MIGRATION OF SPECIALIST PHYSICIANS IN AN ECONOMIC COMMUNITY: A COMPARISON OF THAILAND AND POLAND

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ด้วยประชาคมเศรษฐกิจอาเซียน (AEC) ซึ่งกำลังจะเกิดขึ้นในปี 2558 นั้นจะยอมรับการย้ายถิ่นอย่างเสรีของแพทย์เฉพาะทางภายในอาเซียน อนึ่ง แพทย์เฉพาะทางคือแพทย์ผู้มีความชำนาญขั้นสูงสามารถวินิจฉัยและรักษาโรคในผู้ป่วยหนักได้ อย่างไรก็ตาม ขณะนี้ยังไม่มีการศึกษาเกี่ยวกับแบบแผนการย้ายถิ่นดังกล่าว วัตถุประสงค์ในการศึกษานี้ เพื่อสำรวจแบบแผนการย้ายถิ่นในอนาคตภายใต้กรอบ AEC ของแพทย์เฉพาะทางในประเทศไทย วิธีวิจัยประกอบด้วย 3 ขั้นตอนหลัก ได้แก่ (1) การทบทวนวรรณกรรมการย้ายถิ่นของแพทย์เฉพาะทางของโปแลนด์ในสหภาพยุโรป (EU) เพื่อใช้เปรียบเทียบกับแบบแผนการย้ายถิ่นในอนาคตของแพทย์เฉพาะทางของไทย (2) การสำรวจความคิดเห็นของแพทย์ประจำบ้าน (แพทย์ที่กำลังฝึกเฉพาะทาง) ของไทยจากแบบสอบถามที่มีผู้ตอบ 76 คน และ (3) การสัมภาษณ์เชิงลึกจากแพทย์เฉพาะทาง 3 คน และแพทย์ประจำบ้าน 7 คน

จากการทบทวนวรรณกรรมพบว่า ตั้งแต่โปแลนด์เข้าร่วม EU เมื่อปี 2547 จำนวนแพทย์โปแลนด์ที่ย้ายถิ่นออกนอกประเทศนั้นเพิ่มขึ้นกว่าเดิมมาก แพทย์ส่วนใหญ่ที่ย้ายไปได้แก่วิสัญญีแพทย์ ประเทศปลายทางที่ไป ได้แก่ สหราชอาณาจักร, สวีเดน, เยอรมนี และ ไอร์แลนด์ ตามลำดับ ปัจจัยจูงใจให้ย้ายถิ่น ได้แก่ ค่าตอบแทนที่สูงขึ้น, สภาพการทำงานที่ดีกว่า, และ โอกาสที่ดีในการพัฒนาทางวิชาชีพ จากการประเมินแบบสอบถามพบว่าร้อยละ 97.3 ของแพทย์ประจำบ้านตั้งใจว่าจะทำงานในประเทศไทยเป็นเวลาอย่างน้อยห้าปีหลังจบการฝึกอบรม มีเพียงร้อยละ 22.4 และร้อยละ 23.7 เท่านั้นที่รู้จัก AEC และข้อตกลงยอมรับร่วมคุณสมบัติวิชาชีพแพทย์ในอาเซียน (MRAs) อย่างไรก็ตามร้อยละ 33.8 มีความสนใจที่จะไปทำงานแบบเต็มเวลา ระยะเวลาเกินหนึ่งปีในประเทศ 'สิงคโปร์' สาระสำคัญจากการสัมภาษณ์เชิงลึกชี้ให้เห็นว่า ภาระการทำงานที่หนักและล้นเกิน, การขาดการจัดการทางการเงินที่ดีของโรงพยาบาล และ การฟ้องร้องแพทย์ เป็นส่วนผลักดันให้แพทย์อยากย้ายถิ่น ขณะเดียวกัน ค่าตอบแทนที่สูงขึ้นและสภาพการทำงานที่ดีกว่า จะเป็นแรงจูงใจสำคัญให้แพทย์เฉพาะทางต้องการย้ายถิ่น ดังเช่น ระบบบริการสุขภาพที่มีความ 'เป็นธรรม' และ 'โปร่งใส' ของประเทศสิงคโปร์ สรุป แพทย์เฉพาะทางของไทย มีแนวโน้มว่าจะไม่ย้ายถิ่นไปมากเหมือนเช่นในกรณีของโปแลนด์ อย่างไรก็ตาม รัฐบาลไทยควรผลักดันให้มีการพัฒนาสภาพการทำงานและสภาพความเป็นอยู่ในประเทศให้ดีขึ้น

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548 763 8620: MAJOR EUROPEAN STUDIES
KEYWORDS: MIGRATION/ PUSH-PULL FACTORS/ SPECIALIST PHYSICIANS/ ASEAN ECONOMIC COMMUNITY/ HEALTH CARE SYSTEM

KANOKWAN TANGCHITNUSORN: MIGRATION OF SPECIALIST PHYSICIANS IN AN ECONOMIC COMMUNITY: A COMPARISON OF THAILAND AND POLAND. ADVISOR: CHANTAL HERBERHOLZ, Ph.D., 222 pp.

With the establishment of the ASEAN Economic Community (AEC) in 2015, the free movement of specialist physicians, whose competencies are the practicing of advanced diagnosis and treatments for severe patients, will be allowed within the region. However, their future migration patterns within the AEC still have not been assessed yet. This study aims to examine future migration patterns of Thai specialist physicians within the AEC. The methodology of this study consisted of three steps: (1) reviewing relevant literature regarding the migration of Polish specialist physicians in the European Union (EU). This review was used as a benchmark for Thailand's case; (2) opinion surveying of 76 Thai resident physicians by self-administered questionnaires; (3) conducting in-depth interviews (IDI) of three Thai specialist physicians and seven resident physicians.

The literature review shows that the number of emigrated Polish medical doctors had significantly increased after the country's accession to the union since 2004. Most of them were anesthesiologists. Main destinations were the UK, Sweden, Germany, and Ireland, respectively. The main pull factors in the destinations included better income, working conditions, and professional development. The evaluation of questionnaires reveals that 97.3% of respondents intend to work in Thailand, for at least 5 years after finishing the specialist training. In fact, only 22.4% and 23.7% knew about the AEC, and the Mutual Recognition Arrangements (MRAs) on ASEAN medical practitioners, respectively. However, 33.8% were interested to work full-time in 'Singapore' for more than one year. The IDI shows that the main push factors in Thailand include heavy workload, poor financial management of hospitals, and medical malpractice litigations. The main pull factors in more developed ASEAN countries are reported to be better income and better working conditions. In addition, the health care system of Singapore is perceived to be 'fairer' and 'more transparent.' In conclusion, unlike Poland, Thailand does not seem likely to face a large flow of external migration of specialist physicians to other member states in the future. However, according to Thailand-Poland comparison, the improvement of domestic working and living conditions are recommended for the Thai government.

Field of Study : European Studies Student's Signature .....
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LIST OF ABBREVIATIONS

AEC	ASEAN Economic Community
AFAS	ASEAN Framework Agreement on Services
ASEAN	Association of Southeast Asian Nations
EU	European Union
IAI	Initiative for ASEAN Integration
IDI	In-depth interview
MRA	Mutual Recognition Arrangement
PMRA	Professional Medical Regulatory Authority

CHAPTER I

INTRODUCTION

With the establishment of the ASEAN Economic Community (AEC) in 2015, the free movement of specialist physicians, whose competencies are the practicing of advanced diagnosis and treatments for severe patients, will be allowed within the region. However, their future migration patterns within the AEC still have not been assessed yet.

Since, ASEAN countries, including Thailand, have never had experience being members of such economic community before; it is hard to picture of how the future migration would be after the AEC is established. Thus, the migration pattern of Polish specialist physicians in the European Union (EU) will be used as a benchmark for Thailand's case.

Questionnaire surveys and in-depth interviews (IDI) will be used to examine future migration pattern of Thai specialist physicians within the AEC, which comes into effect in 2015. Questionnaire surveys will be used as the study of such phenomenon, while the IDI will help explain in deeper details about the causality of the phenomenon. The survey will be conducted among resident physicians (who will be specialist physicians in 3-5 years). And, the IDI will be conducted among both specialist physicians and resident physicians. On the other hand, the review of literatures will be used to describe the migration of Polish specialist physicians within the EU.

1.1. Background and significance of the problem

The AEC tends to be another challenging issue for Thai health system as the supply of physicians in Thailand is not adequate while the demand for the service is tremendous. According to statistical data, physician density of Thailand is just 0.298 physicians per 1,000 populations.[1] Furthermore, the supply of specialist physicians in the country is far more inadequate. Hence, the AEC as perceived to be the lubricator for migration can have an impact on the future supply of Thai physicians/ specialist physicians in the future. Future migration of specialist physicians, will be necessary to be studied first as they are the majority of total physicians in Thailand.

In conclusion, the study on the future migration pattern of Thai specialist physicians is necessary for policy implications in order to prevent threats of the upcoming the single market (AEC) for Thai health system.

1.1.1. Scope of the study

This paper will cover the study of future migration pattern of Thai specialist physicians, including resident physicians, within five years after the establishing of the ASEAN Economic Community (AEC) in 2015. In addition, the review on the migration of Polish specialist physicians after the country's accession to the European Union (EU) in 2004 will be used as the benchmark for the migration comparison with Thailand.

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[1] "Thailand," https://www.cia.gov/library/publications/the-world-factbook/geos/th.html.

In addition, this paper will rather focus on the external migration within the economic community (from one Member States to another), and will not cover the internal migration pattern within a country.

1.1.2. Free movement of health services within ASEAN

Back in 1967, The Association of Southeast Asian Nations (ASEAN) was established by five countries, including Indonesia, Malaysia, Philippines, Singapore and Thailand. The main objective of the establishment is to accelerate regional "economic growth, social progress and cultural development."[2]

In 2003, all ASEAN Member States agreed to establish "ASEAN Community" by 2020 aiming for deeper integration of the region. ASEAN Community consists of three pillars, including the ASEAN Political-Security Community, ASEAN Economic Community (AEC), and ASEAN Socio-Cultural Community[3].

Thereafter, during the 12th ASEAN Summit in 2007, leaders of all ASEAN countries decided to accelerate the date to establish the ASEAN Community from 2020 to 2015, five year faster than the old plan. All Member States have to adopt the Initiative for ASEAN Integration (IAI) Strategic Framework and IAI Work Plan

[2] "About ASEAN," Association of Southeast Asian Nations official website, http://www.aseansec.org/about_ASEAN.html.
[3] Ibid.

Phase II (2009-2015) as a roadmap to facilitate the establishment of ASEAN Community in 2015 as planned[4].

Health service sector has been included in the ASEAN FRAMEWORK AGREEMENT ON SERVICES (AFAS) since the Fourth Round of the negotiation in 2005 (signed in 2006).[5] The goal of AFAS is to achieve free trade in services by the year 2020, however; the blueprint of the establishing of ASEAN Economic Community in 2015 is already adopted according to the agreement on such acceleration of the integration, so every stakeholder in ASEAN should be aware of this regional evolution. In addition, the rule of Mutual Recognition Arrangements (MRAs) has been adopted to achieve the free movement of professional and skilled workers within ASEAN since 2008.[6]

Mutual Recognition Arrangement (MRA) on medical practitioners mainly aims at facilitating mobility of medical practitioners within the ASEAN; however, according to MRA regulation, ASEAN Member States still have power to exercise their own regulatory power, but such powers are supposed to be in line with the MRA.[7] According to the Article II of the MRA on medical practitioners, definitions of medical practitioners, specialist, foreign medical practitioner, Professional Medical Regulatory Authority (PMRA), are introduced. "Medical

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[4] Ibid.

[5] Chantal Blouin et al., *Trade and health : seeking common ground* (Montreal; Ithaca: Published for the McGill Institute for Health and Social Policy and the North-South Institute-L'Institut Nord-Sud by McGill-Queen's University Press, 2007).

[6] Ibid.

[7] "ASEAN Mutual Recognition Arrangement on Medical Practitioners," Associated of Southeast Asian nations, http://www.aseansec.org/22231.htm.

practitioners," in a sense, have to register to the PMRA and get qualified license to practice medicine. "Specialist" is medical practitioners who has obtained medical specialist training and postgraduate qualification recognized by the Country of Origin. "Foreign medical practitioners" include both medical practitioner and specialist acquiring license to practice medicine in the Country of Origin, but applying to be registered in the Host country. For Thailand, the PMRA who have the control to regulate Medical Practitioners and their practice medicine are Thailand Medical Council and Ministry of Public Health.[8]

According to Article III of the MRA, ASEAN medical practitioners can apply for registration in other Member States, in which, they can be recognized and qualified to practice in other Member States in ASEAN, in accordance with the main objective of the MRA that it has to "facilitate mobility of medical practitioners within ASEAN."[9] However, initial requirements are imposed for the applications as well; first, the applicants must be certified by national PMRA to practice medicine in their country of origin; second, the applicants must work as general medical practitioners or specialists for at least five continuous years in their countries; and thirdly the applicants must fulfill domestic requirements (i.e. passing domestic licensing exam) in the Host countries, in order to be able to practice in such countries.[10]

According to Article X or the final provision of the MRA on medical practitioners, the MRA has to be entered into force after the Member States signed on

[8] Ibid.
[9] Ibid.
[10] Ibid.

the agreement within six months[11]. Member States, who cannot make the MRA into force, have to notify the ASEAN Secretariat within six months from the date of signature.[12]

In terms of legal perspective, leaders from ASEAN Member States agreed to adopt ASEAN Charter on 15 December 2008 as a means to achieve the ASEAN Community[13]. ASEAN Charter has empowered the organization to establish "a number of new organs to boost its community-building process.[14]"

In 2008, ASEAN launched the blueprint of the ASEAN Economic Community (AEC). It has confirmed that the AEC will be created by 2015, and as a result, it will upgrade the economic integration status of ASEAN from free trade area (FTA) into the so-called "single market."[15] The single market under the AEC will facilitate free flow of goods, free flow of services, free flow of investment, freer flow of capital, and free flow of skilled labor.[16] Healthcare has been categorized as one of the four priority services sectors, together with, air transport, e-ASEAN, and tourism. And, it is stated in the AEC blueprint that all Member States should substantially remove restrictions on those four services sectors by 2010.[17]

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[11] Ibid.
[12] Ibid.
[13] "ASEAN Charter," Association of Southeast Asian Nations (ASEAN), http://www.aseansec.org/21861.htm.
[14] Ibid.
[15] "ASEAN ECONOMIC COMMUNITY BLUEPRINT," (2008).
[16] Ibid.
[17] Ibid.

Regarding to the free flow of skilled labor, the blueprint indicate that Member States should promote the mobility of the natural persons who are involved in "cross-border trade and investment related activities" by facilitating "the issuance of visas and employment passes for ASEAN professional."[18]

In 2009, the Roadmap for an ASEAN Community has been signed by all ASEAN Member States during the 14th ASEAN Summit in Cha-am, Thailand. Regarding to the free flow of health services, there would be "substantially no restriction to ASEAN services suppliers; in providing services; and in establishing companies across national borders within the region."[19] However, the free flow of trade in services will subject to domestic regulations.[20]

In addition, it was stated in the 2009 roadmap that all Member States must allow foreign (ASEAN) equity participation of at least 49% by 2008, 51% by 2010, and 70% by 2013 in all "4 priority service sectors."[21]

1.1.3. Trade in health services in Thailand

Prior to the AFAS, General Agreement on Trade in Services (GATS) has allowed Thailand as well as other countries in the ASEAN to develop its trade in health services with other member countries.

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[18] Ibid.
[19] "Roadmap for an ASEAN Community, 2009-2015," (April, 2009).
[20] Ibid.
[21] Ibid. page 36

Active health care providers in the ASEAN like Thailand, Singapore, and Malaysia are trying to liberalize the trade on health services in all modes, except Mode 4 (natural persons), in order to avoid the brain drain of health professionals. In addition, those three countries also want to invest freely in private hospitals in other ASEAN member countries such as Cambodia and Myanmar.[22]

Thailand has been exercising Mode 2 (consumption of service abroad) the most, as the country has provided good standard medical service at relative lower cost comparing to other countries like Singapore, USA, and the UK.

Comparing to other ASEAN countries like Singapore and Malaysia, Thailand exported more of health services in 2005 at 482 million dollars, whereas Singapore and Malaysia could export at 420 million dollars, and 40 million dollars, respectively.[23] According to Table 1 below, it indicates that only 7% of Thailand's health services were exported to ASEAN countries.

	Export revenues	Number of patients	Origin of patients
Malaysia (2003)	RM 150 million ($40 million)	More than 100 000	60% from Indonesia, 10% from other ASEAN countries
Singapore (2002)	$420 million	210 000	45% from Indonesia, 20% from Malaysia, 3% from other ASEAN countries
Thailand	Around 20 billion baht in 2003 ($482 million)	470 000 (2001) 630 000 (2002)	42% from the Far East (mostly Japan), 7% from ASEAN countries

Sources: Singapore Tourism Board, Abidin *et al.* (2005), Arunanondchai (2005).

Table 1: Export of health services from Thailand, Singapore, and Malaysia[24]

[22] _____, *Trade and health : seeking common ground*.
[23] Jutamas Arunanondchai and Carsten Fink, "Trade in health services in the ASEAN region," *Health Promotion International* 21, no. suppl 1 (2006).
[24] Ibid.

However, the price of coronary by-pass graft surgery and hospitalization (for example) in Singapore is almost two times higher than in Malaysia and Thailand (as presented in Table 2 below).

	Coronary by-pass graft surgery	Single private hospital room per night
Malaysia	$6 315	$52
Singapore	$10 417	$229
Thailand	$7 894	$55
United Kingdom	$19 700	n/a
United States	$23 938	$1351

Source: Abidin *et al.* (2005).

Table 2: Price comparison of Coronary by-pass graft surgery and hospitalization (US$, 2001)[25]

Due to the effect of the medical tourism, the demand of Thai physicians by foreign patients is assumed to reach 528-909 incremental physicians in 2015, and the demand of Thai physicians by Thai patients is assumed to increase by around 1,891-2,175 in 2015, according to the analysis of the data of outpatients and inpatients each year.[26] Thus, the total incremental demand of physicians by the year 2015 of both Thai and foreign patients would be around 2419-3084 physicians, the estimation is based on the information from two private hospitals regarding the time that each physician spent with Thai and foreign patients per day.[27]

[25] Ibid.
[26] A. NaRanong and V. NaRanong, "The effects of medical tourism: Thailand's experience," *Bulletin of the World Health Organization* 89, no. 5 (2011).
[27] Ibid.

However, regarding mode 4 of trade in services (movement of natural persons), Thailand only faced the external brain drain of physicians during 1960s, as most of them migrated to the United States.[28]

According to the current situation of the shortage of the physicians in Thailand, the AEC is perceived to be another challenge that Thailand has to face after 2015. Thailand's capacity to provide sufficient health services to both Thai citizens and foreign patients are being questioned widely as it is almost impossible for Thailand to attract foreign-trained doctors to work in the country due to the fact that they have to take a licensing exam, which is written in Thai, before they can practice medicine in Thailand.[29]

1.1.4. Thailand's commitment to the free movement of medical practitioners under the AEC

According to the annexes to the protocol to implement the 7th package of commitments under the ASEAN Framework Agreement on Services (AFAS)

[28] Suwit Wibulpolprasert and Paichit Pengpaibon, "Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience," *Human Resources for Health* 1, no. 1 (2003).

[29] "REGULATIONS CONCERNING THE PRACTICE OF MEDICINE FOR ALIENS IN THAILAND," http://www.tmc.or.th/news02.php.

signed in 2009, all Member States still have not lifted the restrictions on Mode 3 (Commercial presence) and Mode 4 (Presence of natural persons).[30]

According to the seminar on the AEC in June 2011 in Bangkok, the MRA on medical practitioners has already been signed by Thai government (Ministry of Public Health); however, the Medical Council of Thailand has still not signed it.[31] According to the seminar, it was predicted that the main destination of the migration of Thai physicians/ specialist physicians within the AEC would be Singapore[32]. On the other hand, for specialist physicians in other countries in ASEAN, they have to pass the licensing exam, which is written in Thai, before they can practice medicine in Thailand.[33]

According to the information received from telephone interview with the officer at the Medical Council of Thailand on 29 May 2012, it is confirmed that the Medical Council didn't sign on the MRA on medical practitioner; however, the organization complied with the agreement made by the Ministry of Public Health since 2009. In other words, Thailand's PMRA (Medical Council of Thailand and the Ministry of Public Health) are committed to the MRA. In addition, regarding the licensing exam requirement for practicing medicine in Thailand, as of now the exam questions are written in Thai, but the foreign applicants can answer in English.

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[30] "Annexes to the Protocol to Implement the Seventh Package of Commitments under the ASEAN Framework Agreement on Services, Cha-am, Thailand, 26 February 2009," (2009).

[31] "การสัมมนาทางวิชาการ เรื่อง "เช็คความพร้อม" รับการเคลื่อนย้ายแรงงานฝีมือเสรี สู่ประชาคมเศรษฐกิจอาเซียน (Seminar: Readiness of the Free Movement of Skilled Workers in the AEC)", (paper presented at the การสัมมนาทางวิชาการ, Bangkok, 29 June, 2011).

[32] Ibid.

[33] Ibid.

However, in the future, it is likely that the Medical Council of Thailand will conduct licensing exam in English exclusively for ASEAN medical doctors in order to facilitate the inflows of physicians from other ASEAN countries, according to the interview.

1.1.5. The significance of Thai specialist physicians

As of 2010, there are 17,227 specialist physicians in Thailand[34], while the total number of physicians (including both specialist physicians and family physicians) is 22,019[35] Thus, specialist physicians are very important to Thai health system and that their future migration pattern to other ASEAN countries must be studied.

According to the 2010 statistics from Ministry of Public Health of Thailand, the ratio population of physicians and populations for the whole country are 1: 2,893; 1: 1,052 in Bangkok Metropolis; 1: 2,533 in Central area; 1: 4,947 in Northeastern area; 1: 3,397 in Northern area; and 1: 3,504 in Southern area.[36] However, specialist physicians are much scarcer as the ratio of one specialist physician (in any specialties) per population is all much lower. For example, the ratio of one cardiac surgeon per population is 1: 54,304 in Bangkok, and even more lower

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[34] "รายงานบุคลากร แพทย์เฉพาะทาง (Reports on health personnels: specialist physicians)," Bureau of Policy and Strategy, Ministry of Public Health, Thailand, http://moc.moph.go.th/Resource/Personal/index,new.php?tab=tab1.

[35] "รายงานบุคลากรทางการแพทย์ (Reports on health personnels)," Bureau of Policy and Strategy, Ministry of Public Health, Thailand, http://moc.moph.go.th/Resource/Personal/index,new.php.

[36] Ministry of Public Health Bureau of Policy and Strategy, Thailand, "Health Statistics 2010 สถิติสาธารณะสุข 2553," (2010).

in other provinces (1:150,784 in Central area, 1:205,091 in the Northeast area, 1:112,184 in Northern area, 1: 84,318 in the Southern area).[37]

1.1.6. Rationale of choosing Poland to compare with Thailand

According to the Theory of Migration, the removal of immigration restrictions within the Common Market can exacerbate the migration of workers in those countries.[38] Thus, it supports the belief that the free movement of workers under the economic community can entail large migrations from one of these countries to another. However, Thailand, which has never been part of economic community before can learn such experience from Poland as Poland has become Member State of the European Union since 2004. European Union has developed its community status from European Community (EC) to become economic union since 1993 under Maastricht Treaty. Hence, ASEAN Economic Community, which is still in its early stage, has to learn about the implications of single market, in order to be able to deal with possibly difficult situations in the future.

The reasons for comparing Thailand with Poland are as presented as follows. First, Thailand is a member of the ASEAN, which is going to establish the economic community (AEC) in 2015, and Poland is a member of the European Union since 2004. Second, comparing to other Member States within the EU, Poland has closest number of physician density, in which Thailand figure is 0.298 and Poland is

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[37] "รายงานบุคลากร แพทย์เฉพาะทาง (Reports on health personnels: specialist physicians)".
[38] Everett S. Lee, "A Theory of Migration," *Demography* Vol. 3, No. 1(1966).

2.144. In Physician density of countries in Europe indicates that Poland has the least figure at 2.2 physicians per 1,000 populations, while the average EU figure is 3.3 physicians per 1,000 populations.[39]

Third, both Thailand and Poland are considered the source countries of specialist physicians within the AEC and the EU respectively. They are both considered the source countries or the sending countries of specialist physicians according to the low rates of the registrations of foreign-trained physicians in both countries. In Thailand, the number of foreign-trained physicians is close to 0% of the total number of Thai physicians[40], while in Poland only 0.6% of Polish physicians are foreign-trained physicians.[41] In addition, specialist physicians who want to practice medicine in Thailand or in Poland will have to take licensing exams which are written in Thai and Polish, respectively.

According to the regulations concerning the practice of medicine for aliens in Thailand (section 30 of the Medical Act1982), all foreign-trained doctors have to take the licensing examination.[42]

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[39] OECD, "Practising physicians per 1 000 population," *Health at a Glance: Europe 2010* (2010).

[40] "ข้อมูลแพทย์ ณ วันที่ 31 ธันวาคม 2554 (Data of Physicians Until 31 DEC 2011)," Thai Medical Council, http://www.tmc.or.th/statistics.php.

[41] Katarzyna Czabanowska Marcin Kautsch, "When the grass gets greener at home: Poland's changing incentives for health professional mobility," *Health Professional Mobility and Health Systems, Evidence from 17 European countries* (2011).

[42] "Regulation Concerning the Practice of Medicine for Aliens in Thailand," The Medical Council of Thailand, http://www.tmc.or.th.

In addition, since 1986 onwards (See Figure 1 below), the licensing examination has been given only in Thai. Thus, it is almost impossible for foreign physicians to be able to operate their services in Thailand.[43]

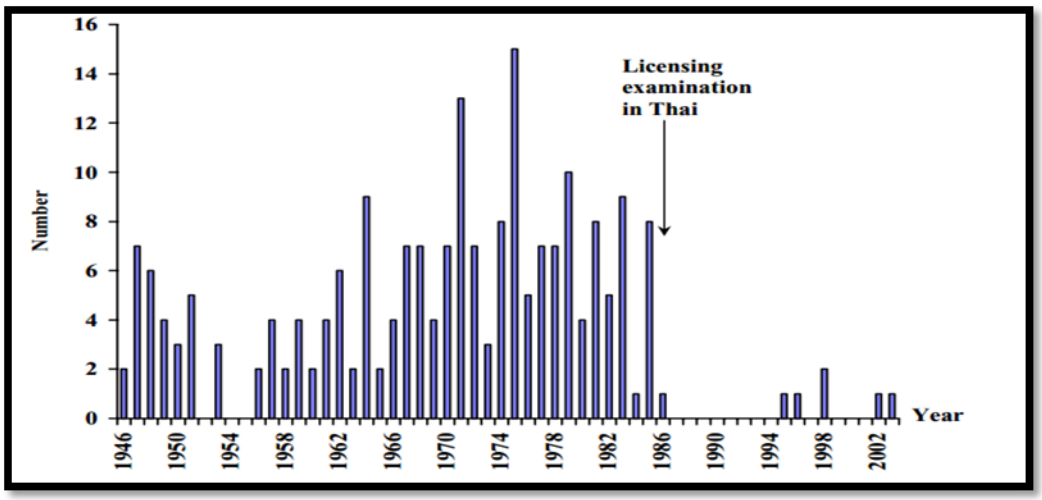

Figure 1: Number of foreign-trained physicians passing licensing examination in Thailand (1946-2003)[44]

1.2. Research question:

The research question is "What will be the future migration pattern of Thai specialist physicians within the ASEAN Economic Community (AEC)?"

1.2.1. Main research objective:

To examine the future migration pattern of Thai specialist physicians within the ASEAN Economic Community (AEC)

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[43] Suwit Wibulpolprasert et al., "International service trade and its implications for human resources for health: a case study of Thailand," *Human Resources for Health* 2, no. 1 (2004).
[44] Ibid.

1.2.2. Specific research objectives:

The specific research objectives are including; to examining push-pull factors behind future migration of Thai specialist physicians in the AEC; to understand migration pattern of Polish specialist physicians in the European Union (EU); and to compare the situation of Thailand and Poland regarding the migration patterns of specialist physician in an economic community.

1.3. Research benefits

This is crucial to see in what degree Thai specialist physicians perceive the AEC as a great opportunity for their career as it could help high authorities in the public health sector to deal with the emigration of Thai specialist physicians that might happen in the future. To do so, research on migration of specialist physicians has to be taken as it could provide rich information about the migration pattern and push-pull factors that cause the act of migration.

Since AEC is going to be established in the near future, it is wiser to look at experience from other country that has been in the economic community as well. Thus, the author selected Poland as the country has become part of the European Union since 2004 and has experienced several problems regarding the migration of physicians/ specialist physicians.

1.4. Expected benefits

This research aims to target decision-makers and experts in healthcare field. Those people can influence the regulation of health policies, which can lead to

better management of the scarce supply of specialist physicians in Thailand, especially after the establishing of the AEC in 2015.

1.5. Overview of the thesis

In Chapter I, the author mainly discussed about the significance of the research problem or the research question. In addition, the author also presented the information regarding trade in health services in Thailand and the rationale of why comparing Poland with Thailand.

In Chapter II, the author specified relevant migration theories and used them throughout this research, and presented findings of previous research regarding the migration pattern and push-pull factors behind the migration of specialist physicians in Thailand and Poland. Consequently, the presented theories and previous research findings in Chapter II were used to form the conceptual framework. The author designed the conceptual framework mainly by using 'A Theory of Migration' by Everett S. Lee, in which, Lee categorized four sets of factors influencing the act of migration, including a set of factors at origin (push factors), a set of factors at destinations (pull factors), a set of intervening obstacles, and a set of personal factors.

In Chapter III, the author used criterion sampling method to select the sample of the study for Thailand's context. The study for Thailand's context is divided into two parts, first is quantitative analysis (questionnaire), and second is qualitative analysis (in-depth interview). In addition, for Poland's context, the author reviewed relevant literature regarding the migration of Polish physicians (as presented in Chapter II), and then draw a summary (as presented in chapter IV) in order to be able to compare with the migration of specialist physicians in Thailand's context (as

presented in Chapter V). However, the author did not submit the thesis to the Institutional Review Board (IRB) to approve before collecting research data. Nevertheless, during working on this paper from the beginning to the end, the author was always concerned about ethical issues regarding the protection of rights of the questionnaire respondents and interview participants.

In Chapter IV, the research results include the results from literature review of Poland's context, the results from questionnaire surveys to Thai resident physicians (physicians who are training to become specialist physicians in the future), and the results from the in-depth interviews of Thai resident physicians and Thai specialist physicians.

In Chapter V, the author discussed about the research results (as presented in Chapter IV), and then referred back to the hypotheses and previous studies (as presented in Chapter II). Then, the author also did the Thailand-Poland comparison.

In Chapter VI, the author summarized the research findings, as well as, indicated limitations and provided suggestions for further studies.

CHAPTER II

LITERATURE REVIEWS

The author will present related theories first as to keep the readers focused on the factors causing migration in broader perspective.

2.1. Theoretical focus

After reviewing several migration theories, Everett S. Lee's *A Theory of Migration* written in 1966 tends to be the most appropriate one to describe migration of specialist physicians in an economic community. Lee's theory was used heavily throughout this research, as it can help describe the push-pull factors of the future migration of specialist physicians in the AEC, as well as, the obstacles for migration and the volume of migration. However, the author also integrated Ravenstein's *Law of Migration* written in 1885, and Iredale's *The Migration of Professionals: Theories and Typologies* written in 2001 to form conceptual framework.

Lee's paper explains migration in very broad way, but he did not describe the migration of highly skilled migrants in particular. Therefore, the author also presents the work of Robyn Iredale, in which, it provides more specific framework to discuss about highly skilled migration. Iredale presented five typologies for analyzing the flow of skilled migration, which includes motivations, nature of source and destination, channel or mechanism, length of stay, and mode of incorporation.

In addition, the author reviewed the original version of Ravenstein's Law of Migration and the revised versions by Everett S. Lee in order to give readers the most accurate interpretation of the main idea of Ravenstein's Law of Migration.

Theories used throughout this research are as presented as follows.

2.1.1. Ravenstein's Laws of Migration

Back in 1885, Ravenstein used British Census in 1881 as based evidence to form his laws of migration, as presented in his work, "The Laws of Migration." Ravenstein mentioned the push-pull process of the migration and identified *distance, economic opportunities, and personal differentials* as the main factors for migration.[45] Regarding migration, Ravenstein described it as the displacement of population. "The deficiency of hands in one part of the country is supplied from other parts where population is redundant," he stated.

According to a Theory of Migration, Lee had furthered Ravenstein's work and formed his own theory of migration, in which he provided broader scope of the push-pull factors and the pattern of migration. However, the summary of Ravenstein's paper in Lee's Theory of Migration is presented in the Table 3 below.

Summary of Ravenstein's migration paper **By Everett Lee in Theory of Migration (1966)**
1) **Migration and distance**.-(a) "[The great body of our migrants only

[45] E. G. Ravenstein, "The Laws of Migration," *Journal of the Statistical Society of London* Vol. 48. No.2(1885).

proceed a short distance" and "migrants enumerated in a certain center of absorption -will . . . grow less [as distance from the center increases]"(I, pp. 198-99).5 (b) "Migrants proceeding long distances generally go by preference to one of the great centers of commerce and industry" (I, p. 199).[46]
2) **Migration *by* stages**.-(a) "[T]here takes place consequently a universal shifting or displacement of the population, which produces 'currents of migration,' setting in the direction of the great centers of commerce and industry which absorb the migrants" (I, p.198). (b) "The inhabitants of the country immediately surrounding a ton of rapid growth flock into it; the gaps thus left in the rural population are filled up by migrants from more remote districts, until the attractive force of one of our rapidly growing cities makes its influence felt, step by step, to the most remote corner of the kingdom" (I, p. 199). (c) "The process of dispersion is the inverse of that of absorption, and exhibits similar features" (I, p. 199).[47]
3) **Stream and counterstream.-"**Each main current of migration produces a compensating counter-current" (I, p. 199). In modern terminology, stream and counterstream have been substituted for Ravenstein's current and counter-current.[48]

[46] Lee, "A Theory of Migration."
[47] Ibid.
[48] Ibid.

4) **Urban-rural differences in propensity to migrate**.-"The natives of towns are less migratory than those of the rural parts of the country" (I, p. 199).[49]
5) **Predominance of females among short distance migrants**.-"Females appear to predominate among short-journey migrants" (II,p. 288).[50]
6) **Technology and migration**.-["Does migration increase? I believe so! . . . Wherever I was able to make a comparison I found that an increase in the means of locomotion and a development of manufactures and commerce has led to an increase of migration" (II, p.288).[51]
7) **Dominance of the economic motive**.-"Bad or oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsion (slave trade, transportation), all have produced and are still producing currents of migration, but none of these currents can compare in volume with that which arises from the desire inherent in most men to 'better' themselves in material respects" (II, p.286).[52]

Table 3: Summary of Ravenstein's paper in Theory of Migration by Lee

[49] Ibid.
[50] Ibid.
[51] Ibid.
[52] Ibid.

2.1.2. Everett S. Lee's Theory of Migration

Lee developed his 'simple schema for migration' from previous works (especially from Ravenstein's Laws of Migration) and general migratory data in Europe and America available at that time. He presented a model which consisted of four sets of factors involving the act of migration including, *factors associated with the area of origin, factors associated with the area of destination, intervening obstacles,* and *personal factors*. Importantly, he presented his hypotheses on *the volume of migration, stream and counterstream*, and *characteristics of migrants.*[53] In addition, according to his work, Lee shared his view regarding to the economic community (European Community: EC) as he concluded that the removal of immigration restrictions within the Common Market countries could lead to large movement of people in such countries.

According to his work, Lee explained about the diversity of people and the volume of migration, and he confirmed that the number of specialists is increased by the 'prolonged education.'[54] Lee exemplified engineers, professors, business executives and actors as examples to generalize that specialists are very prone to migration as their vocations allow them to do so. ". . ., for many of whom the demand is small in any one place but widespread," he stated.

In addition, Lee stated that highly educated persons such as professional and managerial people do migrate as migration could mean 'advancement' for them, as they are under no necessity to migrate.[55]

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[53] Ibid.
[54] Ibid. Page 53.
[55] Ibid. page 56

The author extracted the main idea of Lee's paper into five categories as presented as follows.

2.1.2.1. Migration by definition

According to his paper, Lee discussed about traditional definition of migration, which described migration as "a permanent or semi-permanent change of residence" with no restrictions to distance, voluntariness of the act, or even whether it is an external or internal migration.[56] However, the "continual movement" with "no long-term residence" of those nomads and migratory workers are not considered a migration.[57]

2.1.2.2. Migration factors

Lee presented four factors of migration, which described the push-pull factors of migration and the migration pattern. Lee concluded that his conceptualization of migration is "self-evident" and it could provide "a framework for much of what we know about migration and indicates a number of fields for investigation."[58]

Lee explained that some factors associated in origin and destination could affect most people in much the same way; however, other factors could affect different people in different ways.[59] Lee stated that the differences between the factors associated in an area of origin and the factors associated in an area of destination are

[56] Ibid. Page 49
[57] Ibid. Page 49
[58] Ibid.
[59] Ibid. page 50

caused by the knowledge difference of such areas and the difference of the stages of the life cycle that influence the evaluation process.[60]

According to the Theory of Migration, people's knowledge of their origin areas is quite exact as they can make 'unhurried judgments' through long-term experiences. On the other hand, the knowledge of the destination areas is mostly inexact since most people may not be able to notice some of the advantages or the disadvantages of the destination areas. "Thus, there is always an element of ignorance or even mystery about the area of destination, and there must always be some uncertainty with regard to the reception of a migrant in a new area."[61]

Regarding to the stages of the life cycle, he stated that "the general good health of youth" and "the absence of annoying responsibilities" during formative years in the origin area, could influence people to exaggerate the positive elements (overevaluation) and underestimate the negative elements in the origin (underevaluation). On the other hand, migrants who have trouble in the area of destination during their newly stays tend to produce reckless evaluation of the positive and negative factors at the destination (erroneous evaluation).[62]

However, Lee stated in his work that the differences of the factors in the origin/destination alone cannot assure the act of migration, as it has to consider the set of intervening obstacles as well. According to Chart 1 in his work (as presented in in the Figure 2 below), "…, a simple calculus of +'s and –'s does not decide the act of

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[60] Ibid.
[61] Ibid.
[62] Ibid.

migration, the balance in favor of the move must be enough to overcome the natural inertia which always exist.[63]" Within the set of obstacles, Lee highlighted 'distance' as the most important obstacle as it associated with other factors that could prevent movement of people, including, physical barriers (i.e. Berlin Wall, immigration laws), transporting cost, communication, etc.[64]

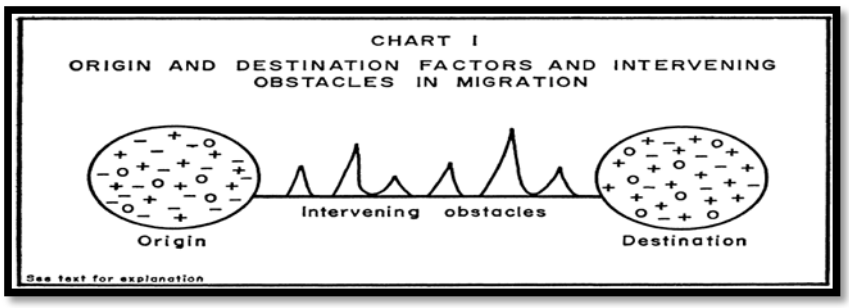

Figure 2: Intervening obstacles in Theory of Migration by Lee[65]

The last set of factors of migration to be considered is 'a set of personal factors' as they could leverage the decision to migrate. "Some of these are more or less constant throughout the life of the individual, while others are associated with stages in the life cycle. . ."[66] He stated that the evaluation of the situation in the origin can be determined by personal sensitivities, intelligence, and awareness of conditions elsewhere, while the knowledge of the situation at destination could be received through 'personal contacts or upon sources of information.'[67]

In additions, Lee also pointed that in reality not all migratory decisions are derived from rational reasons. Irrational reasons, which stem from "transient

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[63] Ibid.
[64] Ibid.
[65] Ibid. page 50
[66] Ibid.
[67] Ibid.

emotions, mental disorder, and accidental occurrences," can also be significant.[68] ". . ., and for some persons the rational component is much less than the irrational," he stated. Also, in reality, migration is very complicated, as the decisions to migrate are not necessarily come from migrants themselves. "Children are carried along by their parents, willy-nilly, and wives accompany their husbands though it tears them away from environments they love."

2.1.2.3. Volume of migration

Everett S. Lee drew six conclusions regarding to the volume of migration, as presented as in Table 4 below.

Volume of migration
1) ***The volume of migration within a given territory varies with the degree of diversity of areas included in that territory.*** ". . . A high degree of diversity among areas should result in high levels of migration," "The end of the period of settlement does not necessarily imply a decrease in areal diversity. On the contrary, the industrialization . . . is a great creator of areal diversity."[69]

[68] Ibid.
[69] Ibid., page 52

2) The volume of migration varies with the diversity of people.

"Where there is a great sameness among people—whether in terms of race or ethnic origin, of education, of income, or tradition—we may expect a lesser rate of migration than where there is great diversity."[70]

3) The volume of migration is related to the difficulty of surmounting the intervening obstacles

"One of the most important considerations in the decision to migrate is the difficulty of the intervening obstacles," "The removal of immigration restrictions within the Common Market countries has been accompanied by large migrations of workers from one of these countries to another."[71]

4) The volume of migration varies with fluctuations in the economy.

"During periods of economic expansion, . . ., The contrast between the positive factors at origin and destination is therefore heightened, and the negative factors at origin seem more distressing,"[72]

"During depressions . . . sheer familiarity with the place of residence (which in itself constitutes an element of safety) militates against moving to places where positive factors no longer so heavily outweigh those at home."[73]

[70] Ibid., page 53
[71] Ibid., page 53
[72] Ibid. page 53
[73] Ibid. page 53

5) Unless severe checks are imposed, both volume and rate of migration tend to increase with time.

"The volume of migration tends to increase with time for a number of reasons, among them increasing diversity of people, and the diminution of intervening obstacles,"[74]

"In an advancing society, however, specialization multiply, and there is an increased realization of both the existence and the need for special aptitudes or training,"[75]

"Increasing technology plays an important role in diminishing intervening obstacles. Communication becomes easier, and transportation relative to average income becomes cheaper,"[76]

"Even if there were no change in the balance of factors at origin and destination, improving technology alone should result in an increase in the volume of migration,"[77]

"A person who has once migrated . . . is more likely to migrate again than is the person who has never previously migrated,"[78]

"Furthermore, succeeding migration lowers inertia even more. Once a set of

[74]Ibid. page 53
[75]Ibid. page 54
[76] Ibid. page 54
[77] Ibid. page 54
[78] Ibid. page 54

intervening obstacles has been overcome, other sets do not seem so formidable, and there is an increasing ability to evaluate the positive and negative factors at origin and destination."[79]
6) The volume and rate of migration vary with the state of progress in a country or area. ". . . Intervening obstacles to migration within the country (economically progressive country) are lessened by improving technology and by political design," "We should, therefore, expect to find heavy immigration to developed countries where this is permitted and within such countries a high rate of internal migration,"[80] "We may argue that a high rate of progress entails a population which is continually in a state of flux, responding quickly to new opportunities and reacting swiftly to diminishing opportunities."[81]

Table 4: Volume of Migration by Lee

2.1.2.4. Stream and Counterstream

Everett S. Lee drew six conclusions regarding to the stream and counterstream, as presented as in Table 5 below.

[79]Ibid. page 54
[80] Ibid. page 54
[81]Ibid. page 54

Stream and counterstream
1) Migration tends to take place largely within well-defined streams. "This is true in part because opportunities tend to be highly localized and in part because migrants must usually follow established routes of transportation,"[82] "Perhaps just as important is the flow of knowledge back from destination to origin and, indeed, the actual recruitment of migrants at the place of origin,"[83] "The overcoming of a set of intervening obstacles by early migrants lessens the difficulty of the passage for later migrants."[84]
2) For every major migration stream, a counterstream develops. "Migrants become aware of opportunities at origin which were not previously exploited, or they may use their contacts in the new area to set up businesses in the old," ". . . not all persons who migrate intend to remain indefinitely at the place of destination."[85]
3) The efficiency of the stream (ratio of stream to counterstream or the net redistribution of population effected by the opposite flows) is high if the major factors in the development of a migration stream were minus

[82] Ibid. page 55
[83] Ibid. page 55
[84] Ibid. page 55
[85] Ibid. page 55

factors at origin.

"Few of the Irish who fled famine conditions returned to Ireland, and few American Negroes return to the South."[86]

4) **The efficiency of stream and counterstream tends to be low if origin and destination are similar.**

"In this case, persons moving in opposing flows move largely for the same reasons and in effect cancel each other out."[87]

5) **The efficiency of migration streams will be high if the intervening obstacles are great.**

"Migrants who overcome a considerable set of intervening obstacles do so for compelling reasons, and such migrations are not undertaken lightly."[88]

6) **The efficiency of a migration stream varies with economic conditions, being high in prosperous times and low in times of depression.**

"During boom times the usual areas of destination . . . expand rapidly, and relatively few persons, either return migrants or others, make the countermove,"[89]

"In times of depression, however, many migrants return to the area of origin,

[86] Ibid. page 55
[87] Ibid. page 55
[88] Ibid. page 55
[89] Ibid. page 56

and others move toward the comparatively 'safer' non-industrialized areas."[90]

Table 5: Stream and Counterstream by Lee

2.1.2.5. Characteristics of migrants

Everett S. Lee drew seven conclusions regarding to the characteristics of migrants, as presented as in Table 6 below.

Characteristics of migrants
1) Migration is selective. ". . . migrants are not a random sample of the population at origin," "By positive selection is meant selection for migrants of high quality and by negative selection the reverse."[91]
2) Migration responding primarily to plus factors at destination tend to be positively selected. "These persons are under no necessity to migrate but do so because they perceive opportunities from afar and they can weigh the advantages and disadvantages at origin and destination."[92]
3) Migration responding primarily to minus factors at origin tend to be negatively selected, or where the minus factors are overwhelming to entire population groups, they may not be selected at all.

[90] Ibid. page 56
[91] Ibid. page 56
[92] Ibid. page 56

"On the whole, however, factors at origin operate most stringently against persons who in some way have failed economically or socially."[93]
4) Taking all migrants together, selection tends to be bimodal. "For any given origin, some of the migrants who leave are responding primarily to plus factors at destination and therefore tend to be positively selected, while others are responding to minus factors and therefore tend to be negatively selected."[94]
5) The degree of positive selection increases with the difficulty of the intervening obstacles. "Even though selection is negative or random at origin, intervening obstacles serve to weed out some of the weak or the incapable,"[95] "It is also commonly noted that as distance of migration increases, the migrants become an increasingly superior group."[96]
6) The heightened propensity to migrate at certain stages of the life cycle is important in the selection of migrants. "Since some of these events happen at quite well defined ages, they are important in shaping the curve of age selection. They are also important in

[93] Ibid. page 56
[94] Ibid. page 56
[95] Ibid. page 56
[96] Ibid. page 56-57

establishing other types of selection—marital status or size of family, for example."[97]
7) **The characteristics of migrants tend to be intermediate between the characteristics of the population at origin and the population at destination.** "Even before they leave, migrants tend to have taken on some of the characteristics of the population at destination, but they can never completely lose some which they share with the population at origin,"[98] "The fertility of migrants, for example, tends to fall between that of the population at origin and the population at destination, and the education of migrants from rural areas, while greater than that of non-migrants at origin, is less than that of the population at destination,"[99] "Thus, we have one of the paradoxes of migration in that the movement of people may tend to lower the quality of population . . . at both origin and destination."[100]

Table 6: Characteristics of migrants by Lee

2.1.3. Robyn Iredale's The Migration of Professionals: Theories and Typologies

[97] Ibid. page 57
[98] Ibid. page 57
[99] Ibid. page 57
[100] Ibid. page 57

2.1.3.1. General conclusions

Regarding to timeline of professional migration, Iredale divided it into three periods, including, prior to 1960; highly skilled migrants migrated mainly because of political conflicts, since 1960s; there was an emergence of the "brain drain," since 2000; highly skilled migrants share larger scale in global migration streams.[101]

He mentioned that temporary skilled migration is much more prevalent than in the past due to the 'increasing globalization of firms' and the 'internationalization of higher education.'[102]

Importantly, he also confirmed in his work that currently national professional bodies are not the only party, which determines professional inclusion/ exclusion, as "the operation of professions has become a transnational matter although the extent of internationalization varies with professions."[103]

According to Iredale (2001), many countries allow temporary migrants to settle and operate their skills in the countries in order to solve either immediate or short-term of skills shortages, but for permanent migrants, it is much harder for them to be absorbed, as those host countries have to guarantee jobs for domestic skilled workers as well.[104]

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[101] Robyn Iredale, "The Migration of Professionals: Theories and Typologies," *International migration* 39, no. 5 (2001). Abstract.
[102] Ibid. Abstract.
[103] Ibid. Abstract.
[104] Ibid. page 8

To specify the definition of highly skilled workers, Iredale described them as people who have at least "a university degree or extensive/equivalent experience in a given field."[105]

Similarly to Lee's argument, Iredale added that highly skilled workers "often seek to maximize return on their investment in education and training by moving in search of the highest paid and/or most rewarding employment."[106] On the other hand, many countries try to seal their domestic highly skilled workers and attract ones from other countries "as a means of filling skilled labor shortages in order to ensure that economic growth is not impeded in the short term."[107]

For nurses, the most important criteria for choosing destinations are including "accreditation issues," and "language and cultural factors.[108]"

Regarding to female migration, Iredale argued that skilled women would choose their family over their careers. Another reason for them not to migrate is the perception of gender bias in the career at destinations.[109]

2.1.3.2. Theories of professional migration

Iredale discussed about previous theories related to professional migration, as presented as in Table 7 below.

Theories of professional migration
1) Human capital theory

[105] Ibid. page 8
[106] Ibid. Page 8
[107] Ibid. page 8
[108] Ibid. page 19
[109] Ibid. page 19

"People move to find employment and remuneration more appropriate to their formal education and training"

"There is no room in this micro level approach for informal training or for the role of institutional factors, discrimination and other factors that lead to imperfections in the labor market."[110]

2) The Structurist neo-Marxist macro level approach

"Allows for the impact of gender, race and class, as well as for the impact of the difference between rich core and peripheral nations."

"But, it does not allow for institutional factors such as ethnic or other networks, various types of agents or the role of professional/industry unions,"[111]

"In 1989, Salt and Findlay argued that a theoretical framework for skilled migration needed to incorporate a mixture of macro and micro elements, including the new international spatial division of labor, the nature of careers, the role of intra-company labor markets and the lubrication provided by recruitment and relocation agencies."[112]

3) Structuration approach (Goss and Lindquist (1995))

"Both private capital and the state are engaged in active recruitment to fill labor needs."

[110] Ibid. page 8
[111] Ibid. page 8
[112] Ibid. page 9

". . . there are important individual and organizational agents who not only provide the employment opportunities that motivate migration, but also directly recruit workers and exert indirect control over recruitment by setting qualifications for employment."[113]
4) Iredale (1999) ***". . . National policies and bilateral and multilateral agreements (European Union, North American Free Trade Agreement, Mutual Recognition Agreement between Australia and New Zealand) were becoming important in facilitating the flow of highly skilled labor"*** "State and regional policies or agreements serve as "lubricators" to speed up desired industry-motivated movements,"[114] "The policies are important although it is now clear that flows are being driven largely by industry and market requirements,"[115] "One national policy being used to a significant degree by many industrialized countries is the internationalization of higher education,"[116] "Residents of developing countries often see a western degree as a ticket to employment in the more industrialized countries,"[117]

[113] Ibid. page 9
[114] Ibid. page 9
[115] Ibid. page 9
[116] Ibid. page 9
[117] Ibid. page 9

"Moreover, a foreign qualification is seen as ensuring not only acquisition of technical skills but also of "other" language competence. . ."[118]
"University training is often seen as too academic, inflexible and too slow to adjust to the needs of the market,"[119]
"The harmonization of training is enabling a more international framework for professions." [120]

Table 7: Theories of professional migration by Iredale

2.1.3.3. Internationalization of Health professionals

Iredale discussed about medical practitioners within Commonwealth countries that those countries shared similar training systems of medical practitioners which involved an exchange of teaching staff and students, and common curricula and standards, which enabled those medical practitioners to work in other countries in the Commonwealth.[121] However, when some countries had an oversupply of doctors, previous agreement was restricted.[122]

Iredale also stated that regional blocs like the European Union (EU), the North American Free Trade Agreement (NAFTA), and the Australia-New Zealand Mutual Recognition Agreement (MRA) at that time were examples of transnational

[118] Ibid. page 10
[119] Ibid. page 10
[120] Ibid. page 10
[121] Ibid.
[122] Ibid.

arrangements, which escalate the idea of transnationalization (interconnectivity between people) as those organizations help facilitate the move of people, especially skilled persons at the very beginning.[123]

International agreements and organizations such as World Trade Organization (WTO) and General Agreement on Trade in Services (GATS) also shared important role towards the liberalization in trade in professional services[124].

Unlike other professions such as accountants, actuaries, and IT professions, medical and nursing professions remain focusing at national level rather than international cooperation, and there are policy barriers initiated to exclude foreign medical practitioners from domestic market[125]. "These policies and practices have subsequently led to shortages that have resulted in a much greater market impact on the operation of the profession," Iredale stated.

Shortages of medical practitioners in many public hospitals in the rural areas of the US, UK, Canada, Australia, New Zealand, and South Africa have forced such countries to bring in the temporary foreign medical practitioners[126]. Regarding to the pattern of migration, Iredale stated that foreign medical practitioners had been recruited and hired through their temporary or permanent visas. In Australia, temporary foreign doctors are easily admitted to Australia, while permanent ones have to pass formal assessment such as formal accreditation through an examination

[123] Ibid.
[124] Ibid. page 11
[125] Ibid. page 12.
[126] Ibid. page 12.

process administered by Australian Medical Council.[127] However, permanent medical practitioners also gained benefits through the influx of temporary medical practitioners as the host country has changed the professional recognition mechanisms to be more open and flexible.[128]

2.1.3.4. Typologies of skilled migration

Iredale presented five typologies, which help analyze the current trend of skilled migration flows. Those typologies are as presented as in table 8 below.

Typologies of skilled migration
1) By motivation—"forced exodus," "ethical emigration," "brain drain," "government induced," "industry led."
"Oppressive regimes, whether overtly or covertly oppressive, have been a consistent factor in the flight of the well-educated," [129]
"On the other hand, the decision by many Thais and other graduates to remain in the US . . . is not considered by Simanovsky et al. (1996) as "ethical emigration". . . better categorized as "brain drain,""[130]
"Brain drain was formerly used to explain the loss of valuable skilled personnel from developing to more developed countries, but the term is now also invoked to

[127] Ibid. page 12.
[128] Ibid. page 13.
[129] Ibid. page 16
[130] Ibid. page 16

describe the loss of skilled human resources from developed countries,"[131]

"In the late 1990s and early twenty-first century, many other governments have tailored their temporary entry policies to attract highly skilled professionals or to encourage the return of skilled nationals from overseas,"[132]

". . . employers are the major force behind the selection and migration of skilled immigrants,"[133]

"Indeed, in the temporary skilled migration programmes of most countries, governments act as 'lubricators' to ensure fast-track mechanisms and speedy entry,"[134]

"The emergence of the internet has become a powerful tool in this process."[135]

2) By nature of source and destination—originate in less developed or more developed countries and moving to more developed or less developed destinations.

"The largest movement of skilled labor is from less developed countries to post-industrialized countries,"[136]

"Lack of economic opportunities, poor working and intellectual environments are

[131] Ibid. page 16
[132] Ibid. page 16
[133] Ibid. page 16
[134] Ibid. page 16-17
[135] Ibid. page 17
[136] Ibid. page 17

major factors in the decision to leave,"[137]

"In recent years there has been an increase in skilled emigration from post-industrialized nations and in Europe . . . Stahl (1993) labels this "capital-induced" migration."[138]

3) By channel or mechanism

"(1) the internal labor markets of MNCs (Multi-National Corporations); (2) companies with international contracts that move staff to service their offshore work; (3) international recruitment agencies_that handle large numbers of self-generated flows . . . (4), the myriad of small recruitment agents or ethnic networks . . . and (5) recruitment by other mechanisms, such as the internet."[139]

4) By length of stay—permanent or circulatory/temporary.

". . . the situation is now much more complex,"[140]

"Many countries demonstrate a willingness to admit temporaries while they attempt to seal their doors to permanents. However crossover is inevitable,"[141]

""Skilled transients" (highly mobile professionals/managers) are no longer easily distinguishable from business visitors (Appleyard, 1985)." [142]

[137] Ibid. page 17
[138] Ibid. page 17
[139] Ibid. page 17
[140] Ibid. page 18
[141] Ibid. page 18
[142] Ibid. page 18

5) By mode of incorporation (the nature of the integration of skilled migrants into destination economies)
". . . three modes of incorporation of professional/technical immigrants, depending on reception at the destination: (1) a "handicapped" or more accurately a "disadvantaged" reception context is one in which skilled immigrants face an unfavorable official reception, closed shop practices of trade unions, race discrimination or lack of legal status and end up as ghetto service providers, unemployed, etc; (2) a "neutral" context in which they become incorporated into the primary market at an appropriate level; and (3) an "advantaged" situation, where due to political, social or economic factors, they experience upward mobility to positions of professional and civic leadership."[143]

Table 8: Typologies of skilled migration by Iredale

2.2. Migration of physicians at regional level

Not only the migration of physicians/ specialist physicians in European contexts and Thai contexts, this topic also discusses about the previous migration study of the migration pattern of physicians/ specialist physicians in a popular region like America as well.

2.2.1. Summaries of the literature reviews of the migration of physicians in America and Europe

[143] Ibid. page 18-19

The author used Everett S. Lee's Theory of Migration to categorize results from previous researches regarding migration of physicians. Thus, "Origin" means a set of factors associated with the area of origin; "Destination" means a set of factors associated with the area of destination.

The summaries are as shown in Table 9 below.

Authors	Research Methodology	Origin (Push factors)	Destination (Pull factors)
1. Ricketts, Thomas C. Randolph, Randy[144]	Content analysis of physician practice location data during 1981-1991, 1991-2001 of American Medical Association (AMA)	(Not being stated directly, but is understandable that factors at origin are less beneficial than in destinations)	1. Low competition (lower physician-to-population ratios) 2. Higher per capita incomes 3. Lower unemployment
Note: (1.) Family physicians migrated slightly more than specialist physicians did during both decades. (2.) Female physicians consistently migrated more than male physicians did. (3.) Younger physicians consistently migrated more than old physicians did. (4.) As income per capita decreased, proportion of non-white physicians increased.			
2. Laura Chappell and Alex Glennie[145]	Content analysis of 11 prior studies regarding the factors influencing migration of skilled migrants, which were all produced before financial crisis in 2008	(Not being stated directly, but is understandable that factors at origin are less beneficial than in destinations)	1. Wages 2. Employment 3. Professional development 4. Networks 5. Socioeconomic and political conditions
Note: (1.) Motivations to return include improvement of situation at the origin, the			

[144] Thomas C. Ricketts and Randy Randolph, "The Diffusion Of Physicians," *Health Affairs* 27, no. 5 (2008).

[145] Laura Chappell and Alex Glennie, "Show Me the Money (and Opportunity): Why Skilled People Leave Home - and Why They Sometimes Return," Migration Policy Institute, http://www.migrationinformation.org/Feature/display.cfm?ID=779.

	feeling of belonging to culture and society of the origin, the achievement of a specific goal set when left.		
3. WHO Regional Office for Europe[146]	Adapted from the work of Buchan, Parkin, Sochalski, 2003	1. Low pay (absolute and/ or relative) 2. Poor working conditions 3. Lack of resources 4. Limited career opportunities 5. Limited educational opportunities 6. Impact of HIV/AIDS 7. Unstable/ dangerous work environment 8. Economic instability	1. Higher pay 2. Opportunities for remittances 3. Better working conditions 4. Career opportunities 5. Better resourced health systems 6. Provision of post-basic education 7. Political stability 8. Travel opportunities 9. Aid work

Table 9: Summaries of literature regarding the migration of physicians at regional level

2.2.2. History of the migration of European workers

Before World War I took place in 1914, border controls or restrictions to the movement of labors across Europe had not substantially presented.[147] When the WWI took place, those restrictions were adopted mainly for security concerns. Consequently, passports and visas were first time introduced in Europe.[148]

Since the end of World War II in 1945, Europe region has shifted its image from a country of sending to a country of receiving, since there were more and

[146] WHO Regional Office for Europe, "Health Worker Migration in the European Region: Country Case Studies and Policy Implications " (2006).
[147] Saara Koikkalainen, "Free Movement in Europe: Past and Present," Migration Policy Institute, Washington, DC, http://www.migrationinformation.org/Feature/display.cfm?ID=836.
[148] Ibid.

more immigrants coming into this region.[149] Not only that, massive economic growth after WWII also encouraged the free movement of European workers, especially for skilled workers within the region.

However, the economic recession during the oil crisis in 1973 had forced each country to close its door for general migrant workers but allowed some "guest workers" into the country.[150] Unexpectedly, those guest workers also brought their families to stay together in the destination countries[151]. Interestingly, Max Frisch, a Swiss author, described this situation in one sentence, "We asked for workers, but human beings came."[152]

Nowadays, all restrictions of migration of EU citizens has been lifted[153] as it is been stated in Article 45 of the Charter of Fundamental Rights of the European Union, "every citizen of the Union has the right to move and reside freely within the territory of the Member States."[154] So, it means that all EU citizens should have rights to travel, to work, and to live in any other EU countries.[155]

2.3. Migration of Polish physicians within the EU

Poland has long been known as the country of migration outflow of health professional to both within the EU and outside the region due to its economy

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[149] Ibid.
[150] Ibid.
[151] Ibid.
[152] Ibid.
[153] Ibid.
[154] "Charter of Fundamental Rights of the European Union - TITLE V - CITIZENS' RIGHTS - Article 45 - Freedom of movement and of residence," EUR-Lex, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:12007P045:EN:HTML.
[155] ———, "Free Movement in Europe: Past and Present".

which is far less attractive than in the countries like United States, United Kingdom, Ireland, Germany, etc.[156] In addition, the GDP per capita of Poland is still far below the EU average, while the GDP of Germany, Ireland, and United Kingdom are above the EU average.[157]

During 1980s-1990s, main destinations for Polish physicians at that time were the United States, Scandinavian or Arabic countries.[158] Then, during the first few years of the country's accession to the European Union in 2004, the number Polish medical doctors craving for employment in other Member States raised noticeably, though the ratio is not significant enough to threaten the stability of the country's health system.[159] The number of the emigrated doctors seems to be small, as the Polish educational system has produced large supply of physicians.[160] The number of total medical doctors in Poland and the number of the doctors who acquired the certificates to practice in other EU countries are shown in Figure 3 below. In Figure 3, it shows that the total number of registered medical doctors in Poland by 2008 was 116,492; however, the number of physicians acquiring certificates is just 7,138 or approximately 6.1%.[161]

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[156] Agnieszka Makulec Adelajda Kołodziejska, Monika Szulecka, Paweł Kaczmarczyk "National profile of migration of health professionals - POLAND," (2011), http://www.mohprof.eu/POLAND.

[157] "GDP per capita in PPS, Index (EU-27=100)," Eurostat, http://epp.eurostat.ec.europa.eu/tgm/graph.do?tab=graph&plugin=1&pcode=tec00114&language=en&toolbox=type.

[158] _____, "National profile of migration of health professionals - POLAND".

[159] Ibid.

[160] Marcin Kautsch, "When the grass gets greener at home: Poland's changing incentives for health professional mobility."

[161] Ibid.

	Data as of:				
	30 June 2005	30 June 2006	30 June 2007	31 Dec. 2007	31 Dec. 2008
Medical doctors					
Registered medical doctors[a]	116 847	118 475	116 160	117 240	116 492
Certificates issued (cumulated)	3 579	5 114	6 237	6 724	7 138
Change on previous period (%)	–	(42.9)	(22.0)	(7.8)	(6.2)
Cumulated certificates as proportion of registered medical doctors (%)	(3.0)	(4.3)	(5.4)	(5.7)	(6.1)
Practising medical doctors in Poland (at 31 Dec.)	80 315	na	na	81 932	na

Figure 3: Practising medical doctors (stock) and certifications of professional qualifications issued in Poland, 2005-2008[162]

Regarding the EU certification, as in accordance with the Directive 2005/36/EC of the European Parliament and of the Council on the Recognition of Professional Qualifications, it aims at establishing an internal European market for doctors by allowing automatic recognition of qualifications of individual EU doctors in any EU Member State.[163] In addition, there are two basic types of EU certificates, including, Certificates of Specialist Doctor (CSD), and Certificates of Specific Training or Acquired Rights (CSTAR).[164] For CSD, it is only for EU-Citizen specialist physicians, who have completed their specialist training and held the

[162] Ibid. page 423.
[163] "Applying for EU Certification," The Irish Medical Council (Comhairle na nDochtúirí Leighis), http://www.medicalcouncil.ie/Information-for-Doctors/EU-EEA-Certification/.
[164] Ibid.

registration with the Medical Council in their country.[165] For CSTAR, it covers only EU-Citizen General Practitioners or physicians who don't specialize in any particular area of medicine.[166]

Even though the number of emigrated Polish physicians has never been substantial if comparing to the total supply of physicians, it has created the shortage of some medical specialists such as anesthesiologists for some extent.[167] Table 10 below has confirmed the fact that the majority of Polish physicians acquiring EU certificates are specialists. Hence, it can be conclude that specialist physicians have higher chance to emigrate than general practitioners do. In Table 11, it shows the comparison of the number of doctors applying for EU certificates and the vacancies of some particular medical specialties in Poland. Anesthesiologists applied for the certificates the most comparing to other specialists, and the vacancies of anesthesiologists as of 2008 are highest as well.[168]

Specialty	Practicing	Certifications issued	Certifications issued as percentage of practicing professionals
1) Anaesthetics and intensive care	4,219	797	18.9
2) Thoracic surgery	222	36	16.2
3) Plastic surgery	160	25	15.6
4) Emergency medicine	538	71	13.2
5) Pathomorphology	497	59	11.9
6) Radiology and diagnostic imaging	2,136	233	10.9
7) Vascular surgery	282	29	10.3
8) Oral and maxillofacial surgery	90	9	10.0

[165] Ibid.
[166] Ibid.
[167] _____, "When the grass gets greener at home: Poland's changing incentives for health professional mobility."
[168] Ibid.

9) Orthopaedics and traumatology of motor system	2,473	248	10.0
10) Haematology	254	24	9.5
11) General surgery	5,594	482	8.6
12) Neurosurgery	433	37	8.6
13) Urology	1,089	77	7.1
14) Oncological radiotherapy	442	30	6.8
15) Paediatric surgery	738	48	6.5
16) Obstetrics and gynaecology	5,890	370	6.3
17) Gastroenterology	530	30	5.7
18) Transport medicine	108	6	5.6
19) Psychiatry	2,575	139	5.4
20) Internal medicine	14,709	746	5.1
21) Cardiology	2,385	121	5.1
22) Nuclear medicine	181	9	5.0
23) Clinical microbiology	68	3	4.4
24) Paediatric and adolescent psychiatry	215	9	4.2
25) Medical rehabilitation	1,298	53	4.1
26) Ophthalmology	2,963	115	3.9
27) Neurology	2,645	96	3.6
28) Paediatrics	6,364	221	3.5
29) Dermatology and venereology	1,642	55	3.4
30) Endocrinology	937	32	3.4
31) Otolaryngology	2,029	67	3.3
32) Allergology	1,024	33	3.2
33) Geriatrics	202	6	3.0
34) Lung disease	2,413	64	2.7
35) Communicable diseases	939	25	2.7
36) Nephrology	599	15	2.5
37) Rheumatology	1,503	36	2.4
38) Laboratory diagnostics	173	3	1.7
39) Occupational medicine	1,578	18	1.1
40) Public health	1,400	14	1.0
41) General practice	9,150	62	0.7
42) Clinical pharmacology	74	0	0
43) Clinical immunology	34	0	0
44) Clinical immunology	34	0	0
Total medical doctors	82,795	4,553	5.5

Source: Ministry of Health 2009.

Table 10: Certifications of professional qualifications by medical specialty, at end 2008[169]

[169] Ibid. page 424

Medical specialty	Vacancies (2008)	Certification holders as percentage of total registered medical doctors	
		May 2004 to June 2006	As of 31 Dec. 2008
Anaesthetics and intensive care	398	15.6	18.9
Internal medicine	312	1.4[a]	5.1
Emergency medicine	306	na	13.2
Paediatrics	230	na	3.5
General surgery	206	6.1	8.6
Psychiatry	170	na	5.4
Orthopaedics and traumatology of motor system	125	7.4	10.0
Gynaecology and obstetrics	110	na	6.3

Sources: Ministry of Health 2009, Kaczmarczyk 2006.
Notes: [a] As of 30 June 2005; na: Not available.

Table 11: Vacancies (2008) and numbers of certifications of professional qualifications issued (2004-2006 and 2008), by medical speciality[170]

According to Leśniowska, European Council Directive 2005/36/EEC has facilitated the free movement of physicians, as it forced all Member States to adopt the mutual recognition of professional qualifications which allows all physicians as well as other health professionals such as nurses and dentists to be able to operate their service throughout the EU.[171]

Hence, it is inevitable for large amount of physicians from less developed countries such as Poland to migrate in order to seek for better economic opportunities in a more developed country within the EU. During 2004-2007, around 6,007 physicians (anesthesiologists: 17.54%, plastic surgeons: 14.97%, and chest surgeon: 13.18%) has registered for professional verification certificates issued by

[170] Ibid. page 436
[171] Joanna Leśniowska, "Migration patterns of Polish doctors within the EU," *Eurohealth* Volume 13 Number 4(2007).

Polish Chamber of Physician[172]. Such certificates allow Polish physicians to work in other EU countries; hence, it can be conclude that the number of the so-called *potential migratory physicians* has been significantly increased after the accession to the EU since 2004.[173] However, the number of Polish physicians who actually registered to work in the EU-15 countries is just about 2,961 doctors or 49% of the total doctors who acquired the certificates by 2007 (6,007 physicians). The number of emigrated Polish physicians during 2000-2007 is shown in Figure 4 below.

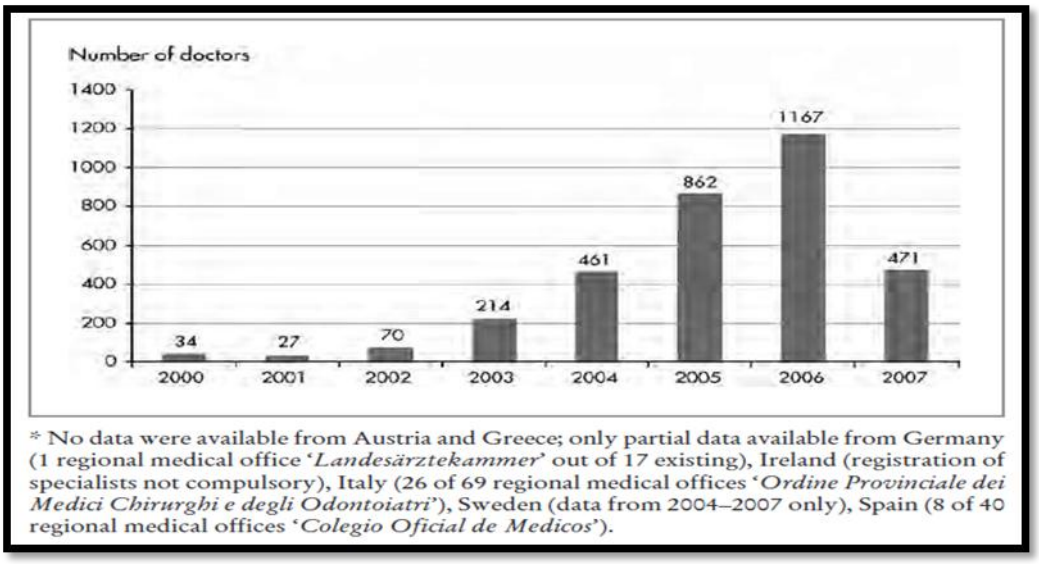

Figure 4: Number of Polish physicians registered in the EU-15 during 2000-2007[174]

The number of Polish physicians registered in other EU countries is shown in Figure 5 below. In Figure 5, it shows that during 2004-2007, most of the migrants went to the UK; 1,633 doctors, Sweden; 417 doctors, Germany; 364 doctors, Ireland; 185 doctors, Denmark; 139 doctors, respectively.[175]

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[172] Ibid.
[173] Ibid.
[174] Ibid.
[175] Ibid.

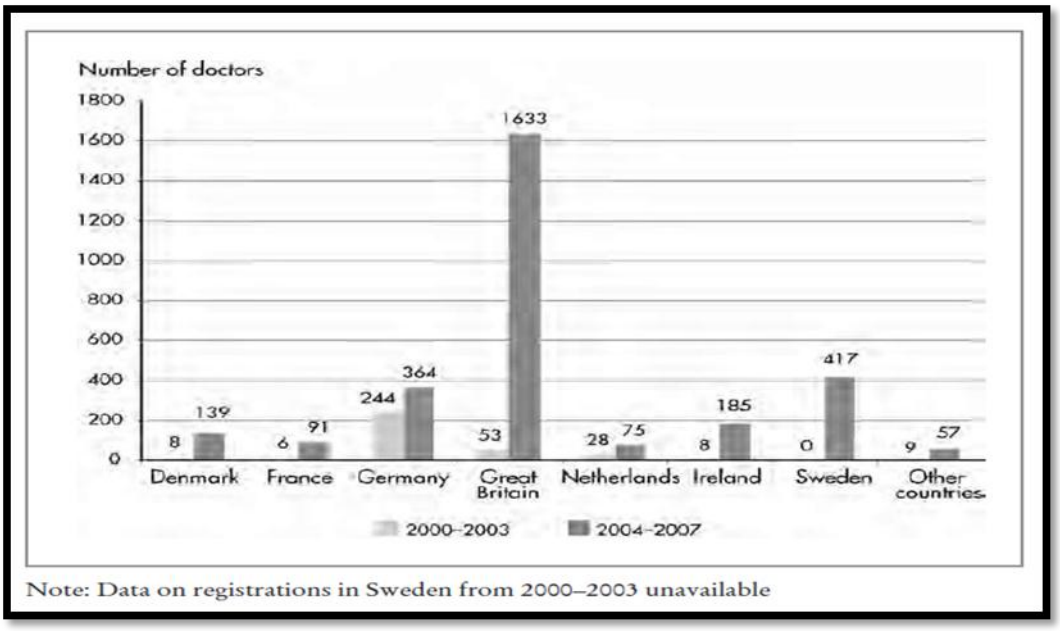

Figure 5: Number of emigrated Polish doctors in other countries during 2000-2003 and 2004-2007[176]

Regional medical council in Poland will only grant the licensed certificate for foreign-trained physicians only if they pass the licensing examination, which is conducted in Polish language[177]. Hence, it is almost impossible for Poland to become the receiving country of physicians, as the share of foreign-national physicians in the country is less than 1% so far; however, if only look at the Newly registered physician category, foreign-national physicians accounted for 2.9% of the total of 3,430 newly registered physicians.[178] The numbers of foreign-national medical doctors working in Poland is shown in Figure 6 below.

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[176] Ibid.

[177] "The recognition of medical qualifications of physicians, phyarmarcists, and dentists.," Ministry of Health, Poland, http://www.mz.gov.pl/wwwmzold.

[178] Marcin Kautsch, "When the grass gets greener at home: Poland's changing incentives for health professional mobility."

Nationality	Medical doctors registered	Newly registered medical doctors (1 Jan.–30 Nov.)
Bulgaria	13	1
Czech Republic	23	0
Germany	41	9
Lithuania	22	2
Russian Federation	48	5
Sweden	24	1
Ukraine	193	41
Other	411	32
Total	**775**	**91**
Percentage of all medical doctors	0.6	2.7

Source: Polish Chamber of Physicians and Dentists unpublished data 2009.
Note: Includes only countries with more than 10 individuals in at least one category. Data from other countries is included in Other.

Figure 6: Number of foreign-national physicians in Poland by 2009[179]

Regarding the factors influencing the migratory decisions of Polish physicians/ specialist physicians, "low salaries, difficult working conditions, and limited possibilities for professional development," are considered the push factors in Poland; while, "better income, better career prospects, and greater prestige and better organization of work," are perceived as pull factors at destinations.[180] In addition, the opportunities provided by the country's accession to the EU, has been seen as great pull factor which "stimulates the desire to experience new things."[181]

Beside salary, the dissatisfactions toward the health system in Poland have long been considered as significant push factor in Poland. The reasons contributing to the inefficient health system in Poland include, the low funding (7% of GDP), poor system of contracting medical services and reimbursement, and the lack

[179] Ibid. page 429.
[180] Ibid.
[181] Adelajda Kołodziejska, "National profile of migration of health professionals - POLAND".

of strategic planning and management skills of Polish healthcare sectors at all levels.[182]

Regarding the salaries, Polish physicians expected to get around 5500 PLN (1400 EUR) per month, while the newly graduates expect to get around 1700 PLN (430 EUR) a month.[183] However, since the salaries in Poland become higher in recent years, long-term emigration has been substituted by short-term migration or circulation.[184]

Krzysztof's research in 2008 had surveyed the opinions of Polish medical students regarding the intentions to work in other EU countries. According to the research, it can be concluded that most of them (85%) were interested to work abroad, though around half of them (42%) perceived working abroad as their definite plan. Other important conclusions have been shown in Table 12 below.

Authors	Research Methodology	Origin (Push factors)	Destination (Pull factors)
1. Krzysztof et al.[185]	Anonymous self-completing Questionnaire of 367 Polish medical students (first year and last year students) *[During Feb-April 2005 at Medical University of Silesia (the largest medical*	[Poland] 1. Poor financial support 2. Poor professional development 3. Lack of employment opportunity (11.4%) 4. Limited access to specialization	[UK (21.5%), Germany (12.3%), Sweden (6.8%), Ireland (4%), USA (4.9%), Norway (4%)] 1. Better income (60.2%) 2. Better working conditions (19.6%) 3. Better possibilities for professional development (15.5%,

[182] Ibid.
[183] Ibid.
[184] Ibid.
[185] Krzysztof Krajewski-Siuda et al., "Brain drain threat–Polish students are not satisfied with labor market options for health professionals in Poland," *Journal of Public Health* 16, no. 5 (2008).

	school in Poland)]	training (7.6%)	increasing to 19.3% if combined with better education possibilities) 4. Better living conditions (9%)

Note:

(1.) 85% of all respondents are considering going abroad.
(2.) Only 6% of all respondents are not considering going abroad at all.
(3.) 78.6% of respondents in (1.) will reconsider if the conditions in home country improve. Those conditions include satisfying work and remuneration (48%), changes in the Polish healthcare system, and improved development possibilities (14.1%).
(4.) 19% of respondents in (1.) said that they would stay in Poland for family reasons.
(5.) 42% of respondents in (1.) declared their willingness to move.
(6.) 24.3% of respondents in (1.) are learning foreign languages such as English and German.
(7.) 10.8% of respondents in (1.) will consult recruitment agencies.
(8.) "Overall people from different background are equally dissatisfied with their professional options at home."
(9.) Students with better academic performance (better GPA) are less inclined to move.

Table 12: Summary of literature regarding the migration of physicians in Poland[186]

Another study conducted in 2004 (as shown in Figure 7) also indicated that Polish healthcare professionals (including physicians, dentists, and nurses) has strong intentions to work abroad; however, only 1/3 of those reporting to have such strong intentions stated that they would certainly emigrate.[187]

[186] Ibid.
[187] Adelajda Kołodziejska, "National profile of migration of health professionals - POLAND".

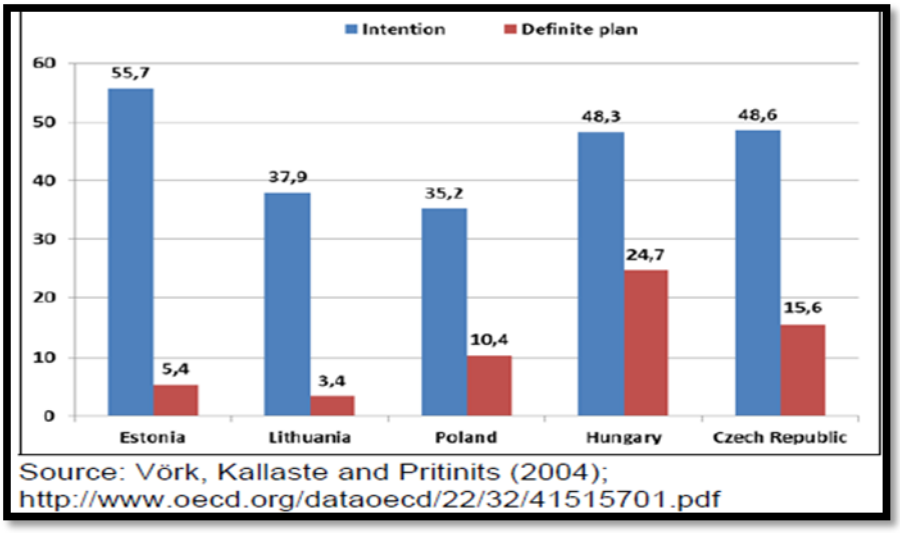

Figure 7: Share of Polish healthcare professionals who want to work abroad (%)[188]

Although, the statistics data and quantitative analysis so far has shown that the emigration of Polish physicians/ specialist physicians are not substantial enough to threaten the stability of Poland health system, the qualitative study has put some worries to the health system.[189] According to the qualitative study, efficient reform of health system in Poland is needed to be done in order to retain Polish physicians within the country in long-term.[190]

According to the qualitative research, the intervening obstacles preventing emigration of Polish physicians/ specialist physicians can be categorized by internal and external factors. For external factors, it is reported that the emigrated Polish specialist physicians rarely to get long-term employment abroad and those who

[188] Ibid. page 4
[189] Ibid.
[190] Ibid.

are able to get short-term employment are mostly anesthesiologists.[191] For internal factors, they included the opportunities for several employments in both private and public sectors within the country as the barriers preventing emigration of medical doctors. Other internal factors are including 'low cost of living in Poland,' 'low knowledge of foreign languages,' 'low cost of medical education,' and 'high social status of health professionals in Poland.'[192] In essence, good conditions within Poland are seen as the barriers for Polish physicians to emigrate as the conditions in destinations become less beneficial. In addition, attachment to home country is perceived as the factor that makes those emigrated Polish physicians want to return to Poland.[193]

2.4. Overview of the migration of physicians in Thailand

According to the study in 2008, "Thailand has been suffering from the inequitable distribution of qualified health professionals, causing by the increasing demand for health care services in urban private hospitals…"[194] In additions, the same study also presented main causes of the inequity of physician distribution, in which, medical tourism is not included. All those main causes are including, "increasing demand by the rich Thai for health care," "social and wealth inequity," "education systems of the qualified health professionals."[195]

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[191] Ibid. page 9.
[192] Ibid. page 7
[193] Ibid.
[194] Suwit Wibulpolprasert and Cha-Aim Pachanee, "Addressing the Internal Brain Drain of Medical Doctors in Thailand: The Story and Lesson Learned," *Global Social Policy* (2008).
[195] Ibid.

Regarding to external brain drain, the study pointed out that Thailand has no significant external brain drain of physicians for more than 30 years, as most Thai physicians are quite satisfied with domestic remuneration, working environment, opportunity for career development, and another reason is that they have limited capacity in foreign languages.[196] However, in Figure 8, it shows the impact of the external brain drain during 1962-1965, in which, Thai physicians migrated to work abroad, especially to the U.S.

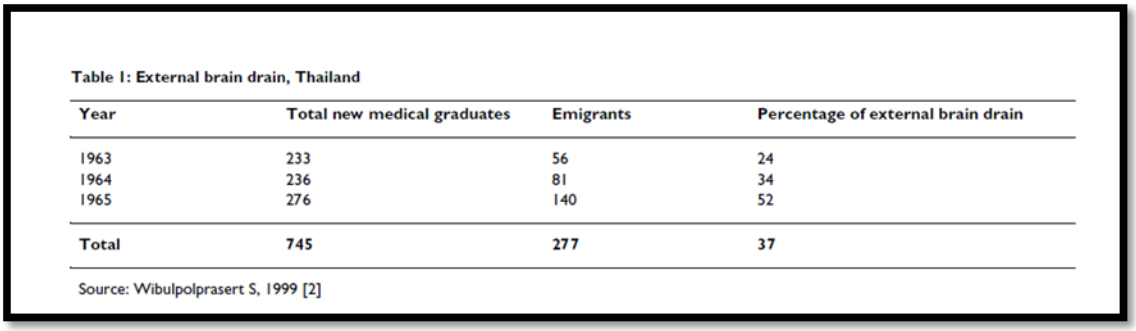

Table 1: External brain drain, Thailand

Year	Total new medical graduates	Emigrants	Percentage of external brain drain
1963	233	56	24
1964	236	81	34
1965	276	140	52
Total	**745**	**277**	**37**

Source: Wibulpolprasert S, 1999 [2]

Figure 8: External brain drain during 1963-1965[197]

The study in 2009 also exemplifies the three clear patterns of the internal brain drain of Thai physicians.[198] The three patterns, which are affected by the medical tourism, include; the move from public provincial hospitals to private hospitals; the move from public hospitals to teaching hospitals; and, for specialists, such as cardiac surgeons, they tend to migrate from teaching hospitals to private hospital. The Figure 9 below presents the public-private workload and income comparison of physicians working in both public and private sectors during 2005.

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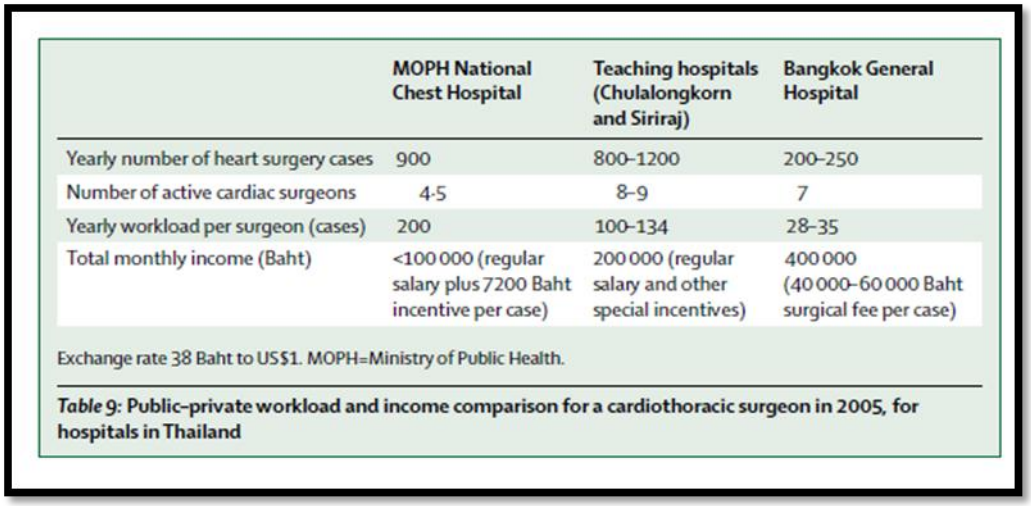
[196] Ibid.

[197] Wibulpolprasert and Pengpaibon, "Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience."

[198] Richard D. Smith, Rupa Chanda, and Viroj Tangcharoensathien, "Trade in health-related services," *The Lancet* 373, no. 9663 (2009).



	MOPH National Chest Hospital	Teaching hospitals (Chulalongkorn and Siriraj)	Bangkok General Hospital
Yearly number of heart surgery cases	900	800–1200	200–250
Number of active cardiac surgeons	4-5	8–9	7
Yearly workload per surgeon (cases)	200	100–134	28–35
Total monthly income (Baht)	<100 000 (regular salary plus 7200 Baht incentive per case)	200 000 (regular salary and other special incentives)	400 000 (40 000–60 000 Baht surgical fee per case)

Exchange rate 38 Baht to US$1. MOPH=Ministry of Public Health.

Table 9: **Public–private workload and income comparison for a cardiothoracic surgeon in 2005, for hospitals in Thailand**

Figure 9: Public-private workload and income comparison for a cardiothoracic surgeon in 2005, Thailand Source: Richard D. Smith, Rupa Chanda, and Viroj Tangcharoensathien (2009)[199]

The study in 2011 also confirmed that there is a brain drain of highly specialized staff from public medical schools to the private hospitals.[200]

The study regarding human resources for health in case of Thailand in 2004, suggested that the internal trade of services could entail negative implications for health care system including supporting the existing of tiered health care systems, simulating external and internal migration of health workforces, and enhancing the erosion of ethics among health professionals[201].

Table 13 below shows the distribution of physicians in Thailand (2010 data), in which, central region has most number of physicians, while southern region has least number of physicians.

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[199] Ibid.

[200] C. Kanchanachitra et al., "Health in Southeast Asia 5 Human resources for health in southeast Asia: shortages, distributional challenges, and international trade in health services," *Lancet* 377, no. 9767 (2011).

[201] Wibulpolprasert et al., "International service trade and its implications for human resources for health: a case study of Thailand."

Number of physicians in Thailand, divided by regions (2010)	
Total	**22,019 (100%)**
Bangkok	5,420 (24.6%)
Central region	6,251 (28.4%)
Northeastern region	4,353 (19.8%)
Northern region	3,468 (15.8%)
Southern region	2,527 (11.5%)

Sour*ce: Reports on health personnel, Bureau of Policy and Strategy, MoPH (2010)*

Table 13: Number of physicians in Thailand, divided by region (2010)[202]

Table 14 below shows number of Thai specialist physicians in five major specialties (2010 data), in which, it indicated that Internal Medicine has the most number of specialists.

Number of specialist physicians in Thailand, divided by specialist areas (2010)	
Total	**17,227 (100%)**
Pediatrics	1,509 (8.8%)
Surgery	1,315 (7.6%)
Obstetrics and Gynecology (Ob-gyn)	1,425 (8.3%)
Orthopedics	1,166 (6.8%)
Internal Medicine	1,725 (10%)
Others	10,087 (58.6%)

Source: Reports on health personnel, Bureau of Policy and Strategy, MoPH (2010)

Table 14: Number of specialist physicians inThailand, divided by specialist areas (2010)[203]

The author used Everett S. Lee's Theory of Migration to categorize results from previous researches regarding migration of physicians. Thus, "Origin" means a set of factors associated with the area of origin; "Destination" means a set of factors associated with the area of destination. The research regarding the internal

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[202] "รายงานบุคลากรทางการแพทย์ (Reports on health personnels)".

[203] "รายงานบุคลากร แพทย์เฉพาะทาง (Reports on health personnels: specialist physicians)".

migration of Thai physicians, including specialist physicians, are as presented in Table 15 below.

Authors	Research Methodology	Origin (Push factors)	Destination (Pull factors)
1. Suwit [204]	Content Analysis of previous research of four decades of experience regarding to the integrated strategies to deal with the inequitable distribution of doctors in Thailand.	(Rural areas in Thailand) 1. Lower living standard 2. Low social recognition 3. Lower income 4. Low opportunity for training 5. Poor facilities and logistics	(Urban areas in Thailand) 1. High demand from foreign patients from rich countries and Thai patients in urban private hospitals. 2. Better living standards 3. Specialization training 4. Better income 5. Higher social recognition. 6. Job satisfaction/ career
Note:			
2. Thaksaphon [205]	A data survey of physicians resigning from hospitals under Office of Permanent Secretary (OPS) Ministry of Public Health (MoPH) to gain some characteristics of resigning physicians/ specialist physicians.	(Rural areas in Thailand)	(Urban areas in Thailand) 1. Better working condition
Note: About respondents: Resigning physicians 1. 26.8% of respondents are specialist physicians including internists (28.14%), surgeon (16.6%), orthopedists (11.6%), pediatricians (11.1%), and others. 2. 73.2% of respondents were general practitioners 3. Average age is 30.6 years old 4. Very short working experience at the time of resignation 5. 46% of respondents violated government contracts, especially about the compulsory public services.			

[204] Wibulpolprasert and Pengpaibon, "Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience."

[205] Thaksaphon Thamarangsi, "Resigning Physicians: Who are they? แพทย์ลาออก: เขาเป็นใคร," *Journal of Health Science 2004; 13:970-82* (2004).

	6. The resigning rate in those working in district hospitals is two times higher than those working in regional and provincial hospitals. 7. Factors relating to the length of public practice retention include medical school graduated from (81.5% of Bangkok, 53.5% of Rural areas), birth place (higher for non-Bangkok residents), work place (higher for those working in provinces that are far different from birthplace). 8. Factors relating to the premature resignation include "graduated from medical schools located in the central part of the country," "geographical region of the hospital," and "disparity condition between working region and hometown region." 9. The study supports the argument that the "local recruitment, rural training and hometown placement" helps create sustainable retention of physicians in rural areas.		
3. Phisal Mairieng[206]	Questionnaire survey of 223 respondents selected from 557 populations (physicians graduated during 1979-2003 from Khon Kaen University) through stratified random sampling	(Community hospitals in the Northeastern region of Thailand) The push factors are the reverse of the pull factors presented on the right side.	(unspecified) 1. Extra money 2. Better hospital facilities 3. Better physical social welfare 4. Postgraduate education 5. Children's education 6. Better quality of life 7. Prefer working in administrative jobs to working in a regional hospital as a graduate doctor.
Note: 1. Significant factors to retain physicians under the community hospital include "the preference of rural life," "near their place of birth," and "the usefulness of knowledge of the community." 2. Male medical graduates desire to work in administrative jobs more than their female colleagues do. 3. Medical graduates working in community hospital are more likely to migrate than those working in regional hospitals are. 4. Male medical graduates prioritize their children's education higher than their female colleagues do. 5. Medical graduates who had gained entrance by quota do interest more in further training/ education. 6. Medical graduates whose ages are between 34 and 43 prioritize their further			

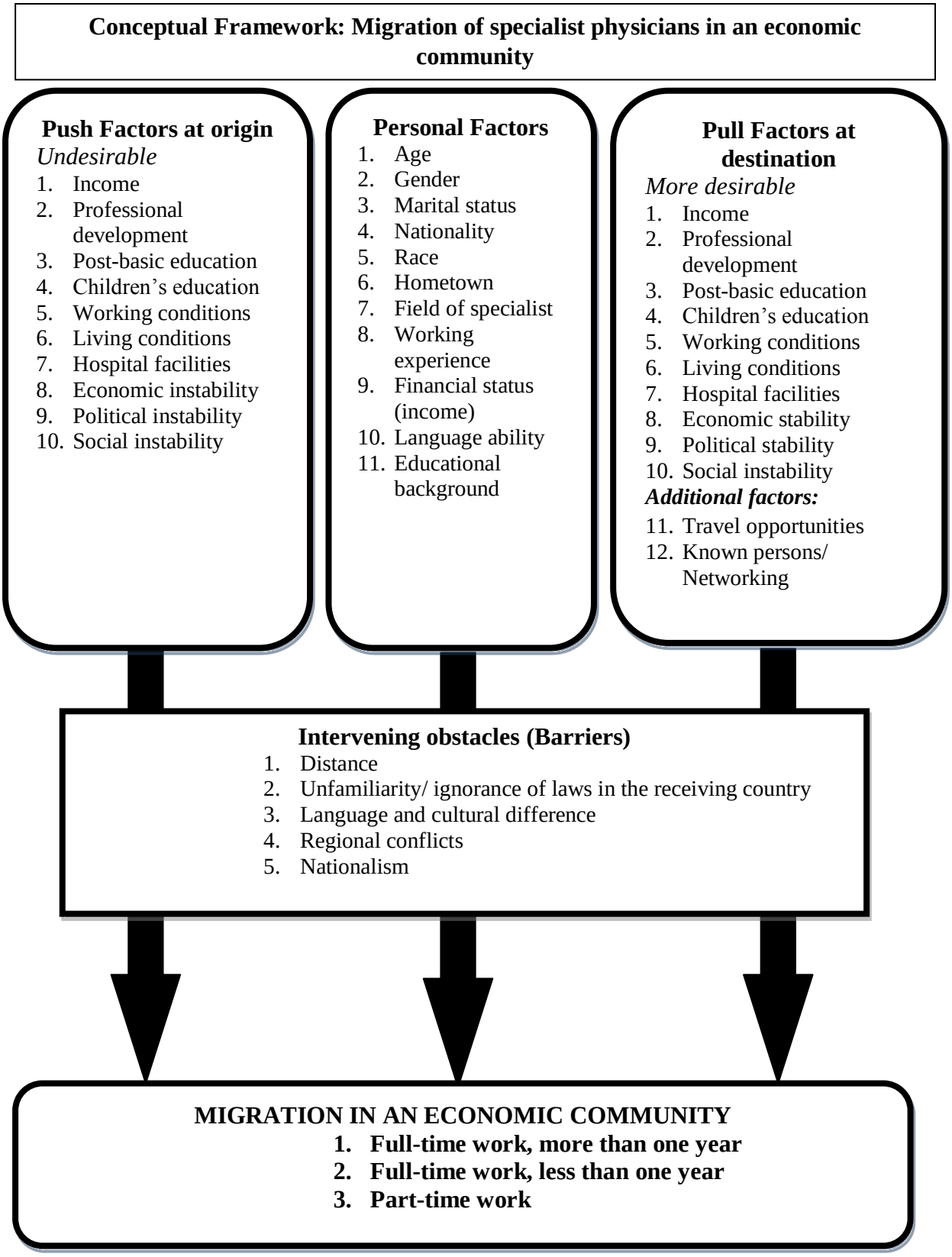
[206] Anongsri Ngoson Phisal Mairieng, Apida Runvat, Bussayasri Sribussayakul, "Factors influencing the Retention of Medical Graduates of Khon Kaen University in a Northeastern Community Hospital ปัจจัยที่มีผลต่อการคงอยู่ของศิษย์เก่าแพทยศาสตรบัณฑิต มหาวิทยาลัยขอนแก่น ในโรงพยาบาลชุมชนภาคตะวันออกเฉียงเหนือ," วารสารวิจัยในระบบสาธารณสุข Vol.2 No.3 July-September 2008(2008).

education and their children’s education more than others do

Table 15: Summaries of literature regarding the migration of physicians in Thailand

2.5. Conceptual framework of this research

According to the theories and the reviewed literature, the conceptual framework of this study is developed as presented as follows.


Conceptual Framework: Migration of specialist physicians in an economic community
Push Factors at origin
Undesirable
1. Income
2. Professional development
3. Post-basic education
4. Children's education
5. Working conditions
6. Living conditions
7. Hospital facilities
8. Economic instability
9. Political instability
10. Social instability
Personal Factors
1. Age
2. Gender
3. Marital status
4. Nationality
5. Race
6. Hometown
7. Field of specialist
8. Working experience
9. Financial status (income)
10. Language ability
11. Educational background
Pull Factors at destination
More desirable
1. Income
2. Professional development
3. Post-basic education
4. Children's education
5. Working conditions
6. Living conditions
7. Hospital facilities
8. Economic stability
9. Political stability
10. Social instability
Additional factors:
11. Travel opportunities
12. Known persons/ Networking
Intervening obstacles (Barriers)
1. Distance
2. Unfamiliarity/ ignorance of laws in the receiving country
3. Language and cultural difference
4. Regional conflicts
5. Nationalism
MIGRATION IN AN ECONOMIC COMMUNITY
1. Full-time work, more than one year
2. Full-time work, less than one year
3. Part-time work

2.5.1. Description for the conceptual framework

The definition of 'specialist physicians' of this research meant to include (1) specialist physicians (physicians who already completed their resident training of 3-5 years) (2) fellowship physicians (specialist physicians who are currently training under subspecialties), and (3) resident physicians (physicians who are currently training to become specialist physicians in 3-5 years). However, in general, 'specialist physicians' are physicians who completed their specialist trainings or resident training. Since, this research is about future migration, thus the author also included the current 'resident physicians' into the study, as most of them will become specialist physicians after the establishing of the AEC in 2015.

According to Lee, migration is mainly driven by the two sets of factors, including "push factors at origin" and the "pull factors at destinations." However, during the process of migration, migrants have to consider the intervening obstacles, which impede the flow of migration. Personal factors also can contribute to the act of migration as they can influence how each person perceive the conditions at the origin, the destination, as well as the obstacles of migration.[207] (Please see on page 23-27, 32-35)

According to the review of previous literature, several factors were added to the set of push factors, including undesirable income[208], undesirable professional development[209], undesirable post-basic education[210], undesirable

[207] Lee, "A Theory of Migration."
[208] Adelajda Kołodziejska, "National profile of migration of health professionals - POLAND".
[209] Ricketts and Randolph, "The Diffusion Of Physicians."

education for their children[211], undesirable working conditions[212], undesirable living conditions[213], undesirable hospital facilities[214], economic instability[215], political instability, and social instability.[216]

According to the review of previous literature, several factors were added to the set of pull factors, including the same substance as in the set of push factors. However, the condition is different since all sub-factors are perceived to be "more desirable" in the set of pull factors. In addition, additional factors such as travel opportunities[217] and known persons/ networking[218] are included in the set of pull factors as well.

The set of intervening obstacles has shown the intervening factors which prevent people to migrate. Those are including distance[219], unfamiliarity/ ignorance of laws in the receiving country[220], language and cultural difference[221], regional conflicts[222], and the attachment to home country[223].

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[210] Wibulpolprasert and Pengpaibon, "Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience."
[211] Ibid.
[212] Thamarangsi, "Resigning Physicians: Who are they? แพทย์ลาออก: เขาเป็นใคร."
[213] Ricketts and Randolph, "The Diffusion Of Physicians."
[214] Wibulpolprasert and Pengpaibon, "Integrated strategies to tackle the inequitable distribution of doctors in Thailand: four decades of experience."
[215] Europe, "Health Worker Migration in the European Region: Country Case Studies and Policy Implications ".
[216] Ibid.
[217] Ibid.
[218] Glennie, "Show Me the Money (and Opportunity): Why Skilled People Leave Home - and Why They Sometimes Return".
[219] Lee, "A Theory of Migration."
[220] Ibid.
[221] Adelajda Kołodziejska, "National profile of migration of health professionals - POLAND".
[222] Lee, "A Theory of Migration."

Migration in an economic community could be seen as permanent, temporary, or circulating, according to Iredale's Typologies of skilled migration, 'By length of stay' (please see in page 44). Since, there is no finite definition of permanent migration and temporary migration, so the author will consider "permanent migration" of specialist physicians as the migration that allows them continuously perform full-time job in other countries for more than one year. Secondly, the author will consider "temporary migration" of specialist physicians as the migration that allows them to perform full-time job in other countries for less than one year. For "brain circulation," according to the definition of this term in other literatures, it would mean the migration in which the migrants migrate to work in other countries, but come back to the home country, and then go to work abroad again, back and forth. Thus, the author will consider only part-time work in other countries as "brain circulating."

In order to examine future migration pattern of Thai specialist physicians in the AEC, the author used 5-year time frame to ask questionnaire respondents (resident physicians) about their future migration pattern within five years after completing their specialist training. This is because some resident physicians who received scholarships from their previous workplaces would have to work in such workplaces to compensate the scholarship for approximately 1-5 years, depending on the contracts. So, such 5-year time frame could allow the author to examine the future migration pattern of both scholarship receivers (as mentioned above) and others who did not received any scholarships.

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[223] Adelajda Kołodziejska, "National profile of migration of health professionals - POLAND".

2.6. Hypotheses for the study

According to theories and previous studies mentioned earlier, hypotheses for the study are formulated as presented as in Table 16 below.

Hypothesis	Source of hypothesis
1. AEC can lead to significant emigration of Thai specialist physicians to other ASEAN countries by 2020.	"The removal of immigration restrictions within the Common Market countries has been accompanied by large migrations of workers from one of these countries to another."[224] "State and regional policies or agreements serve as "lubricators" to speed up desired industry-motivated movements."[225]
2. Most of Thai specialist physicians, who intend to migrate to other ASEAN countries, would prefer to go to the more developed countries in ASEAN rather than the less developed ones (CLMV countries).	"Migrants proceeding long distances generally go by preference to one of the great centers of commerce and industry" (I, p. 199).[226]

Table 16: Hypotheses for the study

[224] Lee, "A Theory of Migration.", page 53
[225] Iredale, "The Migration of Professionals: Theories and Typologies."
[226] Lee, "A Theory of Migration."

CHAPTER III

RESEARCH METHODOLOGY

Methodology of this research consists of three steps: (1) reviewing relevant literature regarding the migration of Polish specialist physicians in the European Union (EU), (2) surveying opinions of Thai resident physicians (physicians who are training to become specialist physicians in 3-5 years) by self-administered questionnaires, (3) conducting in-depth interviews with specialist physicians and resident physicians. The analysis of the collected data will be presented as well.

3.1. Literature review methods

3.1.1. Inclusion criteria for literature review

The data used for the literature review have to fulfill all following criteria. First, the data must come from reliable sources such as peer-reviewed organizations or publications. Second, the data must be relevant to the migration of Polish specialist physicians in the European Union. Thirdly, the data must be written after 2004 onwards, since 2004 is the year of Poland's accession to the EU.

3.1.2. Summarization

The data will be integrated and then summarized into four categories including, the intentions to work in other EU countries, the push factors in Poland, the pull factors in the destinations (EU), and the intervening obstacles for the migration within the EU.

3.2. Survey

The questionnaire (English and Thai version) is presented in Appendix A.

3.2.1. Questionnaire development

The questionnaire was initially developed by the reviews of migration theories, mainly from Everett S. Lee's A Theory of Migration. Secondly, the questionnaire was then developed by relevant literature regarding the migration of specialist physicians of Thailand. Thirdly, the author also developed the questionnaire by comments of two resident physicians (I1 and I2 in in-depth interview session).

3.2.2. Subjects (respondents) for the study

Subjects or the respondents for the study are resident physicians who are studying to become specialist physicians in the near future. Since, the specialist-training period is around 3-5 years, so nearly all of the interviewed resident physicians will graduate by the year 2015, the same year of the AEC establishment. Regarding to the specialist areas, the author will focus on those studying in four major areas including Pediatrics, Surgery, Obstetrics and Gynecology (Ob-gyn), and Internal Medicine, plus one important minor area, which is Orthopedics. According to the interview with specialist physician (I2 in the in-depth interview session), those five specialist areas are the most important for Thai hospitals. Since the demand for their service is urgent, unlike other minor specialist areas, in which, patients can wait for being transferred to another hospital.

3.2.3. Sampling method

The author employed criterion sampling method for this study. The criteria for selecting the respondents are including; firstly, respondents have to be resident physicians, especially those studying in five specialties mention earlier; secondly, they have to be currently training under top three largest specialist training institutions in Thailand, which are including, Chulalongkorn Hospital, Siriraj Hospital, and Ramathibodi Hospital; and thirdly, they have to show their voluntariness to participate in the study.

However, since the author did not submit the paper to the Institutional Review Board (IRB) to revise before collecting research data, Ramathibodi hospital, as one of the three main specialist training institutions of Thailand, then refused to distribute the questionnaires to their resident physicians.

In Table 17 below, it shows the number of resident physicians in Faculty of Medicine Chulalongkorn University, Faculty of Medicine Siriraj Hospital, and Faculty of Medicine Ramathibodi Hospital in the first round of admission in 2012.

NUMBER OF RESIDENT PHYSICIANS IN 2012 (ROUND 1/2)				
	Group 1*	Group 2**	Group 3***	TOTAL
Nationwide	395	1,226	454	2,075
• Faculty of Medicine Chulalongkorn University	**48** (12.15%)	**156** (12.72%)	**80** (17.62%)	**284** (13.69%)
• Faculty of Medicine Siriraj Hospital	**57** (14.43%)	**207** (16.88%)	**69** (15.20%)	**333** (16.05%)
• Faculty of Medicine Ramathibodi Hospital	**58** (14.68%)	**132** (10.77%)	**80** (17.62%)	**270** (13.01%)

* Group 1: *Resident physicians* who fit into the **"Insufficient Category,"** in which, they can continue the study right away after getting the bachelor's degree (6 years of study). They are studying Psychiatry, Child and Adolescent Psychiatry, Forensic Medicine, Anatomical Pathology, Clinical Pathology, General Pathology, Radiotherapy and Oncology, Family Medicine, Emergency Medicine, Nuclear Medicine, Medical Oncology, and Hematology. In addition, the specialist training periods of specialties in Group 1 are varied from 3-5 years.

** Group 2: *Resident physicians* who already did the mandatory public service for at least one year, but normally 3 years for most specialist areas. They are studying Pediatrics, Pediatric Surgery, Ophthalmology, Dermatology, Neurology, Neurological Surgery, General Radiology, Diagnostic Radiology, Child Hematology and Oncology, Anesthesiology, Preventive Medicine (Epidemiology), Preventive Medicine (Aviation Medicine), Preventive Medicine (Clinical Medicine), Preventive Medicine (Public Health), Preventive Medicine (Community Mental Health), Preventive Medicine (Occupational Medicine), Rehabilitation Medicine, Surgery, Plastic and Reconstructive Surgery, Thoracic Surgery, Urologic Surgery, Obstetrics-Gynecology, Otolaryngology, Orthopaedics, and Internal Medicine. In addition, the specialist training periods of specialties in Group 2 are varied from 3-5 years.

*** Group 3: *Fellowship* (Higher education after completing the resident courses), normally the duration of fellowship study is 2 years.

[Source: The Medical Council of Thailand]

Table 17: Number of resident physicians in 2012 (Round 1/2)

According to the data from the Medical Council of Thailand, there are two admission rounds for resident physicians. The data regarding the annual number of resident physicians is not directly stated but there were 1,621 physicians registering to resident training in the first round of the academic year 2012 (excluding the fellowship physician)[227], and there were 515 physicians registering to resident training in the second round of the academic year 2010.[228] Thus, if combining those two rounds (though the data are from different years), it is likely that there would be around 2,000 resident physicians each year.

However, according to information received from the officer of the Medical Council of Thailand on 27 April 2012, the number of resident physicians has been adjusted year by year due to the capacity of training institutions.

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[227]"Resident Physicians แพทย์ประจำบ้าน," The Medical Council of Thailand, http://www.tmc.or.th/train03.php.

[228] Ibid.

Since, resident training in Thailand would take around 3-5 years to complete, thus some resident physicians registered during 2008-2009, would probably graduate by the year 2012 already. However, since the statistical data regarding the number of resident physicians is not presented, the current number of resident physicians can be estimated by adding the estimated number (2,000) of all resident physicians registered during 2010-2012. Thus, the estimated number of current resident physicians is 6,000 (i.e. intake of 2,000 resident physicians per year times 3 years).

According to the definition of 'specialist physicians' of this research (see page 68), resident physicians are considered being part of specialist physicians, since they are going to become specialists in 3-5 years. Since, the questionnaires will be only distributed to resident physicians, thus the population of this study is approximately 6,000. The author will use Yamane's sample size formula[229] to determine the sample size of this study. If allowing 10% sampling error (90% confidence level), the optimal sample size for this study would be 98. Thus, according to the calculation below, this study will require 98 resident physicians.

$$n = \frac{N}{1 + N\,(e)^2}$$

Note: e= the level of precision n = sample size, N= size of population

Thus, the sample size of specialist physicians in Thailand is shown below.

$$n = \frac{\mathbf{6{,}000}}{1 + 6{,}000\,(0.1)^2} = 98$$

[229] Glenn D. Israel, "Determining Sample Size," University of Florida, http://edis.ifas.ufl.edu/pd006.

3.2.4. Questionnaire distribution

In order to achieve the goal of 98 returned questionnaires, the author purposefully distributed 300 questionnaires to the top three largest and leading teaching hospitals in Thailand, including Chulalongkorn hospital, Siriraj hospital, and Ramathibodi hospital. Hence, each hospital would receive 100 questionnaires. Main reasons for distributing much larger number of questionnaires include (1) the expectation of very low response, and (2) the uncertainty about the distribution, as the author wasn't allowed to distribute the questionnaires by herself.

In addition, since the author did not submit the thesis to the IRB (as mentioned earlier), Ramathibodi hospital refused to allow the questionnaires to be distributed to their resident physicians. However, Chulalongkorn hospital and Siriraj hospital approved the questionnaires and agreed to distribute the questionnaires to their resident physicians.

The officers at Chulalongkorn hospital and Siriraj hospital distributed the questionnaires by themselves, as they informed the author that they preferred not to let the outsiders to distribute questionnaires in their hospitals.

The author asked each hospital to distribute questionnaires to resident physicians training in five specialist areas including Pediatrics, Surgery, Obstetrics and Gynecology (Ob-gyn), Internal Medicine, and Orthopedics, in equal number or 20 questionnaires for each specialist areas. All questionnaires were sent on 9 March 2012 and returned on 31 March 2012.

3.2.5. Questionnaire structure

The questionnaire was structured into two main parts including general information of participants (part 1) and the questions regarding the migration of specialist physicians (part 2).

In part 1, participants will be asked about their age, gender, marital status, nationality/race, hometown, specialist areas, specialist training institutions, duration of training, workload during specialist training, number of patients per day, current income, last previous workplace, amount of working experience, education background, English proficiency level assessed by themselves, and third language competencies.

In part 2, each question can be grouped into five categories including the intentions to work abroad, knowledge about the AEC and MRAs, factors contributing to general migrating decision, and the intervening obstacles preventing them to migrate to other ASEAN countries. The questions regarding the push factors in Thailand and the pull factors in other countries in ASEAN will be covered in the in-depth interview sessions.

3.2.6. Questionnaire format

The 4-page questionnaire consists of 29 questions in total; 16 questions in part 1, and 13 questions in part 2. Sixteen out of twenty-nine questions asked participants to choose only one answer from the given answers. Only two out of twenty-nine questions allowed participants to choose more than one answer.

Participants might have to elaborate their answers in the provided spaces for the alternatives they chose in particular questions. Eleven out of twenty-nine questions asked participants to write down their answers in the provided spaces.

The instructions and explanations of the questionnaire are first presented at the top of the questionnaires. In addition, 5-point Likert's scale was used to form the answers of the questions 10-12 of part 2. The rationale behind the using of 5-point scale answers is mainly because it is more convenient and easier than 7-point scale or 10-point scale. It is appropriate for respondents who don't have much time to complete the questionnaire. However, since the respondents are persons who are directly involved in the migration, they are supposed to be able to differentiate their answers quite well. Thus, 5-point Likert's scale is being adopted.

In addition, regarding the strategy for data analysis, the author will mainly use frequencies and means to differentiate the answers. However, for some questions such as the satisfactions of working in Thailand, the author used the number -2, -1, 0, 1, and 2 to represent the answer. Thus, mode and sum are also used to interpret the result as well.

3.3. Interviews

The interview questions (Eng/Thai) are presented in the Appendix B. In addition, the tables discussing about the characteristics of each interviewee, summaries of each interview, and coding of the interviews are presented in the Appendix D.

3.3.1. Type of the interview

The type of this interview is the in-depth interview, in which, it will allow key respondents to focus on particular topics they are interested, while it also allows the interviewer to structure the questions and probe into particular topics.

3.3.2. Interview analysis method

The author will summarize the contents of each interview and the summaries will be presented in the Appendix D. Several themes will be extracted from the summaries to answer the research questions. The author will also provide 'codes' for each explanation in each theme for readers to be able to trace back to the source of data (summaries and code index in the Appendix D). For example, if one statement has I1P1L1-2 as its code, it means that the original information is from the first interviewee (I1), in first paragraph (P1), and in the first and the second lines (L1-2) of the paragraph. Thus, if the code is I5P6L2-3, it refers to the summary of the fifth interviewee, in the sixth paragraph, and in the second to the third lines of the same paragraph.

3.3.3. Key respondents of the interviews

The key respondents or the interviewees are specialist physicians and resident physicians, whose major of studies are not fixed like in the questionnaire section. However, the age of the key respondents is fixed to be less than 35, according to the previous study of the migration pattern of physicians in the United States. It is

stated that younger migrants consistently migrated more than older migrants did.[230] (See Chapter II)

In addition, for the definition of "specialist physicians" in the interview session, the author meant to include "fellowship" physicians (specialist physicians who already completed their resident training, but currently training for subspecialty). Normally, the subspecialty studies of all specialist areas require 1-2 years to complete.

3.3.4. Sampling criteria for the interview

The study adopted the criterion sampling technique in order to form the criteria for selecting each participant.

The inclusion criteria for the key respondents are including, being specialist physician, or resident physician, being less than 35 years old, and being willing to participate in the interview. While, the exclusion criteria include, not being specialist physician or resident physician, not being less than 35 years old, and not being willing to participate in the interview.

The author started the interview session with two specialist physicians she knew personally (I1 and I2). And then, she asked I1 and I2 to introduce later interviewees. The interview ended as the received information is saturated, or no new distinguishable information presented. The information of this interview is saturated since no interviewees reported to migrate to other ASEAN countries within 5 years after the establishment of the AEC by 2015.

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[230] Ricketts and Randolph, "The Diffusion Of Physicians."

3.3.5. Questions of the interviews

The examples of the interview questions (Thai and English version) are presented in Appendix B. Those questions were grouped into five categories including the intentions to work in other ASEAN countries, the knowledge regarding the AEC and MRAs, the factors contributing to general migrating decision, the push factors in Thailand, the pull factors in other ASEAN countries, and the intervening obstacles preventing them to migrate to other ASEAN countries.

3.3.6. Channels for the interviews

Depending on the convenience of the key respondents, the interviews were conducted by face-to-face interviews and telephone interviews.

3.3.7. Length of the interviews

Each interview will be last in 20-90 minutes per key respondent, depending on their willingness to participate and the completeness of their answers.

CHAPTER IV

RESEARCH RESULTS

In this chapter, the research results are divided into three parts. First, the analysis of the literature review of the migration of Polish specialist physicians in the European Union will be presented. Second, the results of the questionnaire surveys of Thai resident physicians will be presented. Lastly, the results of the in-depth interviews with Thai specialist physicians and resident physicians will be presented.

4.1. Literature review of the migration of Polish specialist physicians

The analysis is as presented as follows.

4.1.1. The intentions to work in other EU countries

The intentions for working abroad (EU) of Polish physicians/ specialist physicians are mainly measured by the number of physicians applying for certificates to practice in other Member States. However, in reality some Polish physicians also emigrated without such certificates.

As of 2008, the number of Polish physicians acquired the certificates are only 6.1% of the total supply of physicians in Poland (116,492 physicians), and only around half of those having certificates actually emigrated to other EU countries. Hence, according to the quantitative studies, emigration of Polish physicians to other EU countries doesn’t seem to be significant issue of Poland’s health system.

However, the statistical data showed that the emigrated of specialist physicians has created vacancies of some specialties in Poland, particularly those in Anesthesiology and Emergency Medicine. (See Table 11, p. 52)

However, if comparing the number of emigrated Polish physicians before and after the country's accession to the EU, it appeared that the number rose significantly. Nonetheless, the number of emigrated Polish physicians has slowed down for recent years as the result of the improving of domestic salaries and health system in Poland.

4.1.2. Push factors in Poland

Low remunerations of working in Poland, has long been considered the most determinant push factor in the country. Polish physicians are attracted by better financial condition abroad, so they emigrated. In addition, the low funding and poor management in the health system are also the factors, which escalate the number of emigrated physicians.

Polish specialist physicians perceived Poland's poor healthcare system as the barrier for their professional development as it created difficulties in working conditions. Although, the reform of Poland's health system in recent years is perceived to help improve the domestic working condition, it still doesn't meet satisfactions.

In addition, the difficulties regarding seeking employment in Poland as well as the low opportunity for specialist training also make physicians/ specialist physicians want to migrate.

4.1.3. Pull factors in the destinations (EU)

Economic motivation in more developed EU Member States i.e. United Kingdom, Germany, Ireland, and Sweden is the main pull factor, which pulls Polish specialist physicians to emigrate.

4.1.4. The intervening obstacles for the migration within the EU

The difficulty of getting long-term employment abroad (EU) is seen as the main obstacle for Polish specialist physicians to emigrate for long-term. In addition, the short-term employment is also highly available for some specialists such as anesthesiologists. In addition, the higher cost of living in more developed EU countries is also makes Polish specialist physicians rather stay in Poland instead.

The recent reform of healthcare system in Poland also creates some optimistic forecast of the brighter future of working in Poland. Thus, the emigrated numbers of physicians dropped since 2008.

The economic recession in west Europe due to 2008 economic crisis also makes long-term emigration less beneficial. Hence, Polish physicians are likely to have part-time or short-term jobs in other EU countries, instead of migrating there for long-term. In essence, long-term emigration of Polish specialist physicians has now been replaced by the so-called circulation or the short-term migration.

In addition, ‘low knowledge of foreign language’ is also considered as the dominant obstacle for emigration as well. While, the high social status of Polish physicians are being satisfied by the domestic doctors, the attachment to home country also attracts emigrated Polish doctors to return to their home country.

4.2. Questionnaire surveys of Thai resident physicians

After sending questionnaires to three specialist training hospitals, there were 76 questionnaires returned, 52 questionnaires from Chulalongkorn Hospital, and 24 questionnaires from Siriraj Hospital. The author went to collect 52 completed questionnaires from Chulalongkorn hospital by herself and received 24 completed questionnaires from Siriraj hospital by mail.

However, it turned out that the questionnaire respondents are not only including specialist physicians from five specialties mentioned above, but also including specialist physicians training under Anesthesiology, Psychology, and Radiology, as well.

4.2.1. Characteristics of the respondents

The characteristics of respondents are reflected by their given responses in Part 1 (personal information) of the questionnaires. The raw data were processed by SPSS, as presented as in the Appendix D. Table 18 below summarizes some particular characteristics of respondents, including gender, age, marital status, hometown, and specialist areas.

Questionnaire respondents (n=76)					
Gender Freq.	Male 23	Female 53			
Age Freq.	21-25 1	26-30 71	31-35 3	36-40 1	
Marital status Freq.	Single 70	Married 6			
Hometown Freq.	Bangkok 36	Central 19	Northeast 4	North 10	South 7
Specialist areas Freq.	Pediatrics 31	Surgery 17	Ob-gyn 12	Orthopedics 3	Internal Medicine 3
	Anesthesiology 3	Psychology 2	Radiology 5		

Table 18: Characteristics of questionnaire respondents (part 1)

4.2.1.1. Age

All respondents (76) reported about their age (no missing value). The result showed that 93.4% (71) of respondents are in their 26-30 years of age. Only 1.3% (1), 3.9% (3), and 1.3% (1) reported that they are in the age of 21-25, 31-35 and 36-40, respectively.

4.2.1.2. Gender

All respondents (76) reported about their genders (no missing value). The result showed that 69.7% (53) of the respondents are females, while 30.3% (23) are males.

4.2.1.3. Marital status

All respondents (76) reported about their marital status (no missing value). The result showed that 92.1% (70) of the respondents are single, and only 7.9% (6) are already married.

4.2.1.4. Nationalities/ races

All respondents (76) reported about their Nationalities and races (no missing value). All of them are having Thai nationality. Only 2.6% (2) of them are Chinese descendant.

4.2.1.5. Hometown

All respondents (76) reported about their hometown (no missing value). The result showed that 47.4% (36) of respondents were from Bangkok, while 25% (19), 13.2% (10), 5.3% (4), and 9.2% (7), were from Central region, Northern region, Northeastern region, and Southern region, respectively.

4.2.1.6. Specialist areas

All respondents (76) reported about their specialist areas (no missing value). The result showed that 40.8% (31) of respondents are studying Pediatrics, while 22.4% (17), 15.8% (12), 3.9% (3), 3.9% (3), 3.9% (3), 2.6% (2), and 6.6% (5), are studying Surgery, Obstetrics and Gynecology, Orthopedics, Internal Medicine, Anesthesiology, Psychology, and Radiology, respectively.

Table 19 below, summarizes respondents' information of training institutions, years of graduation, working time per day, number of patients per day, and salary during specialist training.

Questionnaire respondents (n=76)					
Training institutions	Chula	Siriraj			
Freq.	52	24			
Year of graduation	2012	2013	2014	2015	2016
Freq.	22	19	22	9	3
Working time per day	10 hrs	12 hrs	12 hrs <		
Freq.	25	19	18		
Number of patients per day	10/ day	15/ day	20/ day		
Freq.	20	13	14		
Salary	15,000 baht	20,000 baht			
Freq.	31	17			

Table 19: Characteristics of questionnaire respondents (part 2)

4.2.1.7. Training institutions

All respondents (76) reported about their training institutions (no missing value). The result showed that 68.4% (52) of respondents are training in Chulalongkorn Hospital, while 31.6% (24) are training in Siriraj Hospital.

4.2.1.8. Year of graduation

The 98.7 % (75) of respondents reported about the year of graduation of their specialist training (only 1 missing value). The result showed that 29.3% (22), 25.3% (19), 29.3% (22), 12% (9), and 4% (3) will graduate in 2012, 2013, 2014, 2015, and 2016, respectively. In addition, it can be concluded that 96% of respondents will graduate by the year 2015.

4.2.1.9. Working time during specialist training

The 97.4 % (74) of respondents reported about their working time at the training institutions (only 2 missing values). Significant figures showed that

respondents had been working for 10 hours (33.8%) and 12 hours (25.7%) per day. The 24.3% (18) of respondents stated that they worked more than 12 hours a day.

4.2.1.10. Number of patients during specialist training

The 90.8 % (69) of respondents reported the number of patients they have to see at the training institutions (7 missing values). The 29% (20) of respondents reported that they have to see around 10 patients per day, while 18.8% (13) and 20.3% (14) reported that they have to see around 15 patients, and 20 patients, respectively, per day. In addition, the mean of this data is 13.65 patients per physician per day.

4.2.1.11. Salary during specialist training

All respondents (76) reported about their salary during the specialist training (no missing value). The 40.8 % (31) of the respondents reported that their salary is 15,000 baht a month, while 22.4% (17) reported that their salary is 20,000 baht per month. In addition, the mean of this data is 16,250 baht a month.

Table 20 below shows the information of questionnaire respondents regarding their last previous workplace, working experience, university receiving bachelor's degree, Self-English proficiency and third language competencies. Not all answers are put in the Table 20; however, they are presented in the paragraphs below.

Questionnaire respondents (n=76)					
Last previous workplace	Bangkok	Central	North	Northeast	South
Freq.	9	27	15	14	10
Working experience	1 yr	2 yrs	3 yrs	4 yrs	5 yrs
Freq.	6	4	61	1	1
University (bachelor's)	Chula	Siriraj	Chiang Mai	Songkhla	Others in BKK, excluding Ramathibodi
Freq.	23	14	9	6	16
Self-English proficiency	Need improvement	Fair	Moderate	Good	Excellent
Freq.	10	21	32	11	2
Third language competencies	No	Yes			
Freq.	67	8			

Table 20: Characteristics of questoinnaire respondents (part 3)

4.2.1.12. Last previous workplace

The 98.7 % (75) of respondents reported about their last previous workplaces (only 1 missing value). The 36% (27) of them reported that their previous workplaces are in Central Region, while others' last previous workplaces are in Bangkok (12%), the North (20%), the Northeast (18.7%), and the South (13.3%).

4.2.1.13. Working experience

The 96.1% (73) of the respondents reported their working experience (3 missing values). The 83.6% (61) of respondents stated that they had 3 years of working experience. In addition, the mean (2.82), media (3), and mode (3) also confirmed that the working experience of the respondents is 3 years.

4.2.1.14. University receiving bachelor's degree

The 97.4% (74) of respondents reported the name of their universities (only 2 missing values). The 31.1% (23) of respondents graduated from the Faculty of Medicine of Chulalongkorn University, while 18.9% (14), 1.4% (1), 12.2% (9), 2.7% (2), 8.1% (6), 21.6% (16), and 4.1% (3), graduated from Siriraj Hospital (Mahidol University), Ramathibodi Hospital (Mahidol University), Chiang Mai University, Khonkaen University, Prince of Songkla University, other universities in Bangkok, and Naresuan University, respectively. Other universities in Bangkok that the respondents graduated from are Srinakharinwirot University, Thammasat University, Phramongkutklao College of Medicine, and Vajira Hospital.

4.2.1.15. GPA (4.00 scale)

The 90.8% (69) of respondents reported their GPA during their bachelor's degree studies (7 missing values). The mean for their GPA is 3.3165.

4.2.1.16. Self-English proficiency

All respondents (76) reported about their individual English proficiency (no missing value). The author encoded the alternatives of this question as—2 for 'Excellent,' 1 for 'Good,' 0 for 'Moderate,' -1 for 'Fair,' and -2 for 'Need improvement.' The 42.1% (32) of the respondents stated that their English skills are moderate (0). Only 17.1% (13) evaluate their English skills as 'Good' (14.5%) or 'Excellence' (2.6%). On the other hand, 27.6% (21), and 13.2% (10) evaluate their English skills as 'Fair' and 'Need improvement,' respectively. However, when summing up the codes of the alternatives chosen by all respondents, the outcome is -

26. Thus, it means that the respondents evaluated their English skills as below the moderate (average) level.

4.2.1.17. Third language competencies

All respondents (76) reported about their individual third language competencies (no missing value). Only 10.7% (8) stated that they have an ability to speak at least three languages. Those languages are including Chinese, Cantonese, French, and Japanese.

4.2.2. Migration pattern

The future migrations of specialist physicians are reflected by their given responses in Part 2 (migration of specialist physicians) of the questionnaires. The raw data were processed by SPSS, as presented as in the Appendix C. However, some particular tables will also be shown in this chapter for better understanding.

In Table 21 below, it summarizes the migration pattern of questionnaire respondents, regarding their next project, most influential person for any migratory decisions, channels of receiving information for working abroad, their workplace after completing specialist training, and their knowledge about AEC and MRA on medical practitioners, respectively.

Questionnaire respondents (n=76)			
Next project **Freq.**	Work 52	Continue the study 16	
Most influential person **Freq.**	Themselves 55	Parents 14	Spouses 3
Channels of receiving information **Freq.**	Colleagues/ co-workers	Specialist training institutions	

	36	30	
Workplace after completing specialist training	Public hospital in other provinces	Public hospital in BKK	Private hospital in BKK
Freq.	46	17	6
Knowledge of AEC	No	Yes	Not sure
Freq.	50	17	9
Knowledge of MRAs	No	Yes	Not sure
Freq.	52	18	6

Table 21: Migration pattern of questionnaire respondents (part 1)

4.2.2.1. Next project after graduation

All respondents (76) reported about their next project after graduation (no missing value). The 68.4% (52) stated that they would work, while 21.1% (16) said that they would continue their studies.

4.2.2.2. Most influential person for migratory decision

The 94.7% of respondents reported about the most influential person, who has most power on their migratory decision (4 missing values). The 76.4% (55) perceived ‘themselves’ as the most influential persons for their migratory decision, while 19.4% (14), 4.2% (3), stated that their parents and their spouses, respectively, are the most influential persons for their migratory decisions.

4.2.2.3. Channels of receiving information about working abroad

All respondents (76) answered to this question (no missing value). For this question, respondents can choose more than one answer. The result showed that 47.4% (36) gained the information about working abroad from their colleagues/ co-

workers, while 34.2% (26) stated that they had never gained any information regarding working abroad from anywhere. The 39.4% (30), 5.3% (4), 5.3% (4), 1.3% (1) of respondents stated that they received the information from specialist training institutions, family, media, and others, respectively.

4.2.2.4. Workplace for full-time job, right after graduation

The 96.1% (73) of respondents answered to this question (3 missing values). The result showed that 63% (46) would have to work in public hospitals in other provinces right away after graduation, while 23.3% (17) would have to work in public hospitals in Bangkok. The 8.2% (6), 2.7% (2), 1.3% (1), and 1.3% (1) of respondents, reported to be working in private hospital in Bangkok, private hospital in other provinces, hospital in the U.S., and medical clinic, respectively.

4.2.2.5. Knowledge regarding the AEC

All respondents (76) answered to this question (no missing value). The result showed that only 22.4% (17) knew about the ASEAN Economic Community (AEC). Thus, it can be concluded that the ASEAN Economic Community (AEC) is not well-known among Thai resident physicians.

4.2.2.6. Knowledge regarding the MRAs

All respondents (76) answered to this question (no missing value). The result showed that only 23.7% (18) knew about the Mutual Recognition Arrangements (MRAs) on medical practitioners. Thus, it can be concluded that the MRAs on medical practitioners is not well-known among Thai resident physicians.

In Table 22 below, it summarizes the migration pattern of questionnaire respondents, regarding their interests to work full-time for more than

one year in other ASEAN countries, and the interests to work full-time but less than one year in other ASEAN countries.

Questionnaire respondents (n=76)			
Interested to work full-time, more than 1 year of stay in other ASEAN countries	None	Singapore	Vietnam
Freq.	45	25	2
Interested to work full-time, but less than 1 year of stay in other ASEAN countries	None	Singapore	Malaysia
Freq.	55	21	3

Table 22: Migration pattern of questionnaire respondents (part 2)

4.2.2.7. Interests to work in other ASEAN countries for full-time and more than one year job

The 97.4% (74) of respondents answered to this question (2 missing values). The result showed that the most popular destination (ASEAN) for working full-time, more than one year, was Singapore (33.8%), while other countries such as Malaysia, Vietnam, and Laos scored very low at 1.4%, 2.7%, and 1.4%, respectively. Remarkably, 60.8% (45) reported that they are not interested in working in any other ASEAN countries for full-time job and staying there more than one year.

4.2.2.8. Interests to work in other ASEAN countries for full-time but less than one year job

The 96.1% (73) of respondents answered to this question (3 missing values). The result showed that the most popular destination (ASEAN) for working full-time, but less than one year, was Singapore (28.8%), while other countries such as Malaysia, Philippines, Brunei, Vietnam, and Laos scored very low 4.1%, 1.4%, 2.7%, 4.1% and 1.4%, respectively. Remarkably, 57.5% (42) reported that they are not interested in working full-time in any other ASEAN countries, though it is less than one year.

4.2.2.9. Interests to work in other ASEAN countries for part-time job

The 98.7% (75) of respondents answered to this question (only 1 missing value). Respondents can choose more than one answer for this question. The result showed that 49.3% (37) of respondents are interested to work part-time in Singapore, while 48% (36) stated that they are not interested in working part-time in any other ASEAN countries. No respondents are interested to work part-time in Indonesia and Cambodia. Other figures are also presented in Table 23 below.

Popular destinations in ASEAN countries for part-time job	
1) None	48% (36)
2) Indonesia	0
3) Malaysia	10.7% (8)
4) Philippines	6.7% (5)
5) Singapore	49.3% (37)
6) Brunei	9.3% (7)
7) Vietnam	1.3% (1)
8) Laos	2.7% (2)
9) Myanmar	1.3% (1)
10) Cambodia	0

Table 23: Popular destinations in ASEAN countries for part-time job perceived by Thai resident physicians

4.2.2.10. Factors affecting the decisions to change workplace

The author used 5-point Likert's scale as the alternatives in the questions asking about how each factor affecting and contributing to the decisions of

workplace changing of the respondents. The alternatives and their codes are ‘The Most’ (2), ‘More’ (1), ‘Moderate’ (0), Less (-1), and ‘The least’ (-2).

There are 98.7% (75) respondents answered to this question (only 1 missing value). The result showed that working condition (32%), living condition (32%), income (22.7%), and economic stability (22.7%), travel opportunity (21.3%), consecutively, topped the rank of ‘The Most’ category. However, if combing those choosing ‘The Most’ with those choosing ‘More,’ there will be some slightly changes in the rank, which is the working condition (89.3%), living condition (88%), economic stability (86.7%), professional development (80%), Income (78.7%), respectively. Other factors are also presented in the Table 24 below.

Factors affecting the decisions to change workplace		
Factors contributing to the decision of changing workplace	**‘The Most’**	**‘The Most’ plus ‘More’**
1) Income	22.7%	78.7%
2) Professional development	16%	80%
3) Post-basic education opportunities	13.3%	57.3%
4) Children’s education	10.7%	58.7%
5) Working condition	32%	89.3%
6) Living condition	32%	88%
7) Hospital facilities	13.3%	78.6%
8) Economic stability	22.7%	86.7%
9) Political stability	6.7%	53.4%
10) Social stability	5.3%	69.3%
11) Travel opportunity	21.3%	64%
12) Known persons/ network	3.9%	53.9%

Table 24: Factors affecting the decisions to change workplace of Thai resident physicians

In addition, some respondents also suggested ‘hometown’ and ‘spouse’ as the important factors that can greatly affect the decisions to change workplace.

4.2.2.11. Satisfaction towards professional conditions in Thailand

The author used 5-point Likert’s scale as the alternatives in the questions asking about the satisfaction towards the professional conditions in Thailand. The alternatives and their codes are ‘The Most’ (2), ‘More’ (1), ‘Moderate’ (0), Less (-1), and ‘The least’ (-2).

All respondents (76) answered to this question (no missing value). The result revealed that the respondents are contended with the domestic condition, since the sum and the mode of the result are 37 and 1, respectively. No respondents stated that they were ‘very dissatisfied’ with the professional condition in Thailand, on the contrary, two of respondents (2.6 %) said that they were very satisfied with the condition in Thailand. In addition, 56.6% (43) said they are ‘satisfied.’

4.2.2.12. Intervening obstacles to work in other countries in ASEAN

The author used 5-point Likert’s scale as the alternatives in the questions asking about how each intervening obstacle preventing respondents’ decisions to work in other ASEAN countries. The alternatives and their codes are ‘The Most’ (2), ‘More’ (1), ‘Moderate’ (0), Less (-1), and ‘The least’ (-2).

There are 98.7% (75) respondents answered to this question (only 1 missing value). The result showed that the most dominant obstacle is ‘the reluctance to leave the home country,’ in which, it creates the reluctance to migrate from their

home country, hence, impedes the act to migrate to other ASEAN countries of the respondents.

The result showed that respondents chose 'The Most' for the reluctance to leave home country (34.2%), language and cultural difference (26.3%), distance (22.4%), unfamiliarity/ ignorance of laws at the destination (22.4%), and surprisingly regional conflicts (7.9%). However, if combining those choosing 'The Most' and 'More' together, the unfamiliarity/ ignorance of laws at the destination is ranked first, followed by the reluctance to leave home country, distance, language and cultural difference, and regional conflicts, respectively. The numbers are shown in the Table 25 below

Intervening obstacles to work in other countries in ASEAN		
Intervening obstacles for working in other ASEAN countries	**'The Most'**	**'The Most' plus 'More'**
1) Distance	22.4%	65.8%
2) Unfamiliarity/ Ignorance of law at the destinations	22.4%	71.1%
3) Language and cultural difference	26.3%	65.8%
4) Regional conflicts	7.9%	51.3%
5) Reluctance to leave home country	34.2%	71%

Table 25: Intervening obstacles to work in other countries in ASEAN

In addition, some respondents suggested that the cost of a living in the destination as the dominant obstacles for the migration in other ASEAN countries.

4.2.2.13. Full-time working destinations, within 5 years after graduation

The 98.7 % (75) of respondents (only 1 missing value) answered about where they would do a full-time job within five years after graduation. The result showed that 42.7% (32) would work in Bangkok, while 54.7% (41) would work in other provinces. The 37.3% (28) would go to work in other provinces but in the same region with hometown, while only 6.7% (5) would go to work in other provinces, which are not in the same region with their hometown. Only 2.6% (2) of respondents would go to work abroad.

4.2.3. Integrated tables of several data

These approaches help mining for interesting data.

4.2.3.1. Characteristics of the respondents

4.2.3.1.1. **Age and Gender** (No missing value)

Table 26 below reveals that the age of resident physicians are around 26-30 years old, regardless of their gender.

Age * Gender Crosstabulation

Count

	Gender		
	Male	Female	Total
Age 21-25	0	1	1
26-30	23	48	71
31-35	0	3	3
36-40	0	1	1
Total	23	53	76

Table 26: Age and Gender of respondents

4.2.3.1.2. Specialist areas and Training institutions

Table 27 below shows that none of respondents from Chulalongkorn hospital are studying in Orthopedics, Internal Medicine, Anesthesiology, Psychology, and Radiology.

Specialist Area * Training institutions Crosstabulation (No missing value)

Count				
		Training institutions		
		Chulalongkorn Hospital	Siriraj Hospital	Total
Specialist Area	Pediatrics	27	4	31
	Surgery	15	2	17
	Ob-gyn	10	2	12
	Orthopedics	0	3	3
	Internal Medicine	0	3	3
	Anesthesiology	0	3	3
	Psychology	0	2	2
	Radiology	0	5	5
Total		52	24	76

Table 27: Specialist areas and training institutions of respondents

4.2.3.2. The relationship between gender and the interests to work in other ASEAN countries by full-time more than one year, full-time less than one year, and part-time.

According to the Table 28 below, it can be concluded that male specialist physicians are more interested to migrate to other ASEAN countries for longer period of stay (working full-time, more than one year). In addition, the result is significant at 90% confidence level according Chi-square test. However, female

specialist physicians are more interested to migrate to other ASEAN country for shorter period of stay (part-time).

Gender	Number of respondents interested to work in other ASEAN countries		
	Full-time, more than 1 year (M: 22, F: 52)*	**Full-time, but less than 1 year (M: 22, F: 51)****	**Part-time (M: 22, F: 53)*****
1. Male	**11 (50%)**	**10 (45.5%)**	17 (77.3%)
2. Female	18 (34.6%)	21 (41.2%)	**44 (83%)**
* 2 missing values, Chi-Square test: .085 ** 3 missing values *** 1 missing values			

Table 28: Relationship between gender and the interests to emigrate to other ASEAN countries

4.2.3.3. The relationship between channels of information and the number of respondents interested to work in other ASEAN countries

According to the Table 29 below, those who are interested to work in other ASEAN countries, received the information regarding working abroad mainly from their colleagues/ co-workers, and the training institutions.

Channels of receiving information about working abroad	Number of respondents interested to work in other ASEAN countries		
	Full-time, more than 1 year	**Full-time, but less than 1 year**	**Part-time**
1) None	9	11	12
2) Training institutions	**12**	**12**	**18**

3) Colleague/ co-workers	**13**	**14**	**18**
4) Family	3	3	2
5) Media	0	0	0
6) Others	0	0	1

Table 29: Relationship between channels of information and the interests to emigrate to other ASEAN countries

4.2.3.4. The relationship between the number of respondents interested to work in other ASEAN countries and the duration of stay in those countries

According to the Table 30 below, it can be concluded that the number of respondents interested to work in other ASEAN countries will increase, if the duration of stay in those countries decreases.

Number of respondents interested to work in other ASEAN countries, by duration of stay		
Full-time, more than 1 year	**Full-time, but less than 1 year**	**Part-time**
39.2 % (29) *[2 missing values]*	42.5% (31) *[3 missing values]*	**52% (39)** ***[1 missing value]***

Table 30: Number of respondents interested to work in other ASEAN countries, by duration of stay

4.2.3.5. The relationship of between the number of respondents interested to work in Singapore and their specialist areas

The Table below showed that the missing values of each column (part-time, full-time more than 1 year, full-time less than 1 year) range from 1-3.

According to the Table 31 below, those studying in Psychology were not interested in working in Singapore, while 100% (3) of those studying in Anesthesiology were interested in working in Singapore, especially for part-time job. According to the Table below, the top three specialist physicians who were interested in working part-time in Singapore are anesthesiologists, ob-gyn doctors, and internist, respectively. The top three specialist physicians, who were interested in working full-time, but less than 1 year, are radiologists, ob-gyn doctors, and pediatricians, respectively. The top three specialist physicians, who were interested in working full-time, more than 1 year, are anesthesiologists, ob-gyn doctors, and radiologists, respectively.

Specialist areas	**Respondents interested in working part-time in Singapore**	**Respondents interested in working full-time, but less than 1 year in Singapore**	**Respondents interested in working full-time, more than 1 year in Singapore**	**Total (regardless of the missing values)**
1) Pediatrics	41.9% (13)	29% (9)	29% (9)	100% (31)
2) Surgery	47% (8)	17.6% (3)	29.4% (5)	100% (17)
3) Ob-gyn	**66.7% (8)**	**33.3% (4)**	**41.6%(5)**	100% (12)
4) Orthopedics	0	0	33.3% (1)	100% (3)
5) Internal Medicine	66.7% (2)	33.3% (1)	33.3% (1)	100% (3)
6) Anesthesiology	**100% (3)**	**33.3% (1)**	**66.7% (2)**	100% (3)
7) Psychology	0	0	0	100% (2)
8) Radiology	**60% (3)**	**60% (3)**	**40% (2)**	100% (5)

Table 31: Specialist areas and the interests to migrate to Singapore

4.2.3.6. The relationship between the factors affecting the migratory decision and the intervening obstacles

According to the Table 32 below, it can be observed that respondents, who chose 'The Most' for 'Income' or 'Economic stability', were less likely to choose 'the attachment to home country' as their most dominant obstacles. On the other hand, those who chose 'The Most' for 'Working condition,' or 'Living condition,' tend to select 'attachment to home country' as their main dominant intervening obstacles.

Intervening obstacles	**Top factors affecting the migratory decisions**			
	Working condition	**Living condition**	**Income**	**Economic stability**
1) Distance	5	5	2	2
2) Unfamiliarity/ Ignorance of law at the destination	7	8	3	6
3) Language and cultural difference	6	6	7	5
4) Regional conflicts	1	1	3	1
5) Attachment to home country	**10**	**10**	**6**	**7**

Table 32: Top intervening obstacles intersected with the top migratory factors

4.2.3.7. The relationship between the intervening obstacles and the working destinations within five years after graduation

The Table 33 below presents the relationship between the total number of respondents choosing 'The Most' or 'More' for each intervening obstacles, and the working destinations during five years after completing specialist training.

According to the result, it can be concluded that Thai specialist physicians who prefer to work in Bangkok for at least during five years after completing specialist training perceive the attachment to home country (68.8%) as the most dominant intervening obstacle preventing them to go.

On the other hand, for those intending to work in other provinces, the unfamiliarity/ ignorance of law at destinations was chosen to be the most dominant intervening obstacle. However, they do share some similarity which is both of them reveal that ‘regional conflict’ is the least dominant obstacle for the migration to other ASEAN countries.

Interestingly, for two respondents who intend to go abroad within five years after graduation do not consider the unfamiliarity of laws at destinations, language and cultural difference, or the attachment to home country as their dominant obstacles. They’d rather choose distance and regional conflicts as their dominant obstacles to migrate to other ASEAN countries

Working destinations during 5 years after completing specialist training*	**Total number of respondents choosing 'The Most' or 'More' for each intervening obstacles of the migration within ASEAN****				
	Distance (49)	Unfamiliarity/ Ignorance of laws at destinations (53)	Language and cultural difference (49)	Regional conflicts (38)	Attachment to home country (53)
1) Bangkok (32)	20 (62.5%)	20 (62.5%)	20 (62.5%)	17 (53.1%)	**22 (68.8%)**
2) Other provinces (41)	28 (68.2%)	**33 (80.5%)**	29 (70.7%)	20 (48.7%)	31 (75.6%)
3) Other countries (2)	1 (50%)	0	0	1 (50%)	0

* One missing value
** No missing value
Note: The percentage value is calculated, based on the column in the left (Working destinations during 5 years after completing specialist training)

Table 33: Working destinations within 5 years and intervening obstacles

4.3. In-depth interview results

The characteristics of ten key respondents/ interviewees, summaries of the interviews, and the code index of the interview result are presented in the Appendix D. However, Table 34 below also shows brief information of the interview participants.

Interview participants (n=10)					
Gender	Male	Female			
Freq.	**3**	**7**			
Age	21-25	26-30	31-35	36-40	
Freq.	-----	**7**	**3**	------	
Marital status	Single	Married			
Freq.	**6**	**4**			
Hometown	Bangkok	Central	Northeast	North	South
Freq.	**5**	**1**	**2**	**1**	**1**
Specialist areas	Internal Medicine	Neurological Surgery	Ob-gyn	Emergency Medicine	
Freq.	**4**	**1**	**2**	**1**	
	Dermatology	Rehabilitation Medicine			
	1	**1**			

Table 34: Characteristics of the interview participants

Several themes extracted from the interviews are as presented as follows.

4.3.1. Possible Scenarios of the migration of Thai specialist physicians after the establishing of the AEC

This theme presents possible scenarios of the future migration of Thai specialist physicians in the ASEAN. The Figure 10 below shows the possible scenarios of the migration.

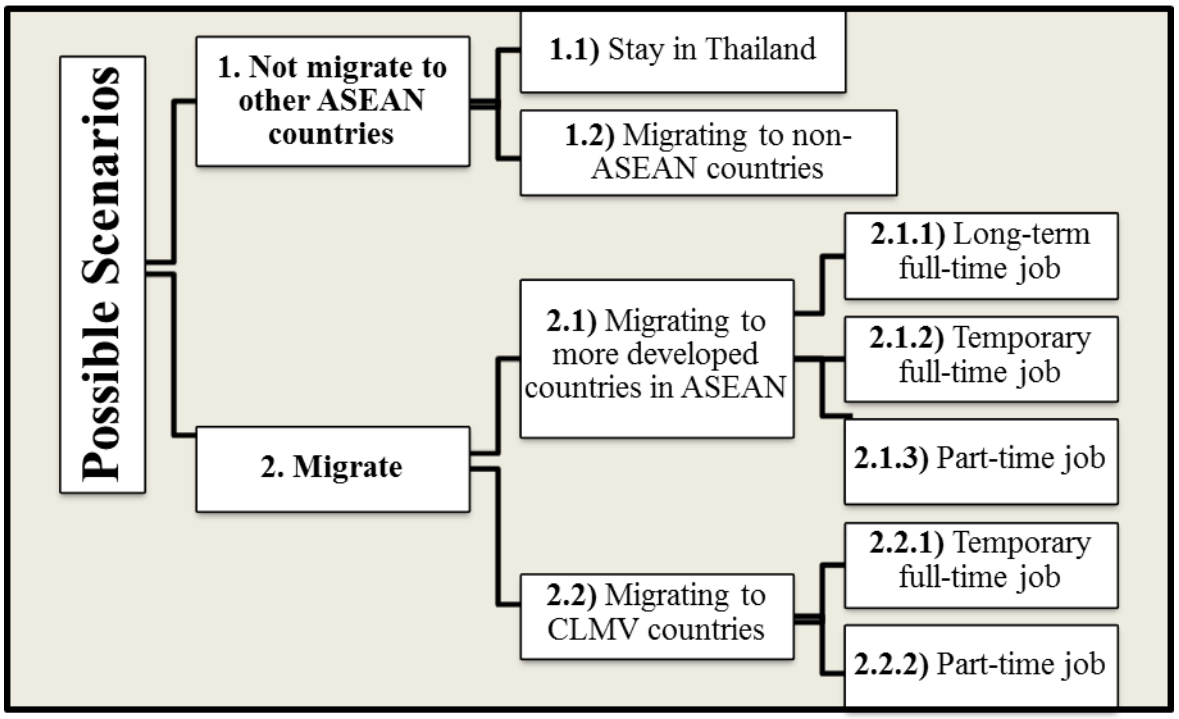

Figure 10: Possible Scenarios for the migration of Thai specialist physicians after the establishment of the AEC in 2015

All interviewees unanimously agree that it is quite impossible for the noticeable number of Thai physicians to migrate to work and live in other ASEAN countries permanently or living there for more than 5 years.

For Thai specialist physicians who tend not to migrate to any ASEAN countries, they may either stay in Thailand or migrate to other countries such as the United States and the United Kingdom. The reason behind the decision not to migrate is that the difference between home (Thailand) and host (other ASEAN countries) are not so significant enough, so they would rather continue working in Thailand.

For Thai specialist physicians who tend to migrate to other ASEAN countries, they will migrate only for short-term jobs and then return to Thailand.

For those who are interested to work full-time in more developed countries, they want to work there for less than 5 years and then come back to

Thailand. And they think that going to work part-time there is too exhausting for specialist physicians as the workload in Thailand is already too much for them. In addition, some specialist physicians would want to migrate to more developed countries in ASEAN for long-term, as well.

For those who are interested to work part-time in more developed countries, they want to go there during weekends. Main reasons for doing part-time job are including gaining new experience (for those who are not concerned much about money), and gaining more money (for those who want to increase their income, but also want to stay in Thailand as well).

For those who are interested to work full-time in CLMV countries, they will only live in the countries for a very short time, unless the hospital facilities there are significantly improved. Main reasons for going to CLMV countries are varied. Some of them want to go there just because their hometowns share the border with those countries. Some of them want to go there for traveling purpose. Some of them want to go there for altruistic/ voluntary purpose

For those who are interested to work part-time in CLMV countries, they want to go there during weekends, mainly for traveling purpose.

4.3.2 Perceptions of Thai specialist physicians towards the future migration under the ASEAN Economic Community (AEC)

This theme shows the perception of Thai specialist physicians towards the free movement of skilled labors under the ASEAN Economic Community (AEC) in the near future. The perceptions on the practicality of the AEC as well as the Mutual Recognition Arrangements (MRAs) on medical practitioners will also be discussed.

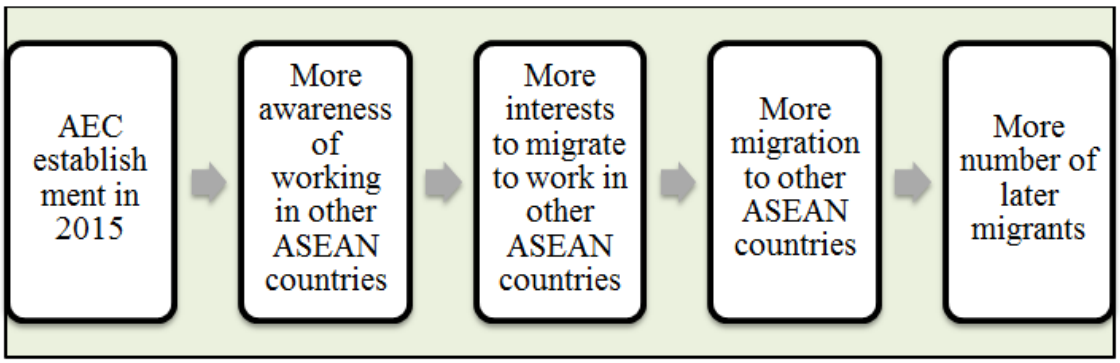

Figure 11: Perceptions of Thai specialist physicians towards the future migration under the ASEAN Economic Community (AEC)

Thai specialist physicians predicted that after the AEC is established in 2015, there would be more awareness of the working in other ASEAN countries. Then, the interests to migrate there will be stimulated. And, as a result, there would be more migration of Thai specialist physicians to other ASEAN countries. However, the number of future migrants may not be substantial, but it is highly possible that it will significantly increase from the status quo. After that, the number of later migrants will be escalated as they can foresee their own migration pathway through the evaluation of the migration of the early migrants.

However, Thai specialist physicians still don't know much about the progress of the MRAs, making them curious about the practicality of the issuance of the licensing certificate of ASEAN doctors. The uncertainty regarding the MRAs came from the perceptions of different standards in each ASEAN countries. For example, in order to be able to practice medicine in Thailand, foreign-trained specialist physicians need to pass the licensing exam, which is written in Thai. But for Singapore, foreign-trained specialist physicians don't necessarily have to take licensing exam written in English, but just have to proof that they are able to speak good English by submitting the English test score as well as other documents such as recommendation letters, which can indicate their qualifications.

4.3.3. Satisfaction of working in Thailand

This theme presents the satisfaction towards working in Thailand by Thai specialist physicians. Figure 12 below shows main three reasons of why Thai specialist physicians are satisfied in working in Thailand.

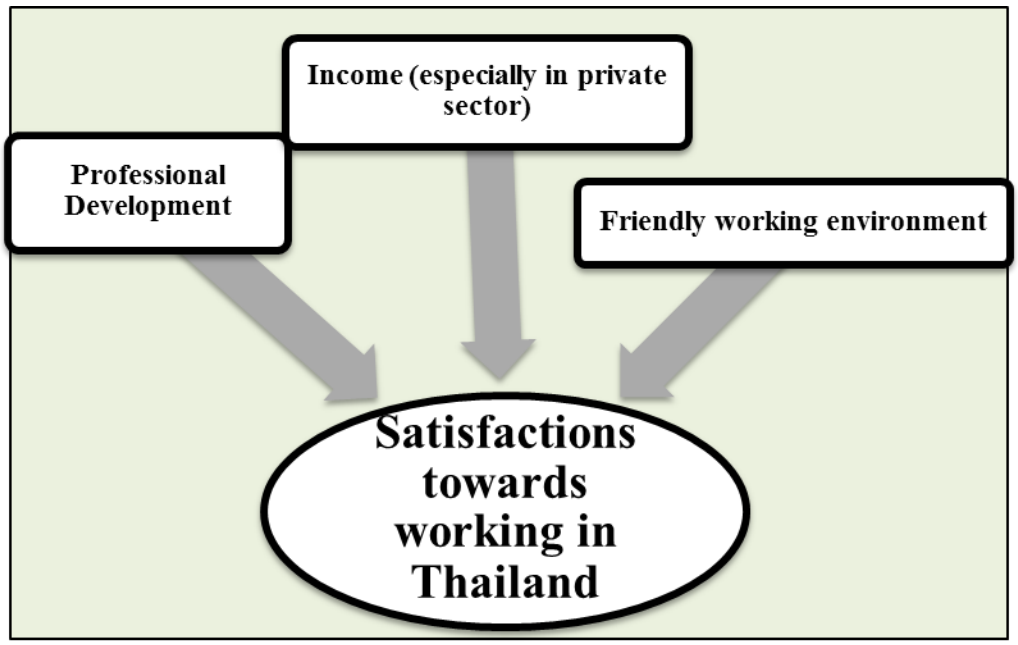

Figure 12: Satisfactions of working in Thailand

Specialist physicians, who are satisfied with the working in Thailand, are satisfied with the professional development, income (especially in private sector), and the friendly working environment. Comparing to other careers in the public sector, specialist physicians perceived the professional development in their career as much better, then being satisfied by that. Regarding the income in private sector, specialist physicians perceived it as the booster of their living standard, hence being satisfied. In addition, some public physicians also reported their satisfaction toward their income as well. Lastly, they are satisfied with the friendly working environment in Thailand. They perceived working in Thailand as less stressful when comparing to more developed countries like Singapore.

4.3.4 Push factors causing dissatisfactions towards working in Thailand

This theme presents the push factors towards working in Thailand perceived and experienced by Thai specialist physicians. Such factors can encourage both internal and external migration of specialist physicians.

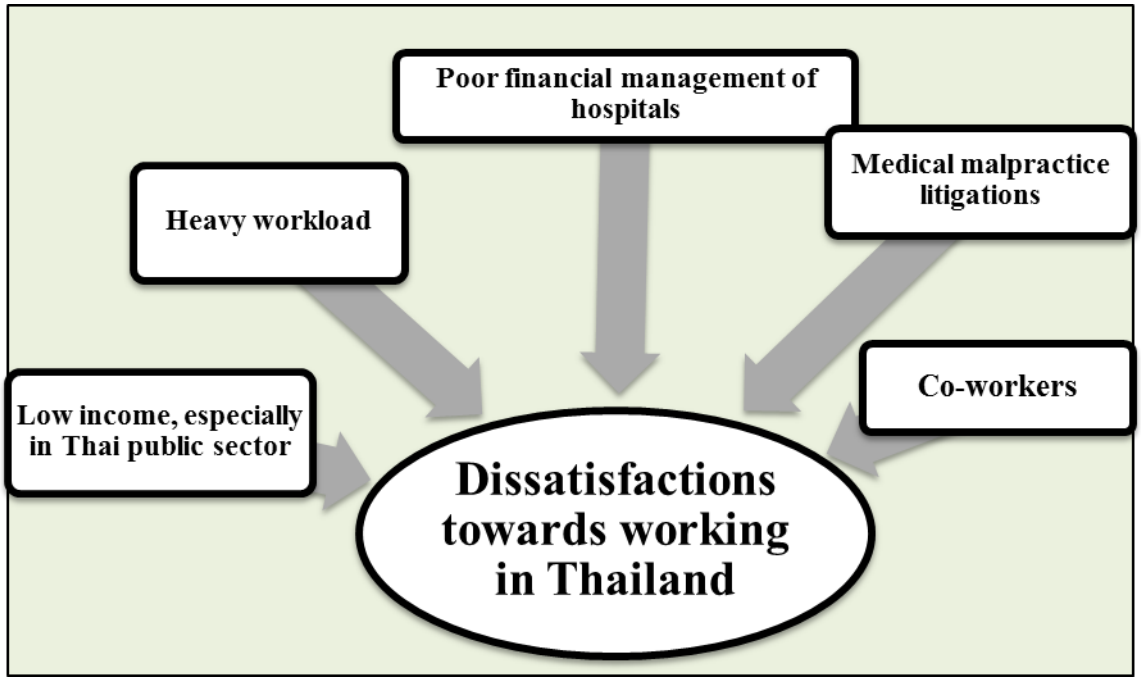

Figure 13: Push factors causing dissatisfactions towards working in Thailand

Specialist physicians, who also do the administrative jobs in public hospitals, reported dissatisfactions about their co-workers. Even though, it is not perceived as strongly dominant push factor, it can also contribute to the migratory decision.

Low income in Thai public sector is perceived to be the factor that makes Thai public specialist physicians to feel inferior to their private counterparts as high income can help improve their living conditions. However, some specialist

physicians think the low income is unpleasant but still they can accept it. In addition, the physicians perceived that at least the salary of Thai public physicians is so much better than the salary of other public officers.

The heavy workload of Thai specialist physicians is the main push factor for working in Thailand. Specialist physicians believe that heavy workload create fatigue during the day, which eventually reduces the quality of treatment provided to patients. Thus, they believe that medical malpractice will increase when the workload increases. Furthermore, medical malpractices can entail medical litigations, which create dissatisfactions to both physicians and patients.

Medical malpractice litigations in Thailand are perceived to be another push factor for working in Thailand, especially after the draft of "the Protection Act to the Detriment of Public Health Services" was proposed in mid-2010 by Consumer Network of Thailand. The proposed draft allows patients to sue individual medical practitioners.[231] Since then, medical practitioners have been protesting against the draft, as they are feared that it will threaten not only their job security but the security of their lives as well. However, groups of medical practitioners also propose another Act which is quite similar in terms of protecting the patient's right; however, it doesn't allow patients to sue medical practitioners like the previous one.[232]

Poor financial management of hospitals also worsens the working condition in Thailand. Some specialist physicians reported that they couldn't get their salary on time as the hospital they are working at run out of money. So, they have to

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[231] "ร่าง พ.ร.บ. คุ้มครองผู้ได้รับผลกระทบจากการบริการสาธารณสุข ", Thai National Assembly, http://www.parliament.go.th/ewtadmin/ewt/parliament_parcy/download/article/article_20110906101618.pdf.

[232] Ibid.

wait for the next month to get their salary. The main causes of such poor financial management can come from corruption, and the excess spending of hospital. It is reported that illegal Burmese immigrants, who intrude the border in order to get the medical service in Thai hospitals, cannot pay for their medical cost in hospitals in Chiang Mai and Chiang Rai. And, the accumulated cost each year is big enough to cause trouble for Thai hospitals as well as Thai people, since some time there's no single bed left for Thai patient. However, specialist physicians also think that it is still a good thing to help those immigrants, but they also want the government to deal with this problem as soon as possible.

4.3.5 Pull factors in other ASEAN countries

This theme indicates the pull factors in other ASEAN countries perceived by Thai specialist physicians. The pull factors in each ASEAN countries are presented in Table 35 below.

Pull factors in other ASEAN countries	
Countries	**Pull factors**
Singapore	1. Higher income 2. Better employee benefits 3. Fairer and more transparent health system 4. High technology 5. Travel opportunities
Malaysia	1. Higher income 2. High technology 3. Travel opportunities
Bruenei	1. Higher income 2. Better employee benefits

CLMV countries	1. Shorter distance from Thailand 2. Serious shortage of specialist physicians 3. Travel opportunities
Philippines and Indonesia	1. Fair technology 2. Travel opportunities
All	1. Gaining new experience

Table 35: Pull factors in other ASEAN countries perceived by Thai specialist physicians

Specialist physicians want to migrate to work in other ASEAN countries in order to gain new experience, though the migrations of each individual are varied in terms of the length of stay.

In general, Thai specialist physicians believe that they can seek better living standards and better working standard in Singapore, Brunei, and Malaysia, respectively.

For CLMV countries, most of them have border sharing with Thailand and the distance is shorter as well. Thus, the physicians who want to go there would go there by this reason. Interestingly, the lack of health professionals in CLMV countries is also perceived as the pull factor of those countries. Many of specialist physicians want to go there for altruistic purpose and for study purpose as well. Specialist physicians think that they can gain a lot experience there.

Even though, physicians perceived Philippines and Indonesia as having better economic condition than that of CLMV countries, they don't show much interest towards the two countries, as they perceived the condition in Thailand to be better.

4.3.6 Intervening obstacles preventing Thai physicians to migrate to other ASEAN countries

This theme presents the intervening obstacles that prevent Thai specialist physicians from migrating to other ASEAN countries. The intervening obstacles for migrating to ASEAN countries are presented in Figure 14 below.

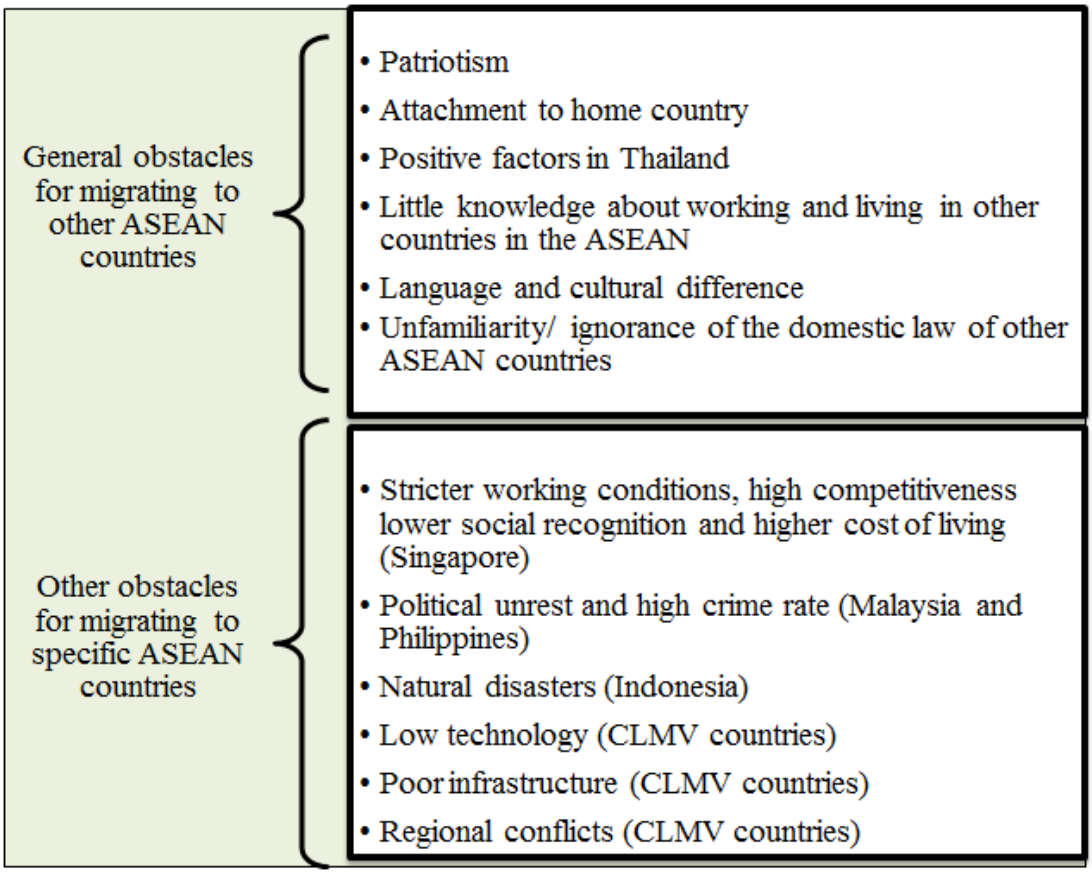

Figure 14: Intervening obstacles for migrating to other ASEAN countries

Most of specialist physicians don't want to leave Thailand mainly for two reasons; firstly, they believe that they have to serve the need of Thai people first (patriotism), and secondly, they are already familiar with working and living conditions in Thailand (attachment to home country) and that they don't like changes.

Positive factors in Thailand perceived by specialist physicians also act as the obstacles for emigration. Those factors are including income (especially in private sector), friendly working condition, and professional development.

Other barriers such as the limitation of the knowledge of the working and living conditions in other ASEAN countries, as well as, the unfamiliarity of domestic laws there, are contributing to the reason why there were very light migration history of Thai specialist physicians to other ASEAN countries so far.

Language barriers is perceived to be strong dominant factor that prevents migration as most Thai physicians can speak only Thai language.

Stricter working condition in Singapore is what most Thai physicians are worried about, as they perceive the working conditions in Thailand to be friendlier. In addition, the high cost of living in Singapore, also cross out the benefits of high salary there.

Unpleasant conditions in Indonesia, Malaysia, and Philippines as presented in Figure 14 are also contributing to the reason why Thai specialist physicians had better stay at home country.

Low technology and poor infrastructure in CLMV countries are perceived as great barriers for specialist physicians as they need good medical equipment and facility in order to provide service. The conflicts between Thailand and its neighbors such as Cambodia, Laos, and Myanmar, also prevent the migration.

4.3.7 Example of the actual migration pattern of one Thai specialist physician migrating to work in Singapore

According to the interviewee No.9 (I9), the real example of migration pattern (before the AEC) of a Thai specialist physician is as presented as follows.

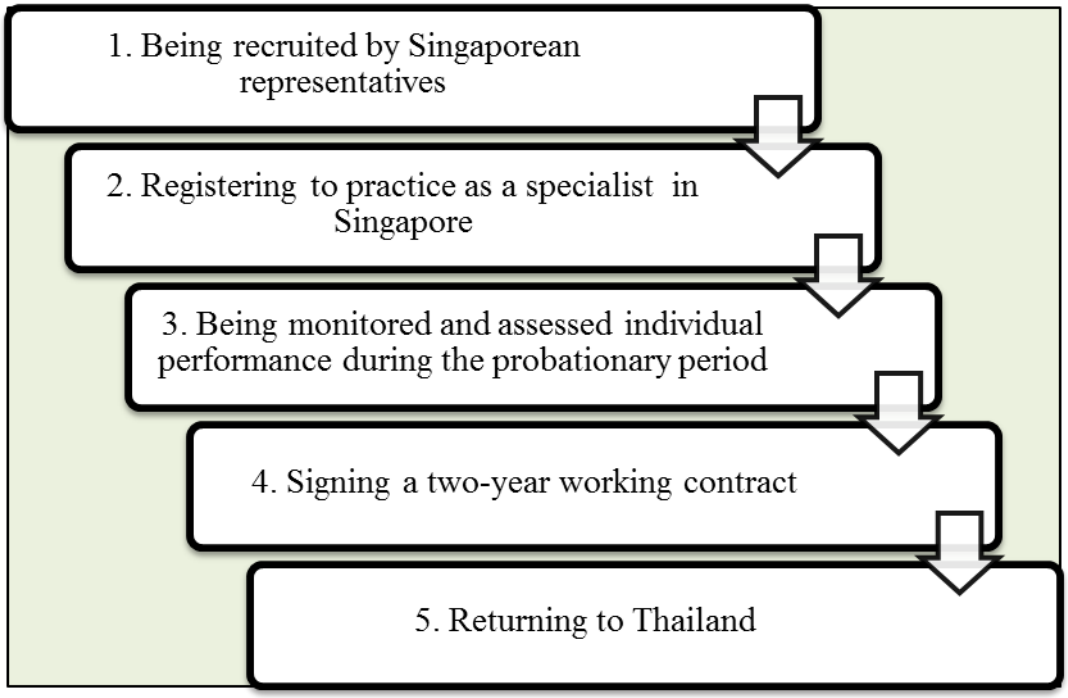

Figure 15: Example of the actual migration pattern of a specialist physician migrated to work in Singapore during 2007-2009

In essence, Figure 15 shows that in order to work in Singapore, physicians/ specialist physicians don't need to take the Singaporean licensing exam, unlike the case in Thailand. Hence, Thai physicians emigrate to practice medicine in Singapore is much easier than foreign-national physicians immigrate to practice medicine in Thailand. However, specialist physicians/ physicians who want to migrate to Singapore, have to submit documents such as the English proficiency test score,

and the recommendation letter from doctors working in Singapore or who used to work there.

In addition, the reason for this physician returning to Thailand is not because she was not satisfied with the working and living condition in Singapore, but because of marriage as her husband wanted to live in Thailand.

CHAPTER V

DISCUSSION

Questionnaire survey and in-depth interviews were conducted in order to examine the future migration pattern and the push-pull factors behind the migration of Thai specialist physicians in the AEC. In addition, the review of literature was used as means to understand the migration pattern of Polish specialist physicians within the EU, in order to be used as a benchmark for Thailand's case

Regarding to the research results of Thailand's context, both quantitative findings (questionnaire survey) and qualitative findings (interviews) yield significantly similar results, in which, it can be concluded that there would be no substantial emigration of Thai specialist physicians to other countries in ASEAN in the near future. According to both studies, the number of potential emigrants for long-term migration is close to zero or almost impossible.

However, when the length of stay in the destinations (ASEAN) becomes shorter, more of Thai specialist physicians are interested to migrate. The questionnaire result reveals that 39.2%, 42.5%, and 52.2% of respondents are interested to work full-time and more than one year, full-time but less than one year, and part-time, respectively, in other ASEAN countries.

The interview results also suggested that the majority of specialist physicians would want to migrate for short period. This finding is also in line with the

previous findings of Poland's context, in which, it describes the current emigration of Polish specialist physicians to other EU Member States as 'circulation.' Circulation or short-term migration is being viewed positively by Polish healthcare system, as it can help improve the quality of healthcare service in Poland through the exchange of medical knowledge between countries.[233]

According to Poland's context, only 345 physicians emigrated from the country during 2000-2003; however, after the country's accession to the EU, 2,961 Polish physicians emigrated during 2004-2007.[234] Although the number of emigrated Polish physicians was not substantial (around 2.5% of the total number of registered physicians in Poland), the significant increase of emigrants has resulted in vacancies of anesthesiologists of the country.[235]

Since, the supply of physicians in Thailand as a whole is much lower than that of Poland, thus, even only small percentage of emigration of physicians/ specialist physicians would create problem to the stability of Thai healthcare system for greater extent than in Poland's context.

However, the emigration rates of specialist physicians in Poland and Thailand (in the future) may not be equal, since the perceptions or knowledge towards the economic communities, which are the EU and the AEC, of specialist physicians in both countries are not equal.

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[233] Adelajda Kołodziejska, "National profile of migration of health professionals - POLAND".
[234] Marcin Kautsch, "When the grass gets greener at home: Poland's changing incentives for health professional mobility."
[235] Ibid.

According to both questionnaire and interview results, they confirmed that the knowledge of Thai specialist physicians regarding the AEC and the MRA on medical practitioners in ASEAN is very limited. The questionnaire result reveals that only 22.4% and 23.7% of respondents reported that they knew about the AEC, and the MRA, respectively. Most of interview participants also have little knowledge about the AEC and the MRA; however, they perceived that the AEC would increase the migration of Thai physicians to other ASEAN countries.

Thus, Hypothsis 1 "**AEC can lead to significant emigration of Thai specialist physicians to other ASEAN countries by 2020**" is not supported by quantitative study, though partially supported by qualitative study.

In addition, the questionnaire result also indicates that 97.3% of respondents will continue working in Thailand for at least 5 continuous years after completing their specialist training or by the year 2017-2021, as all respondents will complete their specialist training by the year 2012-2016.

In addition, according to qualitative analysis, physicians revealed that they don't want to be the 'pioneer' to emigrate, as they want to see how the migration to other ASEAN countries would be first. Thus, it can be concluded that the future volume of migration of Thai specialist physicians to other ASEAN countries would be low since the current or near future of volume of migration is still low.

Regarding the push factors in Poland, many qualitative studies revealed that the relative low income and poor management of Poland's health system has long been considered as dominant push factors. Many of Polish physicians,

especially specialists, left their country in order to seek for better opportunities both in other EU Member States and in other countries, such as the United States.

In addition, since the supply of physicians in Poland is much higher than the supply of physicians in Thailand, Polish physicians are facing different challenges, including unemployment, and hard access to specialist training.

For Thailand's context, relative low income doesn't seem to be the most dominant push factor in the country. According to qualitative analysis, it reveals that the most dominant push factor in Thailand is the heavy workload, especially for public physicians. Specialist physicians perceived the heavy workload as the main factor that lowers the quality of their medical services. Too much workload could lead to medical malpractice, and then medical litigations.

Medical doctors in Thailand perceived medical litigations as the factor which threatens their job security as well as their security of lives. A controversial draft proposed by Network of Consumers in 2010 even worsens the situation. As according to the proposed draft, patients can sue individual medical practitioners, in which, medical practitioners can lose both money and their freedom, as they may have to go to jail.

In addition, similarly with Poland's context, poor financial management of Thai hospital also contributes to worsen the working condition in Thailand.

Regarding the most desired destinations in ASEAN, both quantitative and qualitative study indicated that the majority of Thai specialist physicians would prefer to migrate to work in Singapore the most.

Thus, it can be assumed that the dominant pull factors for the migration of Thai specialist physicians are including better remuneration, better working condition and high technology of medical equipment.

In addition, this finding is also in line with previous studies, as well as, Ravenstein's theory regarding the migration and distance. In his theory, Ravenstein stated that the "migrants proceeding long distance generally go by preference to one of the great centers of commerce and industry," in which, the 'long distance' mentioned in his theory, can be understood as the external migration. [236]

Thus, Hypothesis 2 "**Most of Thai specialist physicians, who intend to migrate to other ASEAN countries, would prefer to go to the more developed countries in ASEAN rather than the less developed ones (CLMV countries)**" is supported by both quantitative and qualitative study.

In quantitative study, it shows that Singapore is the most popular destination among resident physicians, who are interested to work for both part-time and full-time jobs. In addition, the study also reveals that the number of specialist physicians who want to work part-time or full-time in CLMV countries is very low. In qualitative study, it explains that because of economic motivations, better working

[236] Ravenstein, "The Laws of Migration."

conditions, and high technology of hospital facility, Singapore, Malaysia, and Brunei, respectively, are becoming the most desirable destinations within the ASEAN region.

In Poland's context, main destinations within the EU are including the United Kingdom, Ireland, Germany, and Sweden, respectively. The desire to emigrate mainly comes from the economic motivation, as well as, better working and living conditions.[237]

Thus, it could be concluded that the pull factors in destination countries within the economic community of Thailand and Poland's contexts are similar, in which, such pull factors include higher remuneration and better working and living conditions.

Regarding the satisfaction towards working in Thailand, the quantitative result suggested that 59.2% of respondents are satisfied with the working in Thailand. The qualitative study presented quite different results, as it revealed that specialist physicians are not satisfied with the heavy workload, poor financial management of hospitals, and low income (especially in Thai public sector).

However, the interview participants remarked that most physicians still perceived the condition in Thailand as 'bearable.' And, according to strong attachment to the home country and patriotism, it is less likely that Thai specialist physicians would emigrate to work abroad for medium to long-term.

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[237] Krajewski-Siuda et al., "Brain drain threat–Polish students are not satisfied with labor market options for health professionals in Poland."

Another dominant obstacle for emigration of Thai specialist physician is the lack of language proficiency. The questionnaire result indicated that only 17.1% of respondents evaluated their English proficiency as ‘Good’ or ‘Excellent.’ According to the interviews, it is confirmed that the language capacity of most Thai specialist physicians is still quite limited.

In Poland, the main intervening obstacles for emigration of Polish specialist physicians can be grouped into two categories, including firstly the less desirable factors in the destinations, and secondly the improved factors in Poland.

Migration to Western Europe has become less beneficial since the economic crisis in 2008. Higher cost of living and hard access to long-term employment in the destinations (EU) also contributes to the decisions of Polish specialist physicians to better stay in Poland.

In addition, the reform of healthcare system in Poland and the increase income of physicians, has brought with the optimistic forecast and more satisfaction towards domestic health system.

Regarding similar obstacles for migration within an economic community, according to both Thailand and Poland comparison, it is indicated that the higher cost of living in destinations, language barriers, and the attachment to home countries are the obstacles preventing the migrations.

CHAPTER VI

CONCLUSION AND SUGGESTIONS

Unlike Poland, Thailand does not seem likely to face a noticeable flow of external migration of specialist physicians to other member states in the future. That is mainly because in Poland, the emigration of Polish specialist physicians within the union could be observed (though it was not so significant) before the country's accession to the EU. Thus, it is quite predictable that the number of migrants would significantly increase after the country joining the EU in 2004. This argument is supported by Lee's theory that the successful migration can create more migration. However, for Thailand, the number of specialist physicians migrating to other ASEAN countries is still very low so far. So, it is likely that the migration in the near future would be low as well.

Another factor is that the difference of salary of Thailand and other countries in the ASEAN is not as significant as in Poland's case. For example, if comparing the salary of private specialist physicians in Thailand with the salary of public specialist physicians in Singapore, the difference gap is small [I9P4L7-10].

In addition, for Thailand's contexts, it reveals that Thai specialist physicians are having more positive attitude towards the income or remuneration in the home country than in Poland's contexts.

However, according to Thailand-Poland comparison, the improvement of domestic working and living conditions are recommended for the Thai government in order to stabilize Thai healthcare system in long term.

Healthcare system and the working condition in Singapore are reported to be more transparent and fairer for specialist physicians. Thus, if the domestic conditions in Thailand remains as the status quo, then in the future when more of Thai specialist physicians become more familiar with the migration to Singapore, then it is highly possible that the migration in the next generation will be taken seriously. Hence, it can threaten Thai health system stability.

In addition, if such worse scenario really happens, it will affect Thai health system much harder than that of Poland since the total supply of physicians/ specialist physicians of Thailand is around 1/5 of the total supply of physicians in Poland. Thus, in the future, especially after the establishing of the AEC, even small number of emigrated Thai specialist physicians would have a meaningful implication for Thai health system.

Regarding the lack of knowledge about AEC and MRA on medical practitioners of Thai specialist physicians (according to the result from quantitative analysis), Thai government still has to be concerned about the migration of specialist physicians in the distant future. According to the qualitative results, specialist physicians will migrate more to ASEAN countries, when time increases. They stated that when time increases, there would be more awareness of the migration, more

interests to migrate, more migration (of early migrants), and finally more migration of later migrants.

According to Thailand-Poland comparison, it is clearly understood that the emigration of Polish physicians did not yield huge impact on its health system, mainly because the supply of physicians is much higher.

Thus, in order to create the stability of Thai health system, it is recommended that Thailand should produce more supply of physicians or recruit foreign-trained physicians from other countries. The latter recommendation would not be possible unless, the Medical Council of Thailand changes the format of the licensing exam from only written Thai to be written in English as well.

Once the supply of physicians/ specialist physicians reaches the certain point, physician's workload in Thailand would then become less. Hence, working condition in Thailand would be more pleasant. However, only increasing the supply of physicians in Thailand alone cannot equally satisfy the demand of patients nationwide. Thus, effective distribution scheme is needed to deal with the unequal distribution of physicians/ specialist physicians of the country. The increase of income will be needed to attract physicians to work in public sector, in which, it is responsible for providing healthcare services to the majority of Thai people, especially in the rural areas.

One limitation of this research is that the data used for describing the migration of Polish specialist physicians in the EU are only limited to secondary data.

Another limitation is the low response rate in the questionnaire session, in which, it is lower than 98, meaning that the confident level of the data is lower than 90%.

According to the result of this research, the main destination within ASEAN is Singapore. Thus, for future research regarding the implications of the AEC, there should be more focus on the migration of Thai specialist physicians to Singapore. More case studies of the actual migrants who used to migrate to or currently working in Singapore should be studied for better understanding of the migration pattern in ASEAN region of Thai specialist physicians.

The study of internal migration pattern in Thailand (from public hospital to private hospital) of Thai specialist physicians after the establishment of the AEC is also very interesting to be in future studies as it is related to mode 2 (Consumption abroad) of trade in health services, in which, it allows patients from other ASEAN countries or non-ASEAN countries to have medical treatments in Thailand.

Lastly, future studies should be conducted among larger number of specialist physicians from wider range of specialist areas in order to provide more credibility for representing the whole population of the specialist physicians in Thailand.

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APPENDICES

APPENDIX A

1) Example of questionnaire (English)

Questionnaire for Resident Physicians

Explanation:

This questionnaire is part of the research study for the academic thesis, entitled ***"Migration of specialist physicians in an economic community: A comparison of Thailand and Poland."*** This questionnaire is divided into two parts; part 1 will ask about general information of participants, and part 2 will ask about the migration of specialist physicians.

Part 1: General information of participants

Instruction: Please answer all questions below, by putting ✓ in the box in front of your answers, or writing your answers in the provided space.

1. **Age:** ☐21-25 ☐26-30 ☐ 31-35 ☐36-40 ☐41-45 ☐ 45 <
2. **Gender:** ☐ Male ☐ Female
3. **Marital status:** ☐Single ☐ Married ☐ Divorced ☐ Separated ☐ Widowed
4. **Nationality:.....Race:.....**
5. **Hometown:.....**
6. **Field of specialist:.....**

(Please specify the sub-unit (if have))

7. **Training school:**

☐Chulalongkorn Hospital ☐ Siriraj Hospital ☐Ramathibodi Hospital

8. **Training period:.....years, starting from year.....until year.....**
9. **Average work load (during specialist training):.....hrs/ day**
10. **During specialist training, you provide medical service approximately to .....patients/ day**
11. **Your Current income (for regular work):.....Baht/ month**
12. **Last previous workplace before specialist training:.....province.....**
13. **Working experience before specialist training:.....years**

14. Educational background

1. Graduated from Faculty of Medicine from.....
Province:.....Country:.....GPA: .....

2. Master's degree or higher
Program:.....University:.....
Province:.....Country:.....GPA: .....

15. How is your English? (Combining listening, speaking, reading, and writing skills)

☐Excellent ☐Good ☐Moderate ☐ Fair ☐ Needs improvement

16. How many languages can you speak?:.....languages, including.....

Part 2: Migration of specialist physicians

Instruction: Please answer all questions below, by putting ✓ in the box in front of your answers, or writing your answers in the provided space.

1. **What would you do after finishing specialist training?**

☐Work ☐Continue the study ☐Haven't decided yet ☐Others (please specify).....

2. **Whose decision is final for your migration to a new workplace? (Please choose only one answer)**

☐Yourself ☐Parents ☐Husband/ wife ☐Children ☐Others, please specify.....

3. **Where have you got the information about working abroad ? (Can choose more than 1 answer).**

☐None ☐Specialist training place ☐Colleague ☐Family

☐Media (Please specify……) ☐Others (Please specify.....)

4. **Where would you see yourself working <u>full-time</u> <u>right after</u> finishing the specialist training? (Please choose only one answer)**

☐Public hospital in Bangkok ☐Public hospital in other provinces

☐Private hospital in Bangkok ☐Private hospital in other provinces

☐Hospital in other countries (Please specify.....)

☐Others (Please specify.....)

5. **Do you know ASEAN Economic Community or AEC, in which it will be established in 2015?**

☐Yes ☐No ☐Not sure

6. **Do you know that ASEAN countries have signed the Mutual Recognition Arrangements (MRAs) on medical practitioners since 2008 in order to facilitate the movement of physicians after the AEC?**

☐Yes ☐No ☐Not sure

7. **Which countries in the ASEAN that you are interested to work <u>full-time</u>, and stay there for <u>more than one year</u>? (Please choose only one answer)**

☐None ☐Indonesia ☐Malaysia ☐Philippines ☐ Singapore

☐Brunei Darussalam ☐Vietnam ☐Lao PDR ☐Myanma ☐Cambodia

8. **Which countries in the ASEAN that you are interested to work <u>full-time</u>, but stay there <u>less than one year</u>? (Please choose only one answer)**

☐None ☐Indonesia ☐Malaysia ☐Philippines ☐ Singapore

☐Brunei Darussalam ☐Vietnam ☐Lao PDR ☐Myanma ☐Cambodia

9. **Which countries in ASEAN that you are interested to work <u>part-time</u>? (Please choose only one answer)**

☐None ☐Indonesia ☐Malaysia ☐Philippines ☐ Singapore

☐Brunei Darussalam ☐Vietnam ☐Lao PDR ☐Myanma ☐Cambodia

10. **How these factors affect your decision to migrate to a new workplace?**

1. Income	☐The most ☐ More ☐Moderate ☐Less ☐The least
2. Professional development	☐The most ☐ More ☐Moderate ☐Less ☐The least
3. Post-basic education opportunities	☐The most ☐ More ☐Moderate ☐Less ☐The least
4. Children's education	☐The most ☐ More ☐Moderate ☐Less ☐The least
5. Working condition	☐The most ☐ More ☐Moderate ☐Less ☐The least
6. Living condition	☐The most ☐ More ☐Moderate ☐Less ☐The least
7. Hospital facilities	☐The most ☐ More ☐Moderate ☐Less ☐The least
8. Economic stability	☐The most ☐ More ☐Moderate ☐Less ☐The least
9. Political stability	☐The most ☐ More ☐Moderate ☐Less ☐The least

10. Social stability	☐The most ☐ More ☐Moderate ☐Less ☐The least
11. Travel opportunities	☐The most ☐ More ☐Moderate ☐Less ☐The least
12. Known persons/ network	☐The most ☐ More ☐Moderate ☐Less ☐The least
13. Others (Please specify.....)	☐The most ☐ More ☐Moderate ☐Less ☐The least

11. Are you satisfied with the conditions of medical professionals in Thailand?

☐Very satisfied ☐Satisfied ☐Neither satisfied nor dissatisfied

☐Dissatisfied ☐Very dissatisfied

12. How do these barriers impede your decision to migrate <u>to other ASEAN countries?</u>

1. Distance	☐The most ☐ More ☐Moderate ☐Less ☐The least
2. Unfamiliarity/ Ignorance of laws at the destination	☐The most ☐ More ☐Moderate ☐Less ☐The least
3. Language and culture difference	☐The most ☐ More ☐Moderate ☐Less ☐The least
4. Regional conflicts	☐The most ☐ More ☐Moderate ☐Less ☐The least
5. Nationalism	☐The most ☐ More ☐Moderate ☐Less ☐The least
6. Others (Please specify.....)	☐The most ☐ More ☐Moderate ☐Less ☐The least

13. Where would you see yourself working <u>full-time</u> <u>within 5 years</u> after finishing the specialist training?

☐In Bangkok ☐In other provinces (Please specify.....)

☐In other countries (Please specify.....)

***********The end of the Questionnaire*********

Thank you for your participation

2) Example of questionnaire (Thai)

แบบสอบถามสำหรับแพทย์ประจำบ้าน

คำชี้แจง: แบบสอบถามนี้เป็นส่วนหนึ่งของโครงการวิจัย เพื่อรวบรวมข้อมูลประกอบการเขียนวิทยานิพนธ์ เรื่อง **"การย้ายถิ่นของแพทย์เฉพาะทางในกลุ่มประชาคมเศรษฐกิจ: การศึกษาเปรียบเทียบระหว่างประเทศไทยและประเทศโปแลนด์"** ทั้งนี้แบบสอบถามแบ่งออกเป็น 2 ตอน คือ 1. ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม และ 2. การย้ายถิ่นของแพทย์เฉพาะทาง

ตอนที่ 1: ข้อมูลทั่วไปของผู้ตอบแบบสอบถาม

คำชี้แจง: กรุณาตอบคำถาม โดย ใส่เครื่องหมาย ✓ หน้าช่องสี่เหลี่ยมหน้าคำตอบที่ท่านเลือก หรือเขียนคำตอบของท่านลงในช่องว่างที่กำหนดให้

1) **อายุ:** ☐21-25 ☐26-30 ☐ 31-35 ☐36-40 ☐41-45 ☐ 45 <

2) **เพศ:** ☐ ชาย ☐ หญิง

3) **สถานภาพ:** ☐โสด ☐ สมรส ☐ หย่าร้าง ☐ แยกกันอยู่ ☐ หม้าย

4) **สัญชาติ:.....เชื้อชาติ:.....**

5) **ภูมิลำเนาเดิมของท่าน:.....**

6) **สาขาเฉพาะทางที่ท่านกำลังศึกษาอยู่:.....**

(โปรดระบุสาขาย่อย (ถ้ามี):.....)

7) **สถาบันฝึกอบรมแพทย์เฉพาะทางของท่าน:**

☐ โรงพยาบาลจุฬาลงกรณ์ ☐ โรงพยาบาลศิริราช ☐โรงพยาบาลรามาธิบดี

8) **ระยะเวลาการฝึกอบรมทั้งหมด:.....ปี, เริ่มจากปี.....จนถึงปี.....**

9) **ภาระการทำงานโดยเฉลี่ย (ระหว่างฝึกอบรมแพทย์เฉพาะทาง):.....ชั่วโมง/ วัน**

10) **จำนวนผู้ป่วยที่ท่านรักษาในแต่ละวัน โดยเฉลี่ย (ระหว่างฝึกอบรมแพทย์เฉพาะทาง) .....คน**

11) **รายได้ปัจจุบัน (เฉพาะงานประจำ)**:.....บาท/ เดือน

12) **สถานที่ทำงานสุดท้ายก่อนเข้าฝึกอบรมเฉพาะทาง** : **.....จังหวัด:.....**

13) **ประสบการณ์การทำงานก่อนเข้าฝึกอบรมเฉพาะทาง:.....ปี**

14) **ประวัติการศึกษา**

1. **ท่านจบการศึกษาจากคณะแพทยศาสตร์ มหาวิทยาลัย.....**
   จังหวัด:.....ประเทศ:.....GPA: .....
2. **ปริญญาโท หรือสูงกว่า**
   คณะ:.....มหาวิทยาลัย:.....

จังหวัด:.....ประเทศ:.....GPA: .....

15) ระดับภาษาอังกฤษของท่านเป็นอย่างไร เมื่อวัดจากทักษะการฟัง พูด อ่าน และเขียน

☐ดีมาก ☐ดี ☐ปานกลาง ☐ พอใช้ ☐ ควรปรับปรุง

16) ท่านสามารถพูดได้กี่ภาษา อะไรบ้าง:.....ภาษา ได้แก่.....

ตอนที่ 2: การย้ายถิ่นของแพทย์เฉพาะทาง

คำชี้แจง: กรุณาตอบคำถาม โดยใส่เครื่องหมาย ✓ หน้าช่องสี่เหลี่ยมหน้าคำตอบที่ท่านเลือก หรือเขียนคำตอบของท่านลงในช่องว่างที่กำหนดให้

1) ท่านคิดว่า ท่านจะทำสิ่งใดต่อไป หลังจากที่ท่านสำเร็จการฝึกอบรมเฉพาะทางแล้ว

☐ทำงาน ☐ศึกษาต่อ ☐ยังไม่ได้ตัดสินใจ ☐อื่นๆ โปรดระบุ.....

2) ใครเป็นผู้มีอิทธิพลมากที่สุดในการตัดสินใจเลือกสถานที่ทำงาน ของท่าน (กรุณาเลือกเพียง 1 คำตอบ)

☐ตัวท่านเอง ☐พ่อแม่ ☐คู่สามี/ ภรรยา ☐ลูก ☐อื่นๆ (โปรดระบุ).....

3) ท่านเคยได้รับข้อมูลข่าวสารเกี่ยวกับการไปทำงานในต่างประเทศ จากแหล่งใดบ้าง (เลือกได้มากกว่า 1 คำตอบ)

☐ไม่เคยได้รับ ☐สถานที่ฝึกอบรมแพทย์เฉพาะทาง ☐เพื่อนร่วมงาน ☐ครอบครัว

☐สื่อ (โปรดระบุ.....) ☐อื่นๆ (โปรด ระบุ.....)

4) ท่านคิดว่าท่านมีแนวโน้มที่จะได้ปฏิบัติงาน <u>แบบเต็มเวลา</u> ในสถานที่ใดต่อไปนี้ <u>ทันที</u>หลังจากที่สำเร็จการฝึกอบรมแพทย์เฉพาะทางแล้ว (กรุณาเลือกเพียง 1 คำตอบ)

☐โรงพยาบาลของรัฐในกรุงเทพฯ ☐โรงพยาบาลของรัฐในต่างจังหวัด

☐โรงพยาบาลเอกชนในกรุงเทพฯ ☐โรงพยาบาลเอกชนในต่างจังหวัด

☐โรงพยาบาลในต่างประเทศ (โปรดระบุประเทศ.....)

☐อื่นๆ (โปรดระบุ.....)

5) ท่านรู้จัก ประชาคมเศรษฐกิจอาเซียน หรือ เออีซี ซึ่งกำลังจะเกิดขึ้นในปี 2558 หรือไม่

☐รู้จัก ☐ไม่รู้จัก ☐ไม่แน่ใจ

6) ท่านรู้หรือไม่ว่าประเทศในกลุ่มอาเซียนทุกประเทศ ได้ทำข้อตกลงยอมรับร่วมคุณสมบัติวิชาชีพแพทย์ ตั้งแต่ปีพ.ศ. 2551 เพื่ออำนวยความสะดวกเกี่ยวกับการเคลื่อนย้ายแพทย์ในกลุ่มประเทศสมาชิกอาเซียน ในอนาคต

☐รู้ ☐ไม่รู้ ☐ไม่แน่ใจ

7) **ประเทศใดในกลุ่มอาเซียน ที่ท่านมีความสนใจอยากที่จะย้ายไปทำงาน<u>แบบเต็มเวลา (Full-time) และ</u>**
<u>อาศัยอยู่ที่นั่นมากกว่า 1 ปี</u> (กรุณาเลือกเพียง 1 คำตอบ)

☐ไม่มี ☐อินโดนีเซีย ☐มาเลเซีย ☐ฟิลิปปินส์ ☐ สิงคโปร์ ☐บรูไน
☐เวียดนาม ☐ลาว ☐พม่า ☐กัมพูชา

8) **ประเทศใดในกลุ่มอาเซียน ที่ท่านมีความสนใจอยากที่จะย้ายไปทำงาน<u>แบบเต็มเวลา (Full-time) แต่</u>**
<u>ภายในระยะเวลาไม่เกิน 1 ปี</u> (กรุณาเลือกเพียง 1 คำตอบ)

☐ไม่มี ☐อินโดนีเซีย ☐มาเลเซีย ☐ฟิลิปปินส์ ☐ สิงคโปร์ ☐บรูไน
☐เวียดนาม ☐ลาว ☐พม่า ☐กัมพูชา

9) **ประเทศใดในกลุ่มอาเซียน ที่ท่านมีความสนใจอยากไปทำงานแบบ<u>ล่วงเวลา (part-time)</u>** (เลือกได้มากกว่า 1 คำตอบ)

☐ไม่มี ☐อินโดนีเซีย ☐มาเลเซีย ☐ฟิลิปปินส์ ☐ สิงคโปร์ ☐บรูไน
☐เวียดนาม ☐ลาว ☐พม่า ☐กัมพูชา

10) ปัจจัยดังต่อไปนี้ <u>ส่งผลกระทบอย่างไร</u> ต่อการตัดสินใจย้ายที่ทำงานของท่าน

1) รายได้	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
2) ความก้าวหน้าทางอาชีพ	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
3) โอกาสศึกษาต่อ	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
4) อนาคตการศึกษาของลูก	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
5) สภาพแวดล้อมการทำงาน	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
6) สภาพความเป็นอยู่	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
7) สิ่งอำนวยความสะดวกในโรงพยาบาล	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
8) ความมั่นคงทางเศรษฐกิจ	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
9) ความมั่นคงทางการเมือง	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
10) ความมั่นคงทางสังคม	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
11) โอกาสท่องเที่ยว	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
12) การมีคนรู้จัก หรือ เครือข่ายในที่ทำงานใหม่	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
13) อื่นๆ (โปรดระบุ).....	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด

11) ท่านพึงพอใจกับการประกอบอาชีพแพทย์ในประเทศไทยมากน้อยเพียงใด?

☐พอใจอย่างมาก ☐พอใจ ☐เฉยๆ ☐ไม่พอใจ ☐ไม่พอใจอย่างมาก

12) ท่านคิดว่า อุปสรรคต่างๆต่อไปนี้ มีอิทธิพลมากน้อยเพียงใด ในการขัดขวางการย้ายถิ่นของท่านไปยัง <u>ประเทศอื่นๆ ในภูมิภาคอาเซียน</u>

7. ระยะทาง	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
8. ความไม่รู้ หรือความไม่คุ้นเคยกฎหมายของประเทศอื่นๆ	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
9. ภาษาและวัฒนธรรมที่แตกต่างกัน	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
10. ความขัดแย้งระดับภูมิภาค	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
11. ความไม่อยากย้ายถิ่นฐานออกจากประเทศหรือ ถิ่นที่เกิด	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด
12. อื่นๆ (โปรดระบุ.....)	☐มากที่สุด ☐มาก ☐ปานกลาง ☐น้อย ☐น้อยที่สุด

13) ท่านคิดว่า<u>ภายในระยะเวลา 5 ปี</u> หลังจากที่ท่านสำเร็จการฝึกอบรมเฉพาะทางแล้ว <u>มีแนวโน้มว่าท่านจะได้ทำงานประจำอยู่ที่ใด</u>?

☐กรุงเทพมหานคร ☐ต่างจังหวัด (โปรดระบุ.....)

☐ต่างประเทศ (โปรดระบุ.....)

***************สิ้นสุดการทำแบบสอบถาม*****************

ขอขอบพระคุณทุกท่านที่สละเวลาในการทำแบบสอบถามครั้งนี้

APPENDIX B

1) In-depth interview questions (English)

In-depth interview questions

Part I. Personal information

Information regarding participant's age, gender, marital status, specialist area, university (bachelor's degree), specialist training place, current workplace, income, and working experience will be asked.

Part II. Intention to work in other ASEAN countries:

The questions in this part are as presented as follows.

1. Have you ever thought about working in other ASEAN countries in the future?
    a. Which ASEAN countries are you interested to work?
    b. How long do you want to stay there?
2. Do you think the majority of Thai specialist physicians are interested in working in other ASEAN countries?

Part III. Awareness of the ASEAN Economic Community (AEC) and the Mutual Recognition Arrangement (MRAs)

The questions in this part are as presented as follows.

1. Do you know ASEAN Economic Community (AEC)?
2. Do you know that ASEAN leaders already signed on the MRAs on medical practitioners in order to facilitate the movement of medical practitioners within the ASEAN?

3. Do you think that the establishing of AEC will increase the number of Thai physicians or specialist physicians migrating to other ASEAN countries?

Part IV. Push factors in Thailand

The questions in this part are as presented as follows.

1. Are you satisfied by working in Thailand?
2. What are the push factors in Thailand that you think they may force Thai physicians/ specialist physicians to leave Thailand and go to work abroad instead?

Part V. Pull factors in other ASEAN countries

1. What are the pull factors in other ASEAN countries?
2. How those pull factors affect the decision to migrate?

Part VI. Intervening obstacles

1. What are the intervening obstacles for Thai specialist physicians to migrate to other ASEAN countries?
2. In what extent do you think the AEC can minimize the effect of such obstacles?

Part VII. Factors contributing to the decision to change workplace

How many factors do you have to take into considerations when making a decision about changing the workplace?

2) In-depth interview questions (Thai)

คำถามสำหรับการสัมภาษณ์แบบกึ่งโครงสร้าง (Semi-structured interview)

ตอนที่ 1 ข้อมูลส่วนตัว

ผู้สัมภาษณ์จะสอบถามเกี่ยวกับข้อมูลส่วนตัวของผู้ถูกสัมภาษณ์ ซึ่งข้อมูลส่วนตัวดังกล่าวได้แก่ อายุ, เพศ, สถานภาพสมรส, สาขาเฉพาะทาง, มหาวิทยาลัยที่จบการศึกษาระดับปริญญาตรี, สถานที่ฝึกอบรมเฉพาะทาง, สถานที่ทำงานปัจจุบัน, และ ประสบการณ์การทำงาน

ตอนที่ 2 ความมุ่งหมายในการไปทำงาน ณ ประเทศอื่นๆในภูมิภาคอาเซียน

คำถามในส่วนนี้ มีดังต่อไปนี้

1) คุณเคยคิดที่จะไปประกอบอาชีพแพทย์ ณ ประเทศอื่นๆในอาเซียน ในอนาคตหรือไม่
    a. ประเทศใดในภูมิภาคอาเซียนที่คุณสนใจอยากจะไปประกอบอาชีพแพทย์?
    b. คุณต้องการจะประกอบอาชีพแพทย์ในต่างประเทศ (อาเซียน) นานเพียงใด?
2) คุณคิดว่าแพทย์ไทยส่วนใหญ่มีความสนใจที่จะไปประกอบอาชีพแพทย์ที่ประเทศอื่นๆในภูมิภาคอาเซียน หรือไม่?

ตอนที่ 3 ความรับรู้เกี่ยวกับประชาคมเศรษฐกิจอาเซียน หรือ เออีซี และ ข้อตกลงยอมรับร่วมคุณสมบัติวิชาชีพแพทย์ หรือ เอมอาร์เอ

คำถามในส่วนนี้ มีดังต่อไปนี้

1) คุณรู้จักประชาคมเศรษฐกิจอาเซียน หรือ เออีซี หรือไม่?
2) คุณทราบหรือไม่ว่าผู้นำของกลุ่มประเทศอาเซียนทั้ง 10 ประเทศ ได้ลงนามในข้อตกลงยอมรับร่วมคุณสมบัติวิชาชีพแพทย์ เพื่ออำนวยความสะดวกในการเคลื่อนย้ายของแพทย์ในภูมิภาคอาเซียน?
3) คุณคิดว่า ประชาคมอาเซียนจะทำให้แพทย์ หรือ แพทย์เฉพาะทางของไทยย้ายถิ่นไปประกอบอาชีพแพทย์ในประเทศอื่นๆในอาเซียนเพิ่มมากขึ้นหรือไม่?

ตอนที่ 4 ปัจจัยผลักในประเทศไทย

คำถามในส่วนนี้ มีดังต่อไปนี้

1) คุณพึงพอใจกับการประกอบอาชีพแพทย์ในประเทศหรือไม่?

2) สิ่งใดคือปัจจัยผลักที่อาจผลักดันให้แพทย์ไทยย้ายไปประกอบอาชีพแพทย์ในต่างประเทศ?

ตอนที่ 5 ปัจจัยดึงในประเทศอื่นๆในอาเซียน

1) ปัจจัยดึงในประเทศอื่นๆในอาเซียน คืออะไรบ้าง?

2) ปัจจัยดึงดังกล่าวอาจส่งผลต่อการตัดสินใจย้ายถิ่นของแพทย์ไทยอย่างไรบ้าง?

ตอนที่ 6 อุปสรรคแทรกขั้นกลาง

1) สิ่งใดคืออุปสรรคขัดขวางการย้ายไปประกอบอาชีพแพทย์ของแพทย์ไทยในประเทศอื่นๆในอาเซียน?

2) คุณคิดว่าประชาคมเศรษฐกิจอาเซียนสามารถลดอุปสรรคดังกล่าวได้มากน้อยเพียงใด?

ตอนที่ 7 ปัจจัยที่ส่งผลต่อการตัดสินใจย้ายที่ทำงาน

ปัจจัยใดบ้าง ที่มีผลต่อการตัดสินใจย้ายที่ทำงานของท่าน?

APPENDIX C

1) Results of the questionnaire: Characteristics of respondents

Characteristics of respondents in the questionnaire survey

1.1. Age, Gender, Marital status, Hometown, Specialist areas, Training institutions and Year of graduation.

Characteristics of respondents: Part 1

	Age	Gender	Marital Status	Hometown	Specialist Areas	Training institutions	Year of graduation
N Valid	76	76	76	76	76	76	75
Missing	0	0	0	0	0	0	1
Mean	2.05	1.70	1.08	2.04	2.63	1.32	2.36
Median	2.00	2.00	1.00	2.00	2.00	1.00	2.00
Mode	2	2	1	1	1	1	1[a]
Std. Deviation	.322	.462	.271	1.290	2.097	.468	1.147
Sum	156	129	82	155	200	100	177

Frequency Table

Age

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21-25	1	1.3	1.3	1.3
26-30	71	93.4	93.4	94.7
31-35	3	3.9	3.9	98.7
36-40	1	1.3	1.3	100.0
Total	76	100.0	100.0	

Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	23	30.3	30.3	30.3
Female	53	69.7	69.7	100.0
Total	76	100.0	100.0	

Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Single	70	92.1	92.1	92.1
Married	6	7.9	7.9	100.0
Total	76	100.0	100.0	

Hometown

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Bangkok	36	47.4	47.4	47.4
Central	19	25.0	25.0	72.4
North	10	13.2	13.2	85.5
Northeast	4	5.3	5.3	90.8
South	7	9.2	9.2	100.0
Total	76	100.0	100.0	

Specialist Areas

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Pediatrics	31	40.8	40.8	40.8
Surgery	17	22.4	22.4	63.2
Ob-gyn	12	15.8	15.8	78.9
Orthopedics	3	3.9	3.9	82.9
Internal Medicine	3	3.9	3.9	86.8
Anesthesiology	3	3.9	3.9	90.8
Psychology	2	2.6	2.6	93.4
Radiology	5	6.6	6.6	100.0
Total	76	100.0	100.0	

Training institutions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chulalongkorn Hospital	52	68.4	68.4	68.4
	Siriraj Hospital	24	31.6	31.6	100.0
	Total	76	100.0	100.0	

Year of graduation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2012	22	28.9	29.3	29.3
	2013	19	25.0	25.3	54.7
	2014	22	28.9	29.3	84.0
	2015	9	11.8	12.0	96.0
	2016	3	3.9	4.0	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

1.2. Working time during training, Number of patients during training, salary during specialist training, last workplace, working experience, university receving bachelor's degree, GPA, self-English proficiency, third language competencies

Statistics

		Working time during training	Number of Patients during training	Salary during specialist training	Last workplace	Working experience	University receiving bachelor's degree	GPA	Self-English proficiency	Third language
N	Valid	74	69	76	75	73	74	69	76	75
	Missing	2	7	0	1	3	2	7	0	1
Mean		11.6081	13.65	16250.39	2.85	2.82	3.68	3.3165	-.34	.11

Median	11.5000	13.00	15000.00	3.00	3.00	2.50	3.3300	.00	.00
Mode	10.00	10	15000	2	3	1	3.00	0	0
Std. Deviation	2.68082	6.359	3431.128	1.249	.653	2.549	.29810	.974	.311
Sum	859.00	942	1235030	214	206	272	228.84	-26	8

Frequency Table

Working time during training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	8	6	7.9	8.1	8.1
	9	3	3.9	4.1	12.2
	10	25	32.9	33.8	45.9
	11	3	3.9	4.1	50.0
	12	19	25.0	25.7	75.7
	12.5	3	3.9	4.1	79.7
	13	1	1.3	1.4	81.1
	14	5	6.6	6.8	87.8
	14.5	1	1.3	1.4	89.2
	15	2	2.6	2.7	91.9
	16	3	3.9	4.1	95.9
	18	2	2.6	2.7	98.6
	24	1	1.3	1.4	100.0
	Total	74	97.4	100.0	
Missing	99	2	2.6		
Total		76	100.0		

Number of Patients during training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.3	1.4	1.4

	3	1	1.3	1.4	2.9
	4	4	5.3	5.8	8.7
	5	2	2.6	2.9	11.6
	6	1	1.3	1.4	13.0
	7	1	1.3	1.4	14.5
	8	1	1.3	1.4	15.9
	10	20	26.3	29.0	44.9
	12	2	2.6	2.9	47.8
	13	3	3.9	4.3	52.2
	15	13	17.1	18.8	71.0
	16	1	1.3	1.4	72.5
	20	14	18.4	20.3	92.8
	23	2	2.6	2.9	95.7
	30	3	3.9	4.3	100.0
	Total	69	90.8	100.0	
Missing	999	7	9.2		
Total		76	100.0		

Salary during specialist training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5000	1	1.3	1.3	1.3
	7000	1	1.3	1.3	2.6
	9000	1	1.3	1.3	3.9
	10000	4	5.3	5.3	9.2
	11000	1	1.3	1.3	10.5
	14000	2	2.6	2.6	13.2
	15000	31	40.8	40.8	53.9
	15300	1	1.3	1.3	55.3
	16000	1	1.3	1.3	56.6
	17000	3	3.9	3.9	60.5
	17500	1	1.3	1.3	61.8

	18000	4	5.3	5.3	67.1
	18230	1	1.3	1.3	68.4
	19000	5	6.6	6.6	75.0
	20000	17	22.4	22.4	97.4
	22000	1	1.3	1.3	98.7
	23000	1	1.3	1.3	100.0
	Total	76	100.0	100.0	

Last workplace

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bangkok	9	11.8	12.0	12.0
	Central	27	35.5	36.0	48.0
	North	15	19.7	20.0	68.0
	Northeast	14	18.4	18.7	86.7
	South	10	13.2	13.3	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Working experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	6	7.9	8.2	8.2
	2	4	5.3	5.5	13.7
	3	61	80.3	83.6	97.3
	4	1	1.3	1.4	98.6
	5	1	1.3	1.4	100.0
	Total	73	96.1	100.0	
Missing	99	3	3.9		
Total		76	100.0		

University receiving bachelor's degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chulalongkorn	23	30.3	31.1	31.1
	Siriraj	14	18.4	18.9	50.0
	Ramathibodi	1	1.3	1.4	51.4
	Chiangmai	9	11.8	12.2	63.5
	Khonkaen	2	2.6	2.7	66.2
	Songkla	6	7.9	8.1	74.3
	Others in Bangkok	16	21.1	21.6	95.9
	Naresuan	3	3.9	4.1	100.0
	Total	74	97.4	100.0	
Missing	9	2	2.6		
Total		76	100.0		

GPA

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2.2	1	1.3	1.4	1.4
	2.67	1	1.3	1.4	2.9
	2.81	1	1.3	1.4	4.3
	2.92	1	1.3	1.4	5.8
	2.93	1	1.3	1.4	7.2
	2.96	2	2.6	2.9	10.1
	2.99	1	1.3	1.4	11.6
	3	4	5.3	5.8	17.4
	3.03	1	1.3	1.4	18.8
	3.07	1	1.3	1.4	20.3
	3.08	1	1.3	1.4	21.7
	3.1	2	2.6	2.9	24.6
	3.12	1	1.3	1.4	26.1
	3.15	1	1.3	1.4	27.5
	3.17	2	2.6	2.9	30.4
	3.19	2	2.6	2.9	33.3

	3.2	2	2.6	2.9	36.2
	3.21	3	3.9	4.3	40.6
	3.23	1	1.3	1.4	42.0
	3.24	1	1.3	1.4	43.5
	3.25	1	1.3	1.4	44.9
	3.27	1	1.3	1.4	46.4
	3.3	1	1.3	1.4	47.8
	3.31	1	1.3	1.4	49.3
	3.33	1	1.3	1.4	50.7
	3.34	1	1.3	1.4	52.2
	3.4	1	1.3	1.4	53.6
	3.41	1	1.3	1.4	55.1
	3.42	1	1.3	1.4	56.5
	3.43	1	1.3	1.4	58.0
	3.44	2	2.6	2.9	60.9
	3.45	1	1.3	1.4	62.3
	3.47	3	3.9	4.3	66.7
	3.48	1	1.3	1.4	68.1
	3.5	1	1.3	1.4	69.6
	3.51	1	1.3	1.4	71.0
	3.53	1	1.3	1.4	72.5
	3.54	2	2.6	2.9	75.4
	3.56	2	2.6	2.9	78.3
	3.58	1	1.3	1.4	79.7
	3.59	1	1.3	1.4	81.2
	3.6	2	2.6	2.9	84.1
	3.61	1	1.3	1.4	85.5
	3.62	1	1.3	1.4	87.0
	3.65	1	1.3	1.4	88.4
	3.66	1	1.3	1.4	89.9
	3.67	2	2.6	2.9	92.8

	3.69	1	1.3	1.4	94.2
	3.71	1	1.3	1.4	95.7
	3.81	1	1.3	1.4	97.1
	3.82	1	1.3	1.4	98.6
	3.83	1	1.3	1.4	100.0
	Total	69	90.8	100.0	
Missing	9	7	9.2		
Total		76	100.0		

Self-English proficiency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Need improvement	10	13.2	13.2	13.2
	Fair	21	27.6	27.6	40.8
	Moderate	32	42.1	42.1	82.9
	Good	11	14.5	14.5	97.4
	Excellent	2	2.6	2.6	100.0
	Total	76	100.0	100.0	

Third language competencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	67	88.2	89.3	89.3
	Yes	8	10.5	10.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

1.2 **Results of the questionnaire: Migration patterns**

Questionnaire part 2 (Migration of specialist physicians)

1.2.1 **Question 1-3**

Statistics

		What would you do after graduate?	Most influential person	Never received any information	Specialist Training institution	Colleage / Co-workers	Family	Media	Others
N	Valid	76	72	76	76	76	76	76	76
	Missing	0	4	0	0	0	0	0	0
Mean		1.43	1.26	.34	.39	.47	.05	.05	.01
Median		1.00	1.00	.00	.00	.00	.00	.00	.00
Mode		1	1	0	0	0	0	0	0
Std. Deviation		.718	.556	.478	.492	.503	.225	.225	.115
Sum		109	91	26	30	36	4	4	1

Frequency Table

What would you do after graduate?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Work	52	68.4	68.4	68.4
	Continue the study	16	21.1	21.1	89.5
	Not decided yet	7	9.2	9.2	98.7
	Others	1	1.3	1.3	100.0
	Total	76	100.0	100.0	

Most influential person

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Yourself	55	72.4	76.4	76.4
	Parents	14	18.4	19.4	95.8
	Spouses	3	3.9	4.2	100.0
	Total	72	94.7	100.0	
Missing	9	4	5.3		
Total		76	100.0		

Never received any information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	50	65.8	65.8	65.8
	Yes	26	34.2	34.2	100.0
	Total	76	100.0	100.0	

Specialist Training institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	46	60.5	60.5	60.5
	Yes	30	39.5	39.5	100.0
	Total	76	100.0	100.0	

Colleage/ Co-workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	40	52.6	52.6	52.6
	Yes	36	47.4	47.4	100.0
	Total	76	100.0	100.0	

Family

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	72	94.7	94.7	94.7
	Yes	4	5.3	5.3	100.0
	Total	76	100.0	100.0	

Media

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	72	94.7	94.7	94.7
	Yes	4	5.3	5.3	100.0
	Total	76	100.0	100.0	

Others

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	75	98.7	98.7	98.7
	Yes	1	1.3	1.3	100.0
	Total	76	100.0	100.0	

1.2.2 **Questions 4-8**

Statistics

		Where would you work full-time right after graduate?	AEC	MRAs	Full-time, more than 1 year of stay	Full-time, but less than 1 year of stay
N	Valid	73	76	76	74	73
	Missing	3	0	0	2	3
Mean		2.00	1.89	1.84	2.64	2.75
Median		2.00	2.00	2.00	1.00	1.00
Mode		2	2	2	1	1
Std. Deviation		.882	.579	.543	2.117	2.172
Sum		146	144	140	195	201

Frequency Table

Where would you work full-time right after graduate?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Public BKK	17	22.4	23.3	23.3
	Public Others	46	60.5	63.0	86.3
	Private BKK	6	7.9	8.2	94.5
	Private Others	2	2.6	2.7	97.3
	Hospital in the U.S.	1	1.3	1.4	98.6
	Opening private clinic	1	1.3	1.4	100.0
	Total	73	96.1	100.0	
Missing	9	3	3.9		
Total		76	100.0		

AEC

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Know	17	22.4	22.4	22.4
	Don't know	50	65.8	65.8	88.2
	Not sure	9	11.8	11.8	100.0
	Total	76	100.0	100.0	

MRAs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Know	18	23.7	23.7	23.7
	Don't know	52	68.4	68.4	92.1
	Not sure	6	7.9	7.9	100.0
	Total	76	100.0	100.0	

Full-time, more than 1 year of stay

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	45	59.2	60.8	60.8
	Malaysia	1	1.3	1.4	62.2
	Singapore	25	32.9	33.8	95.9
	Vietnam	2	2.6	2.7	98.6
	Laos	1	1.3	1.4	100.0
	Total	74	97.4	100.0	
Missing	99	2	2.6		
Total		76	100.0		

Full-time, but less than 1 year of stay

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	42	55.3	57.5	57.5
	Malaysia	3	3.9	4.1	61.6
	Philippines	1	1.3	1.4	63.0
	Singapore	21	27.6	28.8	91.8
	Brunei	2	2.6	2.7	94.5
	Vietnam	3	3.9	4.1	98.6
	Laos	1	1.3	1.4	100.0
	Total	73	96.1	100.0	
Missing	99	3	3.9		
Total		76	100.0		

2.1. Question 9

Statistics

		None	Indonesia	Malaysia	Philippines	Singapore	Brunei	Vietnam	Laos	Myanmar	Cambodia
N	Valid	75	75	75	75	75	75	75	75	75	75
	Missing	1	1	1	1	1	1	1	1	1	1
Mean		.48	.00	.11	.07	.49	.09	.01	.03	.01	.00
Median		.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Mode		0	0	0	0	0	0	0	0	0	0
Std. Deviation		.503	.000	.311	.251	.503	.293	.115	.162	.115	.000
Sum		36	0	8	5	37	7	1	2	1	0

Frequency Table

None

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	No	39	51.3	52.0	52.0
	Yes	36	47.4	48.0	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Indonesia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	75	98.7	100.0	100.0
Missing	99	1	1.3		
Total		76	100.0		

Malaysia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	67	88.2	89.3	89.3
	Yes	8	10.5	10.7	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Philippines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	70	92.1	93.3	93.3
	Yes	5	6.6	6.7	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Singapore

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	38	50.0	50.7	50.7
	Yes	37	48.7	49.3	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Brunei

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	68	89.5	90.7	90.7
	Yes	7	9.2	9.3	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Vietnam

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	74	97.4	98.7	98.7
	Yes	1	1.3	1.3	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Laos

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	73	96.1	97.3	97.3
	Yes	2	2.6	2.7	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		

Laos

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	73	96.1	97.3	97.3
	Yes	2	2.6	2.7	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Myanmar

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	74	97.4	98.7	98.7
	Yes	1	1.3	1.3	100.0
	Total	75	98.7	100.0	
Missing	99	1	1.3		
Total		76	100.0		

Cambodia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	75	98.7	100.0	100.0
Missing	99	1	1.3		
Total		76	100.0		

2.2. Question 10 (part 1)

Statistics

		Income	Professional development	Post-basic education opportunities	Children's education	Working condition	Living condition
N	Valid	75	75	75	75	75	75
	Missing	1	1	1	1	1	1
Mean		.96	.95	.65	.47	1.20	1.19

Median	1.00	1.00	1.00	1.00	1.00	1.00
Mode	1	1	1	1	1	1
Std. Deviation	.796	.634	.780	1.044	.658	.672
Sum	72	71	49	35	90	89

Frequency Table

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	1	1.3	1.3	1.3
	Less	2	2.6	2.7	4.0
	Moderate	13	17.1	17.3	21.3
	More	42	55.3	56.0	77.3
	The most	17	22.4	22.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Professional development

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	1	1.3	1.3	1.3
	Moderate	14	18.4	18.7	20.0
	More	48	63.2	64.0	84.0
	The most	12	15.8	16.0	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Post-basic education opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	4	5.3	5.3	5.3
	Moderate	28	36.8	37.3	42.7

	More	33	43.4	44.0	86.7
	The most	10	13.2	13.3	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Children's education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	6	7.9	8.0	8.0
	Less	5	6.6	6.7	14.7
	Moderate	20	26.3	26.7	41.3
	More	36	47.4	48.0	89.3
	The most	8	10.5	10.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Working condition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	1	1.3	1.3	1.3
	Moderate	7	9.2	9.3	10.7
	More	43	56.6	57.3	68.0
	The most	24	31.6	32.0	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Living condition

		Frequency	Percent	Valid Percent	Cumulative Percent

Valid	Less	1	1.3	1.3	1.3
	Moderate	8	10.5	10.7	12.0
	More	42	55.3	56.0	68.0
	The most	24	31.6	32.0	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

1.2.3 **Question 10 (part 2)**

Statistics

	Hospital facilities	Economic stability	Political stability	Social stability	Travel opportunities	Known persons/ network
N Valid	75	75	75	75	75	76
Missing	1	1	1	1	1	0
Mean	.91	1.08	.48	.69	.75	.57
Median	1.00	1.00	1.00	1.00	1.00	1.00
Mode	1	1	1	1	1	1
Std. Deviation	.619	.632	.828	.677	.917	.660
Sum	68	81	36	52	56	43

Frequency Table

Hospital facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	1	1.3	1.3	1.3
	Moderate	15	19.7	20.0	21.3
	More	49	64.5	65.3	86.7

	The most	10	13.2	13.3	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Economic stability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	1	1.3	1.3	1.3
	Moderate	9	11.8	12.0	13.3
	More	48	63.2	64.0	77.3
	The most	17	22.4	22.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Political stability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	2	2.6	2.7	2.7
	Less	5	6.6	6.7	9.3
	Moderate	28	36.8	37.3	46.7
	More	35	46.1	46.7	93.3
	The most	5	6.6	6.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Social stability

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	1	1.3	1.3	1.3

	Less	2	2.6	2.7	4.0
	Moderate	20	26.3	26.7	30.7
	More	48	63.2	64.0	94.7
	The most	4	5.3	5.3	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Travel opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	8	10.5	10.7	10.7
	Moderate	19	25.0	25.3	36.0
	More	32	42.1	42.7	78.7
	The most	16	21.1	21.3	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

Known persons/ network

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	4	5.3	5.3	5.3
	Moderate	28	36.8	36.8	42.1
	More	41	53.9	53.9	96.1
	The most	3	3.9	3.9	100.0
	Total	76	100.0	100.0	

2.3. Question 11-13

Statistics

		Satisfactions towards working in Thailand	Distance	Unfamiliarity / Ignorance of laws at the destination	Language and culture difference	Regional conflicts	Resistance to move as a result from personal natural inertia	Full-time within 5 years after finishing the specialist training
N	Valid	76	76	76	76	76	76	75
	Missing	0	0	0	0	0	0	1
Mean		.49	.70	.86	.84	.45	.96	1.93
Median		1.00	1.00	1.00	1.00	1.00	1.00	2.00
Mode		1	1	1	1	1	1	1
Std. Deviation		.757	1.020	.860	.925	.870	.986	1.082
Sum		37	53	65	64	34	73	145

Frequency Table

Satisfactions towards working in Thailand

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dissatisfied	10	13.2	13.2	13.2
	Neither satisfied nor dissatisfied	21	27.6	27.6	40.8
	Satisfied	43	56.6	56.6	97.4
	Very satisfied	2	2.6	2.6	100.0
	Total	76	100.0	100.0	

Distance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	14	18.4	18.4	18.4

	Moderate	12	15.8	15.8	34.2
	More	33	43.4	43.4	77.6
	The most	17	22.4	22.4	100.0
	Total	76	100.0	100.0	

Unfamiliarity/ Ignorance of laws at the destination

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	6	7.9	7.9	7.9
	Moderate	16	21.1	21.1	28.9
	More	37	48.7	48.7	77.6
	The most	17	22.4	22.4	100.0
	Total	76	100.0	100.0	

Language and culture difference

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	1	1.3	1.3	1.3
	Less	4	5.3	5.3	6.6
	Moderate	21	27.6	27.6	34.2
	More	30	39.5	39.5	73.7
	The most	20	26.3	26.3	100.0
	Total	76	100.0	100.0	

Regional conflicts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	2	2.6	2.6	2.6
	Less	7	9.2	9.2	11.8
	Moderate	28	36.8	36.8	48.7
	More	33	43.4	43.4	92.1
	The most	6	7.9	7.9	100.0

Regional conflicts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	2	2.6	2.6	2.6
	Less	7	9.2	9.2	11.8
	Moderate	28	36.8	36.8	48.7
	More	33	43.4	43.4	92.1
	The most	6	7.9	7.9	100.0
	Total	76	100.0	100.0	

Resistance to move as a result from personal natural inertia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The least	2	2.6	2.6	2.6
	Less	3	3.9	3.9	6.6
	Moderate	17	22.4	22.4	28.9
	More	28	36.8	36.8	65.8
	The most	26	34.2	34.2	100.0
	Total	76	100.0	100.0	

Full-time within 5 years after finishing the specialist training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bangkok	32	42.1	42.7	42.7
	Other provinces, same region with hometown	28	36.8	37.3	80.0
	Other provinces, different region with hometown	5	6.6	6.7	86.7
	Other provinces, but not specified	8	10.5	10.7	97.3
	Other countries	2	2.6	2.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		

Full-time within 5 years after finishing the specialist training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bangkok	32	42.1	42.7	42.7
	Other provinces, same region with hometown	28	36.8	37.3	80.0
	Other provinces, different region with hometown	5	6.6	6.7	86.7
	Other provinces, but not specified	8	10.5	10.7	97.3
	Other countries	2	2.6	2.7	100.0
	Total	75	98.7	100.0	
Missing	9	1	1.3		
Total		76	100.0		

APPENDIX D

1) Characteristics of the key respondents of the in-depth interviews

The specialist areas, age, gender, marital status, hometown, university, working experience, and current workplace of all key respondents are as presented as follows. In addition, the date and channel of interviews are presented as well.

In addition, the interviewees (No. 1- No. 10) are put into order as presented as in the table below.

Semi-structured interviews with Thai specialist physicians during March-April, 2012										
No.	Specialist area	Age	Gender	Marital status	Hometown	University (Bachelor's degree)	Working experience (excluding specialist training)	Current workplace	Date of interview	Channel of interview
1	Internal Medicine (studying)	32	Female	Single	Samutsakorn (Central)	Chulalongkorn University, Bangkok	Regional hospital in Udonthani (for 1 year), Community hospital in Nan, Thailand (for 2 years)	Siriraj Hospital, Bangkok (full-time), Bumrungraj hospital (part-time)	4 March, 2012	Telephone interview
	Note: The specialist physician is currently training in Rheumatology subspecialty under Internal Medicine, and will graduate in 2012. After graduation, she will go to work at the public hospital in her hometown, Samutsakorn.									
2	Rehabilitation Medicine (studying)	28	Female	Single	Phitsanulok (Northern)	Naresuan University, Phitsanulok	Community hospital in Phitsanulok, Thailand (for 3 years)	Chulalongkorn Hospital, Bangkok (full-time), Medical clinic on Sukhumvit Rd. (part-time)	7 March, 2012	Face-to-face interview
	Note: The specialist physician will graduate in 2014. However, She will have to work at the provincial hospital in Phitsanulok for 3 years after graduation as being stated in the contract she made with the hospital regarding the scholarship for the specialist training.									
3	Neurological surgery (working)	31	Male	Married	Bangkok	Chiangmai University, Chiangmai	-	Hat Yai Hospital, Songkla, Thailand	30 March, 2012	Telephone interview
	Note: The specialist physician finished the five-year-specialist training in neurological surgery at Prince of Songkla University.									
4.	Internal Medicine (studying)	28	Male	Single	Bangkok	Ramathibodi, Mahidol University, Bangkok	-	Ramathibodi Hospital, Bangkok, Thailand	3 April, 2012	Telephone interview
	Note: The specialist physician is currently training in Clinical nutrition subspecialty under Internal Medicine.									

5	Dermatology (studying)	30	Female	Married	Bangkok	Chulalongkorn University, Bangkok	-	Chulalongkorn Hospital	4 April, 2012	Telephone interview
	Note: The specialist physician will graduate in 2012 after 4-year training in Dermatology. After graduation, she will work for public hospital.									
6	Obstetrics and Gynecology (studying)	28	Female	Single	Bangkok	Ramathibodi, Mahidol University, Bangkok	-	Srinakarin hospital, Khonkaen, Thailand	6 April, 2012	Telephone interview
	Note: The specialist physician is currently training Ob-Gyn in Srinakarin hospital, Khonkaen, Thailand.									
7	Internal Medicine (working)	33	Male	Married	Udonthani (Northeastern)	Siriraj, Mahidol University, Bangkok	Community hospital in Udonthani, Thailand	Mahesak Hospital (private hospital), Bangkok	6 April, 2012	Telephone interview
	Note:									
8.	Obstetrics and Gynecology (studying)	27	Female	Single	Chaiyaphum (Northeastern)	Chiangmai University, Chiangmai	-	Maharaj Nakorn Chiangmai hospital, Chiangmai, Thailand	6 April, 2012	Face-to-face interview
	Note: The specialist physician is currently training Ob-Gyn in Maharaj Nakorn Chiangmai hospital, Chiangmai, Thailand.									

9.	Emergency Medicine (working)	30	Female	Married	Bangkok	Chulalongkorn University, Bangkok	Public hospital in Singapore*	Bumrungraj Hospital (private hospital), Bangkok, Thailand	9 April, 2012	Face-to-face interview
	Note: The specialist physician moved to work in Singapore for two years, from 2007 to 2009.									
10.	Internal Medicine (studying)	30	Female	Single	Chumphon (Southern)	Siriraj, Mahidol University, Bangkok	Public hospital in Saraburi (for 1 year), Public hospital in Nakhon ratchasima, (for 2 years)	Siriraj hospital, Bangkok, Thailand	11 April, 2012	Telephone interview
	Note: After finish specialist training, this specialist physician will go to work at public hospital in Chumphon, her hometown.									

2) Summaries of each interview

Summaries of ten interviews

1. Interviewee No.1 (I1)

The specialist physician has never had a plan to work or to live permanently in other countries **[I1P1L1-2]**. Actually, she plans to work in the public hospital in her hometown, Samutsakorn, after graduation. In her opinion, she thinks that other physicians will not go to work abroad permanently as well. **[I1P1L3-4]** Because of the scarce supply, she strongly believes that Thai physicians must reside in Thailand. "I believe that I must return the favor to my motherland by serving the needs of Thai citizens," she said. **[I1P1L5-7]**

Regarding working condition of specialist physician in Thailand, she said that she's satisfied with the professional development for working in Thai public sector. "Physicians/ specialist physicians can get promoted quite fast when comparing to other public officers," she said. **[I1P2L1-4]**

However, she is very interested to work temporarily in other ASEAN countries. "I would love to work in any other ASEAN countries for 1-2 months or during weekends, if I have a chance to do so," she said. **[I1P3L1-3]** Particularly, the physician wants to visit Myanmar, mainly for two reasons, including for helping the disadvantaged people there **[I1P3L3-4]**, and for travelling purpose i.e. going to visit Shwedagon Pagoda**.** **[I1P3L4-5]** "It doesn't matter if I end up gaining no money back after the trip as I think I can gain a lot of experiences there **[I1P3L5-6]**; however, I

hope the salary can cover the cost of the plane tickets and the basic spending there." **[I1P3L6-7]** In addition, if comparing between more developed ASEAN countries and the less developed ones, she prefers to work in the less developed ones or the CLMV countries. "For those more developed ASEAN countries, they already have more supply of physicians/ specialist physicians, so I think I had better choose to help those who are lack first."

Regarding to the AEC and MRAs, the physician didn't know anything regarding both of them. **[I1P4L1-2]**

According to the factors contributing to migratory decisions, the specialist physician prioritized **the pleasure of working** rather than **income**. "Though, I also work part-time in one private hospital during weekends, I've never imagined myself working full-time there," she said. "I don't have a reason to have 200,000 baht a month as I am not in need of such large money." "I manage to survive with the salary I got from working full-time in public hospital and from working part-time in private hospital," she continued. **[I1P5L1-7]**

Regarding the pleasure of working, she said that it is necessary for her to be able to work happily. She explained that the happiness comes from when she saw how much she could contribute to the society. **[I1P6L1-3]** She said that most people going to private hospitals are richer and that they can seek for best medical service, but the situation is a lot different for those going to public hospitals. "Lots of them cannot afford the medical cost at private hospitals. In addition, as everyone knows that the supply of physicians/ specialist physicians in the public hospital is

greatly inadequate. So, I think I should remain working full-time in a public hospital," she said.

Regarding to the post-basic education, the physician had to resign from the public hospital, since there is no scholarship available for her. "At that time, I really wanted to continue my study in Internal Medicine, so I had no choice but left," she said. **[I1P7L1-4]**

In addition, the physician also prioritizes the preference of her parents to her own preference when it comes to the migratory decision. **[I1P8L1-2]** Actually, she wants to work in other provinces. However, according to her parents' request, she has to work in her hometown instead. "After graduate, I have to fulfill my parent's request by going to work in my hometown, Ban Paew in Samutsakorn to work at Ban Paew Hospital, in which, I can earn approximately 70,000 a month."

Regarding the obstacles preventing her to go working abroad, the physician said that distance, the unfamiliarity of domestic law in the destinations, language and cultural difference, regional conflict, patriotism are the main obstacles for her to go other ASEAN countries. **[I1P9L1-4]** For distance, she said that it does really matter for her. "Although, it is true that traveling by plane does make your life easier but it doesn't solve all the problems. In some places, you also have to travel by cars for long hours to get there, and there may be several stops if the destination is in the very remote area," she said. **[I1P9L4-8]**

2. Interviewee No.2 (I2)

The physician has no interest in working in other ASEAN countries **[I2P1L1]** but the United States, as she wants to further her study there.

And, she thinks there would be no massive flow of Thai physicians migrating to other ASEAN countries **[I2P2L1-2]** because the situation in Thailand is so much better especially when comparing to the poorer countries such as CLMV countries **[I2P2L2-3]**. The physician also said that she's not interested in working in Singapore and other more developed countries in ASEAN as well. "The salary/ income in Singapore is better than in Thailand but the overall (when looking at other factors) is not that impressive. **[I2P2L5-6]** Of course, America is better," she said.

Regarding the AEC or the MRAs, she doesn't know anything about them because she has never had the interests to work in other ASEAN countries. **[I2P3L1-2]** "I prefer Thailand to other ASEAN countries **[I2P3L2-3]**; however, I want to pursue my study and work in America," she said. "Even the AEC can really minimize the obstacles for working in other ASEAN countries; I don't think most of us want to work there since those countries are not interesting enough for most of us to go." **[I2P3L4-6]**

Regarding the push factors in Thailand, she said that she's quite satisfied with the income as she got around 80,000 a month when working in the community hospital in Phitsanulok. **[I2P4L1-3]** However, she is not satisfied with the co-workers, particularly, when she had to perform the administrative job at the hospital. "I have to cure the patients and I have to do administrative job as a director of the hospital as well. It is quite tiring not only because of the workload, but because

people there are not friendly and hard to deal with. Some of them didn't respect and follow my order just only because I am younger." **[I2P4L3-8]**

Regarding to the factors contributing to migratory decision, she said that family and personal network are the most important. Before specialist training, she had been working in her hometown, Phitsanulok, and will continue to do so after finishing the training. **[I2P5L2-4]** After that, she wants to go to the U.S. to continue her study if having chance. In the U.S., she also has her physician uncle living there to count on. **[I2P4L4-6]** "My uncle, who is a physician, specialized in anesthesiology, moved to America during 1970s. Everything works really well for him, his living standard and his family are really better off," she said. **[I2P5L6-8]**

3. Interviewee No.3 (I3)

The physician has never thought about working abroad, no matter where it is. He just wants to work and live in Thailand. He also wants to continue his study in Thailand rather than going to train abroad. **[I3P1L1-3]** "I think specialist training in Thailand is easier than training abroad as from what I knew, they are stricter," he said. **[I3P1L3-5]**

"I don't know about AEC and MRAs," he said. **[I3P2L1]**

Regarding the push factors in Thailand, he said that he is not satisfied with the workload and the income. "I have to see 10-20 patients per day, and I also have to do the over-time job after 4 p.m. until in the morning of the next day. Sometimes, I have to do the over-time job during weekends as well," he said. In addition, the physician reported that he has to do administrative job as well. About income, he said that the remuneration for a specialist physician working in public hospitals should not be less than 100,000 baht a month. **[I3P3L1-7]**

According to the interview, the specialist physician said that better income is likely to be the key pull factor for physicians/ specialist physician to migrate to other ASEAN countries, especially to Singapore **[I3P4L1-3]**, but for short-term jobs. **[I3P4L3]**

Regarding the intervening obstacles, he said that better income in Singapore can be a waste as the cost of living there is significantly higher than the cost of living in Thailand. "I think the cost of living in Thailand is already cheap comparing to others," he said. **[I3P5L1-4]** In addition, he said that he was not sure whether the workload in Singapore would be greater than in Thailand. He is also afraid of the laws in other ASEAN countries. **[I3P5L5-6]**

Regarding to the factors contributing to migratory decision, he said that he would consider the salary and the workload first. **[I3P6L1-2]**

4. Interviewee No.4 (I4)

The physician has no intention to go to work in other ASEAN countries. **[I4P1L1-2]** He continued that only small numbers of specialist physicians will migrate to work there. "I think the possible figure of physicians/ specialist physicians who would go to work in other ASEAN countries will not exceed 20% of the total number," he said. **[I4P1L3-5]**

After specialist training in Thailand, the doctor plans to study abroad but he is not sure whether he would go to the U.S. or the UK.

He also said that the possibility of Thai specialist physicians working part-time in other ASEAN countries would be very low. **[I4P3L1-2]** "I think it would be quite hard for physicians to go to work in other ASEAN countries during

weekends, because they are already exhausted from their full-time job in Thailand, also they have to consider about the cost of travel." **[I4P3L2-5]**

The specialist physician doesn't know about AEC and MRAs. **[I4P4L1]** However, he showed some concern regarding the barriers for specialist physicians to practice medicine in other ASEAN countries. "I am afraid that it would be difficult to get the licensing certificates from other countries in ASEAN, since the standard of each country is different. And, maybe their standard is higher than us, especially for Singapore," he said. **[I4P4L2-6]**

He said that he is quite satisfied with the situation in Thailand as the working here is not too stressful. **[I4P5L1-2]** In addition, he said that he want to work in public hospital after finishing the specialist training.

Regarding to the pull factors in other ASEAN countries, he said that the technology and hospital facility in Singapore and Malaysia will be the key pull factors for migration. **[I4P6L1-3]** And, he believed that the majority of specialist physicians will not go to work in less developed countries in ASEAN due to their lack of technology and necessary medical equipment. **[I4P6L3-5]**

He said that out of the ASEAN countries, he thought Singapore is the best destination country. **[I4P7L1-2]** "Indonesia is too dangerous to go especially because of the frequent earthquakes," he said. **[I4P7L2-3]**

Regarding the obstacles for migrating to other ASEAN countries, he said that he has no connections or known persons to tell him about the working conditions in those countries. "I don't want to be the pioneer, I want to wait and see more about working in ASEAN," he said. **[I4P8L1-4]** Interestingly, he pointed out that the migration of Thai specialist physicians/ physicians within ASEAN is low

because the uncertainty for ASEAN is high in Thai perspective. **[I4P8L4-6]** In addition, he also said that the unfamiliarity of the law in each country is also the determinant obstacle. **[I4P8L6-8]**

Regarding the factor contributing to the decision to change the workplace, the doctor mentioned that he would consider the 'job security' first before making any migratory decision. "I think working in private hospital is more stressful and less safe because in private hospital, patients or the family of the patients can sue physicians directly when there is a problem or when they are not satisfied with the medical treatment being provided. However, for public hospital, the hospital has helped share the burden. Thus, I think public physicians have more job security than the private physicians," he said. **[I4P9L1-8]**

Apart from job security, he said that income is also important for his migratory decision. **"**Salary in private hospital is 2-3 times of what physicians/ specialist physicians can earn from public hospital," he said. **[I4P10L1-3]**

However, regarding the workload of doctors, he said that the workloads of private and public doctors are not significantly different particularly in terms of the daily number of patients.

Regarding marriage, he said that the spouses' preference can have great effect on the migratory decisions of female doctors, but not that of male doctors. **[I4P12L1-2]** However, since he's not married yet, he said that he might change his mind. But as of now, whenever he changes his workplace, he will have to discuss with his parents first. **[I4P12L2-4]**

5. Interviewee No.5 (I5)

The physician has no intentions to go to work in other ASEAN countries more than one year **[I5P1L1-2]**; however, she's interested to work both part-time and full-time but less than one year in CLMV countries. **[I5P1L2-3]** However, she said that private specialist physicians are more likely to migrate to work in other ASEAN countries. **[I5P1L4-5]** "I think the migration flow can be seen in two steps. First, physicians who work for public sector will move to work in private sector in Thailand. Second, those who work in private hospitals are more likely to move to work abroad," she said.

The physician knew about the MRAs, but not that for the AEC. "I have never heard about the AEC but I don't think MRAs is new. Physicians have done it for years. **[I5P2L1-3]** For example, I know a Thai physician who could not get into the university in Thailand. That physician went to study medicine in Philippines instead, then later, came back to Thailand and took the licensing exam to get the license to practice medicine in Thailand," she said.

Regarding the migration to the U.S., the physician said that it is quite hard for Thai specialist physicians to pass the medical exam for practicing medicine in the US or the so-called USMLE. Thus, it is impossible to see the massive flow of Thai physicians going to America.

Regarding to the working situation in Thailand, she said that she's very dissatisfied with the condition here, particularly because of the heavy workload, the recent medical litigations law which creates job insecurity, and the low income. **[I5P4L1-3]** Regarding to the workload, she said that the current situation in Thai

public hospital is very unpleasant especially because workload is ‘too much’ and very unacceptable. **[I5P4L4-6]**

Regarding to the job insecurity, she said that physicians especially the specialist physicians felt more insecure since the recent law allows patients or their family to be able to sue doctors without having to pay the court fees. In addition, the hospitals of those sued physicians normally tend to pay to the patient before he/she file the suit before the court. **[I5P5L1-5]** Thus, she thinks that this law can be seen as the incentives for medical litigations, which creates another problem rather than solving the existing problem. “On the patient’s side, they can sue us with no cost, and if lucky, they can get, for example, 20,000 baht, from the hospital we are working at,” she said. Particularly, in her opinion, she thinks that the government or politicians are only concerned about the well-being of patients, but forget to think about physician’s side. “It seems like now we have no protection and that makes working in Thailand more frustrating, despite the fact that the salary for public physicians is already low,” she said. “Specialist physicians, especially ob-gyn doctors and surgeons, are at risk as their jobs crucially involve dealing with people’s lives.”

The physician also compared the health system of Thailand and Japan, in which, she said that the health system of Japan is a lot better. The physicians used to go to see the hospital in Japan, and she saw that the Japanese universal health care is better than the universal health care in Thailand because of two main reasons. First, the workload of public physicians in Japan is not as heavy as in Thailand. Second, Japanese patients are ‘well-trained’ enough to realize that despite being charged with about the same medical cost, they don’t have to always seek for the tertiary healthcare service at large hospitals. For Thai people, they believe that the larger is the better.

That is why large hospitals like Chulalongkorn hospital and Siriraj hospital are very crowded every day. Since both Chulalongkorn hospital and Siriraj hospital are part of the universal healthcare, so the patients are flooding to the hospitals with the desire to receive the best treatment at the same cheapest cost, in which, creates the workload problems. **[I5P6L8-13]**

Regarding the migration to Singapore, she said that she would not go to Singapore mainly because of lower social recognition and strong competitiveness in the society. **[I5P7L1-3]** "I think those who want to go to country like Singapore are people who prioritize 'living standard' over other factors. So, they want more money and more time to spend with their family. However, I have a friend who used to work in Singapore, but now moved back in Thailand, and according to her, I think the working in Thailand is much better for physicians. The social recognition of physicians/ specialist physicians in Singapore is lower than in Thailand. In Singapore, patients or the family of the patients have less manners towards good manners, they scold on physicians. So, the status of physicians there is just like other general employees, unlike in Thailand where people show more respects. Furthermore, I think if comparing the working in Thai private hospital with working in Singapore, the social recognition of the professionals in Thai private hospital is much higher for physicians," she said. "In addition, Singaporean society, as everyone might know, is very competitive. I am not sure whether Thai physicians can resist that sort of stress as well as the lower social recognition if they are going to work in Singapore."

Regarding working in CLMV countries, the physician said that the motivations mainly come from the spirit of volunteerism. "They may think that it is

the ‘obligation’ for them to help improve the health and sanitation of those disadvantaged people,” she said. **[I5P8L1-4]**

However, she thinks that the majority of Thai specialist physicians, if having chance, they will go to Singapore, comparing to other countries in ASEAN.” **[I5P9L1-2]**

Regarding factors affecting migratory decision, the physician said that she prioritized the importance of her in an organization or how much she can benefit the organization. “I don’t really mind about the income or money I would get from work, but I do mind about how much my existence can benefit the organization I work for,” she said. **[I5P10L1-5]** In addition, she also said that hometown is also the dominant factor for choosing workplace as well. “I lived in Bangkok since I was born, so if I can choose, I would choose to work in the hospital located in Bangkok or in perimeter,” she said. **[I5P10L5-8]**

6. Interviewee No.6 (I6)

The physician think that every physician/ specialist physician may want to go to work in other ASEAN countries if they have chance to do so, particularly to Singapore and Malaysia. “I think they would go there for short period of time/ temporary full-time and part-time jobs,” she said. **[I6P1L1-4]** “But, for less developed countries, I think they will definitely not go to work there permanently, unlike those more developed countries in ASEAN.” **[I6P1L4-6]**

“I have come across both AEC and MRAs.” **[I6P2L1]**

The physician is not satisfied with physicians’ workload in Thailand the most **[I6P3L1-2]**; however, she still can accept it as other factors such as the

employee benefits and job security are good for Thai public physician like her. “I think the overall situation in Thailand is still ‘bearable.’ So, for me, there is no need to ‘struggle’ to work abroad.” **[I6P3L2-5]** Nevertheless, she thinks that the remuneration or income of Thai public physicians is still too much lower than that of private counterparts. **[I6P3L5-7]**

Regarding the pull factors in other ASEAN countries, she perceived higher income, high technology of hospital facility and equipment are important factors to pull Thai doctors to work abroad. **[I6P4L1-3]**

Regarding factors contributing to migratory decision, she prioritizes income, location, post-basic education opportunity the most. Regarding location, she means that she wants to work where the transportation and the surrounding environment are good. **[I6P5L1-4]**

7. Interviewee No.7 (I7)

The physician said that he once intended to work in Laos for long-term job, since it shares border with his hometown, Udonthani. **[I7P1L1-2]** Regarding migration to other ASEAN countries, he said that he would not want to work part-time there and then come back to Thailand. “I don’t think I want to go there if just going there for just 3-4 hours and then come back because I don’t think it is worthwhile doing so,” he said. He elaborated that working part-time abroad is impossible for him, as he is already exhausted from regular works in Thai hospital. **[I7P1L2-7]** However, right now he is not thinking about working abroad anymore since he has his own family (wife and child) to take care of. **[I7P1L7-8]**

Regarding the AEC and MRAs, he said, “My knowledge about AEC and MRAs is very limited, I don’t know how it is going to affect Thai people or Thai physicians, but I heard people talking about it some time.” **[I7P2L1-3]** “However, I think the AEC may become the factor that increases the rate of migration of Thai physicians moving to other ASEAN countries. But, I am not sure about how it can increase the number of migration. I just believe that it will increase,” he continued. **[I7P2L3-6]**

Regarding workload of physicians in Thailand, he said that the workloads of public and private physicians/ specialist physicians are about the same. “Despite working in private hospital, I see around 60-70 patients per day, which I think it is about the same comparing to the workload of my public counterparts,” he said. **[I7P3L1-5]**

Regarding the factors contributing to migratory decisions, the physician prioritizes his family (spouse) the most. The physician used to work for public community hospital in Udonthani; however, he came to work in Bangkok after he got married. “My wife is working in Bangkok, so I can’t just follow my desire to work in other provinces of Thailand,” he said. **[I7P4L1-5]** Another factor which can lead to his migratory decision comes from the working place/ organization. The physician said that he preferred to work in the organization, where he perceived his service to be vital and recognized. “I want to work where I can fully utilize my capability to benefit people and the organization,” he said. **[I7P4L5-9]**

Regarding to the post-basic education, he explained that a public physician could only get accepted by specialist training hospital through scholarship process, in which, the scholarship would come from the hospital where the physician

was working at. And, generally such scholarship comes with the contract that the physicians have to go back to work at that hospital for, normally, 3 years. **[I7P5L1-5]** So, according to this fact, the physician just had no choice but resigned from being public physician, and went to study at specialist training hospital (Chulalongkorn hospital).

Regarding income, the physician said that he is already satisfied with the income he receives from the private hospital he's working at. **[I7P6L1-2]**

8. Interviewee No.8 (I8)

The physician said that she has never considered working in other ASEAN countries **[I8P1L1-2]**, as she perceived that the conditions are not significantly different. **[I8P1L2-3]** However, she said that if it appeared that she had to migrate to other ASEAN countries, then she thought she could only stay there for 5 years, and would come back to Thailand after that. **[I8P1L3-5]**

Regarding to working in CLMV countries, she said that according to her friend's experience, the medical equipment there are not good enough. **[I8P2L1-2]** "One of my friends, who is working for the Bangkok Hospital (private hospital in Bangkok, Thailand), was sent to Cambodia to work in the Royal Angkor International Hospital, which is affiliated to Bangkok Hospital," she said. "He told me that the hospital there in Cambodia was not well-equipped, even the antibiotic was not available to use. So, he had to fly back to Bangkok to get that."

Regarding to the AEC and the MRAs, she said that she's heard about them; however, she didn't know the implications about them. **[I8P3L1-2]**

Regarding working condition of Thai public physicians, she thought that if comparing to other public officers, the situation of public physicians/ specialist physicians is much better in terms of professional development opportunity, salary, and welfare. **[I8P4L1-4]** However, she argued that both salary and welfare of public physicians still cannot be compared with those of private counterparts. "The accommodations provided for physicians are very superb," she said.

However, according to her, the workload of public physicians is very unacceptable as sometimes, it seems like physicians/ specialist physicians are working 24 hours a day. "For example, today I started working at 8.00 a.m. until 4.30 p.m., but I would have to do the over-time job after 4.30 p.m. until tomorrow if there is no available ob-gyn physician at the hospital after 4.30 p.m.," she said. "So, I think it is a very tiring kind of job, and I don't think my body can handle it in long term." **[I8P5L1-6]**

Regarding medical litigations, she said that one of the reasons why Thai physicians preferred to work in the public sector was because the perceived fact that public hospital usually stepped in and helped physicians when they were threatened to be sued by patients. However, for private doctors, their workload is lighter, meaning that they have more time with their patients. So, the litigations are being minimized, since the doctors are not too exhausted to the degree that they can't concentrate with their patients. **[I8P6L1-7]** "For public physicians like us, usually we

have only around 5 minutes for each outpatient, but for private physicians they may have around 20-30 minutes for each out-patient," she said. "So, it is no surprise that the quality of medical treatment provided by private physicians are likely to be more careful than that of us."

Regarding the supply of specialist physicians in the public sector, she said that because of small supply, the workload in public hospitals becomes much heavier. **[I8P7L1-3]** So, she doesn't think it is fair to compare the quality of medical services of private and public physicians since the conditions are different. In addition, since public physicians have to provide time for the outpatients who didn't make an appointment, life is much tiring for public physicians, as they have to rush providing service to as many patients as they can and to meet the end of the office hours at 4.30 p.m., as well.

Regarding to those illegal foreign patients coming from other ASEAN countries, she said that she has a lot experience of Burmese and Laotian illegal patients since she is working in Chiangmai, which is geographically quite near to both Burma, and Laos. She said that she is very dissatisfied about this, since most of these people, especially Burmese people, purposefully come to Thai hospitals to get the medical service for free. "They bribed the officers at the border to let them come to Thailand. And, with their extremely severe health conditions, the Thai hospital cannot refuse to help," she said. "It may sound inhumanly to talk about this since they are coming from one of the less developed neighboring countries of Thailand, but we have to point this out since the number of migratory Burmese patients in Thai hospital is not small." She continued that those patients are enough to use up the hospital beds, so there's no bed left for Thai people. She explained that such problem also

contributes to the budget deficit of Thai hospitals since the accumulated cost of medical service provided to them is quite large. “For example, one hospital in Chiang Rai has run the budget deficit of 50% as they cannot make those Burmese patients to pay for the medical service,” she said. **[I8P8L8-16]**

Regarding the income, she said that the most she could get from working in public hospital (without doing part-time job in private hospital) is around 80,000-90,000 baht. However, for ob-gyn doctors who take several jobs, she said that they can earn up to 500,000 baht per month. “I know an ob-gyn physician who works full-time in public hospital in remote area and also works part-time in several workplaces,” she said. “This physician can earn around 500,000 baht per month, though that is an extreme case.” However, for those ob-gyn physicians working in luxurious private hospital, she said that they could earn around 200,000 baht a month without having to take several jobs. “So, for me, I think I may go to work in private hospital after finishing the specialist training,” she said. **[I8P9L1-10]**

For more developed countries in ASEAN, she thought that specialist physicians would go there mainly because of two factors which are better income and better society. **[I8P10L1-3]** For less developed countries in ASEAN (CLMV countries), she thought that specialist physicians would go to practice their knowledge there in order to increase their skills and gain more experience. “I think that Thai specialist physicians could get so many experiences from going to CLMV countries as they would see more cases than going to more developed countries where the supply of specialist physicians is a lot higher,” she said. **[I8P10L3-8]**

9. Interviewee No.9 (I9)

The physician said that it would be hard to see Thai physicians working in other ASEAN countries **[I9P1L1-2]**, mainly because of the attachment to home country. “I think they prefer working in Thailand mainly because they don’t have to change their behaviors they are getting used to since they were born,” she said. **[I9P1L1-5]**

She continued that it is almost impossible for Thai specialist physicians to be interested in working in CLMV countries permanently or for long-term **[I9P2L1-2]**, but it would be highly possible to see them working there for a very short-term as volunteers. **[I9P2L3-4]**

The physician knows about AEC; however, she is not sure about the progress of the MRAs. She believes that even ASEAN can bring out the AEC in 2015, it will take at least 5 years to see the changing migratory pattern of physicians/ specialist physicians in the region. **[I9P3L1-4]** Importantly, she said that the free movement of physicians/ specialist physicians in the region would not be possible if there is no common licensing exam. “For example, it would be almost impossible for non-Thai doctors to be able to pass the licensing exam which is written in Thai language,” she said. **[I9P3L4-8]**

The physician used to work in Singapore for two years during 2007-2009, so she can compare the working and living conditions there to that of Thailand. She said that comparing to Singaporean healthcare system, Thai healthcare system is in great need to be improved. The physician continued that the healthcare system in Singapore is ‘fairer’ and more ‘transparent.’ “There are CCTV video cameras everywhere in the hospital, including in the doctor’s room, to monitor and record the

performance of their doctors," she said. **[I9P4L3-7]** In addition, regarding the remuneration of public physicians in Singapore, the physician said that the remuneration of public physicians in Singapore is still a little bit higher than that of the private physicians in Thailand. **[I9P4L7-10]**

Regarding the workload, the physician said that nowadays 30% of the newly graduate general physicians went to study dermatology or work for private clinic instead of working in public sector. "The workload there is much lighter while the remuneration is higher," she said. **[I9P5L1-4]** The physician said that initially she wanted to work in public hospital, but she can't due to the financial factor. For her specialty, Emergency Medicine, the remuneration for specialists in this field is very moderate comparing to other specialists. "In the emergency department in hospitals, we cannot refuse any severe patients who got accidents so it is unavoidable that some patients may not be able to pay for the cost of medical service, making this department of service less unprofitable," she explained. "In Bumrungraj, I received roughly 150,000 baht monthly, but if I work in the emergency department in public hospitals, I would get only around 30,000 baht a month."

However, for the majority of physicians, she believes that they want to work in public sectors, because they can utilize their knowledge to benefit most people of the country there. However, she continued that physicians/ specialist physicians are responsible for their family as well. "So, in essence, we also need money to spend, just like other people," she said.

Regarding medical litigations, she believes that with the light workload, the productivity of the diagnosis and medical treatments per case will

increase. Thus, such productivity can reduce the rate of medical malpractice, which eventually helps decrease the rate of medical litigations.

The physician said that Singaporean hospitals always recruit foreign-trained physicians to work in Singapore, in which, most of them are from ASEAN countries, especially from Philippines, Malaysia, Myanmar, and Thailand. A lot of them are from non-ASEAN countries such as India, Sri Lanka, and Ireland as well.

Regarding her own experience, she said that when she was a resident physician at Chulalongkorn Hospital in Emergency Medicine, the hospital was offered by Singaporean public hospital to bring their students including her to visit the public hospital in Singapore. At the end of the field trip, she, as well as, some other Thai resident physicians, was asked to work in Singapore by signing the contract to work there for 2 years. “Other Thai physicians who have never experienced Singapore like I did may not know this. But, I must say that the working condition in Singapore is really good,” she said. “It is a fair society, for example, if you work more than what you’re supposed to work, you will get extra bonus, which will be given to you in every 6 month.” In addition, she said that Singaporean hospital will provide accommodation for physicians, in which, they don’t have to pay for the rental. “In essence, Singapore is a very good place for ‘talented and diligent’ people,” she concluded.

According to the interview, the physician said that there is a program called ‘paid leave program,’ which guarantees physicians/ specialist physicians to have at least 21-24 holidays per year for recreation, in which, they still receive pays by the Singaporean hospital. In Brunei, according to her colleague who’s working there, the paid leave program there has allowed physicians/ specialist physicians to

have the maximum of 45 holidays a year." Brunei people are not interested to become physicians, so the number of physicians is inadequate, so they have to hire international physicians to serve the domestic need for healthcare. **[I9P10L1-8]** "For Thailand, if counting the holidays that the physicians can have, it is less than 10 days per year, especially for those physicians/ specialist physicians who are working in Emergency section like me," she said. **[I9P10L8-11]**

Thus, in her perspective, Singapore and Brunei are the two best countries for specialist physicians, mainly because the well-paid income, well-equipped hospital facility, and fairer society. Another important factor can be the comfortable accommodation they provided.

In Singapore, they appreciate people who are intelligent, diligent, and honest. So, for physicians who want to work there, they have to have those kinds of qualities. Singapore believes in the quality of Thai medical doctors, especially those who graduated from Chulalongkorn University. However, physicians who graduate from other university can go to work in Singapore as well. For example, with the recommendation letters from physicians working in Singapore/ used to work in Singapore, Thai physicians graduated from other universities can be accepted to practice in Singapore. "I just recommended one physician she graduated from Srinakharinwirot University to the public hospital in Singapore, and now she was accepted to work there and that she just went to Singapore two days ago," she said. After getting recruited, Singaporean supervisor will help international physicians during work, by providing translators to help them communicate with the patients, however, the translators will be available only for 6 months. Usually, most patients they speak Malay, Chinese, and English.

“Every good thing or bad thing you do will be recorded and reported to your boss. If they are not satisfied with your performance, they will not hesitate to send you back,” she said. “In my case, they monitored my performance for 2 months, and after that we sign a work contract of 2 years.”

The physician stated that Singaporean people are very strict about punctuality and performance. “In Thailand, if you are 15 minutes late, that was still ok, but it is not in Singapore. Every time you are late, even it is just 2 minutes late, you will have to write a report giving the reason why you can’t be on time,” she said. “When I worked there, I had to be at the hospital 30 minutes before the working time.” In conclusion, she thinks that only the well-adjusted Thai medical doctors can survive working in Singapore, since their expectation towards the performance is higher, comparing to that in Thailand. **[I9P13L1-8]** “My Thai colleague who used to work in Singapore with me really dislikes working in Singapore, because of such serious and competitive atmosphere,” she said. “So, he returned to work in Thailand.”

Regarding other countries in ASEAN, she said that countries like Malaysia, Indonesia, and Philippines are not safe. “I have Malaysian friend who is also a physician. He migrated to Singapore, as he perceived that his own country is not safe to live due to internal conflicts and high crime rate,” she said. **[I9P14L2-4]**

“For Indonesia, there’re several earthquake, as everyone know, **[I9P15L1]** and for Philippine, I heard that the crime rate there is quite serious, even more serious than in Malaysia,” she said. **[I9P15L2-3]**

10. Interviewee No.10 (I10)

The physician intended to return to her hometown, Chumphon (province in the Southern part of Thailand). And that she has no intention to work in other ASEAN countries. **[I10P1L1-3]**

Regarding the AEC, she thinks that the AEC may increase the migration of specialist physicians, but only for temporary visit (several months) or part-time. **[I10P2L1-3]**

If having chance, she said that she might go to CLMV countries **[I10P3L1]**, as physicians are extremely scarce there. **[I10P3L2]** For those more developed countries like Singapore or Malaysia, their supplies of physicians are already better in Thailand, thus she wouldn't want to go there.

However, the specialist physician said that for most specialist physicians, they may go to the more developed countries **[I10P4L1-2]** more than CLMV countries due to poor hospital facility and medical equipment in CLMV countries. **[I10P4L2-4]** Regarding working in CLMV countries, the physician thinks that specialist physician should not go there individually, but have to have a team of at least 4-5 physicians going there together in order to make sure that their provided service is safe enough for CLMV people.

Regarding AEC and the MRAs, the physician just heard about them. **[I10P5L1]**

Regarding working condition in Thailand, the physician said that she is satisfied, though there are still problems, as she believes that physicians/ specialist physicians need to work in the country. **[I10P6L1-3]**

For salary, the physician thinks that it is acceptable **[I10P7L1-3]** except for some case that financial management of the hospital is not good, making the payment to physicians postponed. **[I10P7L2-3]**

Regarding the main obstacle for migration to other ASEAN countries, the physician pointed out language barrier as the most dominant obstacle. **[I10P8L1-2]**

Lastly, the physician said that when considering of changing workplace, she would consider the workload and financial management of the destinations first. **[I10P9L1-3]**

3) Code index for interview results

Code index of the interview results

Note: In Categories column, the number **A-F** represents themes of the findings, in which,

A means 'the intentions to work in other ASEAN countries'
B means 'Awareness of the AEC and MRAs on medical practitioners'
C means 'Push factors in Thailand'
D means 'Pull factors in other ASEAN countries'
E means 'The intervening obstacles for migrating to other ASEAN countries'
F means 'Factors contributing to any migratory decisions to any workplaces'

Code	Categories	Short descriptions/ sub-themes
I1P1L1-2	A	Not migrate for long-term (self)
I1P1L3-4	A	Not migrate for long-term (Others)
I1P1L5-7	E	Patriotism
I1P2L1-4	C	Being satisfied with professional development in Thailand.
I1P3L1-3	A	Being interested to work there 1-2 months or during weekends.
I1P3L3-4	D	Altruism/ voluntary purpose (Myanmar)
I1P3L4-5	D	Traveling purpose (Myanmar)
I1P3L5-6	D	Gaining new experience
I1P3L6-7	F	Income covers air fares and basic spending
I1P4L1-2	B	Don't know
I1P5L1-7	F	Pleasure of working is more important than income.
I1P6L1-3	F	Pleasure of working comes from self-devotion to the society.
I1P7L1-3	F	I quit the public work for post-basic education.
I1P8L1-2	F	Parents' preference (family)
I1P9L1-4	E	Distance, laws at destinations, language, regional conflicts, and patriotism prevent migration.
I1P9L4-7	E	Distance is a great obstacle when having to go to remote areas.
I2P1L1	A	Not to migrate whether it is short-term or long-term.
I2P2L1-2	A	Most physicians will not migrate.
I2P2L2-3	E	Thailand is much better than CLMV countries.
I2P2L5-6	E	Singapore is not so impressive.
I2P3L1-2	B	Don't know and Never wanted to know.
I2P3L2-3	E	Thailand is the best workplace among ASEAN countries.
I2P3L4-6	E	Other ASEAN countries are not interesting enough to create massive migration flow of Thai specialist physicians.
I2P4L1-3	E	I am satisfied with the income in Thailand.

I2P4L3-8	C	Being not satisfied with the co-workers.
I2P5L2-4	F	Hometown is the great factor for migratory decision.
I2P5L4-6	F	Network is the great factor for my migratory decision.
I2P5L6-8	F	My uncle's migration to the U.S. is successful.
I3P1L1-3	A	I will live and work in Thailand.
I3P1L3-5	A	I will pursue further study in Thailand.
I3P2L1	B	Don't know about AEC or MRAs.
I3P3L1-7	C	Heavy workload and low income.
I3P4L1-3	D	Better income (Singapore).
I3P4L3	A	Other specialist physicians may go to Singapore for short-term jobs.
I3P5L1-3	E	High cost of living (Singapore)
I3P5L5-6	E	The unfamiliarity of domestic law
I3P6L1-2	F	Salary and workload.
I4P1L1-2	A	I have no intentions to work there.
I4P1L3-5	A	Small numbers of specialist physicians will migrate.
I4P3L1-2	A	Number of physicians doing part-time job in other ASEAN countries would be low.
I4P3L2-5	E	Fatigue from full-time job in Thailand, cost of travel (part-time migration)
I4P4L1	B	Don't know about AEC and MRAs.
I4P4L2-6	B	Different standards of each ASEAN country as an obstacle for the issuance of regional licensing certificates for ASEAN specialist physicians.
I4P5L1-2	E	Less stressful working condition in Thailand.
I4P6L1-3	D	High technology and good hospital facility of Singapore and Malaysia.
I4P6L3-5	E	The lack of technology and necessary medical equipment in CLMV countries.
I4P7L1-2	D	Singapore is the best.
I4P7L2-3	E	Natural disaster (earthquake) in Indonesia.
I4P8L1-4	E	No network and known persons.
I4P8L4-6	E	High uncertainty for other ASEAN countries.
I4P8L6-8	E	Unfamiliarity with domestic laws in other ASEAN countries.
I4P9L1-7	F	Job security (lower chance of being sued by patients)
I4P10L1-3	F	Income
I4P12L1-2	F	Spouse's preference/ marriage (family) is more important for female specialist physicians than for male counterparts.
I4P12L2-4	F	Parents' preference (family)
I5P1L1-2	A	Not interested to work there more than one year.

I5P1L2-3	A	Being interested to work there full-time/ part-time, but less than one year.
I5P1L4-5	A	Private doctors may migrate more.
I5P2L1-3	B	Don't know AEC but know common MRA rules.
I5P4L1-3	C	Heavy workload, low income, and medical litigations law (leads to job insecurity)
I5P4L4-6	C	Workload is too much and unacceptable.
I5P5L1-5	C	Job security is threatened by new medical litigations law
I5P6L10-13	C	Universal healthcare system and social value of preferring well-known hospitals of Thai people leads to unacceptable workload in tertiary hospitals
I5P7L1-3	E	Lower social recognition, and higher competitiveness in Singapore
I5P8L1-4	D	Voluntary purposes (CLMV)
I5P9L1-2	A	Singapore will be the main destination.
I5P10L1-5	F	The usefulness of oneself in an organization
I5P10L5-8	F	Hometown
I6P1L1-4	A	Many physicians want to have temporary full-time/ part-time migration to Singapore/ Malaysia
I6P1L4-6	A	No long-term migration to CLMV, but may happen for more developed countries in ASEAN.
I6P2L1	B	Know both AEC and MRAs
I6P3L1-2	C	Heavy workload
I6P3L2-5	E	Good employee benefits and job security for Thai public physicians
I6P3L5-7	C	Low remuneration/ income of Thai public physicians
I6P4L1-3	D	Higher income, high technology, good hospital facility and medical equipment.
I6P5L1-4	F	Income, location, post-basic education opportunity.
I7P1L1-2	A	Once intended to migrate to Laos for long-term job as it nears his hometown
I7P1L2-7	A	Never imagined migrate to work part-time there because of the exhaustion from working in Thailand.
I7P1L7-8	A	Will not migrate because of family.
I7P2L1-3	B	Little knowledge about AEC/ MRAs
I7P2L3-6	B	AEC may increase the migration of specialist physicians
I7P3L1-5	C	Workloads in public and private sectors in Thailand are about the same.
I7P4L1-5	F	Family (spouse)
I7P4L5-9	F	The perceived usefulness of oneself in an organization

I7P5L1-5	E	Resident physician, who came to specialist training by scholarship process, have to work in the hospital where the scholarship was given.
I7P6L1-2	E	Being satisfied with the income of private hospital in Thailand.
I8P1L1-2	A	Not migrate to other ASEAN countries
I8P1L2-3	E	The conditions in other ASEAN countries are not significantly different from the condition in Thailand.
I8P2L1-2	E	Medical equipment in CLMV countries is not good.
I8P3L1-2	B	Heard about AEC and MRAs but don't know about them.
I8P4L1-4	E	Salary and welfare of being public physicians are better than that of other general public officials.
I8P5L1-6	C	Unacceptable workload.
I8P6L1-7	C	Too much workload can lead to medical malpractices, and consequently medical litigations.
I8P7L1-3	C	Small supply leads to heavy workload.
I8P8L8-16	C	One of reasons for poor financial management of Thai public hospitals is the high medical cost of illegal patients from Myanmar.
I8P9L1-10	E	High income in Thai private sector.
I8P10L1-3	D	Better income and better society in more developed countries.
I8P10L3-8	D	More experiences in CLMV countries.
I9P1L1-2	A	Most of them will not migrate
I9P1L1-5	E	Attachment to home country
I9P2L1-2	A	Impossible to see long-term or permanent migration to CLMV countries
I9P2L3-4	A	Possible to see short-term migration to CLMV countries for voluntary jobs.
I9P3L1-4	B	It will take at least five years to see the changing migration pattern within the AEC
I9P3L4-8	B	No commitments for common licensing exam according to the MRAs yet
I9P4L3-7	D	Fairer and more transparent working condition in Singapore
I9P4L7-10	D	Income of public physicians in Singapore is higher than that of private physicians in Thailand, though the difference is not significant.
I9P5L1-4	C	Low income and too much workload in Thai public sector.
I9P10L1-8	D	'Paid leave' program in Singapore and Brunei.
I9P10L8-11	C	Small number of holidays for specialist physicians in Thailand.
I9P13L1-8	E	Stricter working condition in Singapore.
I9P14L2-4	E	Internal conflicts and high crime rate (Malaysia)

I9P15L1	E	Natural disaster (Indonesia)
I9P15L2-3	E	Very high crime rate (Philippines)
I10P1L1-3	A	Will not migrate
I10P2L1-3	B	AEC may increase temporary migration
I10P3L1	A	Interested to migrate to CLMV countries
I10P3L2	D	Low supply of specialist physicians (CLMV countries)
I10P4L1-2	A	Most of Thai specialist physicians may migrate to more developed countries in ASEAN rather than CLMV countries.
I10P4L2-4	E	Poor hospital facility and poor medical equipment in CLMV.
I10P5L1	B	Heard about AEC and MRAs
I10P6L1-3	E	Being satisfied with the conditions in Thailand
I10P7L1	E	Being satisfied with the income in Thailand.
I10P7L2-3	C	Not being satisfied with poor financial management in Thailand
I10P8L1-2	E	Language barrier
I10P9L1-3	F	Workload and financial management in destinations

VITAE

The author, Miss Kanokwan Tangchitnusorn, was born on 28 November 1988, in Nan, Thailand. In 2007, she attended the Faculty of Communication Arts (English program), Chulalongkorn University, and graduated in May 2011. After that, in June 2011, she became the master's degree student of the Interdisciplinary Program in European Studies (MAEUS), Chulalongkorn University. In addition, the author also received the thesis scholarship from this program.