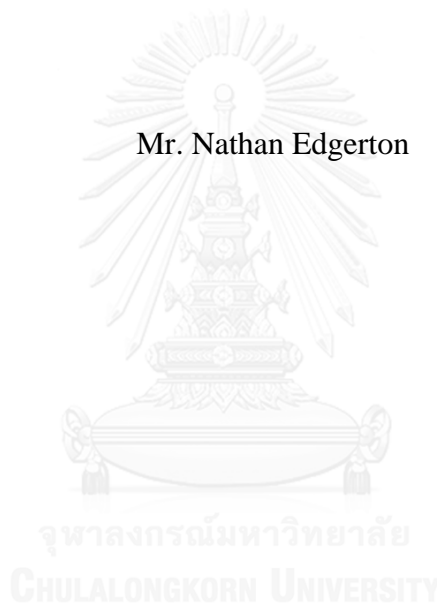


**Wage Returns to English Skills:
A Comparison of Local and Multinational Banks in Thailand**

Mr. Nathan Edgerton



บทคัดย่อและแฟ้มข้อมูลฉบับเต็มของวิทยานิพนธ์ตั้งแต่ปีการศึกษา 2554 ที่ให้บริการในคลังปัญญาจุฬาฯ (CUIR)
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**A Thesis Submitted in Partial Fulfillment of the Requirements
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ผลตอบแทนแรงงานจากทักษะภาษาอังกฤษ:
การเปรียบเทียบระหว่างธนาคารไทยกับธนาคารต่างชาติในประเทศไทย

นายนาธาน เอคเกอร์ตัน

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต
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การศึกษานี้พิจารณาผลตอบแทนแรงงานจากทักษะภาษาอังกฤษของพนักงานธนาคารพาณิชย์ในกรุงเทพมหานคร ประเทศไทย โดยเป็นการศึกษาแรกที่ประมาณการผลตอบแทนจากทักษะภาษาอังกฤษในประเทศไทยและภูมิภาคเอเชียตะวันออกเฉียงใต้ และเป็นหนึ่งในการศึกษาที่พิจารณาความสัมพันธ์ระหว่างทักษะภาษาอังกฤษกับอัตราเงินเดือนของผู้ที่ทำงานในประเทศที่ไม่ใช้ภาษาอังกฤษเป็นหลักในการสื่อสารซึ่งเป็นงานวิจัยที่มีจำนวนน้อยในปัจจุบัน การศึกษานี้ใช้ข้อมูลปฐมภูมิที่รวบรวมจากผู้ตอบแบบสอบถามทั้งสิ้น 428 คน ในช่วงระหว่างเดือนสิงหาคม 2557 ถึงเดือนพฤษภาคม 2558 โดยใช้แบบสอบถามที่จัดทำขึ้นเพื่อให้ผู้ตอบแบบสอบถามสามารถประเมินทักษะภาษาอังกฤษได้ด้วยตนเอง

จากการศึกษาโดยใช้วิธีกำลังสองน้อยที่สุดพบว่า พนักงานธนาคารพาณิชย์ที่มีทักษะภาษาอังกฤษในระดับปานกลางได้เงินเดือนสูงขึ้นร้อยละ 23 เมื่อมีทักษะภาษาอังกฤษสูงขึ้น โดยจะเกิดขึ้นเฉพาะกับพนักงานธนาคารพาณิชย์ที่มีประสบการณ์ทำงานไม่เกิน 10 ปี สำหรับพนักงานธนาคารพาณิชย์ที่มีประสบการณ์ทำงานมากกว่า 10 ปี ไม่ปรากฏความสัมพันธ์ดังกล่าว เมื่อพิจารณาพนักงานธนาคารกลุ่มที่มีประสบการณ์ทำงานน้อยกว่าหรือเท่ากับ 10 ปี โดยเปรียบเทียบความแตกต่างของผลตอบแทนแรงงานจากทักษะภาษาอังกฤษของพนักงานของธนาคารไทยและธนาคารต่างชาติในกรุงเทพฯ ผลการศึกษาระบุว่า พนักงานที่ทำงานในธนาคารไทยได้รับผลตอบแทนแรงงานจากทักษะภาษาอังกฤษมากขึ้นสูงสุดที่ร้อยละ 19 สำหรับกลุ่มที่มีทักษะภาษาอังกฤษระดับปานกลาง ส่วนพนักงานในธนาคารต่างประเทศไม่ปรากฏความสัมพันธ์ระหว่างทักษะภาษาอังกฤษกับเงินเดือนที่ชัดเจน แต่โดยเฉลี่ยกลุ่มดังกล่าวมีทักษะภาษาอังกฤษและเงินเดือนสูงกว่าพนักงานในธนาคารไทย

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NATHAN EDGERTON: Wage Returns to English Skills: A Comparison of Local and Multinational Banks in Thailand. ADVISOR: ASST. PROF. SINEENAT SERMCHEEP, Ph.D., CO-ADVISOR: JESSICA VECHBANYONGRATANA, Ph.D., pp.

This study examines the wage returns to English-language skill for workers in banks in Bangkok, Thailand. It is the first attempt to estimate the wage returns to English skill in Thailand, or in the Southeast Asia region in general. It adds to a small number of studies on the relationship between English language skill and wages in countries where English is not used as a primary language. The study uses an original data set collected through surveys with 428 respondents between August 2014 and May 2015. It uses an original and detailed rubric to let respondents self-assess their English skill.

Using simple OLS, the study finds that there are positive wage returns to intermediate English skill of up to 23%, but only for workers with 10 years of work experience or fewer. For workers with more than 10 years of experience, there is not a clear relationship between English skill and wages. Considering the younger cohort of workers, the study then examines the differential returns to English skills for workers in local and multinational banks. The results indicate that workers in local banks clearly earn wage premiums for English language skills of up to 19% for intermediate-level English skill. Workers in multinational banks have on average better English skills and higher salaries than workers at local banks, but there is no clear relationship between English skills and salary for this group of workers.

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Chapter 1

Introduction

1.1 Background of the Study

As economies around the world are becoming increasingly internationally-integrated and as advances in technology make international communication easier, the use of English in the workplace is on the rise. More than ever, employees must use English to communicate with foreign customers, business partners, and colleagues. For example, a survey by Global English (2011), including 26,000 employees in international corporations whose mother tongue was not English, found that 55% used English every day at work and only 4% did not use English at all in their jobs.

In Southeast Asia especially, English is poised to become more important in the near future. Coupled with steadily-increasing interactions with the rest of the world, as the ASEAN Economic Community (AEC) begins to open up, the region's 625 million people will begin to interact with each other more than ever before. This will likely include increased trade, investment and movement of skilled labor throughout the region. English has been designated as the official language of ASEAN, and should also be the natural choice for communication between people of the 10 countries in the association.

In light of the increasing importance of English in the global economy, more people are learning English than ever before. The British Council estimates that 1 billion people around the world are learning English, and that 750 million of these are learning English as a foreign language (for work, study or travel). In Southeast Asia, the thousands of private English schools as well as the trend for governments in

the region to emphasize English education at all levels of study are prime indicators that many people believe English skills are important.

The large number of private language centers which cater to working professionals shows that many people believe there are significant returns to English skills in the workplace. People appear to be so convinced that English skills will improve their career prospects that they are willing to pay a significant amount of money to attend private courses. In fact, many private language schools in the region charge higher tuition fees than universities.

Indeed, the business community has already recognized the importance of English skill. Some companies require applicants to meet a minimum English skill requirement before they may be offered a job. In addition, some are offering significant raises to employees who score well on the TOEIC English proficiency test. Others are devoting large parts of their human resource budgets to providing English training for their workers.

Despite the increasing importance of English, a number of authors have observed that there is a lack of English language skills in some Southeast Asian countries. S. Y. Chia (2011) and Saraithong and Chancharoenchai (2012) have singled out Thailand among ASEAN countries as having an especially-large shortage. In the English Proficiency Index calculated by English First (2014), Thailand ranks 48 out of 63 countries - well below regional neighbors such as Malaysia (12), Singapore (13), Indonesia (28) and Vietnam (33).

There has been significant interest in the human capital literature about the wage returns to language skill. However, most of these studies have focused on the returns to English skill for immigrants in countries where English is the primary

language, such as the US ((Rivera-Batiz, 1990), (Park, 1999), (Fry & Lowell, 2003), (Bleakley & Chin, 2004), (Chiswick & Miller, 2007)), Canada ((Carliner, 1981)(Boyd & Cao, 2009) and the UK ((Leslie & Lindley, 2001); (Dustmann & Fabbri, 2003), or in countries where a substantial portion of the population speaks English, such as South Africa ((Levinsohn, 2007), (Cornwell & Inder, 2007), (Posel & Casale, 2011)) and India ((Azam, Chin, & Prakash, 2013), (Chakraborty & Kapur Bakshi, 2016)).

As the Thai economy becomes more internationalized, workers in Thai firms will have to use English more often and multinational firms, which are more likely to use English as a primary internal language, will also enter the market. As English skill is scarce in Thailand and multinational firms would seem to have a greater need for employees with English skill, we may expect that the wage returns to English skill will be higher for employees in multinational banks than in local banks. This study also investigates whether this is the case.

Despite so much focus on and money spent for English language training, there have still been no studies which have measured the wage returns to English language skill in Thailand. In fact, despite the increasing importance of English in Southeast Asia there have not yet been any studies which have measured the wage returns to English skill in any country in the region. This study contributes to filling a significant gap in the human capital literature and provides the first insights into the wage returns to English skill in Thailand and in Southeast Asia.

1.2 Objectives and Research Question

This study had two primary objectives. The first was to obtain an estimate of the wage returns to English skill for working professionals in Thailand. The second was to investigate whether there are differential returns to English skill for workers at multinational firms in comparison with local firms. This study focused on employees in the banking sector in Bangkok.

The banking sector in Thailand, while dominated by local Thai firms before the Asian financial crisis, has since then seen higher levels of foreign investment and entrance into the market by foreign institutions. In fact, the government encouraged this in order to stabilize the sector following the crisis (Menkhoff & Suwanaporn, 2007). The banking sector in Thailand employs well over 150,000 people, with the biggest local banks such as Bangkok Bank and Kasikorn Bank employing over 20,000 people each. There is a wide range of firms, with a mix of Thai-owned and foreign-owned. Some banks, including Siam Commercial Bank, are almost wholly Thai-owned. Some local banks have taken on a degree of foreign ownership, such as Bank of Ayudhya and Thanachart Bank. Finally, some wholly foreign-owned banks such as Citibank, Standard Chartered Bank and Mizuho Bank are in the market.

Banking was an ideal sector to study for a variety of reasons. First of all, it is one sector of the economy that clearly has a significant need for English language skills. According to a survey by English First (2012), Banking and Financial Services was ranked 7th out of 19 sectors in terms of the extent to which English is used in the workplace. Since there is clearly a need for English in this sector and, as mentioned earlier, there is a scarcity of this skill in Thailand, I expected that firms should offer a wage premium for English skills.

Banking firms should need staff with English skills for a variety of reasons. First of all, many banks in Bangkok have some foreign customers for their retail banking services and they need staff who can communicate directly with them. These foreign customers may include not only westerners, but also Japanese, Chinese, Koreans and other expatriates and tourists in the city.

Secondly, banking firms likely need to deal with firms with some degree of foreign ownership when making loans. Banks that have better English-language support may be better suited to forming business relationships with companies that do a lot of business in English, but as the business environment is constantly changing local banks may find that even some of their local customers have increased needs for English-language support if they enter partnerships with foreign companies.¹

According to the World Bank, the Thai economy produced nearly \$376 billion in 2014, and of this 75% was accounted for by exports of goods and services. The country also accepted approximately \$70 billion in foreign direct investment in a variety of industries during this year. These figures demonstrate that the Thai economy interacts with foreign investors and customers in many ways. Banks should thus need to work with foreigners to organize loans, set up accounts and convert currencies, among other things.

With the coming of the AEC, we can expect that the banking sector will become internationalized even further. In July 2013, the Bank of Thailand announced plans to open up slots for five more foreign banks to set up operations in Thailand. It

¹ For example, say that a local firm had previously conducted most of its business in Thai, and therefore worked with banks that operated mainly in Thai. However, if that Thai business wanted to open a joint venture with a foreign firm, then there may be a need for three-way negotiations involving the bank. The bank (as well as the local firm) would need employees with English-language skills in order to reach a deal.

is believed that foreign banks may use Thailand as a base through which to set up further banking operations in Thailand's neighboring countries.

Overall, banking is a service industry that is heavily dependent on information. Banks must be able to negotiate and write contracts, to clearly inform customers about the services they offer, to persuade them to buy those services, and to provide ongoing support to current customers. Clear communication is vital to all these tasks, and as business continues to become increasingly international, more of this communication will need to happen in English.

Banking is also an interesting sector to study in order to measure the differential returns to English language skill between local and multinational firms. This is because there is a wide variety of firms in the market with a mix of large locally-owned and foreign-owned firms. Firms such as Krungthai Bank, Siam Commercial Bank and Kasikornbank are locally-owned. Other companies, such as Thanachart Bank and the Bank of Ayudhya, have substantial foreign ownership, though they are majority-Thai firms. Finally, multinational firms such as HSBC, Mizuho and Citibank are also in the market.

It is expected that multinational firms will have the greatest need for English-speaking employees because they should tend to have the most interactions with foreign clients and investors. Thus, they are expected to pay the highest wage-premium for English language skills. While the returns to English language skill should also be positive even in locally-owned banks, I expect that the returns should be smaller than for multinational banks.

While the study focused on the banking sector, it is hoped that the results will give some indication of the value of English language skills throughout the economy.

According to the aforementioned survey by English First (2012), Banking and Financial Services was ranked 7th out of 19 sectors in terms of the extent to which English is used in the workplace. However, the six other industries which reportedly have a higher demand for English skills – travel and tourism, consulting, telecommunications, engineering, aviation and technology – make up a significant portion of the Thai economy. Thus it is reasonable to expect that if there are positive returns to English skill in banking, there should be positive returns in a variety of other industries as well.



Chapter 2

Literature Review

2.1 Theoretical Framework

Language skills are a particularly interesting and important form of human capital. They are the conduit through which people can make use of their other forms of human capital, such as knowledge of facts and theories, analytical skills, and social relationships.

People who work in jobs that require a higher level of language skill are likely to earn a higher wage than people who work in jobs that require a lower level of language skill (Chiswick & Miller, 2010). This makes sense, as people earn higher wages when they have useful knowledge that few others have. In the majority of cases, language skills are needed both to learn new information in order to build human capital, and also to communicate knowledge and thus earn the returns to human capital.

Skill in a particular language allows a person to earn the returns to their human capital within contexts in which that language is used by others. When people learn new languages, they expand their abilities to earn returns to their human capital in wider and wealthier labor markets. English language skills allow many Filipino workers to earn comparatively high returns to their human capital in international companies in their home country, and they also find it comparatively easy to immigrate to work in higher-wage countries such as Singapore or the United Arab Emirates. Within Thailand, Japanese language skills allow Thai workers to attain relatively well-paying jobs in Japanese companies. On a much wider scale, English

language skills allow Thai workers to work with international companies or to offer services directly to comparatively wealthy English-speaking clients.

On the other hand, lack of skill in a language can restrict the number of situations in which a person can make use of their human capital, and conversely skill in additional languages can allow people to earn returns to their human capital in a wider variety of situations. For example, when well-educated immigrants move to a country whose language they do not speak well, they must often take on menial work as they learn their host country's language. While an investment banker relies on a great stock of knowledge and experience to earn economic returns, an investment banker who moved to a country in which she could not communicate well would be unable to earn any returns from their human capital.

As English is the dominant language in many countries with comparatively high wages, and as it is also the dominant language used in international business, it makes sense to expect that workers in English-dominant countries or in countries that engage in international commerce will earn positive returns to English language skills.

2.2 Review of Literature on Returns to Language Skills

There is a significant but far from saturated literature about the wage returns to language skills. These studies can be divided into two main groups. The first group includes studies that examine the wage returns to skill in the dominant language in a country. Within this category, some studies examine the returns to dominant-language skill for native speakers, and some for immigrants. These studies often look at the wages of immigrants in western countries (usually English-speaking countries such as the US, UK or Australia, but sometimes other countries such as Germany, France or

Spain) and examine how language skills affect the speed at which immigrants' wages converge with those of native-born workers. Studies in the second category examine the wage returns from skill in English when it is used as an international or cross-cultural language, such as when Indians speak English in business interactions or when Chinese and Thai businesspeople communicate in English during negotiations.

2.2.1 Returns to English Skill in English-Dominant Countries

Many studies on the wage returns to language skill have investigated the returns to English-language skill in countries where English is the dominant language. In the USA, Chiswick and Miller (2007) found that wages increase with the worker's English skill, with the skill requirements of the job, and with the interaction of the two (positive returns to good job-matching). While this premium is large for native-born Americans, it is even larger for immigrants to the USA.

In another study, Chiswick and Miller (2009) found that immigrants who spoke English better were more likely to obtain jobs that matched their level of education. Immigrants who could not speak English well, on the other hand, were more likely to take jobs that they were overeducated for. For example, someone who had a high level of education in their home country but had poor English skills would likely have to take a job as a manual laborer in the USA, and would therefore be unable to earn the returns to their education. This reinforces the idea that people with high amounts of human capital can only take advantage of it when they possess the language skills needed to use it in a particular context. In his review of the literature on language skill and labor market outcomes, Isphording (2014) stated that "language

skills act as the translating medium to apply pre-migration acquired human capital into the host country labor market.”

Also in the USA, Bleakley and Chin (2004) found that an immigrant in the USA who spoke English “well” could earn 33% more than an immigrant who spoke no English, while an immigrant who spoke English “very well” could earn 67% more. This study, which focused on immigrants who came to the USA as children, found that most of the wage premium in this case was due to the fact that immigrants who had higher English skills were more likely to undertake higher education in the USA.

In another US study, Gonzalez (2000) found that ESL courses, education and years in the USA affected the English proficiency of immigrants. He further found that the returns to oral skills (speaking and listening) were higher than the returns to literacy skills. He found that the returns to writing were higher than the returns to reading.

In the UK, Dustmann and Fabbri (2003) found that immigrants who were proficient in English had on average 20% higher earnings than those who were not proficient in English. Moreover, immigrants who were proficient in English were 22% more likely to be employed than non-proficient immigrants. They also found that literacy in English had a larger effect on employment prospects than spoken fluency. Dustmann (1994) also found that German literacy skills had higher wage impacts than oral fluency in a study of immigrants to West Germany.

2.2.2 Returns to Dominant-Language Skill in Non-English-Dominant Countries

Considering returns to dominant-language proficiency in countries where English is not the dominant language, Gao and Smyth (2011) investigated the returns

to Mandarin Chinese skill for Chinese workers (who spoke a regional dialect as their main language) who moved to work in a large city where Mandarin was the main language. They found that the returns to speaking Mandarin were positive for all migrant workers, but they were higher for females than for males. They hypothesized that this was because women were more likely to work in jobs where they had to interact with others, and therefore needed to be better at Mandarin. Using an instrumental variables approach, they found that fluency in standard Mandarin was associated with 42% higher wages.

Chiswick, Patrinos, and Hurst (2000) found that indigenous Bolivians who spoke only an indigenous language earned about 25% less than indigenous Bolivians who spoke an indigenous language as well as Spanish, the main language in the country. Also in Bolivia, Godoy et al. (2007) found that even people in a small indigenous village with minimal contact with the mainstream society still enjoyed significant earnings advantages (between 37-47%) for fluency in Spanish.

Berman, Lang, and Siniver (2003) found that among Russian immigrants to Israel, higher-skilled workers (computer technicians and software engineers) earned higher wages as their fluency in Hebrew improved. However, less-skilled immigrants (construction workers and gas station attendants) did not see much of an increase in their wages as their Hebrew improved. This is consistent with the argument that fluency in the country's language makes skilled workers relatively more productive because it allows them to make use of their education, skills and other human capital. Also in Israel, Chiswick (1998) found that, when using an IV approach, immigrants who used Hebrew on a daily basis earned 35% more than immigrants who did not.

Immigrants who spoke Hebrew on a daily basis and were also proficient in English earned an additional 11% on top of that.

In the Netherlands, Yao and van Ours (2015) found that male immigrants who could not speak Dutch were not disadvantaged in terms of the likelihood of being employed or the number of hours worked per week. They tended to have a somewhat lower hourly wage, but this finding was not significant. However, female immigrants with poor Dutch language skills were found to earn 48% lower wages than those with good language skills. Like Gao and Smyth (2011), they hypothesized that this may be because immigrant females are more likely to work in jobs that are more dependent on language skills than immigrant men. The authors hypothesized that the lack of a penalty for poor language skills among male immigrants may also have been because many of those immigrants may have been able to converse with Dutch people using English, as around 90% of Dutch people say that they can converse in English.

Finally, in a study of immigrants to Catalonia in Spain, Di Paolo and Raymond (2012) found that those who could speak Catalan earned higher wages than those who could not. Furthermore, in line with Berman et al. (2003), they found that higher-educated immigrants earned significant positive returns from Catalan skill, whereas uneducated immigrants earned little to no benefit from knowledge of Catalan. Considering Spain as a whole, Budria and Swedberg (2012) found that immigrants who were proficient in Spanish earned 27% more on average than immigrants who were not proficient. Within this group, people who had completed secondary school or higher education and were proficient in Spanish were found to earn 49% more than similarly-educated people who were not proficient in Spanish.

For immigrants who had not completed secondary school, the earnings differential was 21%.

Overall, studies generally find that fluency in the dominant language has a bigger positive effect on the wages of high-skilled workers and workers who must use the language often in their jobs. Studies that estimate the returns using OLS tend to find a wage premium of around 15-20% for fluency in the dominant language (as compared with not being able to speak the language at all), but instrumental variable (IV) approaches find even larger premiums (up to 30-40%).

2.2.3 Returns to English Skill in Countries where English is used as a Second Language

Studies in this category include studies on South Africa and India, where English is a primary language for government and commerce though it is not the first language of the majority of people in the country. In addition, one study has focused on the returns to English in Latvia and Estonia, where it is likely to be used as a language of commerce but not for cross-cultural communication. Finally, a few studies have examined the returns to English language skill in Hong Kong and China, where English is also a language of international commerce though it plays less of a role as a language of cross-cultural communication.

South Africa is a linguistically-diverse country with eleven official languages, but English is the most common language for cross-cultural communication and is also dominant in the government and the media. Levinsohn (2007) investigated the return to speaking English (proxied by the response to a survey question about whether English was the primary language spoken at home) and found that between

1993 and 2000, the premium for speaking English increased in South Africa. After controlling for education, race, and gender, he found that in 1993 speaking English earned a worker an 18% wage premium, and that by 2000 this premium had increased to 25%. In another study on South Africa, Posel and Casale (2011) found that African men who had completed post-secondary education and were proficient in English could earn 97% more than African men who had completed post-secondary education and were not proficient in English.

India is yet more linguistically-diverse, with 30 languages each spoken by more than 1 million people in the country. English plays a significant role in cross-cultural communication (especially between North-Indians and South-Indians) as well as in international business. Azam et al. (2013) found that compared to men who spoke no English, men who spoke fluent English earned 34% more per hour while men who spoke a little English earned 13% more per hour. Furthermore, they found that more-experienced and better-educated workers earned higher returns from English skill. They also found that only better-educated younger workers earned a premium for English skill, though all older workers earned such a premium. They also cited findings by Munshi and Rosenzweig (2006) which found that, in Mumbai, having attended an English-medium secondary school resulted in eventual earnings 25% higher than having attended a Marathi-medium school.

In a study focused on West Bengal state in eastern India, Chakraborty and Kapur Bakshi (2016) found that people who attended primary school in a local language (Bengali) eventually earned about 25% less than people who attended a primary school with English-language instruction. Furthermore, they found that

people who attended an English-language primary school were more likely to end up working in higher-ranked or better-paying jobs.

2.2.4 Returns to Foreign-Language Skill in Non-English-Dominant Countries

The final set of studies focuses on the returns to foreign-language skill. Most of these studies investigate the returns to English language skill in countries where English is not used among local people, but is used primarily for communicating with foreigners within the country or visitors from abroad. However, some studies also look into the returns to other foreign-language skills, such as the returns to speaking French in Germany.

One study focused on the returns to English skill among Russian immigrants in Estonia and Latvia. These two countries are much more culturally-homogenous than South Africa and India, so we could expect that English is used more as a language for international business than for cross-cultural communication within the country. Toomet (2011) found that the return to speaking English for Russian immigrants was even higher than the return to speaking the local language of the country to which they had migrated. This was especially true for those with higher education. In a similar vein, Isphording (2013) found that for immigrants to Spain, foreign language skills (skills in French, German or English) were correlated with a wage premium whereas skills in Spanish were not.

In Hong Kong, Lui (2007) found that the returns to English skill were much higher than the returns to Putonghua (Chinese), even after the handover of the island to China in 1997 and the subsequent increase in the perceived necessity for the use of Putonghua. Lui and Suen (1998) also found a large return to English language skills

in Hong Kong. They found that secondary-school graduates who could speak English earned 23% more than those who could not. The differential increased to 105% for workers with a university degree. In mainland China, Guo and Sun (2014) found that recent college graduates earned an expected 3.3% higher starting salary for a one-standard-deviation increase in their score on the national CET-4 English proficiency test. This higher salary was partly explained by the observation that graduates with higher English skills were more likely to get jobs at multinational firms, which pay higher wages than state-owned firms or private firms. Moreover, multinational firms were found to reward higher English skill more than state-owned or private firms.

Overall, studies in this second group find results quite similar to studies in the first group. Whether English is used for internal cross-cultural communication or for communication with foreigners, workers can earn a wage premium for English-language skill. Moreover, the wage premium is generally higher for better-educated workers than for lower-educated workers.

Table 2.1 Summary of Research

Author	Country	Results
Chiswick and Miller (2009)	USA	Highly-educated immigrants who spoke English fluently earned 40% more than highly-educated immigrants who spoke English “well”
Bleakley and Chin (2004)	USA	Immigrants who spoke English “well” earned 33% more than one who spoke no English. Immigrants who spoke English “very well” earned 67% more than those who spoke no English.
Dustmann and Fabbri (2003)	UK	Immigrants who were proficient in English had 20% higher earnings and 22% higher probability of employment than immigrants who were not proficient in English.
Boyd and Cao (2009)	Canada	Immigrant women who spoke English fluently earned about 60% more than those with the lowest level of English skill. The premium was about 80% for immigrant men.
Gao and Smyth (2009)	China	For immigrants from the countryside, those who were fluent in Mandarin earned 42% higher wages than those who weren't.
Chiswick, Patrinos and Hurst (2000)	Bolivia	Bolivians who spoke only an indigenous language earned about 25% less than Bolivians who spoke an indigenous language as well as Spanish.
Godoy et al. (2007)	Bolivia	People of a small indigenous village earned 37-47% more if they were fluent in Spanish.
Berman, Lang and Siniver (2003)	Israel	Higher-skilled Russian immigrants to Israel earned higher wages if they could speak Hebrew, though lower-skilled immigrants didn't earn a wage premium for speaking Hebrew. Improved Hebrew could account for 66%-75% of the earnings differential between native and immigrant computer programmers.

Table 2.1 Summary of Research (cont)

Author	Country	Results
Chiswick (1998)	Israel	Immigrants who used Hebrew on a daily basis earned 35% more than those who didn't. Those who spoke Hebrew every day and were also proficient in English earned 46% more.
Di Paolo and Raymond (2010)	Spain	Better-educated immigrants to Catalonia who could speak Catalan earned higher wages than those who couldn't speak Catalan. Using an OLS approach, they found a premium of 7.5% for Catalan proficiency.
Budria and Swedburg (2012)	Spain	Immigrants to Spain who were proficient in Spanish earned 27 % more on average than those who were not proficient.
Levinsohn (2007)	South Africa	In 2000, the premium to English-language proficiency was 25%.
Posel and Casale (2010)	South Africa	African men who had completed post-secondary education and were proficient in English earned 97% more than those who had completed post-secondary education but could not speak English.
Azam, Chin and Prakash (2010)	India	Indian men who spoke fluent English earned 34% more per hour than those who spoke no English. More-experienced and better-educated workers earned a higher premium.
Toomet (2011)	Lithuania and Latvia	The returns to speaking English were even higher than the returns to speaking the local language for Russian immigrants in Lithuania and Latvia. Premiums for English skill increased with each quintile, up to 25% for workers in the top 20% of the wage distribution.
Lui and Suen (1998)	Hong Kong	Secondary-school graduates who could speak English earned 23% more than those who couldn't. University graduates who could speak English earned 105% more than university graduates who couldn't speak English.
Guo and Sun (2014)	China	University graduates earned a 3.3% higher starting salary for a one-standard-deviation increase in score on a standardized English test.

2.3 Review of Literature on the Returns to Working for Multinational Firms

It should be noted at this point that workers in multinational companies tend to earn more than workers in local companies generally. The fact that workers in international companies tend to have better English skills may be one factor in this higher pay, but it is not the only one. Multinational companies tend to pay higher wages than local firms because they may have higher search costs when finding new workers, especially if language barriers are involved, but also because they are usually newer entrants into the market and local competitors may have better-established recruitment networks. Multinational firms also tend to pay higher wages because they tend to use more advanced technology than local firms (Okuda & Rungsomboon, 2007), and thus they need better-educated workers to use it. (In some cases, training materials to use the new technology may be available primarily in English, so English language skills may also be important.) In addition, multinational firms may have management styles that differ from local norms, which may make them less attractive than local firms for workers. For this reason, multinational firms may have to offer higher wages to compensate workers for dealing with this cultural difference (Ramstetter, 2004).

In Indonesia, Lipsey and Sjöholm (2004) found that multinational firms tended to pay higher wages than local firms, even after controlling for worker quality. Moreover, they tended to pay higher premiums for white-collar workers than for blue-collar workers.

In Thailand, Ramstetter (2004) found that in general multinational firms tended to pay workers more than local firms. While there was some evidence that

labor productivity was higher in multinational firms, the evidence of higher wages was stronger.

While it is perhaps more intuitively appealing that multinational firms would pay higher wages than local firms in developing countries (as multinational firms are likely to have more capital and more advanced technology than local firms), researchers have wondered whether multinational firms in developed countries would also pay higher wages than local firms. Doms and Jensen (1998) found that in the USA multinational wages were in fact still higher than local firm wages.



Chapter 3

Research Methodology

In this chapter, the conceptual framework, the scope of the study, the specific data series that were collected and the survey questions used to obtain them are presented. Following that, the two common biases which are encountered in studies on language skill and wages are mentioned and the way they were dealt with in this study is described. In the last three sections, the regression equation and summary of the variables included and their expected signs, the data collection methods, and the data summary are presented.

3.1 Conceptual Framework

While language skills are useful for workers in general, there are particular reasons why they are useful for workers in banks. Skill in the English language is useful for firms as it decreases search, translation and information costs associated with obtaining information (Isphording, 2014). There are a few reasons why workers with better-developed English language skills are more productive for banking firms, and therefore should be worth paying a higher wage. We will also examine contexts where English language skills may be more important for multinational banks than for local banks.

First of all, workers with better language skills can communicate more effectively with customers and business partners. This makes them better at selling the company's products and providing information and support to customers. Moreover, people with more complex and specialized knowledge, such as investment

analysts, must have highly developed language skills in order to communicate their vast stock of knowledge. This specialized communication allows businesses to earn higher profits, so companies should be willing to pay more for employees with good language skills.

Both foreign and local banks in Thailand are likely to have some foreign customers for their retail banking services, so English skills should thus be important for at least some workers who need to deal with customers, such as front-office staff and managers. Some foreign expatriates may prefer to deal with multinational banks as they may already have an account with that bank in their home country. A multinational bank's marketing materials, customer information and website are also more likely to be in English, so expatriates may be more comfortable dealing with them. Some long-term expatriates may prefer to use local banks, however, due to their wider networks of bank branches and ATMs. In general, though, foreign customers should make up a larger percentage of the customer base for multinational banks, so I expect that multinational banks should have a greater need for workers with English skill.

Both foreign and local banks also need to interact with multinational companies when making loans. However, it may be that multinational banks have more interactions with foreigners than local banks. Multinational firms that invest in Thailand may prefer to work through multinational banks as they may already have a relationship in another market. Multinational firms may also need more English-language support, and may expect that multinational banks will be able to provide better support. Even local firms may be drawn to work with multinational banks if they need to establish a joint venture with or accept investment from foreign

individuals or companies. As above, I expect that both local and multinational banks will need workers with English skills to communicate with foreign business partners or loan customers, but I expect this need will be greater for multinational banks than for local banks.

Third, workers with better language skills can communicate with management and with their colleagues more easily. This is beneficial for a number of reasons. McManus (1985) argues that workers who can communicate more easily can distribute tasks more efficiently amongst themselves. When workers can communicate, they can tell each other which tasks the group needs to accomplish, and they can identify which people can perform each task the best and assign the tasks accordingly. This allows greater specialization of labor, which should improve the efficiency of the business as a whole. In local banks in Thailand, most of the employees are likely to speak Thai, so English skill would likely not be needed to coordinate tasks in the workplace. However, multinational banking firms may have a significant number of expatriate employees, and thus it would likely be necessary to communicate with them in English to coordinate tasks.

Fourth, workers with better language skills are easier to train, which also makes them more valuable to a company. This applies even for less-sophisticated jobs, as workers who can read are able to learn from training manuals, whereas workers who cannot read must be told or shown how to do something. The importance of language skills is even more pronounced for workers in more sophisticated jobs, in which workers must constantly process and react based on new information from customers and from the company. Local banks are likely to use Thai for all internal emails, meetings, training sessions and other forms of communication.

However, multinational banks are likely to use English for all internal communications. In this respect, I expect that multinational banks would be willing to pay a significantly higher premium for English skills than local banks.

Fifth, in banking some employees, especially managers, investment advisors and loan officers, must keep up to date with the latest news. While news specific to Thailand is generally available in Thai, more news about the international economy is available in English. To the extent that employees of multinational banks must deal more often with multinational companies, they must also be aware of international business news. Employees who understand English better will be better able to obtain this information.

While it is possible to obtain some published research in Thai, nearly all major research is presented in English. There is simply too much research being published for much of it to ever be translated into another language. According to Naisbett (1982) (cited in Tardy (2004)), 7,000 scientific journal articles were published every day as long ago as 1982. According to the British Council, 80% of the world's electronically-stored information is in English. Workers who cannot understand English are thus at a disadvantage in terms of their ability to learn new information and augment their human capital.

Multinational firms can employ translators to address many of these language issues. Translators can help in internal communications, as well as in communications with foreign customers or business partners. They can translate internal documents and relevant news into Thai as well. However, it is expensive for firms to employ translators. Moreover, translators have limited usefulness as so much of communication is dependent on context, such as the shared history of interactions

between people. It is difficult to inform translators of this subtextual information, and thus it is more difficult to build relationships with business partners when communication must be conducted through translators. It is usually more efficient and effective if the firm's employees can communicate in English by themselves.

In summary, the table below presents the estimated need for English skills for different job functions for workers in both local and multinational banks. As workers in multinational banks would seem to have a higher need for English skill for each of the job functions listed, this leads to the hypothesis that multinational banks should have a greater need for workers with good English skills and should therefore be willing to offer a wage premium for workers with those skills.

Table 3.1 Summary of Estimated Need for English Language Skills for Different Functions in Local vs. Multinational Banks

English Function	Local Banks	Multinational Banks
1. Communicate with Retail Banking Customers	Low-medium need	Medium-high need
2. Communicate with Business Partners and Loan Clients	Low-medium need	Medium-high need
3. Communicate with Management and Colleagues	Low need	High need
4. Understand Internal Communication	Low need	High need
5. Understand Relevant News	Low need	Medium need
6. Understand New Research	Low-medium need	Medium need

Source: Author

3.2 Scope of Study

As information on English skill is not yet collected in labor force surveys in Thailand, for this study I used a survey to collect an original data set to capture the English skills, wages and other control variables of respondents. I gathered information on workers in both local and multinational banks in Bangkok. This allowed me to investigate the hypothesis that workers in multinational banks earn comparatively higher returns to English skill than workers in local banks.

Responses were collected from workers in banks with a wide range of years of experience. This allowed me to examine whether English skills may have larger impacts on wages for younger workers or for older workers, which could be the case if workers who speak English well are more likely to earn promotions or to consistently get larger annual bonuses.

3.3 Data Series

In this section I present the data series that were collected in the survey and explain why they were included in the regression. I also comment on the question types used to elicit the data where appropriate, and compare them with the data collection methods used in similar studies on language skill and wages.

3.3.1 Language Skill

As language skill is one of the main foci of the study, it was important to get an accurate measure of language skill. For practical reasons, it was impossible to conduct an objective measure of English skill for each respondent in this study.

However, asking respondents to self-assess their language skill can introduce biases. Charette and Meng (1994) found that people tend to overestimate their language proficiency when asked to give a self-assessment. This leads to a downward bias in the coefficient on the language skill term obtained through an OLS regression. This is because if people claim they have high levels of language skill when in fact they do not, their employer should be able to more objectively assess their lower language skill and thus would not offer them such a high wage.

Previous studies may have encountered bias in their measures of self-assessed language skill due to data obtained from vague survey questions. Studies have mostly made use of national survey data which collected data on language skill along with many other kinds of data. The self-assessment often included just a single question, such as “How well can you speak English?” Respondents then usually selected whether they could speak English “not at all,” “not very well,” “well” or “very well.” Authors have usually used responses to these questions to construct dummy categories in which, for example, respondents who said they could speak English “well” or “very well” were included in the English-proficient category while other respondents were included in the non-proficient category.

Questions of this type can present problems for respondents, who may be unsure whether to compare their language skill to other people in their country or to native speakers. For example, someone may speak English well compared to their peers, but rather poorly compared to native speakers or working professionals. Respondents may also have different opinions of what level of proficiency is required for them to say they can speak English “well.”

Furthermore, people can have varying levels of English skill across the four basic language skills – reading, writing, listening and speaking. A single question does not allow respondents to report the different facets of their language skill, and could also bias estimates of language skill. For example, people with strong speaking skills but poor writing skills may be unsure how to classify themselves.

This study attempted to address the problem of bias in self-assessed measures of language skill by giving respondents a purpose-built survey with a detailed rubric through which to assess their language skill. Respondents should be able to more accurately evaluate how well they can perform specific language tasks, such as reading a newspaper article in English or conducting a brief business phone call in English, rather than just estimating their overall level of skill. By asking respondents to tell how easily they could accomplish certain tasks, we don't have to worry that they will be unsure about which reference group or level of skill they should compare themselves to when they decide if they speak English “not very well,” “well,” or “very well.”

The language skill assessment included twenty questions about the respondent's ability to complete a variety of language tasks in English. There were 20 multiple-choice questions in total, with five questions about each of the four skill areas – reading, writing, listening and speaking. Respondents were asked to answer questions about how easily they could complete various language tasks, from reading a short business email to giving a presentation in English. Their answers were scored depending on how easily they said they could perform each task – easily (4 points), somewhat (3 points), with some difficulty (2 points), with difficulty (1 point). Their

scores for each question were then summed, giving a range of scores from 20 (answering 1 on every question) to 80 (answering 4 on every question).

After arriving at a total score for each respondent, three dummy categories were then created. ENGBEGINNER included respondents with a total score from 20-39. ENGPREINTER included scores from 40-59, and corresponds roughly to a pre-intermediate level of English skill. ENGUPPERINTER included scores from 60-80, and corresponds roughly to intermediate or higher English skill. These dummy categories were created because we are not so interested in knowing the marginal increase in salary due to a one-point increase in a self-assessed English measure. We are really interested in knowing how much higher salary someone might earn as a result of having a pre-intermediate or intermediate level of English skill, compared to no English skill at all.

The robustness of the self-assessed English score was measured by correlating self-assessed English score against TOEIC score for the subset of the sample that had taken the TOEIC test (73 respondents). The correlation coefficient between the two measures was found to be 0.29, which is not particularly high. To some extent this calls into question the respondent's ability to assess their own language skill. However, another reason for the rather low correlation coefficient could be that some of the respondents may have taken the test a few years earlier, and their English skill may have gotten better in the time since they took the test (if they use English often at work) or worse (if they have used English rarely since taking the test).

As the responses were later categorized into three dummy categories based on self-assessed English skill, it is hoped that people would generally end up in the appropriate categories, even if their self-assessed score is not totally accurate. It

should also be noted that this measure is still no less reliable than measures of self-assessed language skill used in nearly all other studies on the subject.

3.3.2 Education

The first control variable, considered to be one of the most important determinants of a worker's wage, is his level of education. Through education a worker builds up his stock of human capital. Human capital obtained through education can be embodied in knowledge of facts, in theoretical knowledge (which explains the interconnections between facts), and in analytical skills (the ability to extract relevant information in a certain situation, apply a theory, and decide upon a response). However, human capital gained through education can also include mathematical skills, computer skills, and other kinds of skills. The main idea is that knowledge and skills contribute to higher wages because they allow the worker to perform productive tasks.

In the human capital literature, education is traditionally measured by the number of years the individual has attended school. However, most studies include sample populations comprised of people who have only primary education all the way up to people with PhDs. In these studies, there is enough variation in years of education that it makes sense to measure it as a continuous variable. However, most employees at banks will have either bachelor's degrees or master's degrees, with some employees having PhDs. This means that in this study there will be little variation in years of education, so it would be inappropriate to measure education as a continuous variable.

In this study, respondents were separated into a few different dummy categories. As all respondents had earned at least a bachelor's degree, respondents were grouped by whether they had studied for their bachelor's degree at a normal Thai university, at an elite Bangkok university, or at a foreign university.

Workers who have gone to more prestigious schools should earn comparatively higher wages. This may be because the quality of education at these schools is higher, so that it increases the human capital of students more than education at other schools. However, even if the quality of education at prestigious and less-prestigious universities is the same, prestigious universities tend to have higher-ability students because of their more-rigorous selection standards.²

Three dummy variables were used to capture the university at which the respondent studied for their BA degree. BANORMAL was used as the base case, and it included most Thai universities. BAELITEBKK included elite Bangkok universities – Chulalongkorn, Thammasat, Mahidol and Kasetsart. BAABROAD included foreign universities. I expected that respondents who studied for their BA at an elite Bangkok university would have a higher average salary than those who studied at other Thai universities. I further expected that those who had studied abroad for their BA would have a higher average salary than the other two groups.

To capture the returns to higher education in greater detail, I also used four dummy categories to collect data on whether respondents had completed a master's

² A paper by Lang and Siniver (2011) finds that the wage differential due to differences in the quality of undergraduate education may be most noticeable for recent graduates. They compare the salaries of graduates of two universities in Israel; the more-prestigious Hebrew University and the less-prestigious College of Management Academic Studies. They use scores on a common standardized test as a measure of ability. They find that after controlling for ability, graduates of Hebrew University have higher starting salaries just after finishing university. However, they find that over a period of around seven years, the labor market assesses the true ability of workers, and high-ability workers (workers who achieved high test scores) from both universities end up earning similar wages.

degree, and if so about what kind of program they had studied in. MAABROAD included respondents who studied for an MA degree at a foreign university. MATHENG included respondents who studied for an MA degree in Thailand in an English-language program. MATHTH included respondents who studied for an MA degree in Thailand in a Thai-language program. BAONLY included respondents who had not completed an MA degree. It was expected that those who had studied for an MA degree abroad would have the highest average salaries, followed in order by respondents who had earned an MA in an English-language program in Thailand, by those who had earned an MA in a Thai-language program in Thailand, and finally those who had not yet earned an MA degree.

3.3.3 Ability

In addition to the years of education that a worker earns, a worker's innate ability is also an important determinant of their salary. In order to capture this quality, respondents were asked to report the GPA they earned during their bachelor's degree studies. The idea is that intelligent students will earn higher grades in university because they will find it easier to do so than lower-ability students. However, one student may also earn higher grades than another because they are harder-working. It would be impossible to separate these two influences through this measure, but in any case they would both be expected to be correlated with higher wages.

A number of previous studies have found that GPA has an important influence on wage. G. Chia and Miller (2008) found that in Australia, a student with a top GPA earned a significant wage premium over a student with a middling GPA. The difference was equivalent to about 3 extra years of education. Hershbein (2013) found

that the wage returns to GPA were positive for all groups, but for workers who attended a selective university the wage returns to GPA were lower than for students who attended a less-selective university. The author reasoned that this may be because employers view graduation from a selective university as a signal of ability, and therefore discount the importance of GPA as a signal. On the other hand, employers may be unsure of the ability of applicants who have attended less-selective universities, and therefore consider GPA to a greater degree in these cases.

BAGPA was a continuous variable which measured the GPA that the respondent earned during their BA degree studies, and was intended as a measure of unobserved ability – a common confounding factor in studies of wages.

3.3.4 Experience

Experience is another standard control variable in studies on the relationship between wages and language skill, and between wages and human capital in general. A more-experienced worker has greater human capital because she gains greater factual and theoretical knowledge as well as analytical skill through her work. While education tends to develop more general skills, work experience tends to develop more job-specific and company-specific skills. More experience makes a worker more productive, and therefore should be correlated with higher wages.

For this study, respondents were asked how many years they had been working since they finished university. The regression included both an experience term and an experience-squared term. The experience-squared term is conventionally included because of the supposition that while the returns to additional experience are always positive, they decrease as the level of experience rises.

EXP was a continuous variable measuring the years of work experience post-graduation that the respondent had.

3.3.5 Environment

The environment within which a worker grows up can also play a role in their eventual wages. People who grew up with better-educated or higher-income parents may be more likely to earn higher wages in the future for a number of reasons. They may have higher ambitions than people born into lower-income families. Their families may have better social connections, which could give them access to better work opportunities. Furthermore, their parents may invest in extracurricular courses or activities that would further build the child's human capital in addition to their normal schooling.

As most of the workers in this study grew up in a time when men were the primary breadwinners of the family, it was sufficient to ask for the father's level of education in order to get an estimate of the environment in which the respondent grew up. The survey asked respondents about the highest level of education their father had completed as a proxy to measure the environment in which the respondent grew up. Some studies have used the mother's level of education as a proxy for environment, as it has been reasoned that the mother's education level has a bigger influence on the child as the child is more likely to spend more time with the mother during childhood. However, to measure the environment in terms of the level of affluence and opportunity provided by the child's household and family connections, the father's highest level of education was a better choice. Summary statistics also showed that

fathers had on average a higher level of education than mothers among the survey respondents.

As respondents' fathers may have a range of educational achievement, from less than a high school diploma all the way up to a PhD, this was separated into two dummy categories – one category for fathers who had completed primary school, lower-secondary school or upper-secondary school and another category for fathers who had completed studies for a technical certificate, a bachelor's degree, a master's degree or a doctorate degree. The variable ENV took the value of one for respondents' whose fathers were in the higher-education category, and zero for the base-case category.

Some studies have used parental income levels to estimate the status of the household, but children may not have a clear idea of how much their parents earned. They would be expected to have more precise information about their parents' education levels.

3.3.6 Job Category

The particular job category in which a person works may also impact their wages. For this study, workers were separated into three broad categories according to their job function.

We can expect workers at management level to earn higher salaries than workers in other positions. Managers have to engage in the widest variety of tasks in their work and must take on higher levels of responsibility than workers in other positions, so we can expect that they would in general earn a wage premium. The

category MANAGER included people who listed their job title as manager, assistant manager, president, vice president, head of department, or another similar title.

FRONTOFFICE included front office staff, who were most likely to interact with customers. If banks have a large number of foreign customers, they should need front office workers with better English skills in order to serve them. Positions included in this category were loan service officers, customer service officers, and business relationship officers.

BACKOFFICE included back office staff, such as accountants, data analysts, lawyers, administrative staff, secretaries, and other staff who were unlikely to interact often with customers or clients from outside the company. Respondents in this category are unlikely to need to use English to interact with customers, but may need to use English to communicate with bankers or other institutions or to gather information.

3.3.7 Employment Location

Another important factor may be whether the respondent worked at the bank's main office in Bangkok, or in a branch. It's likely that employees of the bank's main office would be higher-skilled and higher-paid than employees at the branches within Bangkok. While some of this variation would be captured by the other control variables, work location was also included as a dummy variable. MAIN was a dummy variable which took the value of 0 if the worker worked at a branch office and 1 if they worked at the main office.

3.3.8 Sex and Marital Status

The survey also asked respondents to report their sex, as the trend in the data stubbornly remains that men tend to earn more than women even when other factors are held constant. The variable *SEX* was a dummy variable taking the value of 0 if the respondent was female and 1 if they were male.

The survey also collected data on marital status. *MARRIED* was a dummy variable coded as 0 if the respondent was single and 1 if they were married.

3.4 Statistical Techniques

Researchers have identified two main ways in which OLS regressions can be inaccurate when investigating the influence of language skill on wages. One problem involves error in the measurement of the language skill variable when self-assessed language skill is used (as is often the case). The other problem involves the impact of unobserved ability on wages (Dustmann & van Soest, 2002). This section will examine these issues, review some techniques used by other researchers to account for them and explain how they were addressed in this study.

The problem with self-assessed language skill is that people tend to overestimate their language skill.³ Charette and Meng (1994) found that Canadian respondents' assessments of their own language skill were higher than the assessments of a language test. If people overestimate their level of language skill,

³ Shields and Price (2002) use a data set where language skill is assessed by an interviewer, not self-reported. However, the interviewer was only able to assess interviewees based on their spoken skill, not as much on their listening, reading or writing skills. The authors reason that employers might also reward employees for these other skills, though they were not measured in the language-skill assessment. Therefore they say that the coefficient for the wage-value of language skills may be underestimated. The interviewers used instrumental variables to attempt to correct for this. They found that a set of instruments based on the language in which the interview was conducted were stronger instruments than a set based on whether the individual's spouse was UK-born and how many dependent children were in the household.

this would lead to a downward bias in the estimated value of the coefficient for language skill. This is because people would tend to report that they have high English skills when in fact they do not. Presumably their employer would be able to assess their poorer English skills, and therefore would not be willing to pay them such a high wage. Thus, an increase in self-reported language skill would not tend to be associated with such a large increase in wages, compared to an increase in actual language skill.

Interestingly, despite this bias Charette and Meng (1994) still found that there was not a significant difference in the results of a regression of wage against either objectively measured English skill or self-assessed skill. They found that self-assessed language skill had a correlation coefficient with objectively-measured language skill of only 0.58. However, they also found that after using an instrumental variables (IV) technique to arrive at endogenous language skill, it did not make a significant difference in the wage regression whether the objective or subjective measure of language skill was used. They concluded that using the IV approach to correct for the endogeneity of language skill also corrects for the error in self-assessed language skill.⁴

When designing the survey, I reasoned that at least some of the bias in self-assessed language-skill measures arises because of the vague questions about language skill that are asked in most surveys. Most of the studies in the literature use data sets that have been collected as part of a larger survey and have therefore not focused on detailed questions about language proficiency. Many of these surveys

⁴ They also found that family characteristics, such as parental education, had a larger influence on language skill than previously realized.

simply ask respondents to rate their skill on a scale of, say, 1-4, where “1” means “not at all,” “2” means “not very well,” “3” means “well” and “4” means “very well.”

These are rather vague categories to begin with, and in addition there might be a problem with interpretation of the question. Do respondents think the question asks them to rate their skill relative to native speakers or relative to other respondents? Someone may feel that they speak English very well compared with their peers (if their peers are other immigrants, for example), but not very well compared with native speakers. It is unclear what frame of reference respondents might assume after reading this question. Moreover, if respondents can understand spoken English quite well but cannot read very well (or vice versa), they may be unsure how to answer this question.

Berman et al. (2003) attempted to address the measurement-error problem by asking people to assess their skills at the time of the study and also to assess their skills at a certain time in the past. However, this approach may introduce other kinds of biases. It depends on the assumption that if someone tends to be biased to rate their level of language skill too highly, then this bias will be the same for both their past appraisal and their current appraisal. However, there are reasons to believe this may not be the case. For example, people may have a bias to believe that they have improved over time more than they actually have, thus leading to a bias through which they would rank their current skill higher than it really is and they would estimate their skill at the previous time lower than it actually was.

In this study, I attempted to correct for the tendency for people to overestimate their language skill by asking respondents how well they could perform specific language tasks, rather than asking them how skilled they are at using the language in

general. Given more specific questions about their language skill, respondents should be able to provide more accurate data. The design of the survey questions on language skill is described in more detail in Section 6.3.

The second problem area centers on the correlation between education and unobserved ability. This problem comes up in studies that seek to investigate the returns to education because the worker's ability cannot be measured – and unobserved ability is correlated with both years of education and wages. That is, workers with higher ability tend to get more years of education and also to earn higher wages. This means that the coefficient on years of education obtained through a regression represents not only the returns to education but also the returns to ability. In a study also including language skill, we would expect ability to also be positively correlated with language skill. If a variable capturing ability is not included in the study, this would mean that some of the positive effect of ability on wage would be captured by the language skill variable, thus upwardly biasing the coefficient on language skill.

It may be that in my study this would not be such a large problem. Studies that find the returns to education do so by comparing the wage outcomes for people with lower education to those with higher education. Their samples usually include people with only primary or secondary education all the way up to people with PhDs. In my sample, however, there should be less variation in the years of education variable, with most respondents likely having bachelor's or master's degrees. To the extent that ability is reflected in the choice of the number of years of education attained, then this would imply that there is not a large difference in ability between the workers in the sample.

Some studies have attempted to use an instrumental variables approach to purify the coefficient on years of education from the influence of unobserved ability. This approach involves using another observable variable that has a high correlation with years of education, but which we do not expect would have any correlation with the worker's wages or the error term (including unobserved ability) (Angrist & Krueger, 2001). Examples of such instrumental variables include the mother's or father's level of education⁵ or income, or the distance that the person lived from a school or university as a child (Card, 1995). Angrist and Krueger (1991) used the month in which an individual was born, which caused variation in the total number of months of schooling obtained for individuals who dropped out of school as soon as they were allowed to do so. Thus, a small amount of variation in years (months) of education was uncorrelated with ability.

For my study, however, there was no good instrumental variable to make use of. Good instrumental variables often arise as a result of some "natural experiment" due to some sort of event that randomly separates people into distinct groups, as in the Angrist and Krueger (1991) study in which a government policy change created variation in the number of months individuals spent in school. In my study, there was no such natural experiment to exploit.

By gathering information on university GPA and university quality, I attempted to proxy unobserved ability without having to resort to using instrumental variables. In this case, it should be possible to estimate the returns to language skill by simple OLS.

⁵ This instrument has yielded mixed results. Some studies have found that it is a valid instrument, whereas others, such as Posel and Casale (2011), have found that it is not.

3.5 Regression Equation

To test the relationship between wages and language skills, the regression equation below was adapted based on the equation developed by Mincer (1974), which has become the standard equation used in studies on the topic. In general, the equation examines the relationship between work experience, education and wages, while also including a set of control variables.

In many studies, education enters as a single continuous variable measuring the respondent's total years of formal education. Compared to most other studies on the subject, this study includes a wider variety of variables to control for education, as it includes measures of educational attainment, university type, and undergraduate GPA.

Work experience is measured as a continuous variable capturing the number of years of employment, which is comparable to most other wage studies. This study also includes information on the respondent's employer type (local versus multinational bank), work location (branch office versus main office) and job function (front office, back office, or management). It is thus able to give a more detailed picture of the relationship between work experience and wages.

$$\begin{aligned} \log(WAGE_i) = & \beta_0 + \beta_1 ENGPREINTER_i + \beta_2 ENGUPPERINTER_i + \beta_3 EXP_i \\ & + \beta_4 EXP_i^2 + \beta_5 MULTINATIONAL_i + \beta_6 MAIN \\ & + \beta_7 FRONTOFFICE_i + \beta_8 MANAGER_i + \beta_9 BAELITEBKK_i \\ & + \beta_{10} BAABROAD_i + \beta_{11} BAGPA_i + \beta_{12} MATHTH_i \\ & + \beta_{13} MATHENG_i + \beta_{14} MAABROAD_i + \beta_{15} SEX_i + \beta_{16} MARRIED_i \\ & + \beta_{17} ENV_i + \varepsilon_i \end{aligned}$$

The variables used in this model are summarized in the table below. The table specifies whether each variable was a continuous or binary variable, tells its expected sign in the regression results, and explains how the data was coded in the regression equation.

Table 3.2 Explanation of Variables

Variable	Explanation
Dependent Variable	
WAGE	It is a continuous variable measured as the log of monthly salary.
Independent Variables	
ENGPREINTER	This dummy variable captures respondents with a self-assessed English language skill level around pre-intermediate. This includes respondents with 40-59 points for self-assessed English skill on the survey used in this study. I expect that compared with the base category of beginner-level English, workers in this category will earn a wage premium. This is a binary variable, with an expected positive sign.
ENGUPPERINTER	This dummy variable captures respondents with a self-assessed English language skill level around intermediate to upper-intermediate. This includes respondents with 60-80 points for self-assessed English skill on the survey used in this study. I expect that compared with the base category of beginner-level English, workers in this category will earn a wage premium. This is a binary variable, with an expected positive sign.
EXP	A worker with more work experience should also have greater knowledge and skills, and should earn a higher wage. This is measured as years of working experience since finishing university. This is a continuous variable with an expected positive sign.
EXP ²	Experience-squared is included in order to capture the supposed concavity of the effect of experience on earnings. That is, as a worker's experience increases it continues to contribute positively to the worker's wages, but at a decreasing rate. (The first derivative of the effect of experience on wages is positive, but the second derivative is negative.) This is a continuous variable with an expected negative sign.

Table 3.2 Explanation of Variables (continued)

MULTINATIONAL	This is a dummy variable which will take the value of 1 if the firm is multinational and 0 if it is local. It is a binary variable with an expected positive sign.
ENV	A worker who grew up with a better-educated father would have higher expectations and better opportunities and connections, and may therefore tend to have higher wages. ⁶ This is a binary variable with an expected positive sign.
FRONTOFFICE	This dummy variable captures workers in front-office positions, who are most likely to deal with customers and loan clients. There is no <i>a priori</i> expectation whether front-office workers will earn more in general than back-office workers. This is a binary variable.
MANAGER ⁷	This variable captures workers in management positions. It is expected that managers will tend to have higher wages than other workers in the sample. This is a binary variable with an expected positive sign.
SEX	This is a dummy variable equal to 1 for men and 0 for women. In line with previous research, I expect to find that men generally earn more than women. This is a binary variable with an expected positive sign.
MARRIED	This is a dummy variable equal to 1 for people who are married and 0 for people who are single. I expect married men to earn a higher salary than unmarried men. The relationship is unsure for married women, as they may also be more likely to have taken time off work to raise children. This is a binary variable with an expected positive sign.
BAGPA	This variable measures the GPA that the respondent earned as an undergraduate at university. It is intended as a measure for ability. I expect that workers who have performed better in university will tend to earn higher wages. This is a continuous variable with an expected positive sign.

⁶ However, Rischall (1999)(cited in Harmon and Walker (2001)) found that family-background instrumental variables rarely play a significant role in determining wages in models where they are used.

⁷ As Isphording (2013) notes, holding occupational choice constant makes interpretation of the coefficient on English skill more difficult. This is because occupational choice is not exogenously determined. In addition, Thomsen, Gernandt, and Aldashev (2008) find that after language skill's influence on occupational choice is controlled for, there is no further benefit to language skill.

Table 3.2 Explanation of Variables (continued)

BAELITEBKK	This is a dummy variable equal to 1 if the worker attended a top-tier university in Bangkok (Chulalongkorn, Thammasart, Mahidol or Kasetsart) as an undergraduate, and 0 if not. I expect that workers who have attended a top university will tend to earn higher wages. This is a binary variable with an expected positive sign.
BAABROAD	This is a dummy variable equal to 1 if the respondent studied for a bachelor's degree abroad, and 0 if not. I expect that workers who have studied abroad will tend to earn higher wages. This is a binary variable with an expected positive sign.
MATHTH	This is a dummy variable equal to 1 if the respondent studied for a master's degree in Thailand in a Thai-language program, and 0 if not. I expect that workers in this category will earn higher wages than those in the base category, who have only a BA degree. This is a binary variable with an expected positive sign.
MATHENG	This is a dummy variable equal to 1 if the respondent studied for a master's degree in Thailand in an English-language program, and 0 if not. I expect that workers in this category will earn higher wages than those in the base category, who have only a BA degree. This is a binary variable with an expected positive sign.
MAABROAD	This is a dummy variable equal to 1 if the respondent studied for a master's degree abroad, and 0 if not. I expect that workers in this category will earn higher wages than those in the base category, who have only a BA degree. This is a binary variable with an expected positive sign.
MAIN	This is a dummy variable equal to 1 if the respondent works at the company's main office, and equal to 0 if the he or she works at a branch in central Bangkok. I expect that respondents who work at the main office will earn more than respondents who work at branches. This is a binary variable with an expected positive sign.

3.6 Data Collection

As noted earlier, due to the sensitive nature of the data that were collected, including information on employee salary, education levels and undergraduate GPA, it was impossible to distribute the survey to randomly selected respondents within various banks. Rather, data were gathered using an online survey and also through a paper survey distributed face to face. Data were collected from August 2014 through May 2015. Before distribution, the survey was translated into Thai so that respondents would be able to clearly understand it. The survey was translated into Thai by a research assistant and was then checked over by my advisors, who are both fluent in Thai and English.

3.6.1 Online Survey

The online survey was prepared using online survey software from Survey Monkey (www.surveymonkey.com). Data were gathered from the online survey by contacting friends and colleagues (primary contacts) who had friends or colleagues who worked in banks (secondary contacts), and sending them the link to complete the survey online.

Each primary contact could use the link fill out the survey (if they worked at a bank), and they could also distribute that link to their friends or colleagues who worked in banks in Bangkok (secondary contacts). After making primary contact with one person who worked in a bank, it was often easy to get them to fill out the survey. The convenience of the online survey made it easy for the primary contact to pass it on to secondary contacts who worked at the same bank or at other banks. However, I

rarely collected more than five total responses through any primary contact in this way.

The online survey was anonymous, in that once someone received the link they could click on it to take the survey online. The respondent would then input their responses and those responses were submitted to me directly. No identifying information was requested. This meant it was impossible to know which people who had been sent the survey had actually completed it, and it was thus difficult to follow up with those who hadn't completed it.

73 usable responses were gathered from the online survey. All responses were complete, as the survey software had the capability to require that all fields were filled in before the survey could be submitted.

3.6.2 Paper-Based Survey

I initially planned to focus on the online survey, with limited use of the paper survey only in cases in which it was requested. However, I found that response rates for the online survey were generally low, while the paper-based survey achieved far higher response rates. Using paper-based surveys, some primary contacts were able to help me obtain up to 40 surveys from their colleagues and contacts.

Paper surveys were distributed to primary contacts who worked in banks or knew people who worked in banks, and then those primary contacts distributed the survey to the people they knew who worked in banks (secondary contacts). Primary contacts then collected the surveys and returned them to me. In total there were 21 primary contacts. In total, 465 responses were obtained through the paper survey. Of these, 83 were dropped because key information was missing. A further 22 responses

were dropped because the respondent was in the wrong industry or was not technically an employee of the bank (i.e. contractor). This left 360 usable responses from the paper survey.

Some secondary contacts were concerned about the privacy of the information that they wrote on the paper survey. They were more concerned about the primary contact or other coworkers seeing their personal information than the researchers, so I provided envelopes so that secondary contacts could seal their responses before submitting them to the primary contact who would later submit them to me. Many envelopes which I received were fully taped or stapled shut, highlighting the importance of information security to at least some respondents.

3.6.3 Full Sample

The original sample size thus included a total of 433 observations. Of these, 4 were dropped as outliers as they reported a monthly salary of 130,000 baht or higher. These respondents were mostly senior-level managers, including vice presidents. We can assume that the processes involved in promotion to these positions may include English skill, but are likely dependent on a range of other idiosyncratic factors. Thus, it makes sense to exclude these observations as they likely do not represent the same underlying processes that influence salary as the processes that determine salary for lower-level workers in banks. One other observation was dropped as the respondent gave themselves one of the lowest scores for self-assessed English although they reported some of the highest scores on the TOEIC and IELTS tests. This was evidence of careless answering on the self-assessed English section.

The final sample included 428 observations. Of these 94 were obtained from workers at multinational banks. Banks included in this category were Citibank, UOB, HSBC, Standard Chartered Bank, Bank of China, Mizuho Bank, Deutsche Bank, Tisco Bank and Bank of Tokyo. 334 observations were obtained from local banks. The local bank category included observations from Bangkok Bank, Siam Commercial Bank, Krungthai Bank, Thanachart Bank, Krungsri Bank, Kiatnakin Bank, TMB, Kasikorn Bank, Government Savings Bank, Islamic Bank of Thailand, and Bank of Thailand.

3.7 Data Summary

The data summary for the full sample, presented below in Table 3.3, shows a few general differences between the characteristics of the samples collected from local banks and multinational banks. Workers from multinational banks had fewer years of work experience (7.3 vs 9.3) but also had higher salaries (42,172 baht/month to 33,722 baht/month). Compared to respondents from local banks, respondents from multinational banks were more likely to work in management or in the back office, and were more likely to work at the bank's main office rather than at a branch. Part of the reason for this is that foreign banks have fewer branch offices in Thailand, making it more difficult to obtain samples from these workers. Workers in multinational banks also tended to have achieved higher levels of education, and were more likely to have attended elite Bangkok universities. 61% of workers in multinational banks rated themselves as having intermediate English skill or above, whereas only 39% of local bank workers rated themselves so highly.

In Table 3.4, the data is summarized for respondents in the younger cohort (with 10 years or fewer of work experience) and the older cohort (with more than 10 years of work experience). Among younger workers, the differences between respondents from multinational and local banks are generally similar to the differences presented above regarding the full sample. Younger workers at multinational banks are generally better-educated, more likely to work in the main office, and more likely to be back-office workers or managers. In this cohort, multinational bank workers have only slightly less average experience than local bank workers. However, multinational bank workers in the younger cohort still have much higher average salaries, earning an average of 37,350 baht per month compared with 26,936 baht per month for local bank workers.

Comparing the younger and older cohort in general, we can see that workers in the older cohort are comparatively more likely to be male (though respondents included a majority of women in every cohort), are more likely to be married, and are more likely to be managers than workers in the younger cohort. Respondents from the older cohort also generally rate themselves as having lower English skills than respondents in the younger cohort.

Table 3.3 Data Summary – Full Sample

	Full Sample	
	Local Banks	Multinational Banks
Observations	334	94
SEX	.	.
Male	.29	.29
Female	.71	.71
MARRIED		
Married	.27	.15
Single	.73	.85
SAL (baht/month)	33,722 (18,730)	42,172 (21,884)
EXP (years)	9.3 (7.9)	7.3 (5.6)
POSITION		
Front Office	.50	.14
Back Office	.39	.59
Manager	.11	.27
MAIN	.	.
Main Office	.40	.80
Branch	.60	.20
UNIV		
Normal Thai Uni	.74	.42
Elite Bangkok Uni	.25	.56
Foreign Uni	.01	.02
MA DEGREE		
MA Abroad	.08	.15
MA in Thailand (ENG)	.02	.10
MA in Thailand (Thai)	.27	.27
BA Only	.63	.49
BAGPA	2.92 (.37)	3.0 (.44)
English Skill		
ENGBEGINNER	.17	.04
ENGPREINTER	.45	.35
ENGUPPERINTER	.39	.61

Note: Standard errors presented in parentheses.

Table 3.4 Data Summary – Younger Cohort and Older Cohort

	Younger Cohort (EXP≤10)		Older Cohort (EXP>10)	
	Local Banks	Multinational Banks	Local Banks	Multinational Banks
Observations	244	75	90	19
SEX				
Male	.26	.25	.36	.42
Female	.74	.75	.64	.58
MARRIED				
Married	.15	.09	.58	.33
Single	.85	.91	.42	.67
SAL (baht/month)	26,936 (12,585)	37,350 (19,193)	51,242 (20,595)	58,048 (23,060)
EXP (years)	5.1 (2.9)	4.7 (2.8)	20.3 (6.0)	15.9 (3.53)
POSITION				
Front Office	.54	.15	.40	.09
Back Office	.40	.63	.35	.44
Manager	.06	.21	.25	.47
MAIN				
Main Office	.36	.78	.51	.83
Branch	.64	.22	.49	.17
UNIV				
Normal Thai Uni	.69	.36	.88	.61
Elite Bangkok Uni	.31	.61	.10	.39
Foreign Uni	.00	.03	.02	.00
MA DEGREE				
MA Abroad	.09	.17	.05	.08
MA in Thailand (ENG)	.02	.13	.01	.00
MA in Thailand (Thai)	.24	.23	.35	.38
BA Only	.64	.47	.59	.54
BAGPA	2.95 (.36)	3.07 (.39)	2.85	2.78
English Skill				
ENGBEGINNER	.10	.03	.28	.09
ENGPREINTER	.45	.35	.45	.33
ENGUPPERINTER	.45	.62	.27	.58

Note: Standard errors presented in parentheses.

Chapter 4

Research Results

In this chapter, the results from all regressions are presented. The subsections of Section 4.1 describe the regression results when the full sample was included, as well as from specifications including workers in the younger and older cohorts, and including workers at local and multinational banks. Section 4.2 summarizes the results and compares the results and research methods with some other studies on the subject.

4.1 Regression Results

The regression results are separated into 5 groups which are presented in the sections below. In section 4.1.1, the regression results from the full sample are presented. In the following sections, the results are presented for the regressions including workers in the younger cohort, the younger cohort in local and multinational banks, and the older cohort.

Table 4.1 Regression Results

	(1) Full Sample	(2) Local + Multinational (EXP<=10)	(3) Local Bank (EXP<=10)	(4) Multinational Bank (EXP <=10)	(5) Local + Multinational (EXP>10)
ENGPINTER	0.061 (0.051)	0.161*** (0.062)	0.157*** (0.06)		-0.01 (0.094)
ENGUPPERINTER	0.071 (0.053)	0.227*** (0.063)	0.195*** (0.061)	0.111 (0.089)	-0.158 (0.107)
EXP	0.062*** (0.007)	0.077*** (0.023)	0.023 (0.025)	0.235*** (0.053)	-0.001 (0.041)
EXP2	-0.001*** (0)	-0.001 (0.002)	0.003 (0.002)	-0.014*** (0.005)	0.001 (0.001)
MULTINATIONAL	0.231 (0.188)	0.122*** (0.042)			0.049 (0.110)
MAIN	0.037 (0.035)	0.018 (0.038)	0.036 (0.043)	-0.093 (0.101)	0.117 (0.088)
FRONTOFFICE	-0.018 (0.037)	0 (0.038)	-0.019 (0.04)	0.097 (0.106)	-0.047 (0.101)
MANAGER	0.282*** (0.047)	0.338*** (0.058)	0.274*** (0.078)	0.370*** (0.095)	0.172* (0.095)
BAELITEBKK	0.125*** (0.036)	0.114*** (0.036)	0.096** (0.041)	0.145* (0.08)	0.195* (0.112)
BAABROAD	0.232 (0.161)	0.399* (0.206)		0.358 (0.237)	0.326 (0.272)
BAGPA	0.103*** (0.041)	0.154*** (0.045)	0.157*** (0.05)	0.097 (0.098)	-0.086 (0.097)
MATHTH	0.105*** (0.037)	0.114*** (0.041)	0.104** (0.043)	0.143 (0.104)	0.036 (0.083)
MATHENG	0.125 (0.082)	0.119 (0.079)	0.169 (0.115)	0.12 (0.121)	0.271 (0.392)
MAABROAD	0.403*** (0.054)	0.452*** (0.054)	0.453*** (0.065)	0.351*** (0.108)	0.188 (0.173)
SEX	0.054* (0.032)	0.058 (0.036)	0.082** (0.039)	0.05 (0.087)	0.052 (0.077)
MARRIED	0.064 (0.052)	0.06 (0.06)	0.097 (0.066)	-0.043 (0.143)	0.041 (0.113)
CHILD	-0.026 (0.034)	-0.006 (0.048)	-0.008 (0.05)	-0.627** (0.241)	-0.035 (0.061)
ENV	0.110*** (0.032)	0.095*** (0.034)	0.097*** (0.036)	0.104 (0.083)	0.149* (0.081)
Observations	428	319	244	75	109
R-squared	0.664	0.638	0.598	0.743	0.391

Description: Regression coefficients presented on first line, standard errors presented in parentheses.

*** p<0.01, **p<0.05, *p<0.1

4.1.1 Regression Results – Full Sample

The regression results including the full sample of 428 observations are presented in column 1 of Table 4.1. Of most interest, the two English skill variables had positive coefficients, but were not statistically significant. The coefficient on MULTINATIONAL was also positive, but not significant. For this regression, then, the two pathways by which English skill would seem to lead to higher earnings (through the English skill variable or indirectly through increased likelihood of working for a multinational bank) did not show a significant effect.

The lack of a statistically-significant positive coefficient on the MULTINATIONAL variable is surprising, but it remains true that on average workers in multinational banks have higher salaries than workers in local banks. MULTINATIONAL may not have been significant because the differences in earnings are largely explained by other factors. For example, we can see from Table 4.1 that multinational banks are more likely to hire people who have graduated from elite Bangkok universities, people who have earned master's degrees, people who have higher undergraduate GPAs, and people with higher self-assessed English skills. As we would expect higher salaries to also be correlated with those variables, then they may to some extent capture the positive returns to working for a multinational bank.

Another possible explanation is that MULTINATIONAL may not have been significant because of some characteristics of the data collected. Again from Table 4.1, we can see that in the sample the workers in multinational banks were more likely to be managers and were more likely to work for the main office than a branch

office, so it is possible that if there is in fact a wage premium for working with a multinational bank, the effect was captured to some degree by those variables instead.

The variables capturing education and ability did, however, find significant effects. Studying for a BA degree at an elite Bangkok university was found to be related to 13% higher salary than studying at a normal Thai university. Earning an undergraduate GPA of one point higher (the jump from 2.5 to 3.5, for example) was related to an estimated 10.3% higher salary. Studying for a master's degree in a Thai-language program in Thailand was related with a 10% higher salary. Studying for a master's degree abroad was related to 40% higher salary, though the sample group in this case was fewer than 10.

As expected, EXP was highly significant, with an expected 6% higher salary for each year of experience. EXP2 was negative and significant, also as expected. Considering the employee's position in the company, the data did not show a significant difference in salary between front-office and back-office workers, though managers (MANAGER) had an expected 28% higher salary than back-office workers.

4.1.2 Regression Results – Younger Cohort (EXP <= 10)

While the results from the first regression did not show a very significant effect of English skill on salary, I sought to test a further hypothesis – that younger workers enjoyed a larger premium for English-language skills than older workers. If English skills have become more important in the past 10 years, their effect may be more pronounced for younger workers as they could play a bigger part in hiring and promotion decisions for younger workers. On the other hand, older workers may have begun to climb the corporate ladder in a time when English skills were less important,

and may therefore have been able to reach higher-salaried positions despite lower levels of English skills.

One note on terminology is that in the paper, the terms “younger workers” or “young cohort” are used to refer to workers who have 10 years of work experience or fewer. The assumption is that generally young workers will also have fewer years of work experience, though it is of course possible that an older worker may have fewer than 10 years of work experience, for example if they took off a significant amount of time from work to raise children or care for family members. The correlation coefficient between respondents’ age and work experience was found to be 0.96, so in general there is a strong positive relationship between age and years of work experience. The term “younger workers” is preferred to “less-experienced workers” as the hypothesis is that younger workers may earn a higher return to English language skill because they have entered the labor market at a more recent time, when English skill has become more important than in the past.

The summary statistics for younger workers are presented in columns 1 and 2 of Table 3.4 above. The results from this regression, including only the 319 respondents who had 10 years or fewer of work experience, are presented in column 2 of Table 4.1. Interestingly, we find that most of the variables that were significant in the first specification are also significant in the second specification, and the effect is also quite similar. Undergraduate GPA appears to be a more important determinant of wage for younger workers than for older workers.

However, we do see that both ENGPINTER and ENGUPPERINTER become positive and highly significant in this specification, with pre-intermediate English related to about 16% higher salary and intermediate level English related to

about 23% higher salary. Compared with the first regression, these results indicate that English skill has become an important factor in determining the salary of younger workers in banks.

4.1.3 Regression Results – Younger Cohort (EXP <= 10) in Local Banks

I next tested whether the returns to English skill were higher for workers in multinational banks than for workers in local banks. I hypothesized that workers in multinational banks should enjoy a higher premium for English language skill, as they are more likely to need to communicate often in English with coworkers and clients. The regression results for younger workers (with 10 years or fewer of work experience) who work at local banks are presented in column 3 of Table 4.1 above.

For the most part, the results from this regression are similar to the earlier regression covering all younger workers. However, there are a few notable differences. First of all, in this sample of 244 workers, the EXP variable appears to be positively related to salary, but is statistically insignificant – a surprising finding. BAGPA remains strongly significant, and the coefficient is slightly higher than in the full sample with younger workers.

In this sample, the English skill variables have become highly significant. The results show that workers with a pre-intermediate to intermediate level of English skill would be expected to earn a 16% higher salary than workers with a low level of English skill. Those with an intermediate to upper-intermediate level of English skill would be expected to earn a 19% higher salary.

These results indicate that local banks reward workers with higher English skill. As local banks may have fewer workers with high English skill, it may be the

case that those who do have high English skill tend to be rewarded significantly, and may be more likely to earn pay rises or promotions due to their rare skills.

4.1.4 Regression Results – Younger Cohort (EXP <= 10) in Multinational Banks

The regression was next run with workers in multinational banks with 10 years of experience or fewer. This regression included a total of 75 respondents. The results are presented in column 4 of Table 4.1 above.

This regression shows a number of differences with the regression including younger workers at local banks, though fewer variables are significant owing to the smaller sample size. In this sample, EXP was highly significant with one year of experience leading to an expected 23% higher salary. Most other variables were reasonably similar to their estimates in the other regressions and thus shall not be commented on again here.

The coefficients on the return to English skill are interesting. ENGBEGINNER was dropped as the base case in this specification because there were only a few respondents remaining in the category. ENGPREINTER was thus used as the base category. When ENGUPPERINTER was included as a regressor, the variable did have a positive coefficient though this was not statistically significant.

Keeping in mind that workers at multinational banks do tend to have a higher level of English skill than workers at local banks, these results may indicate that while multinational banks screen applicants based on English skill, English skill may not be a criteria for pay rises within the organization. Since multinational banks may require a higher level of English skill from all workers, English skill may not be an important factor in determining promotion or pay rises. However, since English skill is rarer at

local banks, it may play a bigger role in decisions regarding pay rises and promotions, and thus may earn a higher wage premium.

4.1.5 Regression Results – Older Cohort (EXP>10) in Multinational and Local Banks

Column 5 of Table 4.1 above presents the regression results when the sample is restricted to workers with more than 10 years of work experience. As the group of older workers who worked in multinational banks was quite small (about 20 respondents), all older workers were grouped together for the regression. There were a total of 109 observations.

The results show no highly significant coefficients, and there are also a number of coefficients which do not have the expected sign. Managers were estimated to earn 17% higher salary than back office workers. Having studied for a bachelor's degree at an elite Bangkok university was associated with 20% higher salary, and having a better-educated father was associated with 15% higher salary. These three findings were significant at the 90% level.

ENGPINTER and ENGUPPERINTER both showed negative coefficients, but neither coefficient reached significance. The results did not show a wage return to English skills for older workers. While it would be hard to believe that older workers are penalized for English language skill, it does not appear that English skills play an important role in determining the wages of older workers.

Surprisingly, EXP also was not significant in this regression. However, compared to younger workers, we can see from Table 3.4 that older workers are more likely to be managers, and they also earn a far higher salary on average. The

difference in average salary between the two groups is approximately 20,000 baht per month. Coupled with the finding that MANAGER was weakly significant, this may indicate that older workers gain salary increases primarily through being promoted to management positions, rather than by getting significant salary increases per year of service.

Overall, the results of this regression are quite different from the other results, and indicate that the factors that determine the wages of younger workers may be quite different from the factors that determine the wages of older workers. The low R-squared term also indicates that the variables we observed do not capture some important factors that determine the wages of older workers.

4.2 Discussion

The results of the study have supported the findings of many other studies on the subject, which have found that there is indeed a positive wage premium for English skill. With a wage premium of 20-23% for younger workers with intermediate English or higher, the premium is in line with most other studies which also find a wage premium near this range. As Thailand has a large degree of international economic activity and as English skill is comparatively scarce in the country, we expect to find a wage premium for English skill. The finding that the wage premium is large (in fact, larger than the wage premium from earning a master's degree) should hopefully help convince people in the country to invest resources in building this skill.

Table 4.2 Comparison of Results – Returns to English Skill

	(1) Returns to Pre-Intermediate English Skill	(2) Returns to Upper-Intermediate English Skill
Full Sample	0.061 (0.051)	0.071 (0.053)
All Workers with EXP ≤10	0.161*** (0.062)	0.227*** (0.063)
Local Bank Workers with EXP ≤10	0.157*** (0.06)	0.195*** (0.061)
Multinational Bank Workers with EXP ≤10		0.111 (0.089)
All Workers with EXP >10	-0.01 (0.094)	-0.158 (0.107)

Description: Regression coefficients presented on first line, standard errors presented in parentheses. *** p<0.01, **p<0.05, *p<0.1

However, the study did not find clear evidence of a wage premium for all kinds of workers – just for younger workers. Though few studies have examined whether there is a differential in wage premiums for workers of different ages and levels of experience, Azam et al. (2013) found that older males in India earned a higher premium for English skill than younger males did.

According to theory, it would seem to make sense that older workers would earn a higher premium for English skill than younger workers. Work experience and education are both forms of human capital, and language skills like English are useful because they help the worker make use of their human capital more effectively in a wider range of situations. As older workers should have more human capital to exploit than younger workers, they would thus be expected to earn high wage premiums for English skills.

One reason that older workers might not earn a wage premium for English skill could be that older workers began to climb the corporate ladder at a time when English skill was less important. This could have allowed workers with poor English skill to set out on the track toward management positions. If banks are conservative

organizations that tend to promote people along a career path based partly on years of service in the company, then older employees with poor English skills could have still been promoted to higher-salaried positions.

On the other hand, the finding that there are significant wage premiums for English skill for younger workers could be evidence that English skill has become more important as a hiring and promotion decision in the past ten years. Younger workers with better English skills may be able to get on the fast track to promotion within the company more easily than those with poor English skills.

The second objective of the study was to investigate whether there are differential returns to English language skill for workers at multinational banks versus local banks. The original hypothesis was that multinational banks would offer a higher wage premium for English skill because they are more likely to have a strong need for workers with these skills.

The results obtained did not clearly support this hypothesis, though there are interpretations of the data that can support it. Regressions found that workers in local banks do enjoy a clear wage premium for English skill of around 16% for pre-intermediate English skill and up to 23% for intermediate English skill. However, workers at multinational banks were not definitively shown to earn a wage premium for higher levels of English skill.

We must keep in mind that workers in multinational banks are selected based on their English skill to a greater extent than workers in local banks. Workers at multinational banks have on average a higher level of English skill than workers in local banks (though they also are more likely to have attended an elite Bangkok university and to have earned a master's degree). Workers in multinational banks also

have higher average salaries than workers at local banks. Among workers with 10 years of experience or fewer, those at multinational banks earn 37,350 baht/month on average, while those at local banks earn 26,936 baht/month.

While the data may not show that multinational banks reward employees with higher salaries based on their English skill, this may be the case because employees at those banks already have a generally high level of English skill, such that other factors emerge as more important when making decisions that affect compensation. However, given that high English skill gives one a better chance at landing a comparatively high-paying job at a multinational bank, it is clear that workers at multinational banks reap a substantial reward for their English skill.

The higher average salaries at multinational banks give an idea about how much the return is to workers for their higher English skill. However, when interpreting the results, we should consider that responses from multinational banks were more likely to come from the main office than were responses from local banks. Among workers with fewer than 10 years of experience, 36% of local bank respondents were at the main office, whereas 78% of multinational bank respondents were at the main office. As most multinational banks have few branch offices, this is unsurprising. However, as workers at the main office have on average higher salaries than workers at branch offices, then part of the 10,000 baht/month differential in average salary between workers at multinational banks and local banks could be accounted for by the fact that workers in the sample from local banks were more likely to have been drawn from branch offices. This would to some extent decrease the implicit bonus for high English skill that workers receive through getting a job at a multinational bank.

The results of this study bring up the question of whether younger workers earn a higher wage premium for English skill in general, or whether this result is peculiar to Thailand only or to the banking sector in Thailand. In Thailand and other countries in Southeast Asia, it could be the case that since English has begun to rise in importance in recent years, older workers in larger organizations in which workers have fairly structured career paths would not see as great an influence of English skill upon salary. This could be because older workers began to move up the ranks into senior positions at a time when English skill was less important. If this is the case, then we should expect that in coming years we would begin to observe wage premiums for both younger and older workers, as workers who have begun their careers in a more internationalized economy move up the ranks.

This study has lent further support to the idea that English skills are rewarded in the labor market, and has given the first estimates of the magnitude of those rewards in Thailand. It has yielded results showing that younger workers receive greater wage premiums than older workers, which is somewhat counter-intuitive if we believe that language skill merits wage premiums because it allows workers to make greater use of their human capital. The absence of observed wage premiums for older workers may be evidence of a greater lag effect for older workers than for younger workers in the time it takes the labor market to reward workers for skills that have recently become important.

4.3 Comparison with Other Studies

The finding that workers can earn a return to intermediate English skill of between 16-23% is comparable with the few other studies on the subject that have

examined the returns to English skill in countries where it is used as a language for international business, but not as a primary language for communication. Toomet (2011) found that among well-educated Russian immigrants to Lithuania and Latvia, English proficiency led to approximately 25% higher wages. In China, Guo and Sun (2014) found that a one-standard-deviation increase in recent college graduates' scores on the CET-4 English proficiency test were correlated with 3.3% higher starting salaries.

The returns to English language skill in this study are a bit lower than the returns found in studies examining the returns to dominant language skill for immigrants to a country. For example, Bleakley and Chin (2004) found returns of up to 67% for immigrants who spoke English 'very well' compared to immigrants who spoke no English. Boyd and Cao (2009) found returns of 60-80% for fluency in English among immigrants to Canada. In South Africa, Posel and Casale (2011) found returns of 97% for English language proficiency among male post-secondary graduates. However, it makes sense that the observed returns in this study would be lower than in the studies mentioned above, as English skill should be more important for workers in countries where it is used as the primary language for communication.

When comparing the results of this study with other studies, it is useful to consider how the scope of the study and the research methods used differ from those used in other studies on this subject. The first major difference between this study and other studies in the literature concerns the method of measurement of English language skill. The majority of studies on language skill have made use of national-level household surveys. These surveys typically ask just one or two questions on language skill, such as "What language do you primarily use at home?" or "How well

can you speak English?” Studies then typically use the answer to this question to create dummy categories separating respondents into those who are ‘proficient’ or ‘non-proficient’ in English.

In contrast, this study used a more-detailed language-skill rubric to attempt to get a more accurate self-assessment of language skill. Respondents reported their ability to complete a range of tasks using English, and their scores were then summed and used to construct dummy categories. This allowed for the creation of three categories of English skill – beginner, pre-intermediate and intermediate.

However, a correlation test between self-assessed English score and TOEIC score for a subset of the sample found a correlation coefficient of 0.29, which does call into question people’s ability to self-assess their language skill. However, this is a weakness shared by nearly all other studies on the subject, with the exception of Guo and Sun (2014) which made use of standardized-test scores in China.

A second difference between this study and other studies on this subject concerns the level of education and work industry of the respondents. Few other studies have focused on respondents from a particular industry. Since most studies have used large-scale datasets, they have typically captured respondents with a large variation in age, work experience and education levels.

Studies such as Azam et al. (2013), Berman et al. (2003) and Chiswick and Miller (2009) find that the returns to dominant language skill (English in India and the USA, Hebrew in Israel) are highest for highly-educated immigrants. Immigrants with lower levels of education earn smaller returns, if any, from proficiency in the dominant language.

This study focused on highly-educated Thai workers, with nearly all respondents having earned a bachelor's degree or higher. There was thus lower variation in years of education and unobserved ability than in other studies. Thus, we can expect that the estimate of the returns to English obtained in this study would be higher than the returns that would be obtained by less-educated workers. On the other hand, as there are many industries in the economy with a greater need for English skill than banking, there are also many workers who could gain greater rewards for their English skill than the workers in this study.

A third key difference concerns methods for dealing with unobserved ability. In this study, data were gathered on undergraduate GPA, the type of university the respondent studied at for their bachelor's degree, and the type of master's degree program they studied in. These measures helped to further control for unobserved ability, which should have given a more purified estimate of the returns to language skill than other studies. A few studies have been able to use an instrumental variables approach to attempt to purify the effect of unobserved ability, but due to the rarity of suitable 'natural experiments' occurring, most studies have been unable to use this approach.

Finally, this study has taken a unique perspective in examining the differential returns to English skill for workers in different age groups. Most studies have used large data sets with respondents having a wide range of years of work experience, but have not tested whether the returns to English skill are different for respondents with different amounts of work experience.

Azam et al. (2013) found that among Indian males, better-educated younger workers earned a premium for English skill, whereas lower-educated workers did not.

On the other hand, both better-educated and lower-educated older males earned a premium for English skill.

Guo and Sun (2014) focused on recent university graduates, and found a premium of around 3.3% higher starting salary for a one-standard-deviation higher level of English skill. This is a rather small premium compared to other studies, so this would appear to indicate that the increased returns to English skill apply more to older workers than younger workers.



Chapter 5

Conclusion and Recommendations

5.1 Conclusion

This study has sought to examine the returns to English skills for workers in Thailand, and to estimate whether workers in multinational firms earn a higher premium for English skill than workers in local firms. The study focused on the banking industry, as this industry has a significant need for workers with English-language skill as well as a variety of local and multinational firms. An original data set was gathered with a total of 428 respondents.

Two common issues faced in studies of the effect of language skill on wages are the measurement bias in the measure of language skill when self-assessed measures are used, and the correlation of unobserved ability with language skill, education and salary.

The first issue was addressed by creating a much more detailed rubric for self-assessment of language skill than previous studies. Respondents were asked to rate how easily they could perform a range of communication tasks. The validity of self-assessed language skill was compared with score on the TOEIC test for the subset of respondents who had taken that test, but the correlation coefficient between the two measures was only 0.29. The study then took an approach that other researchers have taken by creating dummy variable categories for respondents whose rating fell in the top third, middle third or bottom third of the rating scale.

The second issue was addressed by gathering information on undergraduate university type, master's degree program type, and undergraduate GPA. These

measures allowed for a direct estimation of unobserved ability, which allowed the effect of language skill on wages to be estimated using simple OLS.

When all respondents were grouped together, a positive though non-significant relationship was found between English skill and salary. A positive though non-significant relationship was also found for workers in multinational banks compared with workers in local banks. As workers in multinational banks had higher average self-assessed English scores than workers in local banks, this could be an indirect channel through which higher English skill impacts higher salary.

Next, the hypothesis that English skill has become more important in recent years than it was in the past was tested. Perhaps older workers had been hired and had begun to move up the career ladder in a time when English skill was less important than it is now. As the AEC opens up and banks prepare for higher levels of international interaction, they may thus reward younger workers who have higher English language skills. To investigate this hypothesis, the regression was next run with only respondents who had 10 years or fewer of work experience.

The results of this regression of 319 observations found a highly significant premium for English-language skill. Workers who assessed themselves at around pre-intermediate level of English skill were found to earn 16% more than those who assessed themselves at beginner level. Those who assessed themselves at intermediate and above were found to earn nearly 23% higher salaries. Younger workers at multinational banks were found to earn around 12% more than younger workers at local banks.

The sample of younger workers was next split into workers at local banks and workers at multinational banks to check whether younger workers at multinational

banks earned a higher premium for English skill than younger workers at local banks. The first regression showed that younger workers in local banks earned an average 16% wage premium for speaking English at a pre-intermediate level, and a 19% premium for speaking English at an intermediate level. This indicates that local banks must also have a need for staff who can speak English well. As English skill is rare among workers in local banks, banks therefore have a strong need to reward and retain employees with those skills by offering pay rises or promotions.

In the second regression with younger workers at multinational banks, there were very few workers in the beginner-level English category, so pre-intermediate English was used as the base case. Compared to this base case, the coefficient for workers with intermediate English and above was positive though non-significant.

Although there was not such clear evidence that workers who already work for multinational banks are rewarded with yet higher salaries based on superior English skill, multinational banks clearly have a strong need for workers with English skill. Workers in multinational banks have on average higher levels of English skill and higher average salaries than workers in local banks. As multinational banks consider English skill as a selection criterion, there is thus clearly a benefit for workers to improving their English as higher English skill can increase the probability that the worker will be able to get a comparatively high-paying job at a multinational bank. In fact, the average salary for younger workers at multinational banks is still higher than the average salary for younger workers at local banks plus the expected returns of 20% higher salary for intermediate level English skill. Thus, while there are higher marginal wage returns to English skill for younger workers in local banks, the

absolute wage levels for younger workers with good English skills are still higher for younger workers in multinational banks.

The data obtained in this study support findings of other studies in international economics which have found that multinational firms tend to pay higher salaries than local firms. Part of the reason for this may be that multinational firms use more sophisticated capital (Okuda & Rungsomboon, 2007) or because they must compensate workers for dealing with foreign culture and work processes (Ramstetter, 2004).

These higher wages are also at least partially explained by the fact that multinational firms seem to require workers with more specific and better-developed skills. As the data in this study showed, workers in multinational banks generally have higher undergraduate GPAs, are more likely to have attended elite universities, and have higher levels of English skill than workers at local banks. They also earn on average significantly higher salaries.

While this study has been the first to examine the returns to English skill for workers in Southeast Asia, its findings are in line with those of other studies which have measured the returns to English skills, some in countries where English is the dominant language and some in countries where English is used primarily for international business.

Higher levels of English skill will be important for Thailand as it continues to integrate with the international economy, and especially as Thai workers will have an increasing need to compete with workers from other ASEAN countries in at least some fields of work. It is hoped that the results of this research will provide further motivation to young Thai students and workers to improve their English skills.

5.2 Recommendations

Considering the results of the research, a clear policy recommendation is simply to find ways to help people improve their English skills. The best way to improve English skill isn't a question that economics can answer, but this study does give insights into the relative importance of English skill and the returns that people can expect to earn from improving their skills. With marginal returns of 16-23% for younger workers in banks in general, the returns to English skill appear to be higher than the returns to earning a master's degree, and to be equivalent to about 3 additional years of work experience. Considering these returns, young workers at local banks could earn higher salaries of around 5,000 baht per month if they can attain high levels of English skill. This finding should lend importance to the recommendation that younger workers strive to build their English skills.

The high returns we observe for younger workers should motivate younger workers to learn English on their own. Indeed, nowadays many young people in Thailand are investing significant time and money to improve their English skills. However, the lack of clear returns to English skill for older workers may be evidence that wages are sticky and fail to completely adjust to reward older workers for English skill.

The results of the regression involving older workers indicate that older workers may not find that English skills are important factors impacting their salaries. If companies believe that English skills are indeed important for at least some of their older employees, they may need to invest resources to provide training for their older workers, or adjust their compensation policies in order to establish clear incentives for older workers to improve their English skills.

5.3 Suggestions for Further Study

Future studies on the returns to language skill would benefit from a more objective method for assessing language skill, in order to avoid the possibility of measurement bias through self-assessed language skill. Most studies make use of large data sets which do not focus primarily on language skill, and therefore do not collect detailed data on the subject. Even in a study such as this, which used a purpose-built survey, the time-demands required of respondents to take a language skill assessment make it difficult to collect this data from respondents who are not being paid for participation in the study.

To address this issue in future studies, it may be possible to include a brief language skill test in a survey, as long as respondents are sufficiently motivated to put in the time and effort to complete the test. While it may be impossible to complete a detailed language assessment within a short period of time, it may be possible to give a short test sophisticated enough to place respondents into broad skill-level categories.

Another way to address the issue would be to seek data sets including information on salary and language skill from multinational companies which require all staff to take a standardized English test such as the TOEIC or IELTS. While this would only allow the researcher to examine a small subset of the working population, the increased accuracy in the measurement of language skill may make this approach worthwhile.

This study found significant returns to English language skill for workers with fewer than 10 years' experience, but not for older workers. An interesting question raised by these results is whether older workers' wages are influenced as much as younger workers' by their skill level in areas that have recently become more

important in the economy. We could imagine that computer skills also may have a larger influence on the salaries of younger workers than older workers, as older workers may have advanced to higher positions in the company at a time when computer skills were less important. Further study of the returns to skills for workers at different stages of their careers would give further insights into the determinants of wages, and into how skills come to be rewarded in the labor market over time.

Finally, while many studies have been conducted on the returns to dominant-language skills for workers or immigrants to a particular country, there have still been few studies on the returns to foreign language skill. This study has given the first estimate of the returns to English skill for university-educated workers in a Southeast Asian country, but there is certainly room in the literature for further study covering a wider range of countries in this region, as well as covering respondents across a wider range of employment sectors and levels of education.

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APPENDIX

Research Survey

Section 1: English Skill (for ENG-related variables)

1) For each statement about language skill below, choose whether you could do the task easily (3), somewhat (2), a little bit (1) or not at all (0).

1a) Reading

English Reading Skill					
		Easily (3)	Somewhat (2)	A Little Bit (1)	Not At All (0)
I can...	...read a short story for young children in English.				
	...read a short business email in English.				
	...read a newspaper article in English.				
	...read a magazine article in English.				
	...read an academic journal article in English.				

1b) Writing

English Writing Skill					
		Easily (3)	Somewhat (2)	A Little Bit (1)	Not At All (0)
I can...	...write a short story for young children in English.				
	...write a short business email in English.				
	...write a news article in English.				
	...write a short story for adults in English.				
	...write an essay for a university course in English.				

1c) Listening

English Listening Skill					
		Easily (3)	Somewhat (2)	A Little Bit (1)	Not At All (0)
I can...	...understand simple sentences in English.				
	...understand a short business conversation in English.				
	...understand a news report on the radio in English.				
	...understand a full radio program in English.				
	...understand a lecture at a university in English.				

1d) Speaking

English Speaking Skill					
		Easily (3)	Somewhat (2)	A Little Bit (1)	Not At All (0)
I can...	...say simple sentences in English.				
	...talk about many daily events in English.				
	...talk about the news in English.				
	...talk about topics related to my job in English.				
	...give a presentation to a group in English.				

2) Have you taken any standardized English tests before? If so, please tell us your scores:

2.1) IELTS: _____

2.2) TOEFL: _____

2.3) TOEIC: _____

Section 2: Personal Information**3) What is your sex?**

3.1) Male

3.2) Female

4) What is the highest level of formal education that your father completed?

- 4.1) Primary School
- 4.2) Lower Secondary School (Mattayom 1-3)
- 4.3) Upper Secondary School (Mattayom 4-6)
- 4.4) Technical College
- 4.5) Bachelor's Degree
- 4.6) Master's Degree or higher

5) What is the highest degree that you have earned?

- 5.1) Bachelor's Degree
- 5.2) Master's Degree
- 5.3) Doctorate Degree

6) What was your GPA in university during your undergraduate studies?

- 6.1) _____ was my GPA.

7) What was the highest possible GPA in your university? (Did your university use the 4.0 scale?)

- 7.1) _____ was the highest possible GPA.

8) What university did you attend as an undergraduate?

- 8.1) _____

Section 3: Job-Related Information**9) What is your current monthly wage for full-time work (40 hours per week)? (If you are working part-time, please give your hourly wage and the number of hours you work each week.)**

- 9.1) For Full-Time Workers: I earn _____ per month.

- 9.2) For Part-Time Workers: I work _____ hours per month and earn _____ per hour.

10) How many years have you been working since you graduated from university?

- 10.1) _____ years

11) What company do you work for?

- 11.1) Company: _____

12) What is your job?

- 12.1) Job: _____

13) Do you work at the company's main office, or at a branch bank?

- 13.1) Main Office

- 13.2) Branch Bank : Which Branch? _____

VITA

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