number fluctuating by season. Evidence of labour shortages in this sector was shown by the rapidly increasing wages in the sector during the early 1990's. However, wages significantly declined after the crisis, indicating a lessening of the labour shortage. Average monthly wage for an employee in this sector was around 3,000 baht in 2000. The number of registered irregular migrants was 103,338 persons in 2001, which is almost 20 percent of the total number of registered migrants and about 10 percent of low-skilled Thai employees in this sector.

In 2000, there were 131,000 Thais working in the marine fisheries sector (excluding related industries). Forty percent of workers were private employees, who received an average wage of 4,140 baht a month. Wages in this sector continually increased until 1999, but then declined, along with the labour shortage. Employees in this industry work 65-70 hours a week. The long hours are believed to be a major deterrent for Thai workers to participate in this sector. The number of registered migrants is 103,375 persons in the marine fisheries and related industries.[1] Astonishingly, when focused only at the marine fisheries business, the number of registered migrants in 2001 is about 130% of low-skilled Thais in this sector.

The share of the textile and garment industry in GDP peaked at nine percent in 1990 and had declined to eight percent in 1998. However, the numbers employed in the industry increased during the 1990s, with the employment of 1-1.3 million Thais in 2000. Private employees receive an average monthly wage of 4,730 baht. Signs of a labour shortage were seen before the economic crisis, but have since disappeared. The number of registered migrants in the industry is not known, as the industry is combined with other industries in the registration data. It is believed that hiring more irregular migrants in this sector may distort the employment and wage structure of the labour market as a whole.

Employment in the construction industry increased from one million in 1990 to three million in 1995, and accounted for 10 percent of GDP in both years. After the crisis, employment reduced to 1.5 million between 1998 and 2000 and the contribution to the GDP dropped to five percent in 1998. Employees receive an average monthly wage of 4,940 baht, the highest level of the five sectors included in this study. There have been no signs of recovery of the construction industry. There were 47,320 registered migrants working in this sector in 2001. The ratio of registered migrant workers to low-skilled Thai workers is at 5%, the lowest among all types of business allowed to employ migrants. However, because of the low dependence on migrants and large number of unemployed low-skilled Thais, the question still remains whether we should allow the foreigners to work in this industry. We found no justification for the employment of foreigners in this particular sector.

A shortage of housemaids is clearly seen in the escalating wages in this sector. Even though average wages declined 10 percent in 1999 as a result of the economic crisis, the average annual percentage growth of wages in this sector was 6.8 percent in the 1990s. In 2000, the average wage was 3,630 baht a month. The number of Thai housemaids in 2000 was 0.22 million persons, and the number of registered migrants is 92,389 persons, or 15 percent of total registration and 46% of low-skilled Thai housemaids. Increasing the wages in this sector should attract Thais into the sector, while employment of alien workers may depress sectoral wages and drive Thai workers away from the sector.

According to TDRI's forecasts, total employment will increase from 33.3 million in 2001 to 36.7 million in 2006. Significant growth will occur in the service sector, while the needs for labour in industries will slowly increase. Agriculture will experience little employment growth. The unemployment rate will increase from 5 to 5.5 percent for the first quarter of 2001 and 2006 respectively and from 2.4 to 4 percent during the third quarter of 2001 and 2006 respectively. Unemployment will be most severe among educated workers, with uneducated more likely to experience underemployment.

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[1] The number of Thai workers only refers to the marine fisheries industry while for registration purposes the marine fisheries and related industries are combined.

From the macroeconomic perspective, a distinction should be made between short-run economic expansions versus long-run sustainable development. The simple question is what would happen if Thailand could not hire irregular workers. Long-run policies should aim to reduce the dependence on these workers. Promotion of labour substituting technologies should be implemented to take the pressure off the demand for low-skilled labour.

บทสรุปผู้บริหาร

การวิเคราะห์ตลาดแรงงานไทย

ประเทศไทยมีการขยายตัวทางเศรษฐกิจที่รวดเร็วในช่วงประมาณกลางทศวรรษที่ 1980 ถึงต้นทศวรรษที่ 1990 อัตราการเติบโตเฉลี่ยในช่วงปี 2533-2538 อยู่ที่ร้อยละ 8-9 ต่อปี อย่างไรก็ตามวิกฤติเศรษฐกิจในระดับภูมิภาคที่เกิดขึ้นในปี 2540 ได้ส่งผลกระทบอย่างรุนแรงต่อตลาดแรงงาน การศึกษาในครั้งนี้จะวิเคราะห์ถึงสภาพตลาดแรงงาน ทั้งในด้านแนวโน้มระยะยาวและผลกระทบจากวิกฤติดังกล่าว โดยจะเน้นศึกษาในรายละเอียดในบางกลุ่ม (5 กลุ่ม) ที่อนุญาตให้ขึ้นทะเบียนแรงงานต่างด้าว

ประชากรในประเทศไทยในปัจจุบันนี้มีจำนวนประมาณ 63 ล้านคน โดยเพิ่มขึ้นร้อยละ 1 ต่อปี ทั้งนี้ มีการลดลงของอัตราการขยายตัวของประชากรและอัตราการมีส่วนร่วมในกำลังแรงงานมาเป็นระยะเวลาหนึ่งแล้ว ซึ่งปัจจัยทั้งสองจะทำให้เกิดข้อจำกัดในการขยายตัวของกำลังแรงงานไทยในอนาคต อีกทั้ง ระดับการศึกษาที่สูงขึ้นอาจช่วยเร่งการขาดแคลนแรงงานในบางกลุ่มแรงงานได้เร็วขึ้น

ก่อนที่จะเกิดวิกฤติเศรษฐกิจขึ้นนั้น การขยายตัวทางเศรษฐกิจที่รวดเร็วได้ช่วยให้ความต้องการแรงงานได้เพิ่มขึ้นอย่างมาก โดยเฉพาะความต้องการแรงงานในภาคอุตสาหกรรม จำนวนผู้มีงานทำในภาคอุตสาหกรรมได้เพิ่มขึ้นมากกว่า 2 ล้านคน ซึ่งอุปสงค์แรงงานนี้มิได้ถูกสนองโดยกลุ่มผู้เข้าสู่ตลาดแรงงานใหม่เท่านั้น แต่จะมีแรงงานในภาคการเกษตรอีกเป็นจำนวนมากที่ได้ย้ายเข้ามาทำงานในภาคอุตสาหกรรมเหล่านี้ด้วย อัตราการว่างงานค่อนข้างคงที่ที่ร้อยละ 1-2 แต่หลังจากที่เกิดวิกฤติเศรษฐกิจในปี 2540 สถานการณ์ในตลาดแรงงานได้เปลี่ยนแปลงไปอย่างมากและผลกระทบยังคงอยู่ในตลาดจนปัจจุบันนี้ จำนวนผู้มีงานทำลดลงไปทันที 1 ล้านคนระหว่างปี 2540-2542 โดยจำนวนผู้มีงานทำที่ลดลงในภาคอุตสาหกรรมเพียงอย่างเดียวจะมากกว่า 1 ล้านคนเสียอีก แต่ส่วนหนึ่งได้ถูกดูดซับไว้โดยภาคการเกษตร อัตราการว่างงานเพิ่มขึ้นอย่างรวดเร็วจาก ร้อยละ 0.88 ในไตรมาสที่ 3 ปี 2540 เป็นร้อยละ 4.78 ในไตรมาสที่ 1 ปี 2541 ทั้งนี้ ในปี 2543 พบว่ามีผู้มีงานทำทั้งสิ้น 32.82 ล้านคน โดยร้อยละ 48 ของจำนวนดังกล่าวทำงานในภาคการเกษตร และอีกร้อยละ 18 ทำงานในภาคอุตสาหกรรม อัตราการว่างงานอยู่ที่ร้อยละ 4.95 โดยผู้ว่างงานส่วนใหญ่จะมีระดับการศึกษาเพียงประถมศึกษา แต่ผู้ที่มีการศึกษาสูงกว่ามัธยมศึกษาตอนต้นจะเผชิญกับอัตราการว่างงานที่สูงกว่า

กิจการการเกษตร (ไม่รวมปลูกข้าว) มีมูลค่าผลผลิตคิดเป็นสัดส่วนประมาณ ร้อยละ 2.6 จากผลผลิตรวมทั้งประเทศในปี 2541 ซึ่งสัดส่วนดังกล่าวได้ลดลงอย่างต่อเนื่องในระยะที่ผ่านมา ผู้ทำงานในสาขานี้มีจำนวนประมาณ 5-7 ล้านคนในปี 2543 โดยจำนวนดังกล่าวจะผันผวนไปตามฤดูการผลิต

หลักฐานที่แสดงถึงการขาดแคลนแรงงานจะปรากฏในค่าจ้างแรงงานที่เพิ่มสูงขึ้นอย่างรวดเร็วในช่วงปี 2534-2538 แต่เมื่อเกิดวิกฤติเศรษฐกิจขึ้นแรงงานในสาขานี้ได้รับค่าจ้างที่ต่ำลงไปอย่างมาก โดยค่าจ้างสำหรับลูกจ้างในกิจการนี้โดยเฉลี่ยจะเท่ากับ 3,000 บาทต่อเดือน จำนวนแรงงานต่างด้าวที่จดทะเบียนในสาขานี้เท่ากับ 103,338 คนในปี 2544 คิดเป็นสัดส่วนประมาณร้อยละ 18 ของแรงงานต่างด้าวที่ขึ้นทะเบียนทั้งหมด และคิดเป็นสัดส่วนร้อยละ 10 ของลูกจ้างทักษะต่ำที่เป็นคนไทย

ในปี 2544 มีจำนวนผู้มีงานทำในกิจการประมงทะเลประมาณ 0.13 ล้านคน (ไม่รวมอุตสาหกรรมต่อเนื่อง) โดยร้อยละ 40 ของผู้ทำงานจะเป็นลูกจ้างในภาคเอกชนซึ่งได้รับค่าจ้าง 4,140 บาทต่อเดือน ทั้งนี้ ค่าจ้างสำหรับลูกจ้างในสาขานี้ได้เพิ่มขึ้นอย่างต่อเนื่องจนถึงปี 2542 แต่หลังจากนั้นได้ลดลงไป พร้อมทั้งการขาดแคลนแรงงานในสาขานี้ด้วย อย่างไรก็ตาม ลูกจ้างในกิจการนี้ทำงานเฉลี่ย 65-70 ชั่วโมงต่ออาทิตย์ ซึ่งเชื่อว่าชั่วโมงการทำงานที่ยาวนานนี้เป็นอุปสรรคสำคัญที่ทำให้แรงงานไทยไม่ต้องการเข้าทำงานในกิจการนี้ จำนวนแรงงานต่างด้าวจดทะเบียนในสาขาประมงทะเลและอุตสาหกรรมต่อเนื่องจะเท่ากับ 103,375 คน แต่หากพิจารณาเฉพาะกิจการประมงทะเลแล้วแรงงานต่างด้าวจะคิดเป็นร้อยละ 130 ของแรงงานไทยทักษะต่ำในสาขานี้

อุตสาหกรรมเครื่องแต่งกายและสิ่งทอมีสัดส่วนของมูลค่าผลิตต่อ GDP อยู่ในระดับสูงสุดที่ร้อยละ 9 เมื่อปี 2533 แต่หลังจากนั้นจะมีสัดส่วนลดลงจนเหลือร้อยละ 8 ในปี 2541 ทว่า การจ้างงานหลังจากปี 2533 กลับได้เพิ่มขึ้นตลอด โดยในปี 2543 มีจำนวนผู้มีงานทำในสาขานี้ประมาณ 1-1.3 ล้านคน ลูกจ้างในสาขานี้ได้รับค่าจ้างเฉลี่ย 4,730 บาทต่อเดือน แม้ว่าจะมีสัญญาณที่บ่งถึงการขาดแคลนแรงงานในช่วงก่อนวิกฤติ แต่หลังจากวิกฤติเป็นต้นมาสัญญาณต่างๆ เหล่านั้นได้หายไป แรงงานต่างด้าวที่ทำงานในอุตสาหกรรมจะมีจำนวนไม่แน่ชัด เนื่องจากได้รวมกิจการนี้อยู่กับหลายอุตสาหกรรมในประเภทกิจการที่ 10 อย่างไรก็ตาม การจ้างแรงงานต่างด้าวมากขึ้นในสาขานี้อาจยิ่งเป็นการบิดเบือนการจ้างงานและโครงสร้างค่าจ้างในตลาดแรงงานโดยรวมได้

การจ้างงานในสาขาการก่อสร้างได้เพิ่มจาก 1 ล้านคนในปี 2533 เป็น 3 ล้านคนในปี 2538 และก่อให้เกิดมูลค่าผลผลิตประมาณร้อยละ 10 ของ GDP อย่างไรก็ตาม เมื่อเกิดวิกฤติเศรษฐกิจขึ้น จำนวนผู้มีงานทำในสาขานี้ได้ลดลงเหลือเพียง 1.5 ล้านคนระหว่างปี 2541 ถึง 2543 และสัดส่วนมูลค่าผลผลิตต่อ GDP ได้ลดลงเหลือเพียงร้อยละ 5 เท่านั้น ลูกจ้างจะได้รับค่าเฉลี่ย 4,940 บาทต่อเดือนในปี 2543 ซึ่งถือเป็นค่าจ้างที่สูงที่สุดในทั้ง 5 กิจการที่ศึกษาในที่นี้ จวบจนปัจจุบันนี้ยังไม่พบว่ามีสัญญาณที่บ่งถึงการฟื้นตัวของสาขานี้ในอนาคตอันใกล้แต่อย่างใด แรงงานต่างด้าวจดทะเบียนในกิจการนี้มีจำนวน 47,320 คน คิดเป็นสัดส่วนเพียงร้อยละ 5 ของลูกจ้างคนไทยที่ทำงานในสาขานี้ อย่างไรก็ตาม เนื่องจากการพึ่งพิงแรงงานต่างด้าวที่ต่ำอยู่แล้ว กอปรกับผู้ว่างงานที่ยังมีจำนวนมาก จึงเป็นที่สงสัยว่าควรจะอนุญาต

ให้แรงงานต่างด้าวยังคงทำงานอยู่ในสาขานี้หรือไม่ ทั้งนี้ คณะผู้ศึกษาไม่พบเหตุผลที่เหมาะสมสำหรับการจ้างแรงงานต่างด้าวในสาขานี้แต่อย่างใด

การขาดแคลนผู้รับใช้ในบ้านจะเห็นได้ชัดจากค่าจ้างที่เพิ่มสูงขึ้น แม้ว่าวิกฤติเศรษฐกิจจะทำให้ค่าจ้างของผู้รับใช้ในบ้านจะลดลงไปร้อยละ 10 ในปี 2542 ก็ตาม แต่อัตราการขยายตัวของค่าจ้างเฉลี่ยตลอด 10 ปีที่ผ่านมายังอยู่ที่ประมาณร้อยละ 6 ต่อปี โดยจำนวนผู้รับใช้ในบ้านในปี 2543 มีอยู่ทั้งสิ้น 0.22 ล้านคน แรงงานต่างด้าวที่ทำงานในอาชีพนี้ที่มาขึ้นทะเบียนมีจำนวนเท่ากับ 82,389 คน คิดเป็นร้อยละ 15 ของการจดทะเบียนทั้งหมด และร้อยละ 46 ของผู้รับใช้ในบ้านที่เป็นคนไทยและจบการศึกษาในระดับต่ำที่ทำงานอยู่ในสาขานี้ การเพิ่มขึ้นของค่าจ้างน่าจะทำให้แรงงานไทยสนใจที่จะเข้าทำงานในอาชีพนี้เพิ่มขึ้น แต่การอนุญาตให้จ้างแรงงานต่างด้าวอาจไปตรึงค่าจ้างของสาขานี้ไว้ และยิ่งทำให้แรงงานไทยกลับไม่สนใจทำงานด้านนี้ได้

การพยากรณ์ความต้องการแรงงานซึ่งจัดทำโดย TDRI พบว่า ระดับการจ้างงานโดยรวมของประเทศไทยจะเพิ่มขึ้นอย่างต่อเนื่องจาก 33.3 ล้านคนในปี 2544 เป็น 36.7 ล้านคนในปี 2549 ทั้งนี้ภาคการบริการจะมีการจ้างงานเพิ่มขึ้นอย่างมาก ขณะที่ความต้องการแรงงานในภาคอุตสาหกรรมได้เพิ่มขึ้นเช่นกันแต่จะค่อนข้างช้ากว่า ส่วนภาคการเกษตรจะมีจำนวนผู้มีงานทำเพิ่มขึ้นเล็กน้อยเท่านั้น อัตราการว่างงานจะเพิ่มขึ้นจากร้อยละ 5 เป็นร้อยละ 5.5 ในช่วงไตรมาสที่ 1 ตั้งแต่ปี 2544 ถึง 2549 และจากร้อยละ 2.4 เป็นร้อยละ 4 ในช่วงไตรมาสที่ 3 ในช่วงเวลาเดียวกัน โดยปัญหาการว่างงานจะพบมากในกลุ่มผู้ที่มีการศึกษาสูง ขณะที่ผู้ที่มีการศึกษาต่ำจะเผชิญกับปัญหาการทำงานต่ำระดับมากกว่า

จากมุมมองในเชิงมหภาค สิ่งที่ควรพิจารณาเป็นพิเศษคืออัตราการขยายตัวทางเศรษฐกิจในระยะสั้น กับ การพัฒนาประเทศอย่างยั่งยืนในระยะยาว คำถามง่ายๆ คือ จะเกิดอะไรขึ้นหากประเทศไทยไม่สามารถจ้างแรงงานต่างด้าวได้อีกต่อไป นโยบายในระยะยาวควรวางเป้าหมายที่การลดอัตราการพึ่งพิงแรงงานต่างด้าวลง การส่งเสริมการใช้เทคโนโลยีเพื่อทดแทนแรงงานจะสามารถช่วยลดความต้องการแรงงานกลุ่มทักษะต่ำเหล่านี้ลงในอนาคต

I. Introduction

The recent results of open registration of irregular migrant workers in Thailand revealed that there were 568,249 migrants from Burma, Laos and Cambodia reported for the registration in 2001. Even though it is speculated that there were still thousands of illegal migrants who did not show up for the registration, this amount of registered irregular migrants already accounted for 1.7% of total Thai workforce. Concurrently, the National Statistical Office (NSO) reported the unemployment rate of 2.12%, or there were 710,000 unemployed Thais during the 3rd quarter of 2001. This situation made Thai people wonder why the Thai Government allowed so many irregular migrants to work in this country while thousands of Thai workers still struggled to get jobs. Should the Government expel all irregular migrants to create job vacancies for Thai workers?

The paper mainly aims to give a broad answer to the question. The objectives of this study are as the followings:

1) To provide an overview of Thai sectoral economic development and social trends during the past decade,
2) To review sectoral labour market trend during the past 10 years,
3) To provide a short-term sectoral employment projections by gender and education, and
4) To provide highlights of summary and conclusion from the above analysis.

Out of 10 types of business allowed for the irregular migrant registration, this study focuses only 5 types—which are agriculture, marine fisheries, construction, textile and garment, and housemaid. Major piece of the information is from the Labour Force Survey (LFS) conducted by the National Statistical Office (NSO). The study covers the period mainly from 1991 to 2000. The reason for not including the latest information in 2001 is because of the modification of definition since the 2001 LFS, which makes the new series incomparable to the old ones. Most of the definitions are consistent with the definitions used by the NSO except the definition on the age level of a person to be included in the labour force. While the NSO has shifted the minimum working age from 13 to 15 years since 2001, this study counts only people aged 15 and above as the labour for all period. Other macroeconomic data from other sources such as the Ministry of Labour and Social Welfare (MOLSW), the Office of National Economic and Social Development Board (NESDB), and the Bank of Thailand (BOT) are also used in different sections according to the requirement. Statistics about the number of registered irregular migrants are obtained from the Office of Administrative Commission on Irregular Migrant Worker (OAM), MOLSW.

This paper consists of 4 sections. The introduction, objectives and scope of study are included here as the first section of the study. The discussion about the past and present Thai labour market at the macro level is presented in the following section. Also, the projection of the labour market is intentionally placed in section II to help lay down ideas about the future market before the analysis and suggestion for each sector will be made. Then, section III concentrates on our 5 specific sectors—that are agriculture, marine fisheries, textile and garment, construction, and housemaid in that order. Analysis of each sector includes background of the sector, trend of employment and other labour related factors, level of dependence on irregular workers, and suggestions. The last section summarizes major findings of the study and provides suggestions for the comprehensive policy on the irregular labour migration.

II. Thai Labour Market and Forecast

2.1 Labour Force

The population of Thailand in 2000 was approximately at 63 million persons. Of this number, there were 34.38 million persons in the labour force, separated into 33.48 million employed persons and 0.9 million unemployed persons. Size of the workforce had continually increased from 31.13 million persons in 1991 to the current figure of 34.38 million. Despite the expanding size of the labour force, the labour force participation rate (LFPR) in Thailand obviously showed a declining pattern. The LFPR for male was at 87.5% in 1991 but reduced to 81.28% in 2001, while the LFPR for female also dropped from 74.05% to 64.75% over the same period. In fact, when classified by the age level, it could be observed that the declining LFPR did not appear in all age groups but only among the young labour aged 15-24 years. From 1991 to 2001, the LFPR of male aged 15-19 and 20-24 reduced from 68% to 40% and from 91% to 80%, respectively. Also, the LFPR of female of the similar age cohorts decreased from 68% to 29% and from 79% to 66%. For those aged 25 years and above, the LFPR remained rather stable over the past decade, and no significant decline in the LFPR was found even during the crisis. The reduction of the LFPR among young labour should be contributed partly to the improvement of the education system. Children tended to stay longer in schools. This resulted in the increase of the education level of the workforce. In 1991, workers that graduated only from the primary school used to account for 81% of the total labour force, but the proportion reduced to 66% in 2001. The amount of people graduated in other levels in 2001, on the other hand, almost doubled the number in 1991. (*Table 2*)

2.2 Employment

(1) Before the Crisis

As a result of the economic expansion before the crisis, the number of employed persons in Thailand increased rapidly from 30.3 million persons in 1991 to 32.9 million persons in 1997, with the number fluctuating by season. The needs for labour substantially increased in the industrial sectors—including mining, manufacturing, public utility, and construction. Employment in the construction increased by no less than one million persons over the 1991-1997 period, and employment in the manufacturing increased by 0.8 million persons. Also, the number of people working in the entire service sector—including commerce, transportation, and service—increased by 3 million persons over the same period. Since the size of labour force increased only by approximately 0.6-1.0 million persons each year, this new demand certainly could not be satiated only by the new workforce. Therefore, many workers from the agriculture were forced to move into these expanding sectors. The workers themselves found it rational to move into these expanding sectors as wages in these sectors were generally higher than the returns to work in the agricultural sector. As a result, the number of employed person in agriculture declined by 2 million persons during the first half of the 1990's. (*Table 3 and 4*)

As the mobility continued, the major status of employment in Thailand slowly shifted from the family worker to the private employee. People who used to work for their family, especially in the agriculture, moved away from their families to establishments as hired workers. The proportion of family workers used to be at 36.7% to total employment in 1991, but it reduced to 28.7% in 1996. On the contrary, the share of private employees in total employment increased substantially from 24.7% to 30.6% over the same period. Another major status in Thailand was the own-account workers, of which the proportion to total employment had not differed very much. Even though the dominant occupation in Thailand had always been the agriculturist, but its significance in term of employment declined greatly over the period. There used to be 18.10 million agriculturists in 1991, but this number reduced to 16.0 million persons in 1996. On the contrary, the number of craftsmen and general laborers, the second largest occupation, increased from 4.4 million persons in 1991 to 6.0 million persons in 1996. Also, the number of commercial workers, the third largest group, increased from 2.9 million to 3.6 million persons.

During this period, the problem of labour shortage quickly became the center of concerns in many businesses. Employers had to increase wages rapidly to lure labour to work in their industries. Average money wages of private employees increased from 2,900 baht a month in 1991 to 5,500 baht a month in 1997. Deducting the inflation effect, the real wages received by private employees increased by approximately 6% a year. Moreover, the shortage problem was also stimulated by the fact that Thai people tend to work lesser hours. As the wealth of the nation increased, it seemed that the willingness to work declined. The average hours worked of all Thai workers used to be around 52.5 hours a week in 1991, but it reduced to 51.0 hours a week in the early 1997.

(2) After the Crisis

The economic crisis emerged in 1997 caused many structural changes in the Thai labour market. The number of employed person suddenly declined by one million persons between 1997 and 1998. The actual reduction in the industrial sector was already more than one million, but some laid off workers seemed to be absorbed by the agricultural and service sectors. Most of the low-skilled workers had to return to their agricultural hometowns since jobs in the cities were unable to find. Despite of its long-run declining trend, the level of employment in the agriculture was rather stable since the beginning of the crisis. At the same time, the high-skilled workers who did not have the agricultural background needed to find job in the informal market such as the service sector to earn a living, resulting in the higher employment in the service sector.

The major problem existed in the labour market suddenly reversed from the shortage one to the excess supply problem. The unemployment rate rose to an unprecedented level (to be discussed in the following topic). Wages received by employees significantly reduced. The wage level in 1998 after the inflationary adjustment was 6.6% lower than the level in the previous year. Hours worked were substantially reduced as employers tried to lower their costs of production. The pattern of counter-mobility could be detected easily. In fact, these laid off workers, who either returned to the agriculture or switched to the service sector, helped diffusing the crisis impacts to all other Thai people. As they entered the agricultural and service sectors, they also cut the marginal benefits enjoyed by workers previously in those sectors.

During the 3rd quarter of 2000, there were 32.83 million employed persons in Thailand, which has increased by 0.9 million persons from the previous year. The amount of workers graduated in the primary level was only 66% of all workers. Average hours worked was equal to 50.73 hours a week, and the money wage received by an average employee was at 5,540 baht a month. Even though almost half of all workers (48%) still worked in the agricultural sector, this figure has declined considerably from 60% in 1991. Yet, the employment in the industrial sector did not show any strong sign of recovery from the crisis.

2.3 Unemployment

Unemployment rate in Thailand obviously fluctuates along with the business cycle in the long run. Between 1995 to 1997, the unemployment rate in Thailand was stable at around 1-2%. However, the crisis caused the unemployment rate to increase sharply from 0.88% during the 3rd quarter of 1997 to 4.78% during the 1st quarter of 1998. The rate of unemployment in recent years was peak at 5.39% or 1.7 million persons during the 1st quarter of 1999. Most of the unemployed holds only primary education, but those holding the upper secondary education or higher level generally faced a larger rate of unemployment. (*Table 5*)

2.4 Projection of Thai Labour Market

The forecast of manpower requirement in this study is taken from the TDRI's previous projection conducted in the early 2002 under the project of "Employment Policy Framework under National Development Plan". On the supply side, this model follows a person from the birth through the death, passing 4 major steps—education entrance, graduation, labour market participation and retirement—in order to decide the amount of supply of labour in each period. The demand model is based on the theory of labour market segmentation, which principally stated that the labour market could be segmented into the formal market (such as working in industries) and the informal one (such as working in small family businesses). The forecast of employment, therefore, was made separately between the two markets, but the result shown in this paper would be an integral one for the purpose of simplicity.

To forecast employment, a few assumptions are made about the future as the followings:

- The Government will increase the number of government employees by 1% during 2002-2005.
- State enterprises will NOT increase their levels of employment.
- Productivity growth is 0.5% in the agriculture and 2.5% in manufacturing and commerce sector.
- Oil price is fixed at US$ 25 per barrel.
- Minimum Loan Rate is fixed at 7.5%.
- Minimum wage is to be adjusted in concordance to the inflation, which was assumed to be 2% a year

- GDP growth in the agriculture, the manufacturing, and other sectors are:
  - 1.9, 2.8 and 3.0 percent in 2002.
  - 2.0, 4.0 and 4.0 percent in 2003.
  - 2.0, 4.5 and 5.0 percent in 2004.
  - 2.0, 5.5 and 5.0 percent in 2005.
  - 2.0, 6.0 and 5.5 percent in 2006.

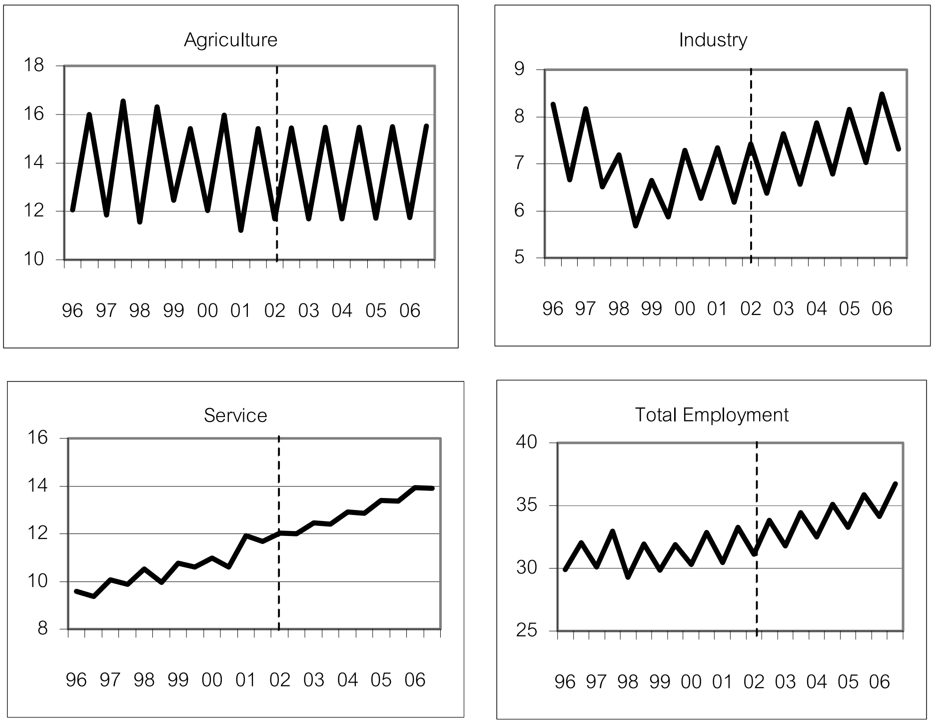
The result shows that the size of the labour force during the 1st quarter will increase from 33.90 million persons in 2002 to 37.28 million persons in 2006, and during the 3rd quarter it will increase from 34.99 million persons to 38.28 million persons. The average growth rate of labour supply is approximately 2.3-2.4% over the period. The proportion of workers graduated in the primary level of education will continually decline, but these people still accounted for 56-57% of total labour force in 2006. The proportion of lower secondary graduates will remain between 4.5-5.0 million persons, but those with higher education than the lower secondary level will increase greatly from 7.5-10.5 million persons over the period. The number of male and female labour will increase at the same rate, which will result in the unchanged proportion of male and female labour force. The number of male workforce will be between 55% and 56% of the total labour force. (*Table 6*)

The number of employed persons will be at 31.15 million persons during the 1st quarter of 2002 and 33.81 million persons during the 3rd quarter in the same year. These figures will increase to 34.16 and 36.74 persons during the 1st and 3rd quarter of 2006, respectively. Similar to the labour force, the number of employed persons holding primary level of education will decrease from 20.24-22.09 million persons in 2002 to 19.77-21.44 million persons in 2006. At the same time, those having education higher than the lower secondary level will be employed in the larger amount from 6.88-7.38 million person to 9.37-10.44 million persons over the same period.

Classified the employment by production sectors, it is found that the sector with the largest employment in the future will still be the agriculture. Approximately 11.7 million persons will be employed in this sector during the 1st quarter and about 15.5 million persons during the 3rd quarter. These figures will not change over the period of study, indicating that the proportion of workers in this sector will reduce over the period (as total employment continually increases). In 2002, about 37%-45% of all workers will be working in these sectors, but in 2006 these figures will decline to only 34%-42%, depending on season. In contrast, the sector with the largest expansion of employment will be the commercial sector. The sector employs 5.6 million persons in 2002 and will rise to 6.7 million persons in 2006, or the amount of employed persons in this sector will grow by 4.6%-5% a year. The manufacturing is another sector with large expansion of employment at around 3.9% a year, and the service sector also has an impressive growth rate of employment. Moreover, it should be pointed out that the construction sector does not show any evidence of increasing demand for labour as the amount of employed persons in this sector will increase merely by 2% a year between 2002-2006. In 2006, the construction sector will employ about 1.35-1.8 million persons, which is still substantially lower than its the pre-crisis level. (*Table 7 and Figure 1*)

Even though the number of employment will increase in the future, it seems that the size of the labour force will increase even faster than the employment. As a result, the number of the unemployed and the unemployment rate will surely rise. The forecast shows that the unemployment rate in 2002 will be at 5.06% during the 1st quarter and 3.04% during the 3rd quarter, and it will increase to 5.54% and 3.71% during the 1st and 3rd quarter of 2006, respectively. Female will probably experience a higher chance of being unemployed than male. The changing structure of the labour force is believed to have some effects on the increasing unemployment rate in the future as well. As the people in the labour force have higher level of education, they are willing to be unemployed and search for other jobs rather than being under-employed. This behavior should stimulate the future unemployment problem in a certain level. The amount of unemployed persons having education higher that the lower secondary level will increase significantly in the future from about 0.5 million persons to 0.9 million persons and do not differ greatly between seasons. The unemployment rate of this group will rise to approximately 9% in 2006. In contrast, the amount of primary school graduates being unemployed will reduce by 0.1 million persons over the 2002-2006 period, and the unemployment rate of this specific group will decline by 0.5%. In 2006, there will be 0.7 million unemployed persons holding primary education during the 1st quarter and 0.3 million during the 3rd quarter. This indicates a possibility of having labour shortage among the low education group of people.

Figure 1 Forecast of Employment in 3 Major Sectors



Source: National Statistical Office and TDRI
Note: All vertical axes are in thousand persons

III. Profile of Sectoral Study

3.1 Farming

(1) Background

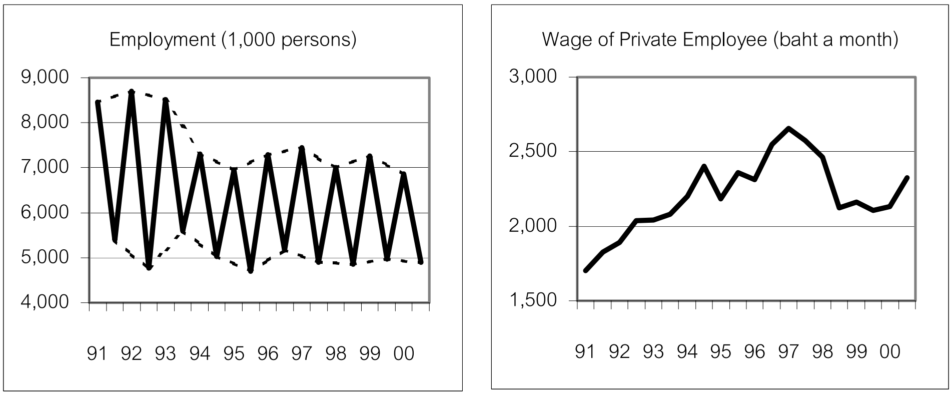
This farming sector—including the farming of vegetable, fruit, sugarcane, rubber, palm, coffee, etc—is the Type 1 of business allowed to register irregular migrant workers in 2001. Certainly, the rice farming is not allowed to employ foreign workers and is not included in our scope of study. According to the 1998 Input/Output Table (I/O Table), this sector contributed around 2.6% of the total GDP. This proportion has steadily declined over the past 2 decades, marking that the importance of this sector to the national income has subsided over time. (*Table 8*)

Large amount of employment in the agriculture and this particular farming sector has always raised the question of the efficiency in the sector. The agriculture as a whole employs around half of the workforce in Thailand but accounts for only 10% of the total GDP. The same disparity goes to our specific farming sector, which employs from 14% to 20% of Thai workforce but contributes 2.6% of the national income. Taking the fact that the arable land in Thailand is nearly at its full capacity level, it would be implausible to increase the level of production further from this point solely by increasing the production factors. Therefore, it leaves us no way to improve the sectoral production without increasing the productivity. However, the productivity in this sector is believed to be at a low level. Previous policies did not concern about the productivity in a great deal, but they aimed to improve the income in many other fashions, which is proven to be futile. People in this sector are still the poorest group in the country. Income from non-farm activities gradually becomes an indispensable source of earnings.

(2) Employment

In 1991, there were 8.4 million persons working in this sector during the 1st quarter and 5.4 million persons during the 3rd quarter. Approximately 94% of them held only the primary education. Most of the employed were either own-account workers (33%) or unpaid family workers (47%). The number of private employees was between 0.9 and 1.6 million persons or about 17-19% of total employment. Average working hour of people in this sector was between 49 to 50 hours a week. It is interesting that the peak season for this sector is not in the 3rd quarter as the entire agricultural sector, but instead the peak season of the farming is in the 1st quarter. Seasonal pattern did not affect only the size of employment but its gender and location structure as well. During the 1st quarter, proportion of male workers would stand at 54% of total employment, but this figure reduced to 52%. Also, most of the workers (37%) were in the Northeastern region in the 1st quarter, but only a few of them participated in this sector during the 3rd quarter. (*Table 9 and 10 and Figure 2*)

Figure 2 Total Employment and Real Wage of Private Employees in the Farming in the 1st and 3rd quarter from 1991 to 2000



Source: Table 9 and 10

As Thai economy expanded rapidly during the first half of the 1990's, the needs for labour in many other sectors increased quickly as well. Many workers from this sector decided to move to other highly paid sectors such as manufacturing or construction. The number of employed persons in the farming, thus, declined to 7.44 million and 4.89 million persons during the 1st and 3rd quarter of 1997 respectively. Proportion of unpaid family workers reduced to 40-42% in 1997, while the proportion of private employee increased to16-21% on the contrary. The number of own account workers in the farming sector remained mostly unchanged. Proportion of male workers declined to 53.6% in the 1st quarter of 1997. Further, the portion of primary graduates diminished greatly from 94% in 1991 to 90-91% in 1997. Two reasons behind the improvement of education level of the people in this sector are the retirement of uneducated old people and the mobility out of this sector of the uneducated young people. The entrance of new and highly educated workers might involve in such improvement, but it is expected to have minimal effect.

So, it could be inferred that the emigrants during the economic expansion were mostly male who used to work for the family held only the primary school level of education. However, the disappearance of one million workers from this sector would not simply leave the sector unaffected. When household leaders could not use labor from their heirs, they certainly needed to hire employees to work in the plantation. As a result, private employees became increasingly needed in this sector. Monthly wage received by hired workers was only 1,470 baht in 1991 but increased to 3,000 baht in 1997. After the inflationary adjustment, the real wages of hired workers increased approximately 5.8-7.6% a year between 1991 to 1997. With this highly increasing wage, it was clear that the shortage in this sector appeared during the period.

The impacts from the financial crisis in 1997 caused many businesses to be permanently shut down, while those that could survive needed to lay off massive amount of workers to lower their costs. Many people became unemployed suddenly. It seems like workers with the background from the agriculture were luckier than others because they could return to their hometowns and worked with their families. The number of employed persons in this sector increased from 7.0 and 4.8 million persons in 1998 to 1.25 and 4.96 in 1999. The proportion of male workers grew from 52-53% in 1997 to 54-

56% in 1999. The sign of labour shortage in this sector was disappeared mainly because of the return of these workers. The real wages of private employees declined by 9% a year between 1997 and 1999. Average working hours abruptly reduced from 45-48 hours a week in 1997 to 44-46 hours a week in 1999. In fact, instead of the existing shortage before the crisis, the sector oppositely faced the underemployment problem after the crisis.

In 2000, the employment in the farming sector continued to decline again instead of the temporary increase during the crisis. There were 6.86 million persons and 4.89 million persons working in the 1st and 3rd quarter of 2000, respectively. The primary school graduates now counted for only 83% of total employment. Most of the workers were still the unpaid family workers, but the proportion of the status to total employment declined significantly from 47% in 1991 to 37% in 2000. In contrast, private employees became increasingly important in this sector as its share to the sectoral employment increased from 19% to 25% over the same period. Even though most of the workers were still in the Northeastern region, the employment level in this region reduced largely during the past 10 years, while the numbers of employed persons in other regions were rather stable. The average working hour was at 46.52 and 44.16 in the 1st and 3rd quarter, and a hired worker in this sector, on the average, received the wage around 2,800 to 3,000 baht per month.

(3) Registered Irregular Migrants

According to the 2001 registration, there are 103,338 foreign workers reported for the registration in the agricultural sector. This figure counts for 18% of the total registration. Most of them worked in the South (38.66%) and the North (30.46%). If one compares the amount of migrants with the figure of 4.89 million Thais working in this sector, it seems that the ratio of foreign to Thai workers is trivial at only 2% of Thais in this sector. However, this ratio should indeed increase to 10% if the focus group of Thai workers is limited only to the private employees with primary level of education. Although the ratio is lower than what existed in other sectors, it is still quite a significant amount. (*Table 19*)

(4) Sectoral Suggestion

It is obvious that Thai workers are moving away from this sector to others with higher returns to work. In fact, this pattern is nothing unusual but just an ordinary process of efficiency adjustment in the domestic labour market. As people moved to other sectors, wages of the remaining workers will continually increase in the future. At the end, employees in this sector will not receive wages significantly different from workers in other sectors, which can raise the standard of living of people in this sector largely. However, this process may take quite a long time and should be guided and stimulated constantly by the government.

It is, however, possible that the needs for labour will be persistently unfulfilled in the long run because of the lack of domestic supply. There are two means to solve the problem; one is to import foreign workers and the other to promote the use of labor substituting technologies in this sector. We strongly recommend the second mean as the long-term solution to the problem, but the first approach might be used in the short-run.

Not only should the introduction of new technologies reduce the needs for foreign workers, but it should increase the productivity of this sector as well. Though there may be the needs for foreign workers to fill the vacancies caused by the departure of Thais, the government should attempt to minimize such needs because long term dependence on the foreign workers may slow down the willingness to improve the productivity. Thus, instead of issuing permits to stay continuously for 6 months or 1 year, the hiring of irregular migrants might be allowed on the seasonal basis lasting only a few months (or a matter of days). In this way, foreign workers do not need to stay with their employers during the low season, which can avoid the undesired long-term reliance on the migrants in a certain level. Cost sharing among the employers and organized institution aimed to manage a pool of migrant workers might be two necessary complementary methods to the proposed staying period to reduce the cost borne to each of the employers.

3.2 Marine Fisheries

(1) Background

According to the 2000 Intercensal Survey of Marine Fishery, there are approximately 56,859 marine fishery establishments in 2000. This figure has steadily increased from 50,176 establishments in 1995 and 49,862 establishments in 1985. About 80% of the households are in the Southern region of Thailand. Most of them use only medium-scale fishing boats such as the outboard powered boats, which accounts for 74% of all boats used in this sector. Large-scale fishing boats such as inboard powered boats count for another 21%. Moreover, the number of marine fishery employee's households—the household having at least one member working as employee in marine fisheries—is at 29,183 households slightly lower than the figure of 29,302 households found in 1995. Contribution to the national income of this sector is quite stable at approximately 1% from 1980 to 1995, but it increases to 1.35% in 1998 as the crisis caused the income from other sectors reduced largely. (*Table 8*)

(2) Employment

In 1991, there were approximately 200,000 persons working in the marine fisheries sector. About 87-88% of the workers was male, and the primary-school graduates accounted for 93-95% in this sector. About 75-80% of the workers in this sector was in the Southern region of Thailand, and the rest of them were in the Central or the Eastern region. The seasonal pattern of the employment in this sector was not as strong as what appeared in the agriculture. From 1991 to 1993, employment level peaked in the 1st quarter of the year and dropped by 1,000 to 30,000 persons in the following 3rd quarter. The work status that dominated this sector in 1991 was the private employee (or hired worker) at 44% of the total employment during a peak season and at 33% during a low season. The status of own-account worker and unpaid family worker were the second and the third largest group, which counted for 35% and 17% in the 1st quarter and 38% and 23% in the 3rd quarter, respectively. Working hours in this sector were around 60 hours a week on the average, significantly higher than hours worked in other sectors. However, this figure is only the average number, and it means that someone may work longer than that. It was found that a hired worker spent approximately 74 hours a week on this job, or it means that they worked more than 10 hours a day and 7 days a week. Wages of hired workers were about 2,575 baht a month in 1991, which seemed to be higher than the amount received those in the agriculture. However, taking the fact that the hours worked were significantly different, the actual returns from one working hour in the 2 sectors were indeed not different from one another. (*Table 11 and 12 and Figure 3*)

Figure 3 Total Employment and Real Wage of Private Employees in the Marine Fisheries in the 1st and 3rd quarter from 1991 to 2000

Source: Table 11 and 12

During the economic expansion period, workers in this sector had continually moved out of this sector as well. Nevertheless, the effects from the industrial development were rather small in this sector. Total employment reduced from 200,000 persons in 1991 to 180,00-190,00 persons in 1997. However, there were two cycles of the employment in this sector over the period. The first cycle was from 1991 to 1995 when the employment declined from 200,000 to 150,000 persons. Then, the level of employment substantially increased to 230,000 persons in 1996 but declined again thereafter. Proportion of male employment dropped to the lowest level at 80% in 1997. Hired workers became difficult to find as its share declined to 80% in 1997, while the family workers contrarily increased to 29% in the same year. These young children usually went through the reformed education system and graduated in a higher education level than the working people. Therefore, the education structure of employed persons gradually increased, but still most of the workers had only primary level of education. Average hours worked per person declined from 60 hours per week in 1991 to 52-53 hours in 1997. As the shortage was mounting, wages received by employees in this business increased substantially at a rate of 5% a year between 1991 and 1997.

Indeed, during the 1991-1997 period, the reduction of employed person in the marine fisheries was caused by the decline of hired workers. Unlike the farming sector that the emigrants were the members of family, those who moved out of this sector were the hired employees. However, the effects from labour mobility were no different between the two sectors. Both the farming and marine fisheries were encountering the labour shortage problem. As a result, the structure of demand-pull increase in wages could be noticed. Fortunately, the shortage could be alleviated partly by the inclusion of young family members on-board.

When the crisis took place, the amount of employed persons in this sector did not differ very much between 1997 to1999, but the structure of employment changed extensively. Many people who had previously moved to other sectors returned to the marine fisheries. It should be reminded that the workers that previously moved away from the sector were the hired workers not the family members. Therefore, after the crisis, the number of employees increased from 58,000 persons in 1997 to 72,000 persons in 1999. As hired workers were easy to find, the needs for family workers were lessened. The number of unpaid family workers reduced substantially from 61,000 to 45,000 persons over the same period. The proportion of male employment rose to 86% in 1999. However, the increase amount of hired workers could not satisfy all needs as the wage level still continued rising. The real wage of private employees reached the highest level in 1999.

In 2000, the number of employed persons in the marine fisheries dropped significantly from 200,000 persons in 1999 to 130,000 persons. Many people moved out of this sector again. In this time, the decline was not bound only to the hired workers, but the family workers started leaving this sector as well. The amount of hired workers declined by 20,000 persons between 1999 and 2000, and the number of family workers dropped by another 20,000 persons. Most of the departures were found in the South, while the numbers of employed persons in other regions had not differed greatly. Wages for private employees declined considerably by –20% between 1999 and 2000. The money wages of private employees averaged 4,140 baht a month, which was not significantly different from the 1991 level. Average working hours of all workers reduced to 55.91 hours a week, while the average working hours of private employees alone declined to 62.8 hours a week.

(3) Registered Irregular Migrants

According to the 2001 registration, there are 103,338 migrants working the marine fisheries and related industries, which accounts for 18.19% of all registered migrants. These foreign workers spread over 3 regions adjacent to the sea—the Central (41%), the South (35%), and the East (19%). It is obvious that the foreign workers in this sector become important, as the number of registered migrants in this sector was only 51,923 persons in 1996 but has increased almost twice to the current level. Although the figure of 103,338 registered migrants seems to be high in comparison to the total employed Thais at 131,000 persons, the two figures are yet comparable. Pinpointing all Thai workers in this sector to only low-skill employees, one can see that the scope of Thai workers related to the employment of migrant workers reduced to 46,729 persons in 2000. Moreover, the mentioned number of registered migrants counts both marine fisheries and related industries, but the employment counts the Thai workers solely in the marine fishery business. According to the 1996 registration, the ratio between irregular migrants in the marine fisheries and those in the related industries was equal to 6:4. Therefore, applying the ratio to the 2001 registration, one can notice that the number of foreign workers actually outnumbered the amount of low-skilled Thai employees in this sector, the foreign migrants account for 130% of low-skilled Thai workers. (*Table 19*)

(4) Sectoral Suggestion

It is recommended that irregular migrants should be permitted to work only with the large and medium-scale fisheries. Promotion of labour-substitute gears should be conducted to reduce the reliance on the alien workers.

3.3 Textile and Garment

(1) Background

The development of textile and garment industry started from the production for domestic demand. Then, when other countries detected the low wages of Thai workers, many factories from those countries quickly moved into Thailand. This sector suddenly turned into an export-oriented one. However, as the time passed by, the country's level of development had substantially increased and many other developing countries started to open up to the world. The wage of Thai labour was no longer cheap. Labour-intensive industries owned by foreigners began moving away from Thailand to other countries with lower wage. This could be substantiated by the fact that although the production of textile and garment has consistently increased, its share in GDP peaked at 9% in 1990 and had declined to 8% in 1998. Some of the remaining industries improved themselves to be capital-intensive ones. However, there are still many industries that decided not to increase the productivity but seek further for cheap labour from nearby countries. With the invitation of the Burmese government and the promotion from the Board of Investment (BOI), many establishments moved to the border of Thailand, especially the West border, to hire the cheap Burmese laborers. (*Table 8*)

(2) Employment

The number of employed person in the textile and garment industry in 1991 was equal to 889,000 persons during the 1st quarter and 779,000 persons during the 3rd quarter. Workers in this sector were clearly dominated by female since the percentage of female employment was as high as 75-80% in 1991. The employed persons with primary education counted for more than 80% of the total employment, and those with lower secondary counted for another 8%. Most of the workers were hired employees as the proportion of private employees was at 63-69% in this sector, and another important status was the own-account workers that accounted for 20-25%. The average hours worked of people in this business were at 51.5 hours a week. (*Table 13 and 14 and Figure 4*)

Before the crisis, it was obvious that the number of employed persons in this sector had an increasing trend. From 1991 to 1997, the level of employment increased from 889,000 person to 1,142,000 persons during the 1st quarter and from 779,000 to 863,000 during the 3rd quarter. The highest level of employment during the pre-crisis period was at 1.3 million persons during the 1st quarter of 1995. Even though the employment declined after 1995, the long-run trend still showed an upward trend. This long-run increase, however, did not create a large structural change in the employment in this sector. The proportion of male/female workers was almost the same over the period. The average hours worked slightly reduced by one hour per week. The most striking change in this sector was the continual increase in real wage, which had the annual growth rate over 5%. Also, as establishments were moving away from Bangkok to the Northeastern region following the BOI's plan of industrial decentralization, employment in the Northeastern region increased rapidly from 239,000 persons in 1991 to 403,000 persons in 1997 during the 1st quarter and from 151,000 persons in 1991 to 262,000 persons in 1996 during the 3rd quarter. The needs of labour in the Northern region, where there were many irregular migrants being employed, increased from 109,000-83,000 persons to 159,000-99,000 persons between 1991 and 1997. Furthermore, the decline of total employment during 1995-1997 was caused solely by the decrease of demand in Bangkok and Vicinity area, while other regions still employed a larger amount of workers during the period.

Figure 4 Total Employment and Real Wage of Private Employees in the Textile and Garment in the 1st and 3rd quarter from 1991 to 2000

Source: Table 13 and 14

During the economic crisis, the number of employed persons sprang up by 0.1-0.15 million persons between 1997 and 1998 or approximately by 15%. The level of employment reached the highest level over the decade at 1.33 million persons in the 1st quarter of 1998. However, in spite of the expanding number of employed persons, the average hours worked severely declined from 47.33 hours a week in the 3rd quarter of 1997 to only 35.44 hours a week in the 1st quarter of 1998. This massive reduction was believed to be the result of the employers' adjustments to the crisis. The employers were reluctant to suddenly lay off their employees because they did not wish to pay the severance payment. So, in order to reduce the production costs to alleviate with the crisis impacts, they chose to lower the number of working hours of their employees. Since most of the workers received wage on the hourly or daily basis, the outcome of such action would be indistinguishable to the lay-off, even though the wage rate or the level of employment was not changed. Consequently, actual wages received by employees declined by 30% on the average, and the employers still did not have to pay the severance payment. The reduction in hours worked was witnessed among all employees regardless of the education level.

After the initial adjustment to the crisis, the condition then returned to its usual condition in the 3rd quarter of 1998. The average hour worked increased from the lowest level at 35.44 hours a week to 49.75 hours a week, and the wages also increased enormously from the bottom level but still lower than the pre-crisis level. Employment in this sector was rather stable after the beginning of the crisis.

In 2000, there were approximately 1.3 million persons working in this sector during the 1st quarter and 1.0 million people during the 3rd quarter. The proportion of female employment still remained at 75-79%. The education level of the workers in this sector increased mainly because the general improvement of education of the labour supply. The portion of primary-school graduates reduced to 65-70% of the total employment. There was a slight interchange between the status of private employee and the own-account worker. The share of private employees to total employment reduced from 63-69% in 1991 to 58-65% in 2000, while the portion of own-account workers increased from 24-21% to 30-25% over the same period. The average hours worked remained at approximately 51-52 hours a week. The wages received by employees in money term was equal to 4,731 baht a month that was, in real term, only slightly lower than the peak level in 1997. The needs for labour were partly shifted from Bangkok and Vicinity area to the Northeastern and the Northern region. The share of employed persons in the Northeastern region increased from 27-19% of the total employment in 1991 to 35-25% in 2000, and the figure for the Northern region also increased from 12-10% to 15-12% over the same period.

(3) Registered Irregular Migrants

The number of irregular migrants registered in this sector is unknown from the 2001 registration data because they are included in Type 10 along with many other kinds of businesses. However, it is believed that the amount of migrants in this sector would be insignificant and rather area-specific. (*Table 19*)

(4) Sectoral Suggestion

It is believed that hiring more irregular migrants in this sector may distort the employment and wage structure of the labour market as a whole. Therefore, the allowance should be an area-specific issue in this sector. Only establishments in the provinces along the border (or those currently under the BOI's promotional privilege) should be permitted to employ irregular migrants but definitely not those in the inner provinces of Thailand.

3.4 Construction

(1) Background

Frequently, the performance of the construction sector is used as the indicator of the economic growth. During an expansion period, the construction sector grows largely, but the sector would also contract during a slump. This is especially true in the case of Thailand. The construction used to account for 7% of the GDP during the 1980's, but the figure increased to 9% during the first half of the 1990's. After the crisis, the importance of this sector declined largely and rapidly, and the contribution to the GDP reduced to only 5% in 1998. Over the past decade, the area of construction clearly increased enormously before the crisis. In 1992, the area of new building construction was about 33.14 million square meters, and it increased to 74.20 million square meters in 1995. Most of the increase in the area was found in Bangkok and Vicinity. However, the crisis influentially reduced the area of construction to 14 million square meters in 1998, and even in 2000 there was still no sign of recovery as the construction area was only 22.15 million square meters. (*Table 1 and 8*)

Table 1 Area of New Construction Classified by Building and Non-Building Construction and Regions from 1992 to 2000

(unit: million sq.m.)

	1992	1993	1994	1995	1996	1997	1998	1999	2000
Building	*33.14*	*74.00*	*71.85*	*74.20*	*52.50*	*53.13*	*14.62*	*16.18*	*22.15*
Bangkok and Vicinity	15.52	54.78	50.68	53.63	34.07	31.11	7.13	7.13	9.32
Central	4.85	4.89	6.43	6.39	6.48	7.13	2.73	2.89	4.09
Northern	4.52	5.56	4.05	3.23	3.08	4.93	1.35	1.77	2.26
Northeastern	4.21	4.42	5.47	6.00	4.88	6.19	1.71	2.45	3.80
Southern	4.04	4.35	5.22	4.95	3.99	3.77	1.70	1.94	2.67
Non-building	*1.54*	*1.58*	*3.26*	*4.29*	*3.30*	*8.65*	*2.27*	*0.56*	*0.59*
Bangkok and Vicinity	0.93	0.81	1.44	1.80	1.33	1.47	0.67	0.16	0.23
Central	0.08	0.20	0.45	0.65	0.54	1.35	0.45	0.12	0.10
Northern	0.22	0.17	0.45	0.48	0.32	1.53	0.37	0.08	0.05
Northeastern	0.25	0.27	0.59	1.13	0.53	3.49	0.57	0.11	0.08
Southern	0.07	0.14	0.32	0.23	0.57	0.80	0.22	0.09	0.13

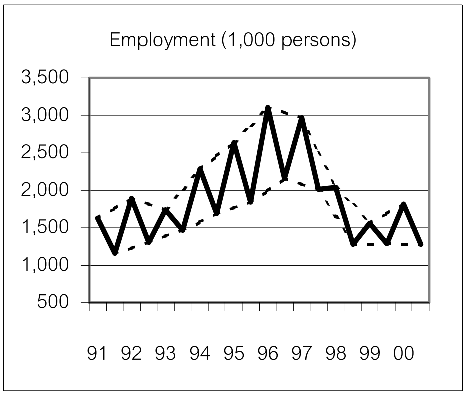
Source: National Statistical Office

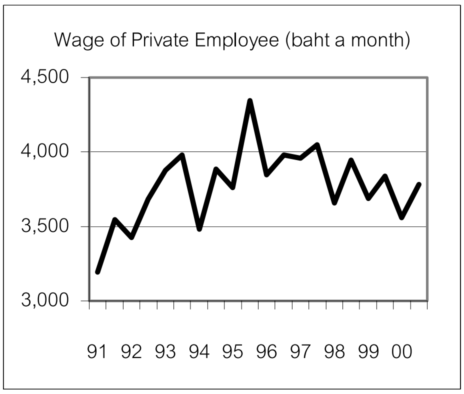
(2) Employment

At the beginning of the study period, the construction sector employed roughly 1.62 million persons during the 1st quarter of 1991, but it reduced to 1.16 million persons in the following 3rd quarter according to its usual seasonal pattern. People with backgrounds from the agricultural sector needed to return to their hometowns to help their families during the harvesting season. In contradictory to the textile and garment industry, majority of employed persons in this sector was male, which accounted for 85% of the total employment. Also, about 84-87% of all people in this sector in 1991 graduated only in the primary level. Most of the workers were the hired labour, which were about 90% of all workers, while only 5-6% of them were the employers. These construction workers spread all over the country with the highest amount in the Central region (27-33%). (*Table 15 and 16 and Figure 5*)

As the Thai economy expanded rapidly before 1997, the needs for the construction works grew rapidly as well, and so did the labour demand in this sector. Many people moved from other traditional sectors such as the agriculture to this sector to this sector because the payment in the construction was significantly higher than the wages in those sectors. As a result, the number of employed persons in the construction sector increased from 1.6-1.2 million persons in 1991 to the highest level at 3.1-2.2 million persons in 1996. Most of the new workers were male, graduated in the primary level, and worked as private employees. Over the 1991-1996 period, male workers in this sector increased by one million persons, while the female workers increased only by 0.3 million persons. However, the role of female became increasingly important in this sector as it faced the shortage of male workers. Some vacancies could not be filled by male workers, so employers had to turn to female workers. The proportion of female employment increased from 14% in 1991 to 20% in 1996. Despite the improvement in the education level of the labour supply, the proportion of primary graduates slightly increased by one percentage-point during the expansion period. The status of private employee still counted for 90% of all employed persons in this sector. The regions with the fastest growth of the employment in the construction were the Northeastern region, Bangkok and Vicinity, and the Northern region, but the regions that had the highest amount of construction workers were the Northeastern and the Central (including the Eastern). The average hours worked of people in this business were rather constant at 53-54 hours a week. Though it was clear that the workers were highly needed, there was no sign of labour shortage in this sector. Real wage received by the private employee grew only 3% a year.

Figure 5 Total Employment and Real Wage of Private Employees in the Construction in the 1st and 3rd quarter from 1991 to 2000





Source: Table 15 and 16

Although the crisis was believed to initiate during the 3rd quarter of 1997 and most of the sector received impacts in the 1st quarter of 1998, the construction sector actually was affected in a year earlier than the crisis. Employment in 1997 declined by 0.1 million persons from the previous year in spite of the continual increase in employment for the past 5-6 years. This reduction in employment was merely the initial adaptation of the sector. The most obvious change before the crisis would be the decline in hours worked per week from the pre-crisis average of 53-54 hours to 51 hours the 3rd quarter of 1997. Also, the reduction in employment in this sector limited only in Bangkok and Vicinity area, while the levels of employment in other regions were mostly unaffected or even increased in some regions. Though this initial impact was apparent, its effects seemed to be minimal as the average wages of private employees still had a rising trend.

In 1998 and 1999, the economic crisis severely affected the employment level in this sector. The number of employed persons in 1998 reduced by 0.8-1.0 million from the year earlier even lower by 0.5 million in the following year. The level of employment in 1999 was only at 1.3-1.5 million persons, which was insignificantly different from the level in 1991. Most of the laid off workers were the hired workers with low education. The amount of hired workers declined by 1.5 million persons between 1997 and 1999, and the portion of primary-school graduates in this sector suddenly reduced from the pre-crisis level at 85-86% to 77-81%. Interestingly, the proportion of female workers significantly declined from 20% in 1997 to 15% in 1998. This indicated that female in this sector had a higher chance to be laid off than male workers during the crisis. Furthermore, the decline in employment since 1998 could be seen in every region, not only Bangkok and Vicinity as occurred in 1996. The average hour worked remained at approximately 51 hours a week. Real wages of private workers declined but rather slowly by 3% a year over the 1997-1999 period.

In 2000, the number of employed persons in this sector merely increased from the trough level in 1999 to 1.8 million persons during the 1st quarter and 1.3 million persons during the 3rd quarter. The proportion of male workers increased to 85% as the shortage of male workers was alleviated. Since the employment in this sector had not increased, the share of private employee and the share of education remained stable at quite a low level. There was no evidence of increasing needs for general laborers. The average hour worked and the real wage of hired workers in this sector decreased further from the levels in 1999. On the average, people in this business worked 51 hours a week, and a hired worker received the money wage at 4,600-4,900 baht a month.

(3) Registered Irregular Migrants

The number of irregular migrants shown up for the registration in 2001 in the construction sector is equal to 47,320 persons, which counted for only 8% of total registration. About 32% of them worked in the Southern region, and another 21% were employed in the Central. When this sector faced the severe impact from the crisis as discussed earlier, the needs for foreign workers seemed to be lessened substantially. There used to be 101,484 migrants registered to work in this sector in 1996, and this sector used to have the highest employment of foreigners of all types of business allowed for the registration. Moreover, in comparison to total sectoral employment, the amount of registered migrants counted for merely 5.28% of all low-skilled Thais in this sector in 2001. This low figure may be nothing to be concerned of, but the question is that if the needs for these irregular migrants were so small, why should we allow the foreigners to work in this industry at all? (*Table 19*)

(4) Sectoral Suggestion

As the question raised earlier, if the level of to migrant workers was already low, why should we still hire these migrants? Employment in this sector should be kept for potential Thai workers as much as possible. At the moment, there is no sign of recovery found in this sector. So, there might be a possibility to open up 47,320 jobs to Thai workers, if the work permits are no longer issued to foreigners in this sector. Even if there is a recovery, the needs for labour still can be eased by those currently unemployed or those who have previously returned to the agriculture sector. Only if the expansion like during the early 1900’s were expected—which seems implausible under the current circumstances, the irregular migrants would then be needed.

3.5 Housemaid

(1) Background

The reason behind the high economic expansion in Thailand from the 1970’s to the early 1990’s had to be given partly to the larger participation of female in the economic activities. During the transformation from the agricultural-based country to the industrial one, many housewives were implicitly forced to work outside the houses in order to help the husbands making a living. Responsibilities on the housekeeping were then shifted from the housewives, who are now working full-time outside the houses, to the housemaids. Thus, the needs for housemaids have been continually increasing in the country. According to the Input/Output Table (I/O Table), the service of housemaids along with other types of personal services contributed less than 0.5% of the country's GDP. This figure is thought to be underestimated the true value of the housemaid service because the wages received housemaids are typically lower than wages received by other occupations. Employers usually provided many forms of in-kind benefits such as free accommodation and food to the housemaids in addition to the wages. (*Table 8*)

At the early process of the country development, people from rural area were willing to work as housemaids as they found it economically rational. However, since the country has developed to a certain level and people's standard of living has increased, these people want to work in better occupations than the housemaid such as workers in textile manufacturing. The shrinkage in the labour supply causes a shortage of the housemaid in Thailand. Along with the economic viewpoint, the changing social value on the occupation has stimulated the declining supply of this occupation. Based on the familiarity on the traditional landlord-slave relationship existed in Thailand in the long past, the young labour have negative attitude toward the occupation of housemaid.

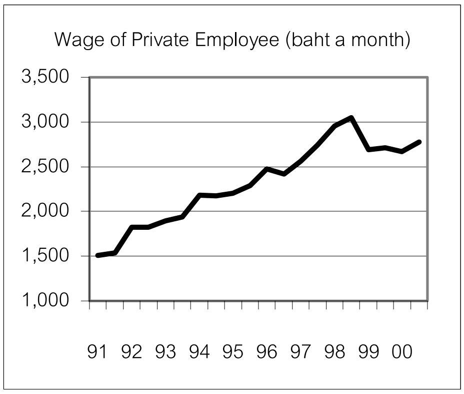
(2) Employment

The number of housemaids, retrieved from the LFS using the combination of 2 variables that are the housemaid occupation and the personal service sector, was equal to 0.20 million persons in 1991. This occupation was clearly dominated by the uneducated female workers. The share of female workers to total employment was as high as 91-93%, and the primary-school graduates accounted for 90-92% of all employment. Practically, all housemaids were hired workers. Although a trivial number of housemaids were reported as employers, it was believed to be the statistical error and should not be taken into the consideration. Average hour worked of housemaids was equal to 64 hours a week in 1991. Moreover, it was found that approximately 56-57% of housemaids worked in Bangkok and Vicinity. Wages received by the housemaids in the nominal term were only at 1,300 baht a month in 1991 on the average, which was the lowest level among the 5 sectors being studied. Yet, it would be inappropriate to state that the earnings from this occupation were lower than the level received by those in other sectors because they received many types of in-kind benefits. In addition to wages, employers usually provided accommodation and food to their housemaids for free. (*Table 17 and 18 and Figure 6*)

Over the long run, the employment of housemaids has not increased extensively despite the obviously increasing demand for housemaids. The number of housemaids increased only by 2,000-5,000 persons between 1991 and 2000. The total number of housemaids in 2000 was at 0.22-0.25 million persons. Average hours worked of housemaid reduced significantly from 64 hours a week to 59-62 hours a week. However, the sign of increasing demand could be seen in the rapidly increasing wage of housemaids. Between 1991 to 1998, the real wages of housemaids increased more than 10% a year. Though it declined by 10% in 1999, the real wage in 2000 showed a sign of increase again. During the 3rd quarter of 2000, housemaids received the money wage at 3,630 baht a month. This wage level became the higher than the level received by employees in the agriculture. Proportion of housemaids that were female declined from

92-93% in 1991 to 87-88% in 2000. The needs for housemaids in Bangkok and Vicinity were still increasing but at a slower rate than the needs in other regions, especially in the Northeastern region. As a result, the division of housemaids by regions showed a decreasing proportion of maids in Bangkok area, but still more than 50% of people in this occupation worked in the capital and nearby provinces.

Figure 6 Total Employment and Real Wage of the Housemaids Occupation in the 1st and 3rd quarter from 1991 to 2000



Source: Table 17 and 18

The economic crisis in 1997 seemed to have a small and short effect on the housemaids. The number of housemaids decreased by approximately 40,000 persons to 0.16 million persons during the 3rd quarter of 1997. Significant decline could be observed among female housemaids working in Bangkok Metropolitan and the Northeastern region. However, this sector quickly recovered from the crisis as the number of employed persons jumped to 0.22 million persons in the following 1st quarter of 1998. No solid change could be found in other indicators except the wage. In contradict to the usual expectation about wages during the crisis, average wage of the remaining housemaids revealed an increasing trend

(3) Registered Irregular Migrants

The number of irregular migrants registered to work as housemaids is equal to 82,389 persons in 2001. This number accounts for 14.50% of total registration. About 55% of registered migrant housemaids work in the Bangkok Metropolitan. The second and third largest employment of migrant housemaids are found in the Central and the Northern region at approximately 15% and 12% of all registered housemaids, respectively. The dependence on the migrant housemaids seems to be increasing over the time. Although the registration of migrant housemaid was not allowed before 2001, it does not mean that there was no use of migrant housemaids. The number of registered housemaids in 2001 is approximately 46% of Thai housemaids, which is the second largest figure of the 5 sectors being studied. Perhaps, these foreign housemaids may be the factor why the wage of this occupation slowly increased in 1999 and 2000. It is because they can alleviate the demand for housemaid in Thailand in a certain level. (*Table 19*)

(4) Sectoral Suggestion

It might be stated that there is a dilemma in solving the problem of migrant in the case of housemaids. On one hand, according to the social viewpoint, the shortage of labour supply is caused by the social value on the occupation of housemaid. It would be a difficult task to change such social value, and therefore this shortage will exist in Thailand for quite a long time. So, if the registration of migrants in this sector is not allowed, some Thai workers, especially female, may need to withdraw themselves from the labour force in order to take care of their houses. The reduction in workforce will suddenly reduce the national income and will probably create the labour shortage in other sectors as well. The registration of housemaid is, therefore, an admirable measure. On the other hand, from the economic perspective, the shortage of domestic housemaid is caused by the low level of wage. If wage could rise higher than the current level, many Thai workers would be lured to work in this occupation. However, allowing foreign workers to work in this occupation will depress the increase of wage of the housemaids as appeared in 1999 and 2000, and it will drive Thai workers even far away from this occupation. Therefore, according to this point of view, the registration of housemaids should not be allowed.

Taking both points into our consideration, we strongly suggest 2 other measures that should also be conducted in order to limit the dependence on these irregular migrants. Firstly, changing the attitude toward the housework among Thai workers should be an urgent measure. Yet, this action does not need to promote the work of housemaid among Thais, but it should only eliminate the wrong attitude toward this occupation. Decision to work or not to work as housemaid should be based purely on the economic viewpoint such as wage and earnings but not on the social value as currently using. However, this first measure alone is probably not enough to solve the problem, and the other measure is also needed. The idea for the second measure is that if we cannot entirely substitute Thai housemaids for foreign housemaids due to the domestic supply constraint, we may need to introduce something else that can be replaced the needs for all housemaids regardless of nationality. The "something" is such as the laundry service, the organized housecleaning service, or the daycare service. If this service becomes reliable and popular among the Thai society, the demand for housemaid as a whole may be reduced.

Yet, it seems that both recommended measures can not solve the problems within the matter of days or months. Thus, the registration of foreign housemaids should still be allowed at the moment to moderate the currently high demand for housemaids. A maximum quota in the foreign housemaid registration should be adopted to slow the level of dependence on the irregular migrants.

IV. Conclusion and Suggestion

Comparing the labour market before and after the crisis, one should notice that the conditions have changed substantially. Before the crisis, the employment level expanded rapidly in modern sectors. Labour shortage became a major problem in many sectors. The adjustments to the shortage, however, were different between sectors. Of the 5 studied sectors, some sectors alleviated the shortage by using the labour of their children, but many started looking for workers from neighboring countries. Yet, only a few of them tried to utilize the benefits from the technology development in order to solve the labour shortage problem.

In 1998, the Thai labour market was severely affected by the economic crisis, and its impacts still remained in the market until today. The current unemployment rate is still at a high level. The labour shortage problem in the construction and textile sector has virtually disappeared, but the problem in the other 3 focused sectors still exists in different manners. The farming sector seems to have a seasonal shortage rather than a long-term one as its level of employment fluctuates around 2-3 million persons between seasons. The marine fisheries sector is currently not facing the shortage problem, but it will probably encounter the problem in the near future. People in this sector are ready to move to other highly paid sectors when the economy revives. Also, the long hours of working in this sector may be the major discouragement to Thai worker from participating in this sector. The shortage of housemaids becomes a structural problem because of the social value. People are unwilling to work as housemaids no matter how high the wage level is. Looking into the future, the forecast of employment shows that the number of employed persons will slowly increase in the future. The rate of unemployment will rise beyond the currently high level as well.

According to the 2001 registration, there were 568,249 irregular migrants reported for the registration. This figure may seem unimportant in comparison to the total amount of Thai workers at 32.83 million persons. However, if one deducts the types of Thai workers who are not affected, in term of employment status, by the hiring of foreigners such as employers or those highly educated, the focused group of Thai workers—the private employees with primary education—would then reduce to 6.34 million person. The registered migrants now account for 8.96% of the number. Even though it is expected that there are thousands of migrants who did not show up for the registration, the ratios of registered migrants to focused group of Thai workers in some sectors are already higher than 100% such as in the transportation in cargo (247.62%) and the marine fisheries (132.73%). It is inarguably that the dependence on the irregular migrants is already at a considerable level.

Although the employment of foreign workers can immediately increase the size of labour force and the national production, a distinction should be made between short-run economic expansion versus long-run sustainable development. The simple question is what would happen if Thailand could no longer hire irregular workers. Therefore, the long-term policies should aim to reduce the dependence on these foreigners. Promotion of labour substituting technologies should be implemented to take the pressure off the demand for low-skilled labour. However, some sectors that do not confront the labour shortage problem would have no justification to employ the foreign workers, and immediate actions in reducing the dependence can be made.

Table 2 Current Labor Force by Sex and Age from 1991 to 2001

(unit: million persons)

	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Male																						
Primary	12.6	13.4	13.2	13.7	13.1	13.5	12.8	13.2	12.7	13.4	13.2	13.3	12.9	13.3	12.4	12.5	12.3	12.2	12.2	12.3	11.7	12.2
Lower Sec.	1.3	1.4	1.5	1.6	1.6	1.7	1.6	1.8	1.9	1.9	2.0	2.1	2.1	2.2	2.4	2.6	2.5	2.6	2.6	2.7	2.6	2.8
Others	1.9	2.0	2.1	2.1	2.2	2.3	2.2	2.3	2.4	2.4	2.3	2.4	2.6	2.7	2.9	3.1	3.1	3.4	3.3	3.5	3.8	4.0
Total	15.8	16.8	16.8	17.4	16.9	17.4	16.6	17.3	17.0	17.8	17.5	17.8	17.6	18.2	17.6	18.2	18.0	18.2	18.0	18.5	18.0	19.0
Female																						
Primary	10.0	12.2	10.9	12.5	10.6	12.2	10.2	12.0	9.9	11.9	10.2	11.5	10.0	11.6	9.5	10.9	9.7	10.5	9.4	10.5	9.3	10.4
Lower Sec.	0.6	0.7	0.7	0.7	0.7	0.8	0.8	1.0	0.9	1.1	1.1	1.2	1.1	1.3	1.3	1.5	1.4	1.5	1.5	1.6	1.5	1.7
Others	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.8	1.7	1.8	1.8	1.9	2.1	2.2	2.3	2.5	2.5	2.7	2.8	2.9	3.2	3.3
Total	12.0	14.3	13.1	14.8	13.0	14.7	12.6	14.8	12.6	14.8	13.1	14.6	13.2	15.1	13.1	14.9	13.6	14.7	13.7	15.1	14.0	15.4
Both genders																						
Primary	22.6	25.7	24.2	26.1	23.8	25.7	22.9	25.2	22.6	25.3	23.4	24.8	22.9	24.9	21.8	23.4	22.0	22.8	21.6	22.8	21.0	22.6
Lower Sec.	1.9	2.1	2.2	2.3	2.3	2.4	2.4	2.7	2.8	3.0	3.0	3.3	3.2	3.5	3.6	4.1	3.9	4.1	4.1	4.4	4.1	4.4
Others	3.3	3.4	3.6	3.7	3.8	4.0	3.9	4.1	4.1	4.3	4.2	4.3	4.7	4.9	5.3	5.6	5.7	6.0	6.1	6.5	6.9	7.3
Total	27.7	31.1	29.9	32.1	29.9	32.1	29.2	32.1	29.5	32.6	30.6	32.4	30.8	33.2	30.7	33.1	31.6	32.9	31.7	33.6	32.0	34.4

Source: National Statistical Office

Table 3 Employment by Sex and Age from 1991 to 2001

(unit: million persons)

	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Male																						
Primary	12.2	13.2	12.8	13.6	12.7	13.3	12.4	13.1	12.5	13.3	13.0	13.2	12.7	13.2	11.8	12.2	11.7	12.0	11.7	12.1	11.1	12.0
Lower Sec.	1.3	1.4	1.5	1.5	1.5	1.6	1.5	1.8	1.8	1.9	1.9	2.1	2.0	2.2	2.2	2.4	2.4	2.4	2.4	2.6	2.4	2.6
Others	1.8	1.9	2.0	2.1	2.1	2.2	2.1	2.3	2.4	2.4	2.3	2.3	2.5	2.6	2.8	2.9	2.9	3.2	3.1	3.4	3.6	3.8
Total	15.3	16.4	16.2	17.1	16.3	17.2	16.0	17.1	16.6	17.6	17.2	17.6	17.3	18.0	16.8	17.6	17.0	17.6	17.3	18.1	17.1	18.5
Female																						
Primary	9.5	11.8	10.3	12.3	10.1	12.0	9.5	11.8	9.6	11.8	9.9	11.4	9.8	11.5	9.0	10.5	9.2	10.3	9.0	10.4	8.8	10.2
Lower Sec.	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.9	0.9	1.1	1.0	1.2	1.1	1.3	1.2	1.5	1.3	1.4	1.4	1.6	1.4	1.6
Others	1.3	1.4	1.4	1.5	1.6	1.6	1.7	1.8	1.7	1.8	1.8	1.8	2.0	2.1	2.2	2.4	2.4	2.6	2.7	2.8	3.0	3.2
Total	11.4	13.8	12.4	14.5	12.4	14.4	11.9	14.5	12.2	14.6	12.8	14.4	12.8	14.9	12.5	14.4	12.8	14.3	13.0	14.8	13.3	15.0
Both genders																						
Primary	21.7	25.0	23.1	25.9	22.8	25.3	21.9	24.9	22.1	25.1	22.9	24.6	22.5	24.7	20.8	22.8	20.9	22.2	20.7	22.4	20.0	22.2
Lower Sec.	1.8	2.0	2.1	2.2	2.2	2.4	2.3	2.7	2.7	3.0	2.9	3.3	3.1	3.4	3.4	3.9	3.7	3.9	3.8	4.2	3.8	4.3
Others	3.1	3.3	3.4	3.6	3.7	3.9	3.8	4.1	4.1	4.2	4.1	4.2	4.6	4.8	5.0	5.3	5.3	5.8	5.8	6.2	6.6	7.0
Total	26.7	30.3	28.6	31.7	28.8	31.6	28.0	31.7	28.8	32.3	29.9	32.0	30.1	32.9	29.3	31.9	29.9	31.9	30.3	32.8	30.4	33.5

Source: National Statistical Office

Table 4 Employment by Work Status, Wage, and Average Hour Worked from 1991 to 2000

(unit: thousand persons)

Whole Kingdom	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
by Work Status																				
Pirvate Employee	8,419	7,477	9,357	7,928	9,607	8,748	10,032	8,732	10,629	9,122	11,607	9,795	11,582	10,017	10,634	9,004	10,164	9,481	11,004	10,324
Government Employee	1,935	1,934	2,088	2,059	2,165	2,182	2,376	2,335	2,416	2,423	2,310	2,299	2,416	2,426	2,668	2,692	2,635	2,759	2,789	2,718
Employer	493	652	699	763	629	632	657	588	676	950	840	813	770	745	783	825	944	934	962	1,101
Own-account Worker	8,944	9,118	8,956	9,067	8,951	9,430	9,021	9,425	9,471	9,829	9,363	9,939	9,300	9,865	9,479	10,014	10,087	10,175	9,736	9,938
Unpaid Family Worker	6,920	11,111	7,516	11,859	7,414	10,641	5,893	10,579	5,632	9,935	5,800	9,186	6,035	9,891	5,706	9,400	6,035	8,554	5,809	8,751
Total	26,710	30,292	28,617	31,676	28,766	31,634	27,979	31,658	28,823	32,259	29,920	32,033	30,102	32,943	29,271	31,935	29,865	31,903	30,300	32,833
Average Nominal Wage																				
(Baht per month)																				
Primary	2,144	2,234	2,414	2,526	2,722	2,846	2,847	3,054	3,102	3,461	3,556	3,761	3,943	4,023	3,761	3,939	3,832	3,902	3,830	3,944
Lower Secondary	2,937	3,054	3,069	3,426	3,806	3,874	3,980	4,065	4,446	5,021	4,557	4,966	4,998	4,957	4,681	4,962	4,850	4,864	4,863	4,911
Others	5,337	5,809	6,216	7,025	7,686	8,149	8,205	8,316	8,176	9,373	9,969	9,817	10,614	10,955	10,455	10,716	10,038	10,394	10,567	10,235
Total	2,641	2,905	2,977	3,354	3,529	3,851	3,731	4,112	3,962	4,670	4,544	4,919	5,161	5,511	5,106	5,570	5,240	5,587	5,349	5,542
Change of Real Wage																				
(percent a year)																				
Primary			7.51	7.88	9.22	9.45	-0.16	2.09	4.07	6.92	6.76	3.36	6.21	0.78	-12.49	-9.50	-0.77	0.06	-0.89	-1.07
Lower Secondary			-0.20	7.05	20.10	9.85	-0.19	-0.18	6.70	16.54	-4.55	-5.93	5.06	-5.97	-14.10	-7.45	0.94	-1.01	-0.56	-1.16
Others			11.25	15.40	19.77	12.68	1.88	-2.90	-4.83	6.33	13.57	-0.38	1.99	5.13	-9.65	-9.56	-6.48	-2.05	4.41	-3.61
Total			7.63	10.15	14.85	11.53	0.90	1.60	1.42	7.15	6.81	0.20	8.80	5.53	-9.24	-6.55	-0.05	1.29	1.25	-2.91
Average Hour Worked																				
(Hours/week/person)																				
Primary	53.32	54.20	52.75	54.08	52.11	52.65	52.41	53.81	52.20	53.67	52.45	52.55	52.31	52.18	49.79	52.72	50.90	51.58	51.29	52.02
Lower Secondary	51.62	50.42	50.21	50.67	49.71	50.34	50.36	50.09	50.78	50.08	50.80	50.70	51.23	48.50	47.13	49.18	49.51	49.45	49.76	49.75
Others	45.90	45.42	45.65	46.13	45.36	45.92	45.95	45.56	45.53	45.85	46.08	45.81	46.12	41.50	43.56	45.46	45.63	45.69	46.31	46.73
Total	52.33	52.99	51.71	52.94	51.05	51.65	51.37	52.44	51.13	52.32	51.42	51.48	51.26	50.25	48.41	51.09	49.79	50.25	50.14	50.73

Source: National Statistical Office

Table 5 Unemployment by Sex and Age from 1991 to 2001

(unit: thousand persons)

	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Male																						
Primary	382.6	242.5	476.2	124.2	446.8	138.3	413.2	115.9	254.9	104.5	218.0	106.0	209.4	76.4	575.5	318.4	542.6	271.6	463.8	196.9	547.0	215.2
Lower Sec.	42.9	38.6	56.4	33.6	58.1	29.0	65.0	28.8	45.5	19.1	54.1	22.0	63.3	28.8	144.1	119.3	169.5	126.5	145.7	101.6	172.2	122.0
Others	67.3	56.9	82.3	62.7	58.9	47.6	61.3	48.0	57.9	38.0	43.4	57.0	62.9	49.2	123.8	183.7	201.7	146.1	143.9	154.1	167.1	174.0
Total	492.8	337.9	614.9	220.5	563.9	214.8	539.5	192.8	358.2	161.6	315.5	185.0	335.6	154.4	843.3	621.5	913.7	544.2	753.4	452.6	886.2	511.2
Female																						
Primary	460.7	424.9	631.5	146.0	521.2	214.3	609.9	165.2	296.7	147.8	261.4	109.1	261.8	77.9	446.1	300.6	549.0	262.9	433.2	180.1	470.7	189.8
Lower Sec.	32.0	28.1	24.1	20.4	31.7	12.5	32.1	16.9	22.9	19.3	25.1	16.3	37.2	16.2	72.3	53.6	94.0	73.4	97.5	50.5	95.8	62.7
Others	51.5	50.8	61.2	58.6	44.8	45.9	46.6	39.6	35.9	33.7	32.7	38.9	49.4	43.3	108.5	153.2	143.8	99.2	127.0	125.2	129.7	132.7
Total	544.2	503.8	716.8	225.0	597.7	272.7	688.6	221.8	355.4	200.8	319.2	164.2	348.4	137.4	626.9	507.5	786.9	435.4	657.7	355.7	696.2	385.1
Both genders																						
Primary	843.4	667.5	1,107.7	270.1	968.0	352.6	1,023.1	281.2	551.6	252.4	479.4	215.1	471.2	154.4	1,021.6	619.0	1,091.6	534.4	897.1	377.0	1,017.7	404.9
Lower Sec.	74.9	66.7	80.5	54.0	89.9	41.4	97.0	45.8	68.3	38.4	79.2	38.2	100.5	44.9	216.3	173.0	263.5	199.9	243.2	152.0	268.0	184.7
Others	118.8	107.7	143.5	121.3	103.7	93.5	107.9	87.7	93.8	71.6	76.1	95.9	112.3	92.5	232.3	337.0	345.5	245.3	270.8	279.3	296.7	306.7
Total	1,037.0	841.8	1,331.7	445.4	1,161.6	487.5	1,228.1	414.6	713.7	362.4	634.7	349.2	684.0	291.9	1,470.2	1,128.9	1,700.6	979.6	1,411.1	808.3	1,582.4	896.3

Source: National Statistical Office

Table 6 Forecast of Labour Force, Employment, and Unemployment by Gender and Education from 2002-2006

(unit: million persons)

	2002		2003		2004		2005		2006	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Both Gender										
1. Labor Force	32.81	34.87	33.51	35.56	34.30	36.33	35.18	37.19	36.16	38.15
- Primary	21.06	22.45	20.90	22.27	20.76	22.09	20.61	21.91	20.47	21.74
- Lower Secondary	4.32	4.52	4.56	4.65	4.83	4.78	5.10	4.92	5.39	5.06
- Others	7.43	7.90	8.04	8.64	8.72	9.46	9.47	10.36	10.30	11.36
2. Employment	31.15	33.81	31.78	34.42	32.49	35.10	33.28	35.87	34.16	36.74
- Primary	20.24	22.09	20.11	21.92	19.99	21.76	19.87	21.60	19.77	21.44
- Lower Secondary	4.03	4.34	4.26	4.46	4.50	4.59	4.75	4.72	5.02	4.85
- Others	6.88	7.38	7.41	8.03	8.00	8.75	8.65	9.55	9.37	10.44
3. Unemployment	1.66	1.06	1.74	1.14	1.82	1.23	1.91	1.32	2.00	1.42
- Primary	0.82	0.35	0.80	0.34	0.77	0.33	0.74	0.31	0.70	0.30
- Lower Secondary	0.29	0.19	0.31	0.19	0.33	0.19	0.35	0.20	0.38	0.20
- Others	0.55	0.52	0.63	0.61	0.72	0.70	0.82	0.81	0.93	0.92
4. Unemployment Rate	5.06	3.04	5.19	3.21	5.30	3.38	5.42	3.55	5.54	3.71
Male										
1. Labor Force	18.64	19.24	19.06	19.63	19.52	20.06	20.03	20.55	20.61	21.09
- Primary	11.81	12.13	11.72	12.03	11.63	11.94	11.55	11.84	11.47	11.74
- Lower Secondary	2.74	2.81	2.90	2.89	3.07	2.98	3.24	3.07	3.43	3.16
- Others	4.09	4.29	4.44	4.70	4.82	5.15	5.24	5.64	5.71	6.19
2. Employment	17.75	18.68	18.12	19.03	18.54	19.42	19.00	19.85	19.52	20.35
- Primary	11.39	11.96	11.32	11.87	11.25	11.78	11.18	11.69	11.12	11.61
- Lower Secondary	2.56	2.69	2.70	2.77	2.86	2.85	3.02	2.94	3.19	3.02
- Others	3.80	4.02	4.10	4.38	4.43	4.78	4.80	5.22	5.21	5.72
3. Unemployment	0.89	0.56	0.93	0.60	0.98	0.65	1.03	0.70	1.09	0.75
- Primary	0.42	0.17	0.40	0.16	0.38	0.15	0.37	0.15	0.35	0.14
- Lower Secondary	0.18	0.12	0.20	0.12	0.21	0.13	0.23	0.13	0.24	0.13
- Others	0.29	0.27	0.34	0.31	0.39	0.36	0.44	0.42	0.50	0.48
4. Unemployment Rate	4.78	2.89	4.91	3.06	5.03	3.22	5.15	3.39	5.28	3.55
Female										
1. Labor Force	14.17	15.63	14.46	15.93	14.79	16.27	15.15	16.64	15.55	17.06
- Primary	9.25	10.31	9.19	10.23	9.12	10.15	9.06	10.07	9.00	9.99
- Lower Secondary	1.58	1.71	1.67	1.76	1.76	1.80	1.86	1.85	1.96	1.90
- Others	3.34	3.61	3.61	3.94	3.90	4.31	4.23	4.72	4.59	5.16
2. Employment	13.40	15.13	13.66	15.39	13.95	15.69	14.27	16.02	14.64	16.39
- Primary	8.84	10.13	8.79	10.05	8.74	9.98	8.69	9.91	8.65	9.83
- Lower Secondary	1.47	1.65	1.55	1.69	1.64	1.74	1.73	1.78	1.83	1.83
- Others	3.08	3.36	3.31	3.65	3.57	3.97	3.85	4.33	4.16	4.72
3. Unemployment	0.77	0.50	0.80	0.54	0.84	0.58	0.88	0.62	0.92	0.67
- Primary	0.41	0.19	0.40	0.18	0.38	0.17	0.37	0.17	0.36	0.16
- Lower Secondary	0.11	0.07	0.11	0.07	0.12	0.07	0.13	0.07	0.13	0.07
- Others	0.26	0.25	0.29	0.29	0.33	0.34	0.38	0.39	0.43	0.44
4. Unemployment Rate	5.43	3.22	5.55	3.40	5.66	3.57	5.78	3.74	5.89	3.91

Source: TDRI

Table 7 Forecast of Employment by Industry from 2002-2006

(unit: million persons)

	2002		2003		2004		2005		2006	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Both Gender										
Agriculture	11.70	15.44	11.69	15.45	11.70	15.46	11.72	15.48	11.75	15.51
Manufacturing	5.58	4.97	5.77	5.13	5.97	5.32	6.22	5.55	6.50	5.80
Construction	1.67	1.24	1.69	1.27	1.72	1.29	1.76	1.32	1.80	1.35
Utilities	0.17	0.16	0.17	0.16	0.17	0.16	0.17	0.16	0.17	0.16
Commerce	5.60	5.52	5.84	5.78	6.10	6.06	6.39	6.38	6.70	6.72
Transportation	0.99	1.10	1.04	1.08	1.08	1.09	1.11	1.10	1.14	1.12
Services	5.43	5.38	5.57	5.53	5.74	5.71	5.90	5.88	6.09	6.07
Total	*31.15*	*33.81*	*31.78*	*34.42*	*32.49*	*35.10*	*33.28*	*35.87*	*34.16*	*36.74*
Male										
Agriculture	7.05	8.74	7.04	8.76	7.06	8.77	7.07	8.79	7.10	8.81
Manufacturing	2.86	2.59	2.97	2.69	3.09	2.79	3.23	2.92	3.38	3.06
Construction	1.41	1.03	1.43	1.05	1.45	1.07	1.48	1.09	1.51	1.12
Utilities	0.14	0.13	0.14	0.13	0.14	0.13	0.14	0.13	0.14	0.13
Commerce	2.82	2.71	2.96	2.85	3.10	3.01	3.27	3.18	3.45	3.37
Transportation	0.88	0.94	0.92	0.94	0.95	0.94	0.98	0.95	1.01	0.97
Services	2.59	2.54	2.67	2.62	2.75	2.71	2.84	2.79	2.93	2.89
Total	*17.75*	*18.68*	*18.12*	*19.03*	*18.54*	*19.42*	*19.00*	*19.85*	*19.52*	*20.35*
Female										
Agriculture	4.65	6.70	4.64	6.70	4.64	6.69	4.65	6.69	4.65	6.70
Manufacturing	2.72	2.38	2.80	2.45	2.89	2.53	3.00	2.63	3.12	2.74
Construction	0.26	0.21	0.27	0.22	0.27	0.23	0.28	0.23	0.29	0.24
Utilities	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Commerce	2.78	2.81	2.88	2.93	2.99	3.05	3.12	3.19	3.25	3.35
Transportation	0.11	0.15	0.12	0.15	0.13	0.15	0.13	0.15	0.14	0.15
Services	2.84	2.84	2.91	2.92	2.99	3.00	3.07	3.09	3.15	3.19
Total	*13.40*	*15.13*	*13.66*	*15.39*	*13.95*	*15.69*	*14.27*	*16.02*	*14.64*	*16.39*

Source: TDRI

Table 8 Distribution of Gross Domestic Products by Sector*

(unit: percent)

	1980	1985	1990	1995	1998
1. Agriculture	*14.03*	*10.44*	*7.34*	*6.13*	*7.15*
- Farming (non-rice)	5.68	4.09	3.24	2.55	2.65
- Livestock	2.35	1.77	1.41	1.00	1.09
- Marine Fisheries	0.99	0.78	0.78	0.98	1.35
- Other Agriculture	5.01	3.80	1.91	1.59	2.06
2. Industry	*51.75*	*52.76*	*57.17*	*58.51*	*57.14*
- Mining	1.36	1.94	1.06	0.96	1.27
- Rice Mill	3.82	2.99	1.47	1.21	1.91
- Pottery	0.14	0.13	0.11	0.12	0.15
- Textile & Garment	6.74	8.12	9.07	8.05	8.04
- Construction	7.06	7.01	9.69	9.50	5.06
- Other Industries	32.62	32.58	35.77	38.67	40.73
3. Service	*34.22*	*36.80*	*35.48*	*35.37*	*35.70*
- Transportation in Cargo	0.11	0.08	0.04	0.04	0.04
- Housemaid**	0.41	0.50	0.60	0.55	0.46
- Other Service	33.70	36.22	34.84	34.78	35.20
Total	100.00	100.00	100.00	100.00	100.00

Source: I/O Table, National Economic and Social Development Board

Note: (*) 180 production sectors were regrouped into the sectors as shown above for our purpose.

(**) Due to the data limitation, this sector also includes other personal service such as laundry hairdressing, funeral, etc.

Table 9 Employment in Farming Sector by Education, Gender and Work Status from 1991 to 2000

(unit: thousand persons)

Farming	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
by Education																				
Primary	7,986	5,062	8,180	4,433	7,999	5,203	6,820	4,598	6,434	4,274	6,670	4,653	6,804	4,409	6,277	4,240	6,395	4,259	5,865	4,102
Lower Secondary	300	212	347	203	331	240	329	280	340	284	443	347	439	321	516	413	600	498	683	534
Others	176	119	181	135	184	149	159	154	181	145	176	172	199	166	214	204	264	207	310	255
Total	8,463	5,393	8,708	4,771	8,514	5,592	7,308	5,032	6,956	4,704	7,290	5,172	7,443	4,896	7,008	4,857	7,259	4,965	6,858	4,891
by Gender																				
Male	4,587	2,818	4,699	2,514	4,618	2,966	3,990	2,634	3,744	2,472	3,928	2,674	3,989	2,556	3,898	2,667	4,074	2,721	3,873	2,684
Female	3,876	2,575	4,008	2,257	3,897	2,626	3,318	2,399	3,212	2,232	3,362	2,497	3,454	2,340	3,110	2,190	3,185	2,243	2,985	2,207
Total	8,463	5,393	8,708	4,771	8,514	5,592	7,308	5,032	6,956	4,704	7,290	5,172	7,443	4,896	7,008	4,857	7,259	4,965	6,858	4,891
by Work Status																				
Pirvate Employee	1,623	934	1,841	879	1,607	1,012	1,684	983	1,563	749	1,680	866	1,602	818	1,686	794	1,573	845	1,736	1,094
Government Employee	-	1	6	-	1	1	-	-	0	0	-	0	-	-	-	-	0	-	0	0
Employer	80	118	180	100	146	86	122	78	126	159	196	143	179	118	152	121	227	143	224	180
Own-account Worker	2,803	1,806	2,682	1,586	2,777	1,964	2,458	1,795	2,493	1,775	2,540	1,944	2,641	1,862	2,451	1,859	2,590	1,865	2,317	1,688
Unpaid Family Worker	3,957	2,534	3,998	2,206	3,983	2,528	3,044	2,177	2,773	2,021	2,873	2,217	3,021	2,098	2,718	2,082	2,869	2,113	2,580	1,929
Total	8,463	5,393	8,708	4,771	8,514	5,592	7,308	5,032	6,956	4,704	7,290	5,172	7,443	4,896	7,008	4,857	7,259	4,965	6,858	4,891

Source: National Statistical Office

Table 10 Average Wage and Hour Worked in Farming Sector from 1991 to 2000

Farming	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Average Nominal Wage																				
(Baht per month)																				
Primary	1,466	1,626	1,718	1,894	1,911	2,002	2,120	2,415	2,232	2,509	2,540	2,834	3,040	3,074	3,098	2,741	2,753	2,698	2,762	3,018
Lower Secondary	1,617	1,517	1,456	1,856	1,828	2,059	2,532	2,937	2,425	2,582	2,664	3,583	3,219	2,811	2,884	2,820	3,053	2,672	2,870	3,256
Others	2,464	2,318	1,572	2,982	1,862	1,350	4,229	2,421	2,258	4,031	2,729	3,483	3,276	3,523	2,528	2,649	3,306	2,648	2,511	3,266
Total	1,473	1,628	1,713	1,901	1,909	1,999	2,153	2,427	2,237	2,526	2,546	2,866	3,050	3,073	3,083	2,744	2,781	2,695	2,763	3,039
Change of Real Wage																				
(percent a year)																				
Primary			11.96	11.17	7.71	2.67	5.88	14.78	0.56	-2.02	6.00	7.44	14.63	2.19	-6.52	-17.55	-13.42	-0.59	-0.52	9.48
Lower Secondary			-14.01	16.77	21.60	7.75	32.20	35.72	-8.54	-17.06	2.30	31.98	15.77	-26.10	-17.82	-7.25	3.12	-4.30	-6.76	19.30
Others			-39.06	22.78	14.68	-56.04	116.81	70.66	-49.00	57.09	12.52	-17.83	15.00	-4.69	-29.21	-30.50	27.37	0.96	-24.66	20.73
Total			11.11	11.41	7.92	2.18	7.62	15.50	-0.73	-1.82	5.98	7.92	14.74	1.01	-7.28	-17.46	-12.13	-0.78	-1.48	10.37
Average Hour Worked																				
(Hours/week/person)																				
Primary	50.22	49.33	49.90	47.64	49.26	46.95	49.38	46.99	48.54	46.53	48.58	47.11	48.41	45.30	47.48	45.82	46.34	44.80	46.93	44.65
Lower Secondary	48.42	47.98	47.66	44.93	46.03	44.88	46.67	44.36	46.69	43.23	45.31	45.84	46.66	41.98	44.18	42.79	42.75	40.62	43.42	41.33
Others	48.82	45.96	46.02	40.99	46.39	42.77	47.78	42.26	44.87	43.43	46.18	43.39	46.07	43.88	43.92	43.60	44.04	39.57	45.60	42.13
Total	50.12	49.21	49.73	47.34	49.07	46.75	49.22	46.70	48.35	46.24	48.33	46.90	48.24	45.03	47.13	45.47	45.96	44.16	46.52	44.16

Source: National Statistical Office

Table 11 Employment in Marine Fishery Sector by Education, Gender and Work Status from 1991 to 2000

(unit: thousand persons)

Marine Fishery	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
by Education																				
Primary	186	187	214	190	191	167	197	204	142	137	213	193	178	191	145	152	179	175	113	117
Lower Secondary	9	5	12	16	7	12	6	7	8	9	14	10	11	10	14	15	13	15	12	10
Others	6	4	3	4	4	4	5	4	3	2	3	4	7	4	8	5	8	8	5	4
Total	200	197	229	210	202	182	208	215	153	149	229	207	197	204	167	173	200	198	130	131
by Gender																				
Male	178	171	201	186	168	152	180	187	129	123	200	168	164	163	140	143	172	171	109	109
Female	23	26	29	24	34	30	28	28	23	25	29	39	33	42	27	30	28	27	21	23
Total	200	197	229	210	202	182	208	215	153	149	229	207	197	204	167	173	200	198	130	131
by Work Status																				
Pirvate Employee	89	67	112	104	86	80	83	96	54	49	78	60	62	58	62	60	72	72	49	52
Government Employee	-	-	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-
Employer	5	9	6	8	6	7	14	14	10	10	5	6	8	6	11	10	11	14	10	11
Own-account Worker	72	76	67	59	71	62	68	64	56	55	94	88	76	80	60	59	66	67	44	41
Unpaid Family Worker	35	45	44	39	38	33	42	42	32	35	52	53	50	61	34	44	51	45	28	26
Total	200	197	229	210	202	182	208	215	153	149	229	207	197	204	167	173	200	198	130	131

Source: National Statistical Office

Table 12 Average Wage and Hour Worked in Marine Fishery Sector from 1991 to 2000

Marine Fishery	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Average Nominal Wage																				
(Baht per month)																				
Primary	2,545	2,568	2,886	3,507	3,237	2,857	3,309	3,428	4,037	4,067	4,691	4,208	5,125	4,352	5,266	5,496	6,190	4,812	4,676	4,095
Lower Secondary	2,531	2,930	3,164	3,144	3,877	4,599	3,036	3,997	3,740	4,256	5,134	3,153	4,103	5,752	5,193	3,493	4,331	5,052	3,386	3,863
Others	2,214	2,106	4,800	4,097	2,472	2,784	7,361	4,311	7,128	4,331	8,633	5,428	5,706	4,349	3,937	5,709	3,982	7,018	2,320	6,731
Total	2,542	2,575	2,913	3,465	3,254	3,000	3,308	3,483	4,064	4,087	4,795	4,176	5,081	4,410	5,186	5,281	5,952	4,902	4,436	4,140
Change of Real Wage																				
(percent a year)																				
Primary			8.32	30.31	8.61	-20.87	-2.43	14.15	16.52	11.95	8.22	-1.61	4.66	-2.56	-5.75	16.76	14.50	-11.59	-25.09	-16.69
Lower Secondary			19.42	2.40	18.66	42.09	-25.26	-17.30	17.66	0.45	27.86	-29.55	-23.45	71.87	16.09	-43.86	-18.75	46.05	-22.45	-25.14
Others			107.04	85.65	-50.11	-34.00	184.17	47.33	-7.51	-5.22	12.79	19.22	-36.68	-24.53	-36.71	21.35	-1.49	24.16	-42.22	-6.13
Total			9.46	28.41	8.18	-15.91	-2.96	10.48	17.33	10.70	9.89	-2.81	1.50	-0.52	-6.37	10.70	11.79	-6.26	-26.08	-17.33
Average Hour Worked																				
(Hours/week/person)																				
Primary	61.79	59.79	59.15	63.14	57.14	53.48	53.65	59.54	53.93	55.72	56.80	52.09	53.59	51.49	55.67	54.24	54.10	57.27	58.39	56.44
Lower Secondary	63.47	58.89	56.74	67.41	64.80	59.95	62.05	64.61	54.82	64.02	45.28	45.87	57.25	51.34	53.77	51.55	66.21	50.85	58.21	51.05
Others	53.67	44.68	42.11	69.24	70.26	66.17	72.53	60.59	60.69	67.44	49.51	69.50	47.69	57.34	60.21	52.66	43.75	52.33	58.41	52.67
Total	61.62	59.44	58.78	63.57	57.63	54.16	54.31	59.74	54.11	56.41	56.03	52.09	53.58	51.60	55.73	53.95	54.50	56.56	58.37	55.91

Source: National Statistical Office

Table 13 Employment in Textile and Garment Sector by Education, Gender and Work Status from 1991 to 2000

(unit: thousand persons)

Textile and Garment	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
by Education																				
Primary	740	634	754	591	813	662	849	654	1,090	878	966	712	878	627	1,040	677	777	633	907	668
Lower Secondary	77	69	83	85	82	84	81	105	109	125	160	129	157	136	182	195	166	166	240	204
Others	73	76	63	55	73	82	70	67	101	80	93	72	107	101	109	101	116	153	148	161
Total	889	779	900	730	968	828	1,000	825	1,299	1,084	1,219	913	1,142	863	1,331	973	1,059	951	1,295	1,033
by Gender																				
Male	169	182	190	160	175	175	165	148	264	212	227	190	195	174	272	229	201	213	274	249
Female	721	597	710	570	793	654	835	677	1,035	872	992	723	947	689	1,059	743	859	738	1,021	783
Total	889	779	900	730	968	828	1,000	825	1,299	1,084	1,219	913	1,142	863	1,331	973	1,059	951	1,295	1,033
by Work Status																				
Pirvate Employee	565	538	543	492	642	600	583	526	707	634	739	579	688	578	861	678	632	636	759	676
Government Employee	4	3	5	1	4	2	0	0	0	1	1	4	1	1	3	-	0	0	0	-
Employer	25	22	24	24	22	18	14	17	50	32	23	17	15	15	22	20	19	20	26	21
Own-account Worker	217	169	251	165	232	174	339	222	447	322	367	264	350	217	350	224	345	239	400	263
Unpaid Family Worker	78	47	77	48	68	34	64	60	94	95	89	48	88	52	95	51	63	56	111	73
Total	889	779	900	730	968	828	1,000	825	1,299	1,084	1,219	913	1,142	863	1,331	973	1,059	951	1,295	1,033

Source: National Statistical Office

Table 14 Average Wage and Hour Worked in Textile and Garment Sector from 1991 to 2000

Textile and Garment	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Average Nominal Wage (Baht per month)																				
Primary	2,382	2,268	2,419	2,760	2,513	2,888	2,855	2,994	2,904	3,403	3,458	3,623	3,624	3,778	2,577	4,134	3,699	4,110	3,599	4,005
Lower Secondary	2,766	2,814	2,626	3,092	2,814	3,342	3,700	3,651	4,248	3,885	4,153	4,352	4,637	4,631	3,416	4,784	4,461	4,376	4,152	4,149
Others	3,901	4,399	4,267	4,422	5,341	5,381	5,651	5,294	7,252	6,697	6,425	7,420	7,775	8,870	8,020	9,485	8,649	9,113	7,560	7,842
Total	2,562	2,542	2,604	2,926	2,776	3,192	3,177	3,291	3,401	3,740	3,827	4,089	4,259	4,597	3,189	4,757	4,556	5,137	4,182	4,731
Change of Real Wage (percent a year)																				
Primary			-3.01	16.09	0.61	1.65	8.42	-1.34	-2.83	7.21	10.88	1.28	0.40	-1.77	-34.79	1.16	39.86	0.41	-3.52	-4.62
Lower Secondary			-9.33	4.87	3.80	4.97	25.46	3.94	9.66	0.40	-8.95	6.53	6.96	0.25	-32.43	-4.50	27.22	-7.62	-7.69	-7.19
Others			4.47	-4.09	21.23	18.20	0.99	-6.39	22.56	19.34	-17.49	5.38	15.92	12.62	-5.39	-1.13	5.06	-2.98	-13.31	-15.77
Total			-2.91	9.79	3.26	5.97	9.21	-1.91	2.24	7.24	4.79	3.97	6.62	5.91	-31.33	-4.34	39.19	9.06	-8.98	-9.85
Average Hour Worked (Hours/week/person)																				
Primary	51.64	52.37	51.55	52.24	49.29	51.11	50.74	51.36	49.30	50.67	50.51	50.42	50.52	48.44	40.55	50.99	50.30	51.86	51.23	52.35
Lower Secondary	51.27	49.60	51.48	52.02	47.45	50.28	50.48	50.88	50.01	50.76	50.08	50.78	49.48	48.48	36.25	49.00	51.33	50.96	51.30	53.05
Others	50.09	49.63	49.91	51.72	47.00	50.10	50.71	49.25	51.01	51.13	48.90	49.61	49.85	47.92	43.55	49.07	50.01	48.90	49.60	50.14
Total	51.48	51.86	51.43	52.18	48.96	50.93	50.71	51.13	49.49	50.72	50.33	50.41	50.32	48.39	40.21	50.39	50.43	51.23	51.05	52.14

Source: National Statistical Office

Table 15 Employment in Construction Sector by Education, Gender and Work Status from 1991 to 2000

(unit: thousand persons)

Construction	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
by Education																				
Primary	1,421	974	1,658	1,098	1,521	1,214	2,020	1,421	2,276	1,501	2,746	1,863	2,565	1,659	1,693	1,020	1,267	1,000	1,497	992
Lower Secondary	104	92	119	87	116	138	139	142	203	149	211	170	215	168	181	126	155	136	187	151
Others	99	94	117	114	104	118	127	127	156	191	148	126	187	184	164	133	137	148	135	134
Total	1,624	1,161	1,894	1,300	1,742	1,470	2,285	1,690	2,635	1,841	3,105	2,159	2,966	2,011	2,038	1,279	1,559	1,284	1,819	1,277
by Gender																				
Male	1,385	988	1,576	1,075	1,472	1,210	1,933	1,391	2,164	1,524	2,495	1,729	2,391	1,588	1,715	1,082	1,334	1,064	1,569	1,086
Female	239	173	318	225	269	260	352	298	471	317	610	430	575	423	323	197	225	221	250	191
Total	1,624	1,161	1,894	1,300	1,742	1,470	2,285	1,690	2,635	1,841	3,105	2,159	2,966	2,011	2,038	1,279	1,559	1,284	1,819	1,277
by Work Status																				
Pirvate Employee	1,451	1,045	1,708	1,158	1,586	1,312	2,023	1,511	2,399	1,579	2,811	1,930	2,714	1,804	1,790	1,104	1,368	1,110	1,602	1,120
Government Employee	4	1	1	0	5	3	4	1	0	0	1	1	0	1	0	-	-	5	4	0
Employer	76	69	72	81	61	78	109	98	112	139	138	111	123	115	115	97	108	90	98	89
Own-account Worker	69	29	80	37	64	47	122	58	90	94	106	73	89	60	89	45	57	47	83	44
Unpaid Family Worker	25	16	32	24	26	30	27	22	33	29	48	44	40	32	44	34	26	32	32	24
Total	1,624	1,161	1,894	1,300	1,742	1,470	2,285	1,690	2,635	1,841	3,105	2,159	2,966	2,011	2,038	1,279	1,559	1,284	1,819	1,277

Source: National Statistical Office

Table 16 Average Wage and Hour Worked in Construction Sector from 1991 to 2000

Construction	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Average Nominal Wage																				
(Baht per month)																				
Primary	2,643	2,947	2,933	3,103	3,332	3,381	3,192	3,605	3,478	3,879	3,871	4,058	4,081	4,211	4,165	4,399	4,155	4,278	4,171	4,432
Lower Secondary	2,959	2,956	2,939	3,015	4,126	3,608	3,760	4,193	4,159	4,475	4,504	5,357	4,643	4,441	4,297	4,217	4,756	4,396	4,379	5,121
Others	4,668	5,971	5,967	7,697	8,262	9,728	7,476	7,879	10,473	13,485	12,789	11,391	12,468	11,983	9,825	12,760	11,387	10,857	12,250	9,657
Total	2,760	3,155	3,099	3,436	3,623	3,824	3,407	3,923	3,856	4,650	4,233	4,479	4,549	4,837	4,584	5,097	4,743	4,908	4,617	4,941
Change of Real Wage																				
(percent a year)																				
Primary			5.99	0.46	10.00	5.84	-8.57	1.45	4.09	1.52	3.65	-0.49	1.00	-2.23	-6.39	-3.44	-2.83	-1.78	-0.44	1.41
Lower Secondary			-5.14	-2.65	35.99	16.23	-13.01	10.58	5.63	0.68	0.86	13.87	-1.24	-21.90	-15.11	-12.21	7.81	5.26	-8.67	14.02
Others			22.09	23.00	34.10	22.76	-13.64	-22.94	33.80	61.47	13.73	-19.65	-6.61	-0.90	-27.72	-1.56	12.89	-14.07	6.70	-12.94
Total			7.24	3.91	13.23	8.11	-10.24	-2.39	8.08	11.82	2.23	-8.38	2.95	1.73	-7.57	-2.58	0.79	-2.75	-3.46	-1.45
Average Hour Worked																				
(Hours/week/person)																				
Primary	54.67	53.61	55.24	54.37	55.00	54.23	54.69	54.08	54.00	54.02	54.98	53.38	54.76	51.90	51.88	51.96	52.43	51.77	51.23	51.31
Lower Secondary	54.03	51.39	54.43	52.63	54.31	53.02	53.34	52.47	52.93	53.83	54.89	52.97	53.50	50.65	50.57	50.39	51.56	49.82	50.17	50.13
Others	52.52	50.50	51.22	52.22	50.66	50.52	52.95	51.19	50.76	50.81	50.28	50.65	52.00	46.68	48.66	49.82	50.40	48.13	49.13	51.62
Total	54.50	53.18	54.94	54.07	54.69	53.82	54.52	53.73	53.72	53.67	54.75	53.19	54.50	51.32	51.50	51.58	52.17	51.14	50.97	51.20

Source: National Statistical Office

Table 17 Employment in Housemaid Sector by Education, Gender and Work Status from 1991 to 2000

(unit: thousand persons)

Housemaid	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
by Education																				
Primary	184	188	178	184	206	169	163	141	217	186	178	179	168	139	173	175	198	176	200	178
Lower Secondary	11	11	13	12	14	14	18	23	21	17	14	20	18	17	32	27	33	32	38	25
Others	5	8	6	7	5	5	5	4	5	5	16	13	4	2	14	12	11	12	12	16
Total	200	207	197	202	226	187	187	168	244	208	207	212	190	158	218	214	241	220	250	219
by Gender																				
Male	16	13	18	21	18	14	25	20	21	16	21	25	16	22	43	32	32	30	28	29
Female	184	194	179	181	207	173	162	148	223	193	186	187	174	136	176	182	209	190	222	190
Total	200	207	197	202	226	187	187	168	244	208	207	212	190	158	218	214	241	220	250	219
by Work Status																				
Pirvate Employee	199	206	196	201	226	187	184	165	242	206	206	209	188	156	215	212	239	219	247	219
Government Employee	-	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	-
Employer	-	-	-	-	-	-	-	-	0	1	-	-	1	-	-	-	-	-	-	-
Own-account Worker	1	1	1	1	-	1	3	3	2	2	1	2	2	2	3	2	2	2	3	0
Unpaid Family Worker	0	-	-	-	-	-	0	0	0	0	0	0	-	0	0	-	-	-	-	-
Total	200	207	197	202	226	187	187	168	244	208	207	212	190	158	218	214	241	220	250	219

Source: National Statistical Office

Table 18 Average Wage and Hour Worked in Housemaid Sector from 1991 to 2000

Housemaid	1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3	Q1	Q3
Average Nominal Wage																				
(Baht per month)																				
Primary	1,230	1,298	1,564	1,600	1,697	1,769	1,900	2,176	2,223	2,362	2,421	2,500	2,781	3,145	3,489	3,477	3,276	3,346	3,365	3,442
Lower Secondary	2,088	1,854	2,415	2,642	2,360	2,465	3,989	2,034	2,175	2,705	6,149	4,198	4,072	3,682	4,073	6,269	3,861	3,817	3,847	4,600
Others	2,208	2,275	2,535	3,030	3,186	3,538	2,928	4,544	4,982	4,653	3,118	3,517	4,462	7,569	5,885	5,567	5,758	4,341	3,739	4,210
Total	1,302	1,367	1,648	1,704	1,774	1,862	2,133	2,196	2,260	2,448	2,721	2,721	2,945	3,270	3,705	3,934	3,462	3,471	3,459	3,630
Change of Real Wage																				
(percent a year)																				
Primary			21.47	17.58	5.07	7.41	6.88	17.05	11.73	2.41	1.42	0.68	10.07	18.50	15.07	2.19	-8.55	-2.80	1.88	0.68
Lower Secondary			10.44	35.94	-5.33	-9.35	61.28	-21.49	-47.92	25.45	163.32	47.62	-36.56	-17.38	-8.27	57.41	-7.66	-38.50	-1.17	17.95
Others			9.66	27.10	21.73	13.43	-12.29	22.20	62.51	-3.39	-41.71	-28.10	37.08	102.72	20.98	-32.00	-4.69	-21.26	-35.60	-5.07
Total			20.92	18.94	4.25	6.15	14.77	12.22	1.15	5.17	12.16	5.70	3.68	13.22	15.39	11.23	-8.99	-10.89	-0.90	2.36
Average Hour Worked																				
(Hours/week/person)																				
Primary	64.90	63.88	66.98	65.17	63.41	63.35	61.15	63.52	59.91	61.56	62.49	62.03	61.96	61.79	58.63	61.94	61.94	61.85	57.36	62.34
Lower Secondary	60.52	63.49	66.93	64.45	62.44	61.32	54.83	62.78	57.69	61.67	68.74	63.82	65.63	52.64	60.85	59.13	61.61	59.35	64.78	65.21
Others	63.60	62.08	61.16	63.03	62.20	59.95	62.84	61.54	50.59	50.42	65.36	51.98	43.81	53.24	60.99	62.15	56.32	61.90	67.80	61.93
Total	64.63	63.79	66.81	65.05	63.32	63.12	60.59	63.37	59.51	61.28	63.12	61.60	61.88	60.70	59.10	61.59	61.65	61.50	58.98	62.64

Source: National Statistical Office

Table 19 Level of Dependence on Irregular Migrant Worker Classified by Type of Buiness

(unit: persons)

Types of Business Allowed for the Registration	Total Employment* (1)	Private Employee* (2)	Private Employee with Primary Education* (3)	Registered Irregular Migrants (4)	% of Migrants by Type of Business % of (4) to total	% of Migrants to Low-Skilled Thais = (4)*100 / (3)
Agriculture	4,891,468	1,094,048	995,387	103,338	18.19	10.38
Livestock	562,832	58,253	43,222	29,613	5.21	68.51
Marine Fisheries	131,317	52,223	46,729	62,025**	10.92	132.73
Mining	39,077	35,528	18,817	1,387	0.24	7.37
Rice Mill	73,269	38,310	33,459	6,195	1.09	18.52
Pottery	69,167	68,108	31,462	3,548	0.62	11.28
Textile and Garment	1,032,556	675,815	414,594	n/a	n/a	n/a
Construction	1,276,948	1,119,919	896,476	47,320	8.33	5.28
Transportation	218,886	6,761	5,690	14,090	2.48	247.62
Housemaid	218,886	218,776	177,992	82,389	14.50	46.29
Total***	32,832,817	10,324,146	6,342,781	568,249	100.00	8.96

Source: National Statistical Office and Office of the Administrative Commission on Irregular Migrant Worker

Note: (*) Data presented here are from the LFS in the 3rd quarter of 2001

(**) The actual registration in this sector was equal to 103,375 persons in 2002. However, this figure includes the migrants in the marine fisheries AND in the related industries, while the employment figure counts those working solely in the marine fisheries. Therefore, we used the ratio between these 2 sub-sectors from the 1996 registration (Marine fisheries:Related Industires = 6:4) to approximate the number of migrants registered in the marine fisheries alone.

(***) Total employment includes employment in other sectors than these 10 sectors allowed for the registration, and the total registration also includes the business Type 10 (others).

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