



A STUDY OF UNSKILLED MIGRANT CONSTRUCTION WORKERS IN DEVELOPING COUNTRIES

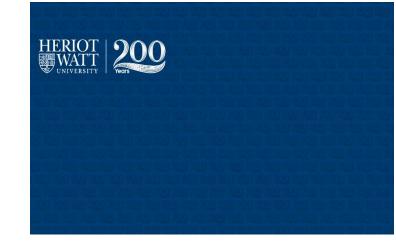
By

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Doctoral thesis submitted in accordance with the requirements for the degree of Doctor Philosophy (*Ph.D.*)

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STATEMENT OF ORIGINALITY

This is to certify that this thesis, presented and submitted in accordance with the requirements for the degree of Doctor of Philosophy at Heriot-Watt University, has been created by myself and has not been submitted before for any previous degree. This work is my own except the sources of information that have been specifically acknowledged.

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Year: 2023

ABSTRACT

Over the past twenty years, migrants have become essential to the construction industry's workforce in developing countries. This thesis is a labour migration study and investigates the involvement of migrant workers and their issues in the wider labour market with a particular focus on the construction sector. Although there is research on the living and working conditions of migrant workers and growing acknowledgement of the construction industry being hazardous for low skilled workers in particular, there has been little research on employment conditions given the new requirements that have put considerable pressure on the industry.

This study takes a qualitative approach, with in-depth interviews with both employers and employees in the construction industry. In-depth telephone interviews were conducted with 12 managers from the UAE (n=5), and the KSA (n=7). In addition, data was collected from the fieldwork in Thailand, which includes face-to face in-depth interviews with managers (n=10) and with migrant workers (n=22). The experiences of the 44 participants in this study provide the basis for understanding the situation of migrant construction workers. The aim is to find ways for improving the conditions of migrant construction workers in developing countries.

Based on the experiences of the participants, this study positions migrant workers within the construction industry by examining the factors that have the greatest impact on the lived reality of work. It considers how they could enjoy positive migration and work experiences in the sector that would allow them to both contribute to and benefit from the new developments within the construction industry. The conceptual models were designed based on the fundamentals of system thinking for a system of several elements under the key catalysers migration and employment. It is vital that knowledge be gathered about factors acting as force to changes within the construction industry to ensure that policies and practices relating to migration, employment, Occupational Health and Safety, and wellbeing are well evidenced. This thesis contributes to existing knowledge by shaping the linkages that reveal the opinions, requirements, and experiences of migrant construction workers. The study outlines recommendations for improving conditions for migrant workers in construction sector.

LIST OF ABBREVIATION AND CURRENCY EQUIVALENTS

Currency equivalents

1 GBP 45.4 THB

1 USD 35.10 THB

1 THB 33.26 MMK

As of June 2016,

Abbreviations

AECOM Architecture, engineering, construction, operations, and management

AIT Asian Institute of Technology

ASEAN Association of Southeast Asian Nations

CITB The Construction Industry Training Board

CMHIS Compulsory Migrant Health Insurance Scheme

CLD Causal Loop Diagram

CLR Construction Labour Research

EAP Engineers Against Poverty

ESOL English for Speakers of Other Languages

EU European Union

GBP

FSTP Federal Skilled Trades Program **FSWP** Federal Skilled Worker Program

Great Britain Pound

1 by the free for the first the firs

GCC Gulf Co-operation Council

GDP Gross Domestic Product

HIC High Income Country

HICS Health Insurance Card Scheme

HRW Human Rights Watch

HIV Human Immunodeficiency Virus

ILO International Labour Organization

IOM International Organization for Migration

KSA Kingdom of Saudi Arabia

LMIC Low- and Middle-Income Country

ME Middle East

MENA Middle East and North Africa

MMK Myanma kyat

MOU Memorandum of Understanding

NGO Non-government Organisation

NSO National Statistical Office

OECD Organization for Economic Co-operation and Development

OSH Occupational Safety and Health

OT Over Time

PPE Personal Protective Equipment

PWC PricewaterhouseCoopers

SDGs Sustainable Development Goals

SML Singal Male Labour

SNW Social Network to Work

TDRI Thai Development Research Institute

TFW Temporary Foreign Worker

TFWP Temporary Foreign Worker Program

THB Thai Bhat

UAE United Arab Emirates

UK United KingdomUN United Nations

USA United States of America

USD United States Dollars

3D Dirty, dangerous, and demeaning

ACKNOWLEDGEMENTS

The journey to complete this research project has been long and challenging, and enjoyable at the same time. I strongly believe that if there are no challenges there is no Ph.D. in practice. I have not been alone. All praise and thanks be to God, who has given me the capability, power, and determination to pursue my passion. My research project was windy like waves on the sea.

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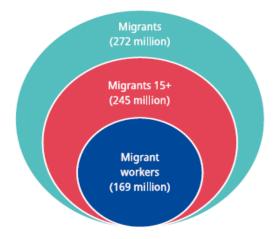
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1 CHAPTER 1 INTRODUCTION

This Chapter considers why migrant workers is a critical concern globally, especially in construction sector, and provides a general introduction to the study. It begins with an overview of migration trends which include a summary of how migrant workers into construction sector related to political, economic, and social issues (Section 1.1). Following this, attempt is made to justify this study by looking at the construction sector in terms of its social trends and the role of the sector's trends (Section 1.2). At the end of this Chapter, considers the aim and objectives of this study (Sections 1.3 and 1.4), and the researcher's perspective for conducting this research project (Section 1.5), and how this research project is significance (Section 1.6). Finally, the thesis outline is clearly displayed (Section 1.7).

1.1 Research background

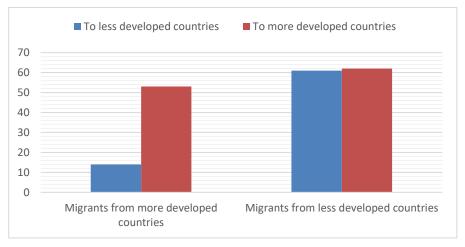
Migration is one of the most important global trends in terms of opportunities and challenges of the 21st century (Asis, 2020). In discussions on migration in most studies, the starting point is usually numbers. According to Rakotonarivo (2021), the UN (D&F) estimates the stock of migrant workers globally at 272 million, of which 245 million are of working age (aged 15 and over) in 2019 (see Figure 1.1). McAuliffe and Ruhs (2017) described migrant workers as workers (unskilled, semi-skilled or skilled) who move from home to destination countries for the purpose to find employment, in particular seasonal or temporary work.



Source: Adopted from ILO (2021)

Figure 1. 1 Global estimates of the stock of migrant workers, 2019

The International Organization for Migration IOM (2011) stated that, migration has a multi-faceted impact on societies, economies and cultures, in sending countries as well as receiving countries. What we know about migration is largely based upon qualitative studies that investigate how both origin and destination countries are affected. According to Martin and Zürcher (2008), people traversing national borders tend to move to neighbouring countries, for example, from Mexico to the United States, or from Turkey to Germany. The literature confirms that the largest flow of migrant workers is from less developed countries to more developed countries (see Figure 1.2)



Source: adopted from Martin and Zurcher (2008)

Figure 1. 2 Origin and destination of international migrants, 2005 (millions)

A great deal of previous research into migration has focused on drivers and factors in an endeavour to identify migration patterns and what influences the movement of people within state and between states in terms of structures and processes (Drachman, 1992, Munshi, 2003, IOM, 2018). According to Amit and Riss (2007), migration is a critical decision entailing risks and costs in terms of finances, community and culture. Almost every report that has been written on migration confirms and includes a section relation to motivation factors to move (Datta, 2004). 'Push and pull' are principal determining factors of migration (Rasool et al., 2012, Van Hear et al., 2017). The push factor operates in countries with higher populations and low levels of economic development (high unemployment and excess workers), while the pull factors generally exist in countries with high incomes but low population levels plus a lower workforce level. According to Martin and Zürcher (2008), migration is generally an individual or family decision and is not taken lightly. Table 1.1 illustrates that the main drivers of migration can be divided into two types: economic and non-economic. However, the major factors that encourage

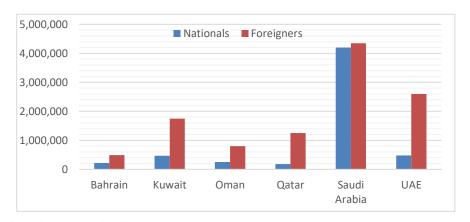
people to move might best be separated into three categories: demand-pull, supply-push, and networks.

Table 1. 1 Factors that cause migration

Type of Migrant	Demand-Pull	Supply-Push	Network/Other
Economic	Labour recruitment	Unemployment or underemployment issues such as low wages	Jobs and wage information flow
Non-Economic	Family unification (husbands and wives join spouses, children join parents)	Fleeing war and/or civil unrest	Communications; transportation; assistance organizations; desire for new experience

Source: Martin, P. & G. Zurcher (2008). Managing Migration: The Global Challenge.

According to Diop et al. (2017), GCC6 countries are more dependent on a foreign workforce for economic growth and development than any other countries worldwide. A recent study by Al-Ubaydli (2015), shows the labour force for each GCC6 country in terms of nationals and foreigners. Foreigners make up a minimum of 75 per cent of the workforce in all GCC6 countries, except Saudi Arabia (see Figure 1.3). However, the available of unskilled migrant workers is much higher than that skilled workers and remains the most likely reason for the employers attraction with the unskilled migrant workers (Hasan, 2015).



Source: adopted from Al-Ubaydi (2015)

Figure 1. 3 GCC6 Countries' Labour Forces

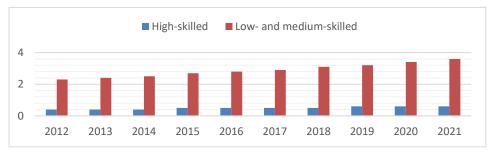
To solve labour shortages, some countries have recruited migrant workers from lessdeveloped neighbouring countries where salaries are comparatively low, and the number of workers is plentiful. In a study conducted by Martin and Zürcher (2008), it was shown that the construction industry has traditionally employed migrants from low wage economies. This is evident in the case of GCC6 where migrant labour is important, the local populations are small, and large construction projects are financed by oil (see Figure 1.4).



Source: International Labour Organization (ILO) 2017.

Figure 1. 4 Migrant workers per main sector in selected countries in the GCC (2015)

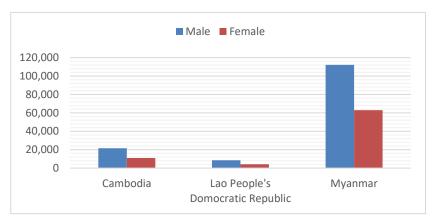
Similarly, IOM (2011) report that as a labour middle-income country (LMIC), Thailand is both the origin and destination of many migrant workers; it is estimated that over 3 million foreigners reside and work in Thailand. A recent study by Napier-Moore and Sheill (2016) also shows that in Thailand the need for low- and medium-skilled workers will increase from 2.3 million in 2012 to 3.6 million in 2021; it is anticipated that migrant workers will mostly meet this need (see Figure 1.5). Migrant workers have a key role in the Thai economy. They typically work in construction, agriculture, manufacturing, domestic work, fishing, seafood processing and the service sector (IOM, 2019, Sakulsri et al., 2020).



Source: ILO, Napier et al. (2016)

Figure 1. 5 Projected demand for migrant workers in Thailand, 2012-2021 (millions)

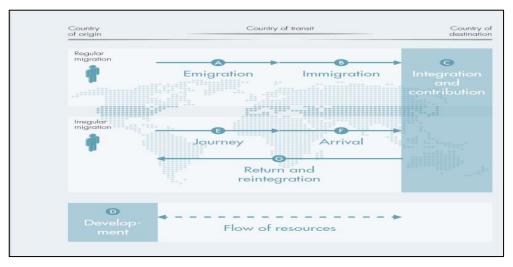
In a comprehensive study of migrant workers in construction, Napier-Moore and Sheill (2016) pointed out that migrant workers contribute greatly to Thailand's construction sector and this employment allows construction firms across the country to be competitive (see Figure 1.6). For example, the Thai Government reports there are 557,724 documented migrant construction workers, approximately 40 per cent of whom are female. Approximately half documented migrant construction workers are from Myanmar and the other half are from Cambodia. Based on the Thai Development Research Institute (TDRI) data, approximately 2.2 million workers (300,000 are registered migrant workers) are employed in the construction sector although there is capacity for up to 2.9 million as a result of the property boom and public infrastructure projects (ILO, 2015a).



Source: adopted from IOM (2011), Office of Foreign Workers Administration, Thailand, Ministry of Labour, 2010.

Figure 1. 6 Registered migrant workers from neighbouring countries working in construction sector in Thailand by nationality and sex, December 2009

According to IOM (2018), the people who migrate are key as who they are, how and why they migrate can be linked to their migration stages. Thus, researchers into migration and policymakers are interested in how migrants consider their migration journeys at various stages. An ILO (2006), (OECD, 2017) and IOM (2018) provide comprehensive coverage of the migration cycle from departure to settlement and possibly return (migrant workers before leaving the country, during the journey, in the country of employment, during employment, and upon return). Several studies have introduced a comprehensive framework, shown in Figure 1.7. The seven dimensions (labelled A to G) can yield value for migrants and non-migrants in countries of origin, transit and destination.



Source: Adopted from IOM, 2018

Figure 1. 7 A framework for capturing the value of migration data – overview

Each stage of the migration processes has its own characteristics. An IOM (2018) study identified four main factors that influence migrants' decisions during the migration process. These are: misinformation, visa preference, risk and reward, and pressure for migration. For example, migration operates on debt as migrants and their families become indebted in the migration process to the extent that many are unable to repay so forfeiting property and other assets (Stoll, 2010). According to Gardner (2012), the "migration industry" profits from unskilled migration through poor information or misinformation. For example, most of the 149 migrants interviewed for the report by Amnesty International claimed that they had receive misinformation about one if not more aspects of the terms and conditions of their employment: wages, the type of job, working hours, overtime pay or holidays. In another major study, Napier-Moore and Sheill (2016) found that contract substitution (i.e. when work or conditions are not what was agreed) occurs frequently in migrant worker recruitment. Similarly, Piper (2014) found that in Qatar, agents and "middlemen" spread misinformation to potential migrants about the type of work, wages, and rights and obligations as migrant workers. On arriving in Qatar, workers may discover that the job description and salary are not what was promised. Moreover, they may have paid a recruitment fee (thus incurring debt) despite this being banned under Qatari law. Martin and Zürcher (2008) indicated that although for most migrants, international migration is a positive experience, many face low-grade working and living conditions. While their employment terms may compare favourably with those in their home countries, they often live in inferior conditions in relation to nationals in host

countries. A recent study by ILO Gomis et al. (2020) concluded that work deficits are evident in several migration corridors. Migration should be safe, orderly, and fair in order to benefit workers, their communities, and countries of origin and destination. However, migrant workers may be exposed to abuses during the recruitment process. Evidence from the literature shows migration may benefit the migrants themselves, enterprises, and the country. In case of Qatar, for example, a recent study by HRW has identified problems with the way construction workers are treated; a serious issue is deception about the salary, benefits, and job responsibilities (Wells and Fernz, 2014).

Furthermore, negative effects in labour supply can be seen early on in the migration process at the point that large numbers of migrants (generally economic migrants) leave their countries to origin to take up employment and favourable conditions abroad. These effects may be positive later in the process at the point of return migration and migration may take over. Al-Ubaydli (2015) agreed that higher wages mean migrant workers enjoy a better standard of living and are able to support their families financially. According to Ratha et al. (2016), migrants are sending savings back to their families in developing countries at levels above US\$ 441 billion, a figure three times the volume of official aid flows. These inflows of remittances constitute more than 10 per cent of GDP in some 25 developing countries and lead to increased investments in health, education, and small businesses in various communities.

According to Sinatti (2015), return migration has attracted attention in global policy, where it is often represented as a triple-win scenario. Firstly, sending states are seen to benefit from finances and education migrants gain abroad. Secondly, receiving states gain from workforce renewal when migrants return after temporary migration. Thirdly, returning migrants experience better conditions upon their return to their country of origin. However, return migration is a highly disputed issue. For example, an IOM report cited in (Siddiqui and Bhuiyan, 2013) reported that 648,083 migrant workers had left Libya during the turmoil crisis as of 2011. By way of illustration, an ILO (2017) report shows the divisions of two groups of returned migrants that can help specialists who work with this group to adapt reintegration programs to better meet the needs of the beneficiary. These divisions are not exhaustive and may vary between cases (see Table 1.2).

Table 1. 2 Returnees with different migration experience

Returnees with a positive migration experience, who	Returnees with a negative migration experience, who
-earned the money they planned to	-did not earn anything and lost what they had
-acquired new technical knowledge and skills	-returned in a forced way
-did not manage to accrue the planned amount of money, but paid all family debts	-experienced various forms of abuse, including smuggling, trafficking, exploitation, etc.
-do not intend to re-migrate	-intend to re-migrate
-are determined to invest their resources into a business in their native community	
-are determined to find a job in the local market	

In her case study of returned migrants, Buckley (2012) reports that Dubai's construction market collapse had affected all interviewees, that the impacts on returning workers varied and depended on factors such as their migration debt and illegal employment practices such as wage theft and fee extraction brought about by the kafala system. The other face of migration is "temporary return". Siddiqui and Bhuiyan (2013), for example, concluded that many Bangladeshis employed as migrants faced negative outcomes when turmoil hit the countries of their employment. They were exposed to loss of jobs, incomes and assets, and they suffered severe hardship and threats to their lives; their investment in migration failed. In another major study, an ILO (2017) found that some migrants feel empowered, confident, and keen to reintegrate into society when they return to their countries of origin. More recently, the 2020 Pandemic is not only a health issues, but also an economic, social, political, and even humanitarian for migrants. For example, 134,551 overseas Filipino workers (OFWs) have been affected by the pandemic and had returned to the Philippines which resulted in massive job losses, displacements, and they being thrust into stranded situation (Asis, 2020). Others face problems that make them more vulnerable both socially and economically than when they departed. The latter often occurs when the migration is negative and includes financial losses, deskilling, or even abuse, fraud, etc.

In view of the above, one may suppose that host countries would prefer to restrict the inflow of migrant workers (particularly low-skilled migrants) for political, economic, and social reasons, despite the needs of the labour market. Sending countries prefer a free flow of migrant labour and depend on labour outflows to alleviate high levels of domestic

unemployment and incoming remittances. They also have issues with the welfare and labour rights of migrant workforce. Overall, migration can generate very large benefits for both countries with the appropriate supportive policies. This study, therefore, adopts a qualitative approach and conducts interviews with the research population (migrant workers and employers/supervisors) in order to know the views of insiders concerning the current situation of the migrant workers in construction sector in developing countries. The findings of the study enable the research stockholders to identify the issues and challenging facing migrants in the construction labour market and provide recommendations to improve the situation of migrants in the construction sector.

1.2 Research justification

Over decades, the construction industry has been designated as one of the key parameters of an economy by both developed and developing countries. Construction is a large and diverse industry that still faces several issues and challenges. It is large in terms of both the economic worth and the size of the workforce. Also, the number of players involved (customers, contractors, consultants, stakeholders and monitoring bodies) adds complexity (Anumba et al., 2002), see Figure 1.8. As this Figure illustrates, there may be a low level of interaction between workers and consultants, causing stress all round. Construction is the largest and most challenging industry in terms of the real inputs required for any construction projects; the outputs of the industry make it the largest manufacturing industry. Compared to other industries in terms of the contribution and employment factors, the construction industry is a major driver of economic growth of any country. On average, this industry contributes 50% of the gross capital or 3 – 8% of GDP (Jarkas and Bitar, 2012). However, the economic crisis has drawn more attention to the industry workforce as migrants working in construction have borne the brunt of global unemployment since 2008 (Buckley, 2012).

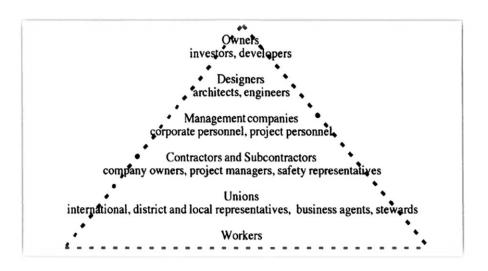


Figure 1. 8 Construction industry hierarchy adopted from (Moir and Buchholz, 1996)

Ofori (2007) presents the importance of the construction industry, the activities of the industry, and the relationships between these:

- Construction makes a major contribution to national socio-economic development by building the infrastructure and productive facilities,
- Construction is a large sector of the economy, contributing a significant proportion of the national economy during each period,
- Construction creates employment as labour intensive technologies are viable,
- Construction takes place in all parts of the country and can be used to develop entrepreneurship, and transfer technologies to all the citizens of the country.

More recent attention has focused on the impact of the COVID-19 which has presented serious challenges to many businesses include the construction industry. According to PWC (Build Back Better, Greener, and Faster) report (2020), the construction sector was one of the last areas of the economy to close and one of the first to reopen due to its critical role and a key driver of the economy. In this section, therefore, the construction industry will be described within its social trend and its role trend, and light will be shed on the challenges in the following some top trends (construction labour situation, and the future of the construction industry) and, its impact on the construction sector in the future.

1.2.1 The social trends of the construction sector

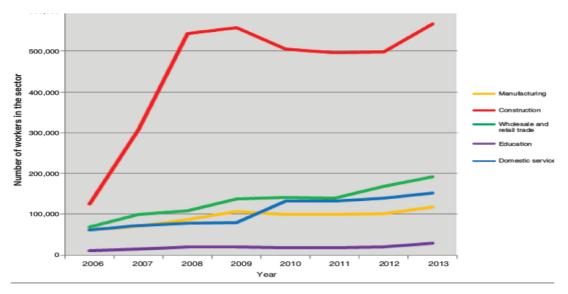
According to ILO (2016), a significant proportion of project budgets is allocated to labour costs regardless of technological innovations in building practices. For example, construction is a labour-intensive industry that its workforce causes of cost and time overruns in construction projects which critical importance to the overall economy of any country (Alaghbari et al., 2019). This is particularly true of less industrialised countries. In addition, construction is project specific and traditionally makes use of flexible employment structures. Some of these practices (i.e., project-based employment, labour-only subcontracting firms) are now being used in other industries too.

The literature confirmed that construction workers have a negative opinion of their employment, which is widely considered to be low status (Dainty et al., 2007, French and Strachan, 2015). In both developed and undeveloped countries, construction work is a necessity rather than a choice. (ILO, 2001, Lu and Fox, 2001). According to Buckley (2012), the production process of a typical construction project is large-scale and longterm, and has high requirements in terms of both labour and capital. These projects are high cost and high risk. Construction workers represent one of the most variable and costly factors and constitute over a quarter of the total project cost. The literature evidenced that construction workers constitute a quarter of the project cost in the more complex projects. In addition, workers can create enormous problems for the construction industry as they are one of the most critical delay factors of any construction programme. For example, some of the common causes of project delays in GCC are shortages, lack of skilled workers and low productivity (Faridi and El-Sayegh, 2007). Pearce (2003) agreed that the labour force is a critical factor in any industry, and especially in the construction industry where construction workers are considered to be a recurring problem. Most of the ASEAN member states place importance on transportation, construction and infrastructure. They emphasise the need for an increased supply of workers who are competent in engineering and construction (i.e. welding, electrical wiring, bricklaying) (ILO, 2015c).

Recently, there is increased literature on construction workforce comprised migrants and their impact on the industry. The construction industry is an extreme example of how migration and flexibility are linked due to its reliance on a mobile workforce and production sites, seasonal employment and safety risks. This is particularly the case given

the economic decline of 2008-2009 (Meardi et al., 2012). Construction is labour-intensive industry depends upon a skilled workforce in developed countries; in developing countries, it could be even regarded as more labour-intensive. In addition, construction like any sector which facing shortages of skilled labour. For example, the UK transportation sector faced a significant shortages of HGV drivers to fulfil the job of deliver key products and services (Manning, 2021). In construction, the shortages of construction labour are grave and chronic, both in developed and developing countries (Han et al., 2008b). For example, the industry faces a drastic shortage of construction workers because of the lack of native workers in its workforce. This is certainly true in the case of Qatar. An example of this is the study carried out by Amnesty International (2013), which reports that 1.38 million foreign nationals are working in Qatar, 94 per cent of the total workforce.

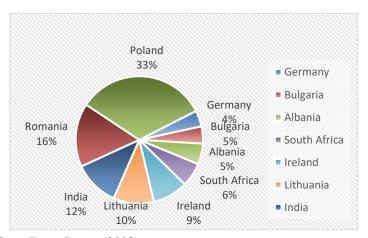
According to ILO (2016), the construction industry's serious dependence on migrant labour has several causes, including its seasonal, project-based nature, and the unique spatial characteristics of the construction process, which means that it cannot be relocated to benefit from lower labour, resource or transportation costs. Diop et al. (2017) state that unlike in Europe, in the GCC, particularly in Qatar and the UAE, migrants are currently a majority in the population. In her major study, De Bel-Air (2014) reported that the construction sector is the major employer. In 2006, there were 125,000 construction workers - 25% of employed foreign nationals. By 2009, recruitment had more than doubled at 558,000 workers (47 per cent of employed foreign nationals. In 2013, 39.2 per cent of all foreign labourers were employed in construction and, as per Figure 1.9, started to increase in absolute size, most likely attributable to construction related to the 2022 World Cup.



Source: adopted from Bel-Air, 2014

Figure 1. 9 Foreign labourers by activity (Qatar, 2006-2013, selected activities)

According to Krings et al. (2011), as a solution to shortages of skill and labour, the construction industry employed a significant number of migrant workers from the new members of European Union in 2004. Abdul-Rahman et al. (2012) state that 800,000 workers are employed in the construction industry in Malaysia (8% of the total workforce) with 69% being foreign workers. In another study, Ling et al. (2013) report that in Singapore, the construction industry depends on non-resident migrant workers since only 104,000 residents (3.3% of the total labour force) are employed in this sector. It is usual for migrant workers of multiple nationalities to work together on construction sites in Singapore. In the UK, for example, 2.1 million workers aged 16 to 64 were employed in construction in 2015, and over a quarter of million (270,653) of them were not born in the UK, i.e., one in eight (12.6%) of the total workforce (CITB Report, 2017; see Figure 1.10). Similarly, ILO (2016) notes that for decades the construction industry in Canada has depended upon an international workforce, recruiting workers from English-speaking countries.



Source: Labour Force Survey (2015)

Figure 1. 10 Most common countries of birth of non-UK construction workers (2015)

According to Hamid et al. (2012), foreign workers will be in demand if locals have no interest in the construction industry or are not willing to receive the level of pay foreign workers receive. Bust et al. (2008) agreed that the use of migrant workers in construction is not a recent phenomenon and is common in many countries; they have been a key solution in terms of labour shortage issues. According to Santoso (2009), construction is labour-intensive and so migrant labour is a result of growth and demand in the industry, particularly in countries with less manpower. Recent studies highlighted that the increase in migrant construction workers is a feature of the sector's labour market (Tutt et al., 2013). For example, migrant workers (EU and non-EU) are a significant portion of the labour force in the construction sector across Europe (Fellini et al., 2016). Abdul-Rahman et al. (2012) pointed out that migrant workers represent one of the most critical issues facing the construction industry when 20% (2.2 million) of Malaysia's workforce is made up of foreign workers. Evidence from the USA construction workforce shows that almost 24% of all construction workforce was foreign born (Nissen and Grenier, 2001). Bloch and McKay (2015) pointed out that around 50 per cent of employers in the construction sector recruit migrant workers, particularly for traditional building trades. This is certainly true in the case of Thailand. An example of this is the study carried out by Martin (2007), showing that construction companies prefer to recruit migrants to Thais because they accept to work more hours/longer periods at lower wages.

Due to the large number of migrant construction workers, the construction industry is a major cause of pollution and employees face continued exposure to chemicals and dust.

Construction work involves manual handling of heavy items and climbing high scaffolding and other dangerous activities. More than 108,000 workers are killed on site per annum, representing approximately 30% of all fatal occupational injuries. Deaths and injuries onsite can result from a range of work-related incidents including falls, injuries from falling objects, collapse of a structure, electrocution, asphyxiation, or exposure to chemical hazards (ILO, 2015d).

Overall, there seems to be some evidence to indicate that migration represents one of the most obvious contemporary manifestations of globalization. There has been a rapid increase in mobility across international borders. In construction, migrant workers represent a large part of the labour force in most countries. The reasons behind this will be reviewed in detail in later sections. Since migrants constitute the majority of the construction workforce in developed countries and even more in developing countries, migrants are an ever-growing and important component of this workforce, and their treatment increasingly affects all construction workers in any country. However, migrant workers recruited into a construction project are associated with factors that directly or indirectly influence the labour market performance. To sum up, the construction industry has absorbed a significant number of migrants. As mentioned above, the use of migrant workers in construction is a global phenomenon and is commonplace in developing countries suffering shortages of labour. For example, the Thai construction sector depends on the migrant workforce, which is a key element of the construction workforce. Therefore, the focus of this research is mainly on developing countries with the aim of investigating the impact of migrant workers in the construction sector.

1.2.2 The role trends of the construction sector

Until recently, in most countries, governments made efforts to strategize and fund sustainable development objectives related to infrastructure, healthcare and educational facilities, and human and economic development projects; these require a high level of knowledge and technical skills as well as a capable construction workforce (Pitt et al., 2009). Clarke (2006) points out that the data show that advanced building practices necessitate advanced professional input, better skilled employees, and fewer labourers. Therefore, developing countries must attract more talent and developing the existing labour market to manage growing construction demands.

Currently, the UN set the 17 sustainable development goals (17 SDGs) in 2015-2016 as a strategic plan to assists governments worldwide to draw up national plans to fulfil the 2030 Agenda for a sustainable future (see Figure 1.11). For example, some of these 17 SDGs are included in the 2030 vision of the KSA alongside other goals (Alharthi et al., 2019).



Figure 1. 11 The 17 SDGs of the 2030 agenda for sustainable future for all countries

Umar et al. (2020) concluded that the UAE would be able to achieve the UN 17 SDGs by 2030 and shed light on some obstacles that require the attention of the government. In addition, Thailand set up a taskforce to report on the implementation of the 2030 Agenda which includes the 17 SDGs. It strongly believes that taking part in a committee on the 17 SDGs will encourage all sectors of Thai society to move the country's sustainable development forward (2030 Agenda, Thailand). These 17 SDGs are important to improving quality of life around the world in a sustainable way, thus, efforts are being made to fulfil these SDGs. Although many countries are on track to achieving all the UN 17 SDGs, it is important to ask questions, such as what the potential role of construction is in the 2030 Agenda. For example, the construction industry can help to develop a heathier built environment and provide a strong support on the achievement of cleaner air within various life cycle stages (Wieser et al., 2021).

There are several published studies, for example, (Goubran, 2019, Fei et al., 2021) have identified that the 17 SDGs targets depend both directly and indirectly on the activities of the construction and real estate industries and shows that 17% are directly dependent while 27% are indirectly dependent (see Figure 1.12).

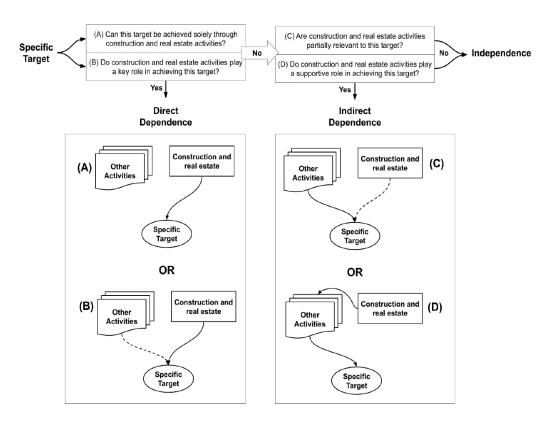


Figure 1. 12 Process for defining direct and indirect dependence of SDG targets on construction and real estate activities.

For all 17 goals, construction contributes to the implementation of the 2030 Agenda, with the largest contributions to SDGs targets 11, 6, and 7. In the same study, attempts were made to specify which SDGs and targets the construction sector can contribute to. For example, SDG 1 focuses on reducing exposure to climate-related events, SDG 9 focuses on building infrastructure that supports economic development and human well-being, SDG 11 underlines the role of cities in construction work in the built environment, SDG 7 identifies the role of buildings and the construction sector in renewable energy, SDG 12 target sustainable consumption and production, and the achievement of the climate adaptation target is the goal of SDG 13. For example, an EAP report (2020) discussed the key challenges of respond to the current pandemic found that while infrastructure supports most of the SDGs, many of the vulnerabilities that have been exposed by COVID-19 require investment in infrastructure that include social infrastructure. Therefore, efforts to achieve the SDGs as opposite with the response to COVID-19, in

many ways, they are the same challenge, and both can be addressed most effectively through coordinated effort. There is another example from Qatar when preparing for the World cup 2022, that the country has paid a great attention to the sustainable construction which can help for material savings and energy to reduce impacts on the natural environment and adopted the Global Sustainability Assessment System (GSAS) as part of the building code for the above reason (Al-Hamrani et al., 2021).

By 2030, for example, the UK will ban the sale of petrol and diesel vehicles and will be the first G7 nation to do so. This puts considerable pressure on car manufacturers, and how the industry can cope with such changes (Intelligent Transport report, 2020). The key challenge faced by the government is that the infrastructure needs to cope with such changes. This is in line with the SDG 11 target. Since there is a direct connection between these challenges and the contribution of the industry, the next chapter will provide some recommendations for employers and policy makers to improve the image of the construction industry, and lessons to learn regarding the real challenges that car manufacturers face.

Furthermore, sustainable development can be separated into three sectors that interact: economic, environmental, and social. These are called the 'triple bottom line' (Shelbourn et al., 2006, Pitt et al., 2009). Socially, housing provides shelter but also a secure future and strengthened local community (Wallbaum et al., 2012). In this way, the accommodation sector is responsible for providing Smart Buildings that should consider the following: gas emissions redaction, energy and material use, waste production, and changes in land-use dynamics. To achieve the above, sustainable development and the role of the construction industry should be considered. Moreover, advanced construction technology includes a broad variety of modern techniques and practices. For example, construction materials, modern methods of construction, modular construction, offsite manufacturing, prefabrication, and construction equipment that includes construction plants and construction tools. As discussed earlier, the production tools for affordable housing construction technology that requires a high skills level will face significant problems in finding skilled and trained workers (Wallbaum et al., 2012). Goubran (2019) claims that the construction sector has struggled to adapt to the 2030 Agenda and that there is less focus on exploring the potential role of the industry in the SDGs and their targets.

Traditionally, the construction industry has subscribed to the belief that it employs those with low levels of education and skill, and often from lower socio-economic groups. In developed countries, it offers necessary jobs to those with few academic qualifications. It employs a significant proportion of those with low education levels, the long-term unemployed, those outside the labour market, and second jobs (ILO, 2001). Furthermore, as the construction industry is labour-intensive in nature, the use of plant and machinery in the sector is less than in other industries (Proverbs and Holt, 2000). More recently, however, there is an underlying trend towards a greater use of equipment in construction.

However, the move to a green economy means new technology, investment, and jobs have a place. Environmental change also has detrimental effects on some economic sectors and can be the cause of job losses. For example, modern construction equipment and material technologies, modularized components, and strategies for estimating and scheduling have counteracted the lack of skilled construction labour (Goodrum and Gangwar, 2004). In addition, major shortages and deficiencies exist in terms of the skills needed for Smart Buildings at the operational level; these include building green buildings, and installing and maintaining their technologies (ILO, 2011). For example, an estimation model for the occupational demands in six ASEAN economies (Cambodia, Indonesia, Lao People's Democratic Republic, Philippines, Thailand and Viet Nam) for 2025 shows the anticipated requirement for various groups of workers, including construction workers (ILO, 2015c).

According to ILO (2011), employers still find it difficult to recruit qualified employees for certain jobs due to limited training that is too general training and lack practical application. This sheds light on two essential dimensions of the construction labour market dynamics: adjustments to the skills and competencies required for existing or new jobs, and fluctuations in the number of employees needed. Connaughton (2012) argues that the issue of skills shortages has significance for construction, as will be shown, and points to possibilities for further research into current industry practice and government policy. The author acknowledges this and refers to UK employment data to demonstrate that migrant construction workers are usually employed in lower-skilled labouring or semi-skilled occupations. The author argues that migrants' acceptance of lower salaries and poorer employment conditions compared to the local labour market makes them attractive to employers.

1.2.3 Summary

The main themes covered in this section are the construction industry situation in terms of its workforce, with particular focus on the involvement of migrant workers, and the future of the industry. Characterisation of the industry is important for our increased understanding of its contribution. The literature confirms, for example, that the industry suffers from a shortage of skilled workers. In addition, the construction industry seems to play an important role in the SDGs targets set by the UN 2030 Agenda, which requires a high level of skilled workers to undertake construction activities. As mentioned earlier, the current situation of the industry's workforce that involves a large number of migrant workers with low or primary level education and no experience or knowledge of construction activities. It is worth noting that the increasing number of migrant workers in construction sector is considered a real challenge by any government due to the future role of the construction sector. Therefore, this study attempts to make a major contribution to research on the future of the construction labour market by exploring the current requirements for entering construction employment. Overall, this study argues that the current labour recruitment practices which reflects into the Kafala system in GCC6 countries, and the MoU regulatory framework in Thailand, are insufficient to contribute to the role of the construction industry in the future.

1.3 Research aim

This research study questions the efficacy of the existing recruitment systems in providing solution to issues affecting migrant workers in the construction sector. It addresses the employment conditions of migrant workers in the labour market in general and the construction industry in particular. The aim of this research is to find ways for improving the conditions of migrant construction workers in developing countries. The findings will contribute to recommendations for the construction sector that could be used to improve the current situation of migrant workers in existing employment regulations in developing countries.

This research is sponsored by Libyan Higher Education. The proposal specified that the research should investigate the migrant workers issues in construction sector. The belief is that the sector can learn from these experiences in terms of the existing construction labour market conditions.

1.4 Research objectives

The general objective of this research is to investigate the current issues and regulations impacting the employment of migrant workers and present their experiences in the construction sector. The specific objectives are as following:

- To identify the issues being faced by migrant workers in the construction sector in developing countries.
- To understand employers' view on the value of migrant workers to construction process.
- To explore migrant workers understanding of their employment and issues that influence their employment in the construction sector.
- To suggest ways for improving the situation of migrant workers in the construction sector in developing countries.

1.5 My interest in the topic

As this research project funded partially by scholarship provided by the Libyan Higher Education Ministry to tackle issues regarding construction labour market after a period of unstable situation which resulting many migrant workers (MWs) leaving the country. This situation we can called temporary leave and we can tackle some issues related to migrant workers to encourage them to return for employment in many sectors in the country. These issues include working and living conditions. To understand these issues, my experience is mainly focus on subject of construction management and my role is how we can meet the construction project goals which include time, cost, and quality. To improve my understanding further in this area and as part of the thesis, I investigated the issues into migrant workers in construction. This research improved my knowledge about migration processes and migrant employment in the construction sector. Moreover, this research enables me to conduct an in-depth study into migrant construction workers in the Middle East and Thailand where many migrants hope and need any opportunity to work there.

1.5.1 Issues facing migrant workers in the construction sector

There are many studies in this subject indicated that migrant construction workers face many issues within the sector which started from preparing to entering the construction employment and during their work activities and ending with return to their origin country. Currently, 169 million migrant workers are distributed worldwide amongst the major regions which include the Arab states with 14.3 per cent, and Asia and Pacific 14.2 per cent (Rakotonarivo, 2021). Moreover, some studies get further and find that migrant workers in construction could be a dual factor for any construction project. The literature indicated that the construction sector is one of the high rates of involving accident which can lead to death. For example, among 120,000 Nepali migrant workers in Qatar are exposed to various occupational hazards which include excessive heat that resulting 3-4 workers die each week (Pradhan et al., 2019). Therefore, there is no doubt that those migrant workers face hard situation during their employment in the construction sector. The situation could be even difficult when involving low skilled migrant workers who supposed to undertaking construction job that processed in new models. Yet there are few general studies onto issues of migrant workers that cover all aspects of their construction employment. Moreover, policies to improve their situation are lacking in both sending and receiving countries when the UN 2030 Sustainable Development Agenda recognizes migration as an important aspect of development policy and urging government to implement planned and well managed migration policies (Rakotonarivo, 2021). As researcher, I am interested in contributing to the existing knowledge by investigating the issues of migrant workers in the construction sector.

1.6 Research significance

This study is a considerable as it covers many important aspects of migrant workers in the construction sector. The first aspect is that this study conducted to provide a better understanding of the current situation of migrant workers in the construction sector by sharing their experiences and lived reality in the sector. It is examining whether the labour employment conditions are designed to consider their situation in both sender and receiving countries. Despite the efforts by many governments to tackle migration issues, migrant workers are unlikely to benefit from their employment because of several barriers such as language and the recruitment system. Therefore, it is important to address the migrant workers issues in construction sector and to provide such recommendations that

helps for tackling labour market in some countries that largely dependent on migrant workers.

The second aspect is the notable absence of the representative of migrant workers in host countries which this indicates the need to conduct fieldwork using an appropriate qualitative research method. To achieve this, a proposed research design has been agreed that conducting in-depth interviews with the research population (migrant workers and employer/supervisors). Thus, conducting fieldwork was an appropriate for this research in terms of providing a vital source of data.

The final aspect is that the share of migrant workers in the construction's workforce is increased gradually, especially in the countries with low birth rate and with high demand for industrial sector labour such as construction. However, there is concern about the treatment of migrant workers in some countries due to the need of the labour market to access a cheap and be flexible workforce in host countries. In addition, the negative factors associated with the current recruitment system, making migrant workers unwelcome in the construction sector in host society. Such risks of these negative factors could make the construction sector unattractive for employment which can lead to labour shortages.

Given the above, this study aims to assist the research stakeholders to understanding the current situation of migrant workers in the construction sector and tackling the recruitment systems that could negatively impact on the employment of migrants and their family members. The findings of this study are supported by the main challenges and issues with relation to the employment on construction sector. These findings help the researcher to provide practical recommendations for policy improvements that assist host countries to improve the situation of migrant workers in construction sector.

1.7 Thesis structure

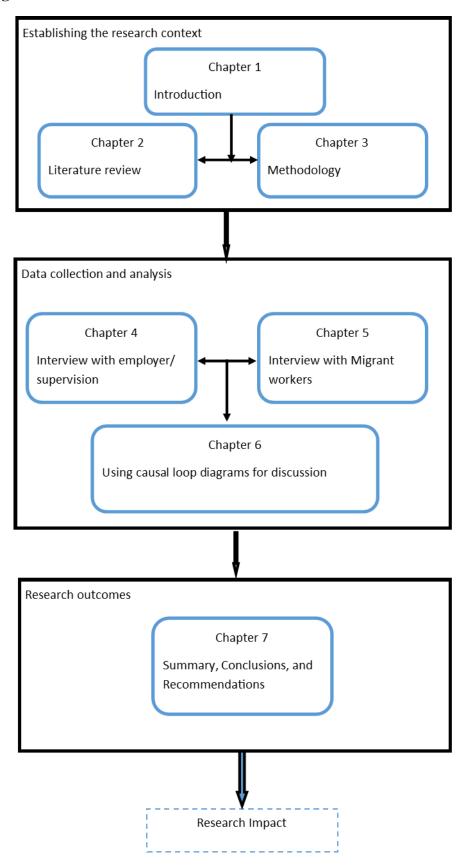
The thesis is structured as shown in Figure 1.13. The overall structure of the study takes the form of seven chapters. From here on, this thesis is structured into three sections. In **Section 1**, the introduction chapter (Chapter 1) sets the scene for this study, detailing the challenges facing the construction industry including its role in the economic and the current situation of its workforce. Additionally, there is an overview of migrant workers

and their migration processes. The migration stages are described as: decision to be migrant workers, stay in host countries, and return to countries of origin. Chapter 2 shows findings from the literature review to identify the issues of migrant workers in the construction industry and to establish the research questions. Chapter 3 outlines the methodology and methods used to gather and analyse the relevant data. This chapter provides details of the in-depth interviews with both employers and employees in the construction industry. The process of the design, conduct, and analysis (thematic data analysis) are explained and discussed in line with the purpose of this research.

Section 2 (Chapter 4, 5 & 6) contains the key findings for each objective. Chapter 4 summarises the findings from the in-depth interviews with managers who are experienced in the recruitment and supervision of migrant workers in construction field. The main aim was to gain considerable knowledge about the advantages and disadvantages of recruiting migrant workers and the issues regarding the employment of migrants in the construction industry. Chapter 5 summarises the findings from the in-depth interview study with migrant workers. This includes their migration backgrounds, their experiences of living in the host countries, and their experiences of working in the construction industry. Chapter 6 is a discussion of the findings contained in Chapters 4 and 5. A system thinking approach was used to better understanding the issues of migrant workers in the construction industry. Thus, three causal loops diagrams were developed to understand the issues in more depth.

In **Section 3**, the key results from previous chapters are presented in chapter 7. This is the final section of the thesis and outlines the recommendations arising from the study. The recommendations are focused on key areas that include recommendations for policymakers in both origin and host countries, recommendations for the research population, and recommendations for training providers. Recommendations for future research involving migrant workers are also provided.

Figure 1. 13 Overview of thesis



1.8 Chapter summary

Overall, this chapter provides the context for the remaining chapters of this thesis. It has highlighted the key challenges faced by the construction industry with specific focus on its workforce, as well as the particular issues of migrant workers. This wider picture has helped to formulate the aims and objectives of this thesis and situated them in context. Section 1.1 provided a brief overview of the background of the research. This includes the current challenges that put considerable pressure on the sector in terms of the participants of migrant workers on its workforce. Section 1.2 evidenced the research in terms of the role of the migrant in the sector and the role of the industry in the future. An interested reflective piece (Section 1.5) has outlined the researcher's interest in the topic of migrant construction workers in order to help the reader understand the natural of the problem. In Sections 1.3 and 1.4 outlined the key aims and objectives of the research, and Section 1.6 outlined the important aspects of migrant workers in the construction sector, while Section 1.6 outlined each individual chapter separately with the key outcomes. The next chapter reviews the wider literature on the topic of migrant workers in the construction sector in developing countries.

2 CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

A considerable amount of literature is available on labour migration in the construction industry. This chapter presents the key findings from the literature review, which are the basis for constructing the research design. The chapter includes a synthesis of the literature on working and living conditions in host societies, issues associated with migration in the Middle East (ME) and Thailand, and the justification for migrant construction workers being the focus of this study. The available literature was searched using a strategy that included various electronic databases and key word combinations, and reports from various United Nations (UN) agencies. A number of articles were retrieved. Only articles published in English were selected. In general, the findings revealed that in the last decades, the issue of migrant workers in construction has been the focus of increased attention, as can be seen from the increasing number of published articles (see Appendix 9.1).

The literature is reviewed under the following sections: Labour market impacts of migration; Recruitment of migrant workers; Migrant workers in the eyes of their employers; Labour migration to construction; Health and safety; Communication barriers; Working hours and overtime; and Living conditions in the construction industry. Sections 1, 2, 3 and 4 focus on issues related to migration and employment, while sections 5 to 10 are more focused on construction as a key industry for labour migration. This chapter attempts to identify the migrant-related issues in the construction industry in developing countries. The chapter critically examines migrant workers in the world context. Following this is an exploration of the same issues in the context of developing countries with particular focus on GCC6 countries and Thailand.

2.2 An overview of labour market impacts of migration

There is a growing body of literature on migration looking at issues such as mis/information on migration and how it impacts migrants during the pre-migration phase, how migrants enter the local labour market during their stay in host countries, and why they choose the construction sector. In addition, understanding the return migration phase is very important for both the country of origin and for the migrants themselves.

Fernandes and Paul GD (2011) show that the flow of migrants has been facilitated through networks involving family members, relatives, friends, fellow villagers, and contractors. An IOM (2018) study cited that family, friends, and other networks at home and in destination countries as motivations for migration. Research over recent decades show that migrants value information from their close social network most highly. In another major study, Tutt et al. (2013) found that the construction sector's noticeably informal methods of recruitment depend on known networks to a great extent. Rahman (2012) states that migrants from south-east Asia are usually recruited to the GCC by agencies and migrant networks. However, ILO (2015c) argues that Thai employers rely on illegal brokers for recruitment. As the brokers operate illegally, it is problematic to involve them in improving the sending process and encourage them to take measures to protect migrant workers' rights. In a study conducted by Gardner (2012), it was shown that misinformation and disinformation are purveyed within migration system. For example, sub-agents and labour brokers in the countries of origin may have little knowledge about the contracts they broker, and incentives often depend on spreading disinformation the issues faced by both males and females in the GCC6 countries. Recruitment agencies, citizen-sponsors and those they represent in the receiving states also gain from the continued arrival of migrants who have received incomplete or incorrect information about their employment conditions in the GCC. Some scholars have termed the recruitment networks as the "engines of migration" (Phillips and Massey, 2000), cited in (Rahman, 2012) and other refer to them as "other engines of migration" (Hernandez-Leon, 2005). Piper (2014) recommends that improved communication with migrant workers to make sure they are familiar with issues around their recruitment and employment. This includes "Labour Information Bureaus" and information "orientation" before leaving their countries of origin as well as on arrival in their destination countries. Kebede (2002) points out that poor quality information about living and working conditions in destination countries is a reason why the majority of migrants find themselves being exploited by their employers. It is widely mentioned that employment contracts play a vital role in the working and living conditions of migrant workers which include the agreed wage, payment methods and the date of recurring payment that are crucial elements of the contract terms (Diop et al., 2020).

In a comprehensive study of migration and labour markets, Baldwin-Edwards (2011) found that the GCC6 countries, which import their workforces and are rich in resources have several structural similarities. However, there are also some major differences. The more or less common features are as follows:

- low total participation and employment rates of nationals;
- extreme segmentation of the labour market especially public/private and national/immigrant worker;
- rising unemployment rates, especially of women and the young;
- ➤ employment dominated by services and construction; female employment almost exclusively in services, notably housekeeping for migrant women, education and social services for native women;
- The importance of the *kafala* sponsorship system, for a flexible stock of 'temporary' foreign labour (which in reality is more permanent).

(Baldwin-Edwards (2011)

Al-Ubaydli (2015) claims that the GCC6 countries mainly attract migrant workers with high per capita incomes. They require imported labour for two main reasons. Firstly, because formal education is newly implemented, skilled labour from abroad is necessary for growth. Secondly, culturally, low-skilled jobs are seen as unacceptable to locals and therefore a workforce must be imported to fill these vacancies. Ewers and Dicce (2016) pointed out that in the GCC6 countries, incoming flows of labourers together with national regulatory frameworks (i.e. the *kafala* sponsorship system) have caused serious labour market distortions. Hasan (2015) highlights that most of the problems caused by recruitment of large numbers of low- or non-skilled workers means that nationals do not have employment opportunities and are marginalised in the labour-intensive economies of the Gulf. For example, Gulf locals lack skills and hold preconceptions that preclude them from many private sector jobs. The safety net of the social security system along with "wasta" (connections/network) and the rent-creating kafala system all mean that local do not seek employment. Furthermore, locals who want to work in the private sector must be competent in English and able to operate in a multi-cultural environment (Mellahi and Al-Hinai, 2000).

According to Katseli et al. (2006), how migration affects sending countries depends on the size, composition, and features of the migration streams, and on the background and context of the migrants. Martin and Zürcher (2008) claim that emigration is perceived to make a net contribution to development in countries of origin. The research to date has determined the impacts of migration on major countries of origin. These include:

- > Reducing population pressure and unemployment;
- > Emigration of skilled persons the "brain drain";
- > Social costs;
- > Flows of remittances;
- > Transnational communities and home country development;
- > Return migration;
- ➤ Migration and trade;
- ➤ Migration and overall economic performance. (Martin and Zürcher (2008)

According to Borjas (1999), the extent to which migration affects local labour depends on how skills compare between migrants and natives. For example, if skills levels are evenly balanced, migration will not affect the supply of skills or alter wages. However, if migrants are less skilled than natives, the distribution of income will shift towards those with more skills, and vice versa. Clark and Drinkwater (2008) report that the main influence on a new migrant's labour market performance is the value of their education, experience and training in the receiving country.

Martin (2007) describes two polar views on the impact of migrants on the labour market. On one hand, some claim that migrants and local workers can substitute each other i.e. a migrant displaces a local by occupying a job vacancy, and frees a vacancy for a local when leaving a job. On the other hand, some claim that there is no relationship between migrants and local workers i.e. migrants take up employment that locals do not want, thus complementing them. However, both views are incorrect. Migrants can be substitutes as well as complements for local workers. They influence both salary levels and job options for locals, and may substitute and complement locals depending on worker characteristics, production technology, type of labour and product markets, amongst others.

In an investigation into labour markets and discrimination in Spain, for example, Sole' and Parella (2003) found that most local workers reject migrants and agree to political measures to close limits. They believe that migrants intrude and cause a decrease wages and working conditions. However, there are no empirical studies that show that this is the case. According to Bryant and Rukumnuaykit (2013), 83 per cent of Thais believe that migration to Thailand reduces local wages. Empirical studies, however, have found that in developed countries, the effect of migration on wages is minimal. For example, a meta-analysis of 18 developed-country studies concluded that a one-percentage point rise in the share of migrants in the workforce causes local salaries to decrease by a modest 0.119 per cent (Longhi et al., 2010), cited in (Bryant and Rukumnuaykit, 2013). In a study investigating safe migration in Myanmar, ILO (2015d) reported that Thailand was most popular with potential migrants (39 per cent). The participants confirmed that the main reasons for choosing Thailand were enhanced job opportunities and increased salaries.

Taken together, these studies clearly indicate that migrant workers are likely to have lower salaries because of their lack of country specific skills, including weak knowledge of customs and language in the host country, little information about job vacancies, little firm-specific training, and less likelihood joining a union member or holding an appropriate occupational licence. The quality of education, schooling and experience in the sending country may not meet the needs of employers in the receiving market. Overall, there seems to be some evidence to indicate that migration is a key factor in the discrimination that can be noted in local construction labour markets. Wells (1996), for example, indicates that in local labour markets with low regulation, there are fewer salary differentials and hierarchies based on gender, religion, race, citizenship and/or ethnonationality.

In view of all that has been mentioned so far, one may suppose that the increased demand for low-wage has in turn encouraged a dramatic increase in the level of migration of any country that resulting a significant low-skilled and low-paid construction labour force. Overall, these studies highlight the complexity of the construction labour market issues that negatively affected the industry. Significantly, the participation of migrant workers in the construction industry is one of the most critical issues facing many governments in terms of the unemployment levels of the native-born and the wage level.

2.3 Recruitment of migrant workers

Recruitment strategy refers to the methods used by companies/employers to recruit the right workers for a job; selection process refers to the method used to select the best candidates (Marsden and Campbell, 1990, Fellini et al., 2016). In construction, there are formal and informal recruitment channels that provide pathways for migrant workers seeking work in the construction industry. As previously stated, the construction sector has faced considerable labour shortages and to satisfy demand, employers have begun to recruit more labour from abroad. For example, migrant workers may find work in the construction sector via a social network of contractors, middlemen, relatives and friends depending of the nature of the employer (Srivastava and Sutradhar, 2016). Refer to Section 1.3 for more details about Social Network to Work (SNW).

In Canada, for example, there are four main methods for recruiting migrant construction workers. These are: The Temporary Foreign Worker Program (TFWP), the International Experience Canada working holiday visa (IEC) and the Federal Skilled Worker Program (FSWP) and Federal Skilled Trades Program (FSTP) (Buckley et al., 2016). Research on migrant construction work, however, shows that some methods (e.g. the TFWP) are used less due to the already large excess population, and because the time these methods take is not feasible in industries that need a flexible workforce. Research carried out in Toronto demonstrates how employers are turning to informal networks to find employees, and seek out workers whose legal status is not stable (e.g. no residency/work status, expired visas, refugee status) (Reid-Musson, 2015), cited in (Buckley et al., 2016).

Fellini et al. (2007) state that in EU countries, either international mobility or migration is caused by companies recruiting foreign workers. In their studies, they identify four strategies that could be used by construction companies in the recruitment of migrant workers:

- 1. companies can recruit foreign workers already present in the country to work on national construction sites (make strategy indirect external recruitment),
- 2. companies can recruit foreign workers directly abroad to work on national construction sites (make strategy direct external recruitment),
- 3. companies can subcontract to national small companies that employ foreign workers already present in the country or to foreign companies that bring their

- own workers from abroad to construction sites (posted workers) (buy strategy subcontracting),
- 4. companies can recruit foreign workers directly on site and dispatch them internationally through their internal labour market (make strategy international ILM).

Many recent studies (Rahman, 2012, Pessoa et al., 2014, Buckley et al., 2016, Damir-Geilsdorf and Pelican, 2019) have shown that the sponsorship or *kafala* system is a type of labour recruitment used in all six Gulf Cooperation Council (GCC6) states. According to De Bel-Air (2014), in the *kafala* system, GCC citizens must sponsor all migrants and then become legally and financially responsible for them while they are contracted. The *kafeel* (sponsor/employer) may be an individual, an agency or a company. The *kafeel* certifies that the migrant works for him/her, and assumes responsibility to inform the immigration department if the work contract expires, is renewed, is cancelled, and agrees to repatriate the employee when the contract ends. Thus, the migrant worker is tied to the *kafeel*. The migrant worker can only work for the sponsor/employer for the period specified.

Through the *Kafala* system, for example, employers in the GCC6 states have great control over migrant workers, who are bound to a single employer and restricted in terms of changing employment and negotiating. According to Nagar (2014), a number of government officials have told Amnesty International that the *Kafala* system aims to ensure a "balance between the rights of the worker and the rights of the employer". In reality, it causes a major discrepancy in power, which leaves workers with limited recourse in case of exploitation. Buckley et al. (2016) report that the *Kafala* system restricts workers' mobility and traps them in exploitative conditions. Thus, sponsors, can significantly influence outcomes for migrant workers. While migrant workers are not covered by labour laws and are restricted by the *kafala* system, no bilateral agreement can offer sufficient protection against exploitation.

According to Rahman (2012), many potential migrants discover the migration process how to search for jobs in the GCC6 countries. In his view, they find work with sponsor-employers in the GCC through migrant brokers already in touch via social networks. Migrant brokers or 'dalal' (broker) or 'adam babshahi' (human-trader) are often ex-

migrant workers who have lived for a long time in the GCC and have knowledge of the local recruitment structures and visas. Moreover, obtaining a work visa through a personal network shows the ability of individual migrants to side-step bureaucratic processes and avoid the rising price of Gulf migration.

In the case of Asian migration to the GCC6 countries, salaries have decreased and recruitment agency costs have escalated (Rahman, 2012). Furthermore, most sponsors do not cover the cost of return tickets, passports and medical examinations for potential migrants. As a result, most Asian migrants pay these migration costs and recruitment fees themselves. According to Jureidini (2014), migrant workers who borrow to cover recruitment costs are susceptible to debt bondage, forced labour, and trafficking. For example, many construction workers do not get the wages and/or food expenses that were promised before departure. In the same study, he suggests that the outlawing recruitment fees and other charges is an important and necessary reform in labour markets from South Asia to the Gulf States. In theory, this would get rid of most corrupt practices between recruitment agents and employing companies; and with monitoring by the government, would also end the market for visa trading, which is normally paid for by migrant workers.

According to Martin (2007), under the MOUs, Thai employers must have their requirement for migrants verified by the Thai authorities, which communicates to sending-country governments how many migrant workers are required. Then, private firms (Cambodia) or government agencies (Myanmar and Lao PDR) recruit and select foreign workers for Thai vacancies. The MOUs suggest that governments should play an active role in organising legal migration, but in reality, recruitment agencies have carried out this role. In Myanmar, for example, according to a flowchart from the Thai Department of Employment (ILO, 2015c), it takes at least of 89 days to deploy a worker from identification of a vacancy to worker starting work. In Malaysia, to regulate inmigration, the government signed numerous MOUs with several designated countries. The first agreement of this kind was the well-known Medan Agreement which was agreed by Malaysia and Indonesia in 1984. This was followed by other MOUs between Malaysia and the Philippines, Bangladesh, China, Vietnam, Pakistan and Thailand. After this, the sector was allowed to establish employment agencies for the recruitment of migrant workers from these countries (Devadason and Meng, 2013). In Singapore, the migrant workforce grew faster than the local workforce between 1990 and 2000 (9.4 percent

compared to 1.4 percent). State policy is still committed to making sure that unskilled and low-skilled migrant workers are managed as a temporary and controlled occurrence via measures such as the permit system (Huang and Yeoh, 2003).

In a study investigating how effective MOUs are in managing labour migration, ILO (2015c) reported that there are extensive procedures for recruitment and placement under the MOU agreements. Policy implementation by labour authorities has shown that the process is complicated, time-consuming, and expensive (Vasuprasat, 2008, Sciortino, 2009, Harkins, 2014). Moreover, many migrants do not see any advantage to having legal status in terms of decent working conditions. However, interviews with Cambodian migrants in Rayong, Thailand show that migrant workers who had had various legal statuses doubted the benefits of the MOU (Harkins, 2014). Workers with irregular status were able to make savings as irregular migration is cheap, fast and easy compared to obtaining legal status.

Furthermore, under the MOU, migrants are tied to their employer for the first two years and cannot change jobs without losing their regular status. In addition, some Cambodian migrant workers recruited through the MOU process were afraid that the property they had used to fund their migration would be repossessed by the recruitment companies if they left their jobs before the end of the employment contract (Harkins and Chantavanich, 2013). Martin (2007) also states that migrants are given passports in order to get entry documents from the Thai embassy before they go to Thailand to obtain two-year work permits that can be renewed once. Migrants must leave when their work permits run out, and when they arrive at home they get the 15 percent of wages that are withheld to encourage them to return (this 15% is forfeited if they do not return home). Moreover, many migrants report overpaying brokers or paying very high fees for the registration process, and finding themselves working under different conditions than agreed with the broker. Others find themselves in indentured working conditions when they arrive (Human Rights Watch, 2010,) cited in (Buckley et al., 2016).

Together, these studies indicate that the flow of migrants is an important source of human capital to complement and enhance economic growth for both sender and receiver countries. However, many recruitment agents and brokers in countries of origin demand payment from potential workers to organise their employment abroad. Evidence from the

literature is that many migrant workers build up debts in their home countries having taken out high interest private loans to pay the recruitment agent's fees in the destination country. Given the migrants' low level of education and skills, and the significant uncertainties faced in the labour market, most depend on brokers and contractors/sub-contractors for recruitment. Agreement between employers and middlemen means that basic labour standards are not met. Overall, there seems to be some evidence to indicate that improved communication to migrant workers and their foreign agents is vital to solving this problem. Potential migrant workers always require effective "orientation" (i.e. induction covering the rights and responsibilities of migrant workers in host countries).

2.4 Migrant workers in the eyes of the employers

As mentioned earlier, there are several causes for the lack of construction workers including poor job image, lack of career development opportunities, training and education, poor salaries and work conditions, and the high turnover of construction workers (Han et al., 2008a). According to Buckley et al. (2016), at the moment, there are three main factors that seem to push construction employers to look abroad for staff:

- Many construction workforces in industrialized economies are rapidly ageing, and
 the demise of training and apprenticeship programs, falling birth rates and lower
 rates of entry into the skilled trades by national citizens has produced structural
 shortages of construction labour.
- 2. Many industrializing nations are rapidly growing both demographically and economically; these trends have spurred construction markets in Brazil, India, China and elsewhere, in which demands for new housing, office space, and industrial and civil infrastructure has vastly outstripped the capacity of local construction labour markets.
- 3. The size and complexity of projects, from residential mega projects to large infrastructure projects, has been growing in recent decades, resulting in the rising demand for highly skilled professional migrants with experience in designing, managing, and supervising large and complex projects on the ground in locales where such expertise might be lacking.

There are many factors that encourage employers to recruit migrant workers. For example, migrants are vulnerable to exploitation (they usually do not access legal support due to their temporary status); migrants are seen as hard working, compliant and keen to work overtime, even over public holidays and weekends; migrants are believed to be more accepting of lower pay than local workers; and migrants are thought to be less interested in safety and working conditions, and often accept very poor conditions (Devadason and Meng, 2013). According to Krings et al. (2011), when employers recruit for lower-skilled construction jobs, they do not place significant weight on the formal qualifications of prospective employees. Instead, a positive attitude and perceived willingness to work hard are considered to be the most important quality of migrants. However, employers have recognised the need to change their practices; for example, communication problems impact the employment of migrants. Another issue is that by employing migrant workers, employers have had to take responsibility for their employees outside the workplace, i.e. by providing housing, translation services and support with financial matters. These changes point to a new and more comprehensive role for employers, and result in obligation between parties. However, the literature confirms employers tend to believe that migrant labour is a new kind of flexible labour, i.e. the workers are willing to work the shifts and hours required by the employer.

Hamid et al. (2011) concluded that the problems employers face when recruiting migrant workers were because of time-consuming procedures and legal requirements. The problems faced by foreign workers were due to the low salary and low expectations for their wellbeing. The demand for foreign workers will continue as long as locals are not attracted by construction work or accepting of the wages paid to foreign workers. Buckley et al. (2016) agreed that migrants and temporary migrants who work in the industry are key because they fill jobs that could not otherwise be filled. Much construction work is dirty, hazardous, low paid, and low-status work, particularly for nationals in fast growing economies.

In an analysis of construction employers' use of non-UK workers, a CITB report (2017) found that the key reasons for hiring non-UK workers are:

Employers look to find skilled people and they respond to the applicants on offer, rather than actively looking for non-UK workers.

- Common reasons for employing non-UK workers are their availability and skills shortages.
- Non-UK workers can add flexibility and speed of response to skills needs. They are often happy to pick up extra work and fit into the existing construction labour model.
- ➤ Cheaper pay rates were not a factor in why employers recruit non-UK workers.
- Non-UK workers are spread across roles, including skilled trades. Multi-skilled workers can add even more value. A stronger work ethic was mentioned by some employers (22%).
- ➤ Migrants' skills levels are comparable to those of their UK counterparts. 59% of recruitment agencies say non-UK workers in construction have similar skills levels to UK workers and over two- thirds of migrants hold a construction-related qualification.
- ➤ For individual workers, the UK offers good economic prospects and non-UK workers can find enough work and steady pay rates.

(CITB, 2017)

In addition, quality skills and safety training are needed in order to cope with the future skills introduced in the industry. According to CITB (2015), there are major obligations for industry, government and policymakers. Migrant workers should not be treated by employers as a convenient, trained and low-cost pool of labour that results in less training and fewer opportunities for UK citizens in construction. In a study conducted by ILO (2016), it was shown that the concept of skills training was new to the majority of the migrant workers questioned. Many interviewees could not respond to questions about training as they could not appreciate the potential benefits of training. Srivastava and Sutradhar (2016) pointed out that skill gaining has little impact in the construction sector because of the extreme lack of formal training. However, particularly in smaller firms, some workers gain skills on the job through close work with skilled colleagues.

Sargeant and Tucker (2009) stated that workers with low education and skills have fewer work opportunities in both the sending and origin and destination country, and it is unlikely they have received any OSH training or have the capacity to control their work performance. According to Trajkovski and Loosemore (2006), safety induction courses offer a framework for teaching workers about hazards and safety at work but have limited

benefits for migrant workers. Hare et al. (2013) state that English language courses, which are available for various vocations including construction, are the most successful long-term investment. They usually cover health and safety with a glossary and pictures or diagrams (Cottom 2005), cited in (Hare et al., 2013). However, English training is costly and demands a major investment of time by the workers. Moreover, work demands and movement between employers can be an obstacle to worker attendance. Srivastava and Sutradhar (2016), for example, found that most migrant workers are-employed on a fixed term contract and then return home; others remain but alternating between one site and another but change jobs frequently and return home only occasionally. Trajkovski and Loosemore (2006) also cite concern for project managers who be sure that all workers on sites are aware of the safety risks. In the same study, they suggest that language barriers and unhelpful trainers can limit the effectiveness of such courses. This could easily be solved by running inductions in a range of languages, training trainers on cultural sensitivity, and translating printed material.

These studies clearly indicate that employers did not claim to employ migrant workers over local workers but that local workers were not available. Local avoid construction work for four reasons: the poor image of construction work, the lack of career development, instability, and the harsh conditions. However, the employers' comments in relation to migrant labour, i.e. that migrants are harder working and more compliant, certainly suggest that they did at least consider employing both local workers and migrants. Overall, these studies suggest that in the low-skilled positions, the problem was the shortage of labour rather than the shortage of skills. The literature confirms that employers sought a steady supply of migrant labour to overcome the low numbers of local applicants. For example, the low wages were more attractive to migrants than to locals, because they could earn more than at home. Moreover, immigrants with low levels of education and experience could satisfy the need for unskilled labour but could not substitute skilled workers. However, they become part of a contingency because they are open to ad-hoc training on-the-job.

2.5 Labour migration to construction

As mentioned earlier, the construction industry is one of the sectors facing severe labour shortages in both developed and developing countries. Migrant workers from less developed countries have been sought as a solution to the problem (see Section 1.1.2). According to Abdul-Aziz (2010), the rise in migrant workers is caused by both supply and demand factors, but demand factor are more significant. Buckley et al. (2016) report that the construction industry's dependence on migrant workers can be attributed to several factors, including the fact that construction is seasonal and project-based. In addition, it can be attributed to the unique spatial features of the construction process, which is similar to sectors including mining, agriculture or consumer services in that construction cannot be relocated to benefit from lower labour, input or transport costs.



Source: adopted from COMPAS photo competition 2010

Labour is a major (and sometimes a majority) of construction project costs in spite of the advances in technological and technical building practices. This is particularly the case in less industrialized countries. Since construction is project specific, it traditionally has flexible employment structures, including project-based employment structures or labour-only subcontracting firms. These have recently been adopted in other sectors.

Clearly, migrant workers have been a great help in solving the shortage of labour in the construction industry. However, Abdul-Rahman et al. (2012) reports that cognizance of overdependence on migrant workers and the negative impacts they bring has resulted in the proposition of strategies for minimising dependence on migrant workers. These include introducing industrialized building systems and making construction more attractive to local workers. Moreover, using foreign workers to solve the issue of labour shortage is challenging. Han et al. (2008b) have identified several factors as a basis for

generating the five major suggestions to improve foreign labour performance: (1) flexible employment systems; (2) education programs for communication; (3) evaluation system for incentive; (4) a teamwork approach; and (5) well-planned welfare programs. (Han et al. (2008b)Their case studies show that these suggestions are reasonably useful for improving foreign labourers' work performance. Thus, together with the critical factors, they should be integrated into an HR management plan to help project managers facilitate foreign workers to reach their full potential. More specifically, relevant factors to the low performance/productivity of migrant workers were shown to be primary concerns in extensive literature reviews (see Table 2.1). All possible factors were split into categories which were then organized into three topics: features of policies on foreign labourers, qualifications and personalities of foreign labourers, and on-site management systems. Then, the three categories were extended into 12 subtrees resulting in the 56 possible factors along with the 12 subcategories.

Friberg (2012) reports that cultural differences become a causal force that not only reflect but also shape material relations by creating demand for certain national or ethnic groups in certain industries in the labour market. In this way, ethnicity becomes a main driver in structuring and segmenting labour markets. In Singapore, for example, a construction site usually consists of migrant workers from different countries. Ling et al. (2013) conclude that there is a great degree of cultural diversity among workers from China, India, and Thailand, and this manifests in particular in working styles, attitude to work, and ways of settling disagreements. Due to the differences between workers of different nationalities, it is necessary to modify an appropriate management strategy to manage migrant workers efficiently. Santoso (2009) suggests that in a multicultural project, communication, wage segmentation, task assignment and trust, belief and religion should be considered to facilitate a constructive environment for working and living. Ling et al. (2013) also reported that project managers and supervisors inevitably interact with and manage a workforce that is culturally diverse. For example, workers who have different national cultures may carry out their work and form relationships with others on-site in different ways. The mix of different nationalities also means there are language differences, and these can cause communication problems.

Table 2. 1 Structures of factors on low performance of migrant workers

Top categories (3)	Subcategories (12)	Descriptions and related factors (56)
Unrealistic regulations and policies in employing foreign workers	Complexity of regulations and lagged supply	Factors affecting the timely supply of foreign workers from approval to utilization, including faulty policies on recruiting foreign workers, bureaucratic process, complex and complicated procedures for work permits, and untimely approval of foreign workers
	Insufficient transparency	Factors related to the transparency or corruption in the process of getting work permits, including improper allocation of quota, and probable corruption in selecting foreign laborers
	Untimely response of governmental agencies	Factors arising from the ineffective and premature responses of the government in reducing the problems of the foreign workers, including inappropriateness of government's monitoring and feedback system, lack of tracking illegally recruited foreign workers, and lack of punitive system on illegal workers and their employers
	Policy constraints	Factors related to the unrealistic barriers aggravating the productivity of foreign workers, including maximum allowable stays up to 3 years, restriction on the flexible relocation of jobsites limitation of reentry for the high-performance, skilled workers, limited quota regardless of demand, constraints on the contractors' direct selection of foreign laborers.
Qualification, ability and personality of foreign labors	Low skillfulness and technical knowledge	Factors caused by relatively low skills and technical ability, including low skillfulness, low craftsmanship, slow learning curve, low educational background, and lack of understanding on the host country's construction industry
	Personal characters and work style	Factors stemming from the personal characteristics and work of foreign workers, including idleness and sluggishness of foreign workers, lack of commitment, inactivity and lack of royalty to the firm, and lack of compliance to the job direction
	Inadaptability to the host country's customs and culture	Factors that are greatly relevant to the different cultures and language barriers, including homesickness, language barriers and communication problem, cultural differences, religious differences, and negative attitude toward foreign workers
On-site management system for foreign labors	Lack of welfares	Factors generated by the discriminations and insufficient welfare for the foreign workers, including shortage of rest time, insufficien accommodations and housing facilities, and poor medical services
	Lack of proper considerations and compensations	Factors affected by improper payments, such as wage differences, excessively low level of wage, and nonincentive system on high performance
	Ineffective training and evaluation programs	Factors forming the unproductive work environments and ill-chose work types, such as lack of positive evaluation system on the performance, shortage of training efforts and programs devised for foreign laborers, inability of project or field managers in recognizing specific features of foreign workers, and inadaptability to the work types, work locations, or required level of skills
	Poor working condition	Factors related to the working conditions that include poor and unsafe work conditions and excessive overtimes
	Inappropriateness of human resource management policy	Factors that are similar to the unreasonable policies in employing foreign workers, but very related to the inappropriateness of on-site plans that foreign workers are often confronting due to those regulations, including shortage of insurance programs such as employment insurance, retirement fund and annuity insurance, safety insurance, lack of incentives, and inapplicability of domestic laborers' right laws in a full capacity

The sector is already unappealing because of the vast number migrant workers already employed in the industry who have low educational and skills levels. In Malaysia, for example, unskilled migrants do not contribute to skill formation. However, they accumulate skills thanks to on-the-job training. Although the costs of this training is covered by Malaysia, these skills are lost when migrants return home. Indonesia benefits greatly from such training as it supplies most of the labour to the sector. For this reason, Indonesia should engage in the training process (Narayanan and Lai, 2005). In a recent study, Srivastava and Sutradhar (2016) investigated labour migration to the Indian construction sector and its impacts. They found that most migrant workers had a low level of education, with 65 percent having finished education at primary level. As a result, only 10 percent of migrant workers claimed to be skilled workers, showing that most are trapped in low-skilled, low-wage work. Easy access to sources of cheap migrant workers indirectly causes the salaries of local workers to decrease. In addition, the willingness of migrant workers to work for low salaries and accept poor working conditions has worsened the problem by causing the wages of local workers to fall further (Narayanan and Lai, 2005) cited in (Abdul-Rahman et al., 2012).

Considering all of this evidence, it seems that construction is one of the fastest growing industries worldwide, drawing a growing pool of migrant workers. This has had costs. The main impact of migrant labour on construction is that migrants, being largely unskilled, do not contribute to skill formation. Rather, they gain skills on-the-job, which are lost upon their return home. In fact, the reliance on migrant workers means the need for supervision and quality control has increased. Overall, the impact of this labour migration on the workers and their families makes it difficult to conceptualize its implications for reducing poverty in general. In some destinations, workers endure poor working and living conditions, and lack citizenship rights, entitlements, and voice. Their salaries are less than the minimum amount allowed by law.

2.5.1 Migrants and compresence

According to an ILO (2015a), the competency standards were written to identity skills required for work, so that training and assessment resources could be generated, and learners tested against the standards (see Table 2.2). These standards provide a framework for the essential skills and knowledge that workers require for work in construction. They

are designed to be a basis for discussion, and should be adapted according to the employer, job, workplace or national education and training system.

Table 2. 2 Critical skills and essential knowledge: the standards, data adopted from (ILO, 2015b)

Critical skills and	Critical skills and essential knowledge				
Core skills	Core knowledge				
Communication skills to follow and clarify	Calculation of material requirements.				
Communication skills to follow and clarify instructions, listen actively, questioning techniques, share information, consult and report hazard and faults. Interpersonal skills to work with others effectively and relate to people from a range of backgrounds and with a range of abilities. Literacy skills to read and interpret specifications and drawings, follow organisational procedures, technical manuals, manufacturer guidelines and work specifications. Numeracy skills to estimate, calculate and record routine workplace measures and to apply processes for setting out and measuring and for calculating material requirements. Problem solving skills to use available resources, manage contingencies, prioritise tasks, and identify and manage hazards. Organisational skills to plan and set out work.	Calculation of material requirements. Construction terminology and relevant specific terminology- electrical, plumbing, steel working, dogging, and rigging terminologies. Job requirements and specifications. Machinery, tools and equipment types, characteristics, uses and limitation. Plans, drawings and specifications. Quality requirements. The International System of Units (SI) of measurement. Workplace procedures and expectations.				
Teamwork skills.					

The migrant's compresence needs to be considered when analysing issues relevant to both employers and employees. For example, migrants' skills and knowledge may not be recognized in the host country because of obstacles related to transferability of qualifications and limitations in language skills (Sparreboom and Tarvid, 2017). In a study investigating skills shortages, an ILO (2011) reported that labour shortages could come about because:

- ➤ there are not enough people interested in working in an area with the underlying abilities required to do the job well;
- there are deficiencies in training and education arrangements that make it difficult for suitable people to develop the skills required; or
- ➤ Requirements change so that the supply of skills that was broadly satisfactory in the past no longer meets requirements, and systems of skills anticipation, careers counselling and provision of training and education fail to keep up with change.

A great deal of previous research into measures of skills has focused on an imbalance between skills offered and skills needed in the world of work. Sparreboom and Tarvid (2017) have identified that there are various methods for measuring skills mismatch, including normative and statistical methods. The normative is used as measure by dividing groups into three levels of education (primary, secondary, and tertiary), then dividing occupations into five broad groups (see Table 2.3) and appointing a level of education to each broad group. The second measure is a statistical measure based on the mean years of education of participants, which the data is vital in this scene (in this measure).

Table 2. 3 Division of major groups into broad occupation groups

ISCO Major Group	Broad Occupation Group	Appropriate Education Level
Legislators, senior officials, managers		
Professionals	High-skilled non-manual	Tertiary (ISCED 5-6)
Technicians and associate professionals		
Clerks	1 billed	
Service workers, shop, market sales workers	Low-skilled non-manual	
Skilled agricultural and fishery workers		Secondary (ISCED 3-4)
Craft and related trades workers	Skilled manual	
Plant and machine operators and assemblers		
Elementary occupations	Unskilled	Primary (ISCED 1-2)

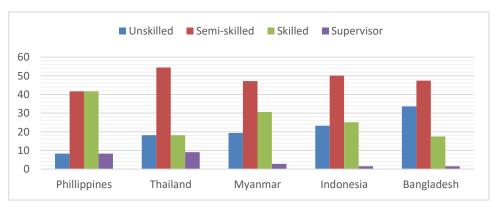
Source: Adopted from Sparreboom and Travid, 2017

Both methods have advantages and disadvantages. For example, the second method is less heterogeneous among groups of jobs compared with normative method. However, changes in the two methods of mismatch do not necessarily result in the same interpretation. For example, an increase in over-education could indicate that a growing

number of workers are unable to find employment suitable for their level of education and are obliged to take jobs requiring a lower level.

Walmsley et al. (2007) reported that the skill level of migrant labour has become a very important issue for policymakers in both the labour exporting and labour importing economies. In labour importing economies, skilled migrant labour has become increasingly accepted in the host economies, while unskilled labour still raises significant concerns despite potential gains. According to Gielen et al. (2019), new emerging occupations will appear in the construction industry. Many existing jobs will need to be elevated in terms of skills content. Workers moving from traditional construction and from sectors in decline will have to undergo more training. Skills for future requirements can be an important contribution to the move to a sustainable economy. Skills shortages and deficiencies cause a bottleneck limiting the development of sustainability.

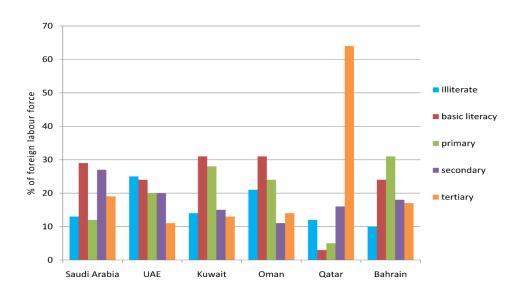
Abdul-Aziz (2010) claims that employers in the construction industry who were least likely to hire Bangladeshi workers cited one of their perceived weaknesses, (poor construction skills). Responses from the site workers surveyed showed that based on classification of level of skill, Bangladeshis were the least skilled compared to other nationalities working in construction (see Figure 2.1). Narayanan and Lai (2005) claim that migrant workers are depended upon to make up the shortfall in both unskilled and skilled labour. Immigrants with low levels of education and no prior experience in building filled the need for unskilled (general) workers, but could not substitute skilled workers. Therefore, they became part of a strategy that allowed employers to cope because they were open to ad-hoc training on-the-job.



Source: data adopted from Abdul-Aziz (2001)

Figure 2. 1 Percentage of foreign workers by skill level

Evidence of the educational level of migrant workers can be clearly seen in the case of the GCC6 states. Baldwin-Edwards (2011) reports that education level of migrant workforces reveal some important differences across the GCC6 for the period 2002–2006 (see Figure 2.2). A very high proportion (64 percent) of Qatar's migrant workforce has tertiary education compared to 11–19 percent in the other GCC countries.



Source: adopted from Hassan (2010, cited in Baldwin-Edwards, 2011)

Figure 2. 2 Educational level of foreign labour in the GCC countries

A large number of published studies, for example, (Borjas, 1999, Orrenius and Zavodny, 2007, Martin and Zürcher, 2008, Islam and Fausten, 2008, Ruist and Bigsten, 2013) describe the link between the economic woes of less skilled and low-paid natives and migration. Migration impacts unskilled wages negatively but may, in fact, cause the real wages of more skilled workers to rise due to the increased supply of products from the low-wage sector. In construction, for example, unskilled or semi-skilled workers are more vulnerable to recruitment and employment issues because of their less educated outlook and because illegal recruiters often take advantage of them (Abubakar, 2002, Kassim, 2005) cited in (Abdul-Rahman et al., 2012). McGrath-Champ et al. (2011) point out that the construction industry is key to all economies but increasing number of countries, its future is vulnerable to uncertainties in the supply of suitably skilled labour and the maintenance of skill formation and schemes. Chia (2011), however, reports that local workers are not interested in low-paid service or manual work in the flourishing construction and shipyard sectors (3D jobs) due to their higher levels of education and

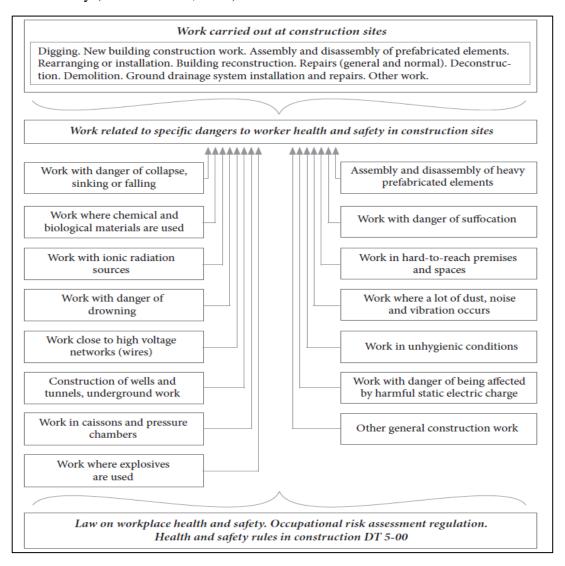
growing affluence. Therefore, migrant workers could make significant contributions to both their home and destination countries if the migration process is managed well and the migrants themselves are shielded from abuse and exploitation (Muntarbhorn, 2005).

2.5.2 Health and safety

According to Ulubeyli et al. (2015), extremely hazardous working conditions mean that the construction industry is considered to have poor safety records in terms of workrelated fatalities and injuries in both developed and developing countries The risks to health and safety from construction work are estimated to be three to six times higher in developing countries than in developed countries (ILO, 2016). The industry is seen as dangerous because of decentralization and mobility. Decentralization means that employees are segregated by sites and have to make their own decisions when facing specific problems despite regulations and plans being available. Mobility implies that employees move between companies, sites, and positions more often than workers in other traditional industries (Fang et al., 2006). Up to now, a number of studies have indicated that those working on construction projects may be vulnerable to many serious accidents, injuries, and diseases due to hard production processes and unsafe working conditions (Sargeant and Tucker, 2009, Tutt et al., 2013, Ulubeyli et al., 2014, Maryani et al., 2015). For example, the industry's workforce is made up of low/semi-skilled migrant labourers who endure tough living and working conditions (Bowen et al., 2008). According to Liaudanskienė et al. (2010), numerous tasks carried out at construction sites expose workers to various dangers (see Figure 2.3). Moreover, in the construction industry, occupational accidents and OHS-related issues are similar in different countries around the world. Although distant in terms of geography, when it comes to culture and economics, workers in China and in Greece share the same problems, including lack of safety awareness (Ulubeyli et al., 2015).

Maryani et al. (2015) state that high work accidents rates in the construction industry can be attributed to the following factors: unique properties or working characteristics, moving work locations, open space working conditions heavily influenced by the weather, limited execution time and tight schedules, types of works which are dynamic and require high physical endurance, and unskilled workers and weak implementation of OSH. For example, an ILO reported that the construction industry is responsible for 17% of fatal occupational injuries. According to a report by the Ministry of Labour and Social

Affairs, 46% of these are in Iran, which is an unsafe and unregulated work environment in the industry (Mohseni et al., 2015).



Source: adopted from Liaudanskiene et al., 2010

Figure 2. 3 Potential dangers when working at construction sites and their legal regulation

Maryani et al. (2015) point out that work-related accidents can cause financial loss to a company as well as death and long-term loss for the company, workers, and workers' families. In Turkey, for example, 9.9% of the total number of work-based injuries occur in the construction industry; this is a rate of two construction injuries per working hour. Of these injuries, 5.2% result in permanent incapacity i.e. one construction worker loses their ability to work every day. Similarly, the construction industry is accountable for

30.1% of workplace deaths, i.e. deaths represent 4.2% of construction injuries (Ulubeyli et al., 2014).

In addition, surveys conducted for HSE, show that approximately 20% of employers from all sectors believe that the migrant workers they employ have a higher risk of accident or ill-health than British workers in the same role. Nine out of 10 respondents stated that the main reason for this is issues with communication (CLR Report, 2010). In Qatar, the Amnesty and HRW Reports claim that employers in the construction industry do not safeguard the health and safety of migrant workers. The accusations include: employers not allowing migrant workers to receive medical treatment, migrant workers working although ill (employers cut pay if workers take sick leave, or employers only accept a doctor's note from the Hamad Medical Centre, which requires them to travel a significant distance), working excessive hours (during the extreme summer heat and without sufficient water supplies), and employers disregarding their health and safety responsibilities and failing to provide workers with the necessary PPE. An investigation by the UK Guardian newspaper stated that at least 44 Nepalese workers died between 4 June and 8 August 2013, more than half of these workers died of heart attacks, heart failure or workplace accidents (Piper, 2014). In addition, 1,800 migrant workers died between 2011 and 2014 according to a report commissioned by the Qatari government. 7,000 migrant workers will have died in projects related to the World Cup by the time the 2022 tournament begins, according to the International Trade Union Confederation (The Guardian Report, March 2017). Debrah and Ofori (2001) conclude that the government should push contractors to endorse safety. The promotion should include how effective safety systems are put in place-, training, and behavioural modification. There could be less emphasis on corrective measures and more on positive reinforcement and on educating both construction companies and workers on the impact of accidents on the employers, the workers, and society at large.

According to Debrah and Ofori (2001), the nature of construction work causes safety problems for workers but, when contractors depend in the main on foreign workers, the risk of accidents at work increases. Sargeant and Tucker (2009) report that migrant workers can be a significant OSH risk factor in the countries in which they are employed. They mentioned that some factors need to be considered when recruited migrant workers such as migration status, conditions of recruitment, sector of employment or occupation,

employment in the informal sector, lack of freedom of association and collective bargaining rights, and discrimination in the workplace. In the same study, the OSH risks faced by migrant workers are identified and divided into three groups (see Table 2.4).

Table 2. 4 Layers of OSH vulnerability

Layer 1 – Migration factors • Migration security	Layer 2 – Migrant worker factors	Layer 3 – Receiving country factors
 Existence of legal status in receiving country Whether status tied to contract of employment Duration and conditions of right to remain Role of recruitment agents 	 Socio-economic conditions in home country Education and skill levels Language skills 	 Socio-economic conditions in receiving country Sectors in which migrant workers employed Access to, and strength of, collective representation Access to, and strength of, regulatory protection Social inclusion/exclusion Living on employer's premises Urban/rural location Racialised group/target of xenophobia Role of unions/civil society groups

In a study investigating occupational safety and health, ILO (2011) reported that migrant workers can be at risk. Migrant workers suffer a higher rate of risk, occupational injuries and disease compared to local workers. Unskilled migrant workers in Thailand, for example, often content with a range of difficulties because of lack of legal support and regulations not being properly applied and enforced. This has compounded the low standard work environment and caused the rate of work-related accidents, injuries and fatalities to rise. In a study conducted by ILO (2016), it was shown that workers usually report that their employer covered medical costs for work related health issues in Thailand. This was more usual than employees being registered for social insurance (HICS). Sometimes, workers claimed that employers paid them at full or half rate while they recuperated. In addition, Thailand allows migrants without documentation to join its Compulsory Migrant Health Insurance scheme (CMHIS). Regular migrants have access to this scheme via their employers, although they often pay part of the premium. However, they do not have access to the same benefits as Thai citizens (IOM, 2019).

The evidence presented in this section suggests that the construction industry has a relatively poor safety record compared to other industries where most accidents are caused by factors directly related to the features of the workforce.

Overall, there seems to be some evidence to indicate that several factors are directly related to migrant workers such as lack of training, communication problems, and lack of skills, experience and discipline. Migrant construction workers are also adversely affected by the lack of occupational and HS training courses, which tend to be short and inexpensive. Research on construction safety in Kuwait reports that there is widespread use of migrant workers, that different work cultures and traditions affect human relationships, work ethics and communication methods, and that migrants are emotionally susceptible and face many problems (Bust et al., 2008). In terms of health conditions at construction sites, employers do not require workers' personal medical records. This results in a hazardous working environment from the outset. Migrant construction workers have a role to play in maintaining health and safety in the workplace. They must participate in occupational training programs to familiarise themselves with the requirements of their work in depth. Moreover, they must consistently make use of the PPE provided at the workplace to keep safe on-site.

2.5.3 Communication barriers: language and culture

According to Loosemore and Lee (2002), the main cultural factors which have an impact on inter-cultural communication are: attitudes, social organisation, thought patterns, roles, non-verbal behaviour and language. Devkota et al. (2021) confirm that one of the main reason that migrant workers face a higher risk of OSH-related injuries and accidents in comparison with local workers is the language barrier and perceived differences in culture. Bust et al. (2008) state that workers of different nationalities or ethnicities communicate and interpret the behaviours of their colleagues differently. This is caused by variations in cultural knowledge and conventions. A recent study investigated the effects of safety climate and safety behaviour on safety outcomes by He et al. (2020) found that the effect of social identity of the construction workers are significantly higher than supervisors that accordant with their education levels.

Santoso (2009) claims that in order to achieve an appropriate working and living environment, workers must understand the various religious and cultural beliefs of their colleagues on workplace. Given the cultural diversity of migrant workers, such interactions cannot be avoided. In his study, Santoso suggests that equipping all project workers with information about religious and cultural beliefs is essential to avoid confrontations when interacting. In this way, cross-cultural misunderstandings can take

place and can cause health and safety issues. Loosemore and Lee (2002) agree that the challenge of managing workforce diversity is significant, particularly facilitating effective communication between cultures. The cost of mismanaging cultural diversity is high and can cause added stress and conflict in the workforce, resulting in lower morale and productivity, issues with quality, and higher rates of accidents. In the same study, they find that language barriers between supervisors and workers are seen as a major cause of communication problems and conflict in the construction industry.

According to Ulubeyli et al. (2015), with relation to images and cartoons in site projects, different countries have common OHS problems such as: (1) unimportant events that can lead to serious results, (2) the lack of safety awareness, (3) ignorance, and (4) lack of safety precautions. These may cause occupational incidents for workers who are central to the occupational health and safety issue. Hare et al. (2013), however, confirm that migrant workers from Europe identify more images correctly than workers from Africa or India. This may be because of the synchronisation of safety signs (most of the images were based on these) between the UK and Europe. In the same study, they consider how differences in culture can affect workers' ability to comprehend images and ask how culture and technological differences can impact understanding. Moreover, levels of education and skills can impact OSH vulnerability in several ways. Workers who have less education and fewer skills have decreased work options in their home and target countries and are less likely to have undertaken OSH training or to have the capacity to control their work performance. There is also an issue with language skills. In an investigation into safety on site, ILO (2016) finds that sites supervisors attend weekly briefings to reinforce safety information. This is good practice, but there are still issues such as whether workers actually attend these briefings, their quality (which may depend on the supervisor), language issues, and the provision of interpretation.

According to Trajkovski and Loosemore (2006), migrants have difficulties comprehending compulsory government safety accreditation courses. It is necessary to offer this training in additional languages and to complement it by providing translated hard copy material. In a study conducted by Tutt et al. (2013), it was shown that provision of English language training is effective in targeting and supporting workers who lack proficiency and slowly improve communication between migrant workers and construction managers. Being unable to comprehend the language in the destination

country causes OSH vulnerability, as workers have limited possibility to comprehend instructions and warning signs, to communicate about problems, and to find out about and use legal protections (Sargeant and Tucker, 2009). In the same study, they find that 56 percent of employers experience a language barrier when they employ migrant workers because of their lack of ability in English. Migrant workers who work long hours and have long commutes do not have the energy to participate in classes. The employment of foreign workers means there are fewer shortages in the construction workforce but often not enough effort is made to find solutions for Temporary Foreign Labourers (TFL). Therefore, problems such as low productivity and difficulties in communication caused by variations in work ethics and culture occur between foreign workers and their employers (Goodrum and Gangwar, 2004, Han et al., 2008b). Debrah and Ofori (2001) state that a key factor in safety is communication. Communication between the supervisors who speak the local language, and illiterate or semi-literate migrant is problematic.

As mentioned earlier, the construction industry offers a significant number of unskilled, basic and manual jobs, and absorbs a great number of migrant workers into its workforce. The situation is similar in many developing and developed countries. Together, these studies indicate that multi-cultural workplaces are an increasingly common feature of the construction industry. The challenge of managing workforce diversity is great, particularly in terms of facilitating effective communication between cultures. For example, language differences occur-between project managers and migrant workers and sometimes also between workers themselves. Issues including low understanding or misunderstanding of instructions take place due to language barriers (Ling et al., 2013).

Therefore, the results of mismanaging cultural diversity are great and include heightened stress and conflict, which results in low confidence, productivity and quality, and higher rates of accident. For example, the health and safety risks from construction work are approximately 3-6 six times higher in developing countries than in developed countries (ILO, 2016). Several studies reveal that migrant workers are exposed to work-related injuries or health issues.

2.5.4 Working hours and overtime

In the literature on working time, a difference is often drawn between **overtime** and **excess** working hours. Working hours over a defined threshold for payment of an overtime premium or time off in lieu is known as overtime whereas working hours above standard working hours without payment and/or time compensation is known as excess hours (Anxo and Karlsson, 2019), see Figure 2.4).

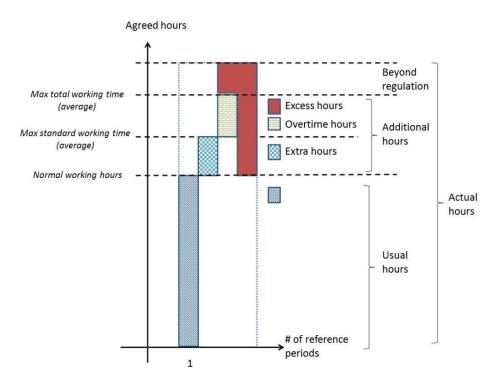


Figure 2. 4 Regulation of working time and overtime work

Overtime is usually preferable because it can yield better progress without the coordination problems of shift work and the skilled staff necessary for overmanning (Hanna et al., 2005). However, it brings other issues such as fatigue, low morale, higher cost per unit, and raised rate of accidents. Srivastava and Sutradhar (2016) found that working hours per day are often more than 8 hours and usually about 12 hours, with workers' salaries rising on a per day basis. However, they are paid at the normal hourly rate instead of the higher wage rate legislated for overtime work. In addition, long working hours without appropriate rest days may have a negative impact on overall work productivity, as well as psychological and physical health (Diop et al., 2017).

CLR (2014) points out that migrant workers often do a great deal of overtime and/or suffer from poor health. They usually work long and unsocial shifts and are less likely to take holidays or sick leave. Overtime work is a key source of additional income for workers (Ogunlana and Pien Chang, 1998). Rabenu and Aharoni-Goldenberg (2017), however, reviewed the literature and found that it has negative psychological results including tension, depression, fatigue, confusion, and anger. In addition, there is a significant link between long working hours and increased morbidity and a negative impact on productivity. In addition, it lowers workplace safety and raises the risk of occupational accidents and injuries, and causes higher rates of absence and staff turnover.

In a study investigating working overtime in East Asia, Tsai et al. (2016) found that long shifts have great effects on the health and well-being of workers and show the "dark side" of the economic boom in the region. Similarly, for example, in the hot summer months, Qatari regulations forbid work in areas exposed to the sun between 11:30 hrs and 15:00 hrs. However, two Nepalese workers at a cement production company reported to Amnesty International that they were required to carry out 12-hour shifts during the summer months, and in the summer of 2012 two workers suffered heatstroke as a result (Amnesty International, 2013). Furthermore, construction workers in Qatar, including thousands of Indian migrants, are put in danger when required to work in the intense heat and humidity. Although outdoor work between 11.30am and 3pm from June 15 to August 31 is banned, Amnesty International claimed that weather conditions beyond these limits can be responsible for life-threatening heat-related illnesses. Three Indians died from heart attacks while working on World Cup sites, according to a 2016 report by Qatar's World Cup organising body, the Supreme Committee for Legacy and Delivery (Hindustan Times Report, Jul. 2018). Previous research shows that productivity can decrease as a result of overtime and cause problems including fatigue, poor safety, higher rate of absence, and low morale (Rad and Kim, 2018).

The literature shows that many common construction workplace practices disrupt employment rules such as not offering sufficient breaks, or paying hours worked (OT) or the legal minimum wage. The literature confirmed that there is concerned with recruitment agencies and brokers that are involved in the trafficking of migrants for exploitation and forced labour. Amnesty International (2013), for example, interviewed 149 migrant construction workers; the report claimed that they had been misled on at least

one essential aspect of their employment terms and conditions such as salary amount, the type of job offered, work hours, overtime pay or rest days. Additionally, it is the case that many of the construction projects are huge and complex, and construction firms work to ambitious deadlines. In addition, the conditions on construction sites can include extreme weather conditions and a workforce drawn from migrants that speak a variety of languages. Anxo and Karlsson (2019) found a significant positive correlation between low-paid jobs and excessive working hours. Although long working hours and a high rate of (paid) overtime can decrease wage dispersion/differentials and raise the wages of low-paid workers, this must be balanced against the possible negatives related to increased rates of illness, injuries and accidents. There are clear hazards for workers from site accidents and the stress of demanding roles in a very hot climate. Health and safety procedures are key in this situation. However, it seems that construction employers do not pay attention to health and safety.

2.5.5 Living conditions in the construction industry

Although some companies have committed to high standards of living for their employees, this applies to few workers. Amnesty International (2013) found many and serious breaches of the standards, resulting in workers enduring terrible conditions. Many workers highlighted issues with their living environments such as crowded rooms, missing or non-functioning air conditioning, overflowing sewage, uncleaned accommodation, bathrooms and kitchens not properly maintained, and lack of power and running water.

Housing sites are important in the lives of migrant workers after working hours; this is where they socialise and interact with other workers. However, the spatially separated accommodation arrangements for migrant workers have similarities with residential segregation, whereby specific minority groups are grouped together and away from the host society (Caro et al., 2015). Migrant workers frequently reside in hazardous accommodation and do not have access to the information and resources they need to prevent disasters or manage them if they happen. Thus, migrants may suffer disproportionately in disasters (IOM, 2019).

According to Buckley et al. (2016), in addition to migrants' economic security being undermined (for example, fee extraction and debt that can occur when workers cross

international borders for work)- a layered set of vulnerabilities can also arise in the destination country, including substandard accommodation. For example, migrants with the legal right to work and live in a destination country may be accommodated by their employer in crude illegal buildings on the construction site. In addition, accommodation is generally linked to a certain site and with a specific employer. Usually, employers want workers to live close to the workplace. However, the employer-arranged and spatially separated accommodation and dining facilities result in an environment in which interaction with locals is avoided as is the need to attend to non-work tasks. If the migrant workers socialise, it is with those of the same nationality or workgroup (Caro et al., 2015). In the UAE, for example, almost 70 percent of the contract workers live in worker camps for housing single male workers. These are located outside the cities and accommodate-workers employed in construction, production, sales and services. Most low-wage categories are accommodated in these camps (Zachariah et al., 2002).

Srivastava and Sutradhar (2016) also mention that employers often do not provide any transport for workers who do not live on-site- and travel costs can be significant for the workers. Most prefer to live with family- friends or co-workers, possibly as a buffer against harsh conditions for living, work and travel. Employers provide facilities to varying degrees but sometimes workers are responsible for cleaning the accommodation themselves. In addition, if televisions are provided they generally do not broadcast channels from the workers' home countries. Most but not all of the accommodation has Internet connection. In smaller scale accommodation, workers prepare their own food (Caro et al., 2015).

According to Piper (2014), Amnesty and HRW report poor accommodation and living standards for migrant workers on construction sites in Qatar. They allege overcrowding of accommodation (e.g. sleeping in rooms with more than eight people). Amnesty International (2013) reports that lack of or broken air conditioning means migrant workers sleep on mattresses on the floor. They also allege poor sanitation (overflowing sewage and exposed septic tanks, lack of cleaning). Also, a lack of power and running water causes issue with preparing food, charging phones and toilet facilities. Amnesty also notes that the ban on single male labourers (SMLs) living in residential areas is discriminatory. Thus, the conditions of migrant workers and their families are extremely poor. Other than paying subsistence level wages and providing basic accommodation onsite, employers do

not take responsibility for the real costs of hiring labour. While migrant workers endure a poor standard of living, they do save money to send to their families to improve their living conditions at home. Such remittances can impact growth and development in the host states, although this can be at the cost of the health of migrant workers (Srivastava and Sutradhar, 2016).

According to Crowder et al. (2011), attitudes are important since they may influence actions and behaviours which can negatively impact both individuals and groups in society. In the case of migrant workers, this can cause their marginalization and social exclusion, and discrimination and exploitation at work (Hellwig and Kweon, 2016, Diop et al., 2017). In 2010, the ILO carried out a study investigating attitudes to migration and migrant workers in Malaysia, Republic of Korea, Singapore and Thailand. Using a representative sample of 1,000 respondents in each country, questions were posed about knowledge, attitude and behaviour. In Thailand, only 17 percent of the respondents had any personal contact with migrants, and those who- generally did not have close relationships with them. Respondents who knew migrant workers personally in some capacity showed much higher levels of support in terms of knowledge and a nondiscriminatory attitude. Respondents showed limited recognition that migrant workers were required to take on particular roles in Thailand's labour market. 40 percent of respondents believed that migrant workers make a net contribution to the economy. Almost 6 in 10 felt that migrant workers were often exploited and a similar numberbelieved that the authorities did not do enough to protect them but there was little support for protecting their rights, irrespective of their legal status. More respondents in Thailand had educated their friends or acquaintances about a positive side of migrant workers than in the other three countries. Only 7 percent of those questioned had assisted with a migrant's integration but as only 17 percent had any type of relationship with migrants, this is hardly surprising.

In case of Denmark, a study conducted by Hellwig and Kweon (2016) showed that education plays a major role in shaping popular attitudes toward immigrants and immigration. As supported by research, those with higher levels of education tend to be more in favour of immigrants. Diop et al. (2017) drew on data from two nationally representative surveys to explore how the preferences of Qatari locals for having Arab and Western migrant workers as neighbours was influenced by religious and social

capital. Even after controlling for numerous socio-demographic characteristics, social capital has a significant effect on the preferences of Qatari locals in terms of trust and bridging social ties. However, the temporary stay of migrant workers, language issues, and dearth of information about local institutional structures means there is no opportunity to develop meaningful contact with locals (Caro et al., 2015). Bruslé (2010) argues that Doha is similar to other Gulf cities (Abu Dhabi, Dubai or Riyadh) and other global cities in that it depends on a dual labour market comprised of highly skilled and unskilled migrants. As result, Nepalese workers believe that they have low status in society, and the Bangladeshis feel similarly about Abu Dhabi.

Considering all this evidence, it seems that the living conditions of most of migrant workers in general and labourers in particular are not decent and often lack all features of healthy living. As the majority of construction workers stay in shared accommodation, it is suggested that improving the standard of employer-provided housing will improve living conditions and also improve the environmental conditions of the cities. Additionally, the way migrant workers are accommodated generates a segregated, disconnected position towards the host society. Overall, there seems to be some evidence to indicate that migrant workers are more segregated and less likely to integrate into the host society, become competent in the language or make social contact outside their work group due to the characteristics of their living arrangements.

2.6 Chapter summary

This chapter has presented the recent research on migrant workers in the construction sector. It also discusses the relevance and implications of this information to the GCC6 countries and Thailand. Complaints range from wage issues to working time and poor working and living conditions. The informal nature of the employment relationship and the lack of safety and skills training mean that such problems may occur in a direct way on project sites. This highlights the link between migration and employment in the construction industry from the migrants' perspective, both in the world in general and in the context of this study in particular. This chapter suggest that there is a stronger link between migration and the construction sector in GCC6 countries and Thailand because of the very deep, complex and important problems that arise mainly from the particular situation of migrant workers in the construction sector.

The construction sector has relied on international migrants for decades. The GCC6 countries and Thailand are popular destinations for many migrant workers. Yet in the last decade, claimed labour shortages in the trades and other occupations have pressed the government to begin programs of international recruitment. Efforts to recruit skilled workers are increasing. However, the literature on migrants in the construction workforce does not give the whole picture of migrant labour conditions, especially for low skilled workers employed in construction.

This chapter shows the importance of the employers who deal with migrant workers. It has not been possible to cover the important and crucial roles of all the stakeholders such as recruiters and agents, but the main recruitment channels are misusing migrant workers and they seem to be the main barrier to increasing the involvement of migrant workers in the construction sector. This is the focus of this chapter. The reader must bear in mind the importance of policy in improving the situation of migrant workers in the host society. The chapter shows that the relevant practices do not seem to be implemented meaningfully in the GCC6 countries and Thailand.

In addition to this, the study highlights the importance of the host countries providing better working and living conditions for migrant workers. In construction, this problem is chronic because the provision of adequate services to most migrant workers is lacking or even absent.

Furthermore, the literature identifies that most migrant construction workers, especially unskilled workers, experience various problems in the construction sector. Given the migrants' profile, common problems identified among workers include communication and cultural barriers. Communication is critical, and on this basis, it is noted that management teams are often challenged when it comes to directing job orders, transferring technical skills, and exchanging and sharing opinions. Poor health and safety at work is the cause of common health hazards. In addition, low wages, low social support, long working hours, and poor access to health services including health insurance are problems that migrant workers may be subject to.

Thus, construction has been shown to be a difficult industry for migrant workers and makes them vulnerable and places them at risk in the workplace. Further research is, therefore, needed into how migrant workers could be treated in construction industry in light of the new skills required in the sector. Based on the review of the previous studies, research questions have been developed. For example, there is a number of studies into the health and safety of construction workers, but little on the part migrant workers themselves play in this.

The literature review can generate ideas for research questions which help to identify interesting, topical, and researchable questions (White, 2017). The research questions in this study focus on the impact of migrant workers in the construction sector. These questions are as following: (1) What are the major issues facing migrant workers in the construction sector in developing countries; (2) What are the employers' views on the benefits of engaging migrant workers in the industry's workforce; (3) How do migrant workers understand their employment and what are the issues influencing their employment in the construction sector; and (4) How can the situation of migrant workers be improved in the construction sector in developing countries. To address these questions, the proposed research engages with both the employer's view on migrant workers and the voice of migrant workers on construction sector. On one hand, it will explore the value of migrant workers to their employers in order to understand their situation and better tackle their issues. On the other hand, it will identify the issues of migrant workers in the construction industry and discuss how to contribute to the development of the sector. This resource will provide guidance and recommendations for the construction industry and encourage migrant workers to remain in the industry. Additionally, it will discuss how they could take advantage of their migration.

3 CHAPTER 3 METHODOLOGY

3.1 Introduction

A critical review of the literature relating to migrant workers in the construction industry has been conducted and is used to frame the key themes for this thesis. This chapter discusses the research methodology used in this study. It then moves on to describe the research design, study site, research population and research tools (methods) used in the study. Data collection and data analysis including systems thinking models are also discussed.

The first section discusses the methodology and approach used for the study of migrant workers in construction in developing countries. The second covers the data collection and analysis. This part discusses data collection from participants (employers and migrant workers) using an in-depth interviewing method. This method is one of the key tools of qualitative research and is employed to identify suitable justifications for the questions posed. Finally, the ethical considerations and the validity and reliability of the data are included. The chapter, therefore, outlines the overall research design, the conformity between the overall objectives of the study and the research methods used, and the sampling within those methods where appropriate.

3.2 Research philosophy

Guba and Lincoln (1994) defined a paradigm thus:

"A paradigm could be considered as a way of looking at the social world. It is composed of certain philosophical assumptions that guide and direct thinking and action".

According to Avramidis and Smith (1999), categorising all education and psychology research into a limited number of paradigms is a complicated task. Three major paradigms operate in the social sciences: positivism/postpositivism, interpretivism/constructivism, and critical theory. Guba and Lincoln (1994) suggest three questions or assumptions that help define a paradigm. These are: ontological, epistemological, and methodological questions:

1. The ontological question asks, what is the nature of the "knowable"? Alternatively, what is the nature of "reality"?

- 2. The epistemological question asks, what is the nature of knowledge and the relationship between the knower (the inquirer) and the would be known (the knowable)?
- 3. The methodological question asks, how can the knower go about obtaining the desired knowledge and understanding?
 (Guba and Lincoln (1994)

According to Petty et al. (2012), two very different paradigms or theoretical frameworks commonly (but not always) underpin quantitative and qualitative research; these are positivism/post-positivism and interpretivism respectively. According to Bryman (2016b), ontology refers to the nature of reality. It is the claims or assumptions that a particular approach makes about the nature of the reality under investigation. Epistemology refers to the ways it is possible to achieve knowledge of this reality. It is the claims or assumptions about how that reality may be formed as knowledge. The relationship between epistemology, methodology, methods, and knowledge creation is explained in figure 3.1.

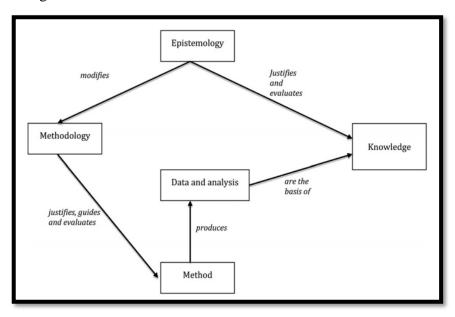


Figure 3. 1 Relationship between epistemology, methodology and methods to create knowledge (adopted from Petty et al., 2012)

According to Amaratunga et al. (2002), the positivism paradigm uses quantitative data and experimental methods to test hypothetical-deductive generalisations. It is largely based on searches for causal explanations and fundamental laws and reduces the whole

to its simplest possible elements in order to enable analysis. The interpretive paradigm, also known as constructivist, uses qualitative and naturalistic approaches to understand human experience inductively and holistically in context-specific settings. This paradigm tries to understand and explain a phenomenon, rather than search for external causes or fundamental laws and looks to facilitate human problem solving rather than prove or disprove hypotheses (see Table 3.1).

Table 3. 1 Two schools of science

Approach	Concepts	Methods
Positivism	Social structure Social facts	Quantitative Hypothesis testing
Interpretive science (phenomenological)	Social construction Meanings	Qualitative Hypothesis generation

Source: adopted from Amaratunga et al. (2002)

According to the above schools of science, research may be categorised into two distinct types - quantitative and qualitative; which approach is used depends on the research question. Quantitative research explains phenomena by collecting numerical data. It tests hypotheses, controls variables, measures, identifies cause and effect, and through statistical analysis, aims to generalize findings to predict future events. On the other hand, qualitative research understands human experience and meaning within a given context using text rather than numbers. It interprets experience and meaning to give understanding, and recognizes the role of the researcher in the construction of knowledge. For this research, qualitative methods had been adopted as more appropriate for investigating and understanding complex and sensitive issues (Merriam, 2002).

Considering the above points, positivism does not offer full understanding of research into human beings because of its quantitative nature. The interpretivist' aim is to offer understanding of the world via qualitative methodologies and reconstruct it where it occurs. This research intends to explore migrant construction workers' views and understanding about their issues in the workplace and any suggestions to make their jobs easier, safer or more comfortable so that they can work in their jobs for as long as they would like to and forge secure attachment with their employers. In-depth opinions and experiences must be collected from both employers and employees to explore these ideas

and opinions; therefore, interpretive or pragmatic approaches are more suitable because they are comprehensive and qualitative.

3.3 Research strategy

In a study conducted by Abowitz and Toole (2010), it is shown that research strategy involves making decisions about which topic is to be studied in which population, with which research methods, and for what purpose (see Figure 3.2). It can be seen from the framework below that the upper section is theoretical in nature that to establish the type of issues experienced by migrant workers in construction sector, and the lower section is a practical which involves the methods used to collect the relevant data. This study is based on a qualitative interview with both migrant workers and employers to gain understanding of the current situation of migrant workers' employment in the construction sector.

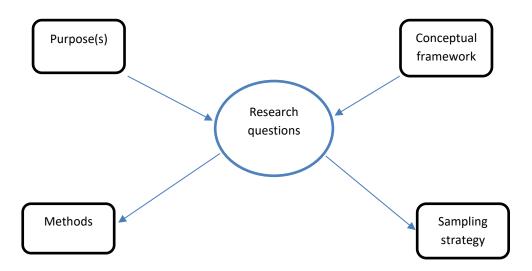


Figure 3. 2 Framework for research design adopted from (Maxwell, 2012, Robson and McCartan, 2016)

Creswell (2009) mentioned that there are three types of designs: qualitative, quantitative, and mixed methods. The inquirer decides on a type of study from these three choices (see Table 3.2). Bryman (2016a) labels these approaches as qualitative and quantitative research framed in terms of using words (qualitative) rather than numbers (quantitative) or using closed-ended questions (quantitative hypotheses) rather than open-ended questions (qualitative interview questions).

Table 3. 2 Alternative strategies of inquiry

Quantitative	Qualitative	Mixed Methods
Experimental designs	Narrative research	Sequential
• Non-experimental	 Phenomenology 	• Concurrent
designs, such as	 Ethnographies 	• Transformative
surveys	Grounded theory studies	
	Case study	

Robson and McCartan (2016) describe the strategies to be considered when conducting research: fixed, flexible and mixed methods. A fixed method means pre-specification before the stage of main data collection required. Data are usually in the form of numbers so this type is usually known as a quantitative strategy. A flexible design develops during the data collection stage. Data are usually non-numerical (usually words) so this type is known as a qualitative strategy. A multi-strategy design combines significant parts of both fixed and flexible design. In construction, flexible design has been used in research carried out in many ways, often with long traditions behind them (Amaratunga et al., 2002).

Given that, grounded theory is one of the flexible design strategies which is described by the progress of a theory through data collection and analysis. Grounded theory has been used in social science studies investigation issues related to workers. For example, a social studies using qualitative interviews techniques that focused on labour migration and the experiences of Polish migrants in the UK, have used grounded theory (Currie, 2016). Researchers are well engaged with grounded theory methodology (GTM), particularly when they expect to produce a literature review in early stages of the research process (Ramalho et al., 2015). The GTM is applied in this study to explore the employment and work conditions of migrant workers in the construction sector. The key objectives of applying GTM is to construct a theory grounded in the experiences and opinions of the research population. This method is introduced as the opposite to deductive methods, which begin with a hypothesis or theory. This inductive method uses the data to inform the development of theory without any fixed hypothesis.

Prior to conducting the field research, the researcher had some partial theoretical knowledge and understanding of the labour market issues and social network theory. However, the use of GTM helps explain how the current policies for recruitment of migrant workers not treated due to political, economic, and social factors. To understand in more depth the realities and experiences of migrant workers in construction, GTM is used in this research. It is worth mentioning that desk research is not sufficient to achieve the main objectives of this study, as there is a wider literature into migrant workers in the construction sector covering many concerns. Qualitative data collected using in-depth interviews is vital in order to gain a full understanding of the issues of migrant workers through their experiences. GTM, therefore, helps identify concerns regarding recruitment systems as well as current policies for and practice in employment and work conditions in the construction industry.

Based on the above, the strategy used in this research is a flexible design that the qualitative approach are the most appropriate data collection techniques such as in-depth interviews. The research field is a vital source of data for identifying the nature of migrant workers issues in the construction sector. Through the GTM, the ethnographic research exposes the problems of migrant workers with their employers. Participants will be questioned about their experiences and views to facilitate their working conditions. Thus, the most suitable techniques for data collection are qualitative (e.g. in-depth interviews) for in-depth exploration of ideas. Common themes within the interviews will be analysed using a thematic approach; the frequency of themes in the interviews (e.g. workers' ideas and suggestions) will be used as indicators of their importance to migrant workers in the construction industry.

3.4 Trustworthiness

In order to establish a level of trustworthiness within a piece of research, it must have a high level of reliability and validity. According to Morse et al. (2002), all research must have true value, applicability, consistency, and neutrality in order to be considered worthwhile. Both paradigms require specific criteria for addressing the rationalistic and trustworthiness paradigm "rigor". Within the rationalistic paradigm, the criteria to reach the goal of rigor are: internal validity, external validity, reliability, and objectivity. On the other hand, in the qualitative paradigm, the criteria to ensure "trustworthiness" are: credibility, fittingness, auditability, and confirmability. Reliability relates to whether or

not the results are repeatable, while validity relates to the integrity of the conclusions generated from the research (Bryman, 2016b). Creswell (2009) identified that qualitative reliability shows the researcher's approach is consistent across different researchers and projects while qualitative validity means that the researcher employs certain procedures to verify the accuracy of the findings (see Table 3. 4).

Table 3. 3 Verification for establishing reliability and validity in qualitative research.

Reliability procedures	Validity strategies
Check transcripts to make sure that	Triangulate different data sources of
they do not contain obvious mistakes	information by examining evidence
made during transcription.	from the sources and using it to build
Make sure that there is not a drift in	a coherent justification for themes.
the definition of codes, a shift in the	Use member checking to determine
meaning of the codes during the	the accuracy of the qualitative
process of coding.	findings by taking the final report or
• For team research, coordinate	specific descriptions or themes back
communication among the coders by	to participants and determining
regular documented meetings and by	whether they feel that they are
sharing the analysis.	accurate.
• Cross-check codes developed by	Use rich, thick description to convey
different researchers by comparing	the findings.
results that are independently	Clarify the bias the researcher brings
derived.	to the study.
	Also present negative or discrepant
	information that runs counter to the
	themes.
	• Spend prolonged time in the field.
	Use peer debriefing to enhance the
	accuracy of account.
	Use an external auditor to review the
	entire project.

Source: details adopted from Creswell (2009)

The validity of a research study can be improved by using a triangulation strategy involving data collection from a number of sources using a range of methods to find answers to the research questions. Triangulation can take several forms, but usually refers

to the use of multiple sources, data collection methods, or investigators (Long and Johnson, 2000). In general, the main purpose of this would be to reduce the disadvantage inherent in the use of any single source, method or investigator (Love et al., 2002). As interpreted in social science research, the term triangulation consists of multiple research methods and/or measures of a phenomenon with the aim of overcoming bias and validity issues (see Figure 3. 3).

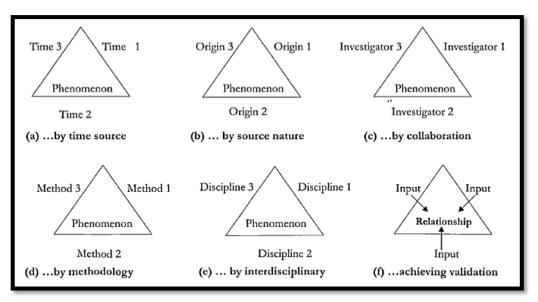


Figure 3. 3 Forms of triangulation (adopted from Love et al., 2002)

3.5 Research methods

Construction is fundamentally a "social" process and can be thought of as the application by people of technology developed by people to achieve goals established by people involving the creation of infrastructure and buildings. That people play major roles in most aspects of the construction process implies that effective construction research needs proper application of social science research methodology in order to understand the human or social factors (Abowitz and Toole, 2010). In addition, methods and tools are borrowed from natural science and used to try to understand or explain managerial problems (Love et al., 2002).

There are three main types of interview technique: structured, semi-structured and unstructured (Bryman, 2016b). In-depth or unstructured interviews are a key method of data collection employed in qualitative research (Adams and Cox, 2008). A highly structured interview is basically a spoken questionnaire with questions decided in

advance. Less structured interviews mean the researcher has extra freedoms in terms of the depth and direction of discussion with the participant. Generally, interviews offer indepth information about participants' experiences and viewpoints on the topic in hand (Turner III, 2010). Semi-structured interviews generally feature an interview schedule with specific topics or questions to be addressed. An unstructured interview progresses around the participant with little guidance on the part of the researcher and is often informal. Interviews may comprise both open and closed questions; the former are used to generate discussion and elicit opinions while the latter are intended to discover specific facts and do not usually offer the opportunity for further discussion (Bryman, 2016b). Semi-structured and unstructured interviews are commonly used in a flexible design strategy (Robson and McCartan, 2016). There are a number of advantages in using a face-to-face interview as the method for data collection (Louise Barriball and While, 1994):

- It has the potential to overcome the poor response rate of a questionnaire survey,
- > It is well suited to the exploration of attitudes, values, beliefs and motives,
- ➤ It provides the opportunity to evaluate the validity of the respondent's answers by observing non-verbal indicators, which is particularly useful when discussing sensitive issues.
- ➤ It can facilitate comparability by ensuring that all questions are answered by each respondent,
- ➤ It ensures that the respondent is unable to receive assistance from others while formulating a response.

Interviews can be expensive and time consuming depending on the interview design and how much interest the participants have in discussing such themes. They can be carried out by phone with cost benefits but this means that visual cues and body language cannot be observed (Sturges and Hanrahan, 2004). In addition, respondents may be relaxed on the phone, and eager to talk freely and reveal personal information. Qualitative telephone data may be rich, vivid, detailed, and high quality (Novick, 2008). Interviews have been used in construction research to assess health and safety (Loosemore and Lee, 2002), labour migration to construction (Srivastava and Sutradhar, 2016) and the impact of living conditions (Bruslé, 2010).

In the context of this thesis, the main participants for this research are identified as low education level and unskilled. Therefore, in-depth interviews were conducted for both employers and employees to gather the necessary data. Site observation and discussions with manager and workers were also conducted to support the study. This study primarily focuses on migrant construction workers whose educational level is generally below high school level. In addition, a triangulation approach was applied and managers were interviewed to produce reliable results.

A summary of the research objectives and corresponding methods is displayed in Table 3. 5 below.

Table 3. 4 Linkage between research objectives and related methods

Research Objectives (ROs)	Research Questions (RQs)	Main methods	Analytical tool
Obj. 1	RQ 1	Literature	Thematic analysis
To identify the issues being	What are the major issues facing	review	
faced by migrant workers in	migrant workers in the construction	(Chapter 1	
the construction sector in	sector in developing countries?	and 2)	
developing countries.			
Obj. 2	RQ 2	In-depth	Thematic analysis
To understand employers'	What are the employer's views on the	interview	System thinking
view on the value of migrant	benefits of engaging migrant workers	(Chapter	approach
workers to construction	in the industry's workforce?	4&6)	
process.			
Obj. 3	RQ 3	In-depth	Thematic analysis
To explore migrant workers	How do migrant workers understand	interview	System thinking
understanding of their	their employment and what are the	(Chapter	approach
employment and issues that	issues influencing their employment in	5&6)	
influence their employment in	the construction sector?		
the construction sector.			
Obj. 4	RQ 4		
To suggest ways for	How can the situation of migrant workers be improved in the construction		
improving the situation of	sector in developing countries?		
migrant workers in the			
construction sector in			
developing countries.			

3.6 Data collection tools

3.6.1 Ethnographic-difficulties & limitation

At the early stage of this research, the researcher faced some challenges and limitations during processing and producing the relevant data. Such difficulties came from MWs, because, prior to the fieldwork in Libya as was the first plan for the data collection, the situation there was unstable in mid-2014 for conducting data collection. This issue was identified after the fieldwork risk assessment was not approved by the school of EGIS. A similar issue came from lack of obtaining a fieldwork Visa for conducting data collection from some GCC6 countries which include UAE and Qatar, even though an invitation was received from HWU Dubai campus and this restriction was one of key reason to conduct this topic and the sensitivity of the issue of MWs in hosting countries. However, my experience and wider network in the construction sector encouraged me to overcome these challenges by gaining access to managerial level (employer). I conducted telephone interviews and conducting interviews with the research population, that would not have been possible without my contacts. Considering these challenges and the sensitivity of this topic, decision was made to shift the fieldwork to Thailand in mid-2016 which after meeting with the research supervisor and receiving an invitation to perform data collection that hosted by the Asian Institute of Technology (AIT) (see Appendix 9.6). The following are a brief description about how the researcher overcome the above challenges with the field-based research project.

Burrell (2009) identified that research field site on qualitative studies refers to a field-based research project at the stage in which the social processes under study take place. In this section, it is important to present the site of studies that were the main source of the data involved in this research. This research involved three sites of studies - the UAE, the KSA, and Thailand. According to Ezzat Othman (2013), whether a country is classed as developed or developing depends on criteria including economic development, education and training provision, political stability, technological development, infrastructure and production rate, healthcare, life expectancy and growth rate of population, and society, demography and culture issues. In the light of these characteristics, there are similarities and differences between the three sites of the data source. However, the main purpose of this research was to investigate the situation of migrant workers in the construction industry with specific focus on developing countries.

As mentioned earlier, this research is the investigation of issues related to migrant construction workers in developing countries. The research design was clear that conducting interview with migrant workers who have experiences in construction employment, as well as the employers' experiences is important for this research to overcome some issues with relation to migrant workers. However, the life cycle of this research went through many issues which the locating of field study among them. Such challenge to locating field sites was raised at the early stages of this research. To overcome this, Burrell (2009) stated that, the effective networking in qualitative research plays an important role for perform social phenomenon under study. In addition, the professional networks are supplying researchers with a large number of people who share with him/her values and interests (Agre, 2005). Furthermore, snowball sampling techniques used when the research focus is on a sensitive issue and potential population of the research is hard to locate which allow the researchers to make estimates about their social network connecting the hidden population (Etikan et al., 2016).

In this thesis, the above techniques greatly benefit the research process during the practical stage of this research. The snowball sampling technique has been used to locate the research population. It is played a vital role when samples were selected based on accessibility and the list of the potential participants presents difficulties for the researcher. As well as the researcher was deeply involved in developing and managing the progress of the sample especially when access for migrant workers in the UAE was facing some difficulties. The following are the description of the three scenarios involved in the research design to perform data collection for this study.

Scenario one was the original plan for this research with Libya being the main source of data related to migrant workers issues in the construction sector in order to understand and tackle issues which have been key issues of the labour market in the country for a long time, especially during the crisis. Such conflicts which include economic downturn, natural disasters, and environmental issues in destination countries or regions where migrant workers present have prompted local government to craft policies and action plans to protect them (Asis, 2020). For example, Libya has been an important destination country of Bangladeshis, however, the 2011 political turmoil in Libya has affected labour migration (Siddiqui and Bhuiyan, 2013). This plan was not applied because of the unstable situation in the country.

Scenario two was discussed and approved to shift the site of the study to one or more countries in the GCC6 region. As the literature confirms, these countries were appropriate for this study because of the long known conditions of the labour market in the region (Hertog, 2012). The region is attractive for migrant workers which resulted in heavy reliance on migrant workers among its workforces. For example, the increased economic activities have resulted in migrant workers being attracted to the region and the harsh labour market in terms of offering of lower wages, fewer benefits, and longer working weeks/hours (Pradhan et al., 2019, Hasan, 2015). This decision was made to overcome the issues raised in the original field site of study. However, fieldwork Visa was declined to perform data collection related to migrant workers in the construction sector. As triangulation techniques part of the research design to interview both sides of the employment, there was difficulties to organise interview session with migrant workers. However, telephone interviews were successfully performed with employer/supervisors. This plan was partly applied with the employer only with limitation for the research and the data was not sufficient to investigate migrant workers issues in the construction sector.

Currently in the Middle East, there are three major regions: the Arab League, the Arab Maghreb Union, and the GCC6 countries created in 1981. According to Kapiszewski (2017), the GCC6 countries (Saudi Arabia, Kuwait, Bahrain, Qatar, the United Arab Emirates, and Oman) have been the largest markets for Arab and Asian job seekers among other regions. A major study of the SDGs targets that involved in 2030 agenda in the GCC6 region shows that cooperation among GCC6 countries has the commitment towards tackling key environmental challenges as provided by the global sustainability agenda 2030 (Al-Saidi, 2021).

Scenario three came after the decline of the fieldwork Visa for the researcher. Thailand was an appropriate field of study for this research. The decision has been made after considering many factors which are as follow:

 the country is attractive for migrants because there are better opportunities to undertake employment. In addition, Thailand has transformed from net labour sending country to labour receiving country which are mostly from neighbouring

- countries and during the past decade the country hosted more than three million migrant workers (Paitoonpong and Chalamwong, 2012).
- The researcher has been approved to undertake some fieldwork as visitor researcher at (AIT), School of Engineering and Technology, under the supervision of Dr Djoen San who acted as local supervisor during data collection in Thailand.
- As a developing country, Thailand shares the same issues with other countries in the region in terms of the Research and Development indicators (R&D) that the UN provides advice regarding world issues (Gaillard, 2010); and
- Thailand is one of the most effective members of the Association of Southeast Asian Nations (ASEAN). This is so especially on issues such as the contribution of migrant workers in the region and policies to manage and organise migration within the region. Southeast Asia countries such as Thailand, Singapore and Malaysia are more focused as importer countries especially, among semi-skilled and unskilled foreign workers (Debrah and Ofori, 2001, Narayanan and Lai, 2005, Santoso, 2009). In an analysis of safe migration knowledge and attitudes in Myanmar, ILO (2015d) found that the most common intended destination country among potential migrants was Thailand (39 per cent), in addition, Thailand was the top destination for both genders, women and men migrants had very different preferences and opportunities for work in other countries.

This plan was successfully applied, and data was collected for the main goal of conducting this research.

The literature strongly supports these sites as a source of data in terms of the role of construction in the economy and the issues the industry faces regarding its workforce. In addition, it provides a comprehensive literature about migrant workers in developing countries and evidence that supports the main aim of this research. The literature confirms that migrants play a vital role in the construction industry in developing countries, and that their involvement gives rise to challenges to the industry that must be investigated. There are various routes by which migrants can enter the construction sector. This was discussed earlier which includes issues that relate to the recruitment process.

Thus, the above three plans were strengthening the research literature and putted the topic in its context of labour migration issues. As well as the above plans were reviewed and

discussed with the research supervisors and the invitations to carry out the fieldwork within scenarios two and three are provided (see Appendix 9.6). Given that, the verification strategies for this study are to ensure both reliability and validity of data such as appropriateness of the sample and dynamic relationship between the sampling and data collection and analysis (Morse et al., 2002). Overall, the above source of data was appropriate for this study in terms of the sampling that reflects both employers and employees, and the sector that plays a major role in the world economies and faces major challenges that must be investigated by looking at its workforce.

3.6.2 Main themes and subthemes

According to Ryan and Bernard (2016), themes develop from the data (an inductive approach) and from the researcher's prior theoretical understanding of the phenomenon in hand (an a priori approach). In this study, the questions posed during the interview emerged from the main themes that interpret the research questions. Themes such as background and experience in the construction industry were discussed with both employer and employee, whereas the reason behind the labour migration and recruitment experiences were discussed with migrants. This includes the pre-migration phase as well as migrants' employment conditions, employer/employee relations, and policies and regulations organising the migrant workers with employers. In the interviews with employers, their experiences on migrant workers in construction and their impacts were discussed.

Interviews with the employers were structured to focus on the migrants and their impacts on the industry. For example, issues were raised regarding construction activities and labour market needs with relation to the technology changes. This includes the skills they need to deal with such changes to the industry as well as the impacts that the industry has long suffered such as health and safety in the workplace. In contrast, migrants were asked about some themes related to the workplace. For example, how they were dealing with construction activities and if there were any changes, and if so, what they expected from the employer to improve themselves (training issues).

Themes were raised about labour issues in the construction sector, including the recognition procedure during recruitment with relation to skills. Participants were also

asked if they believed that employment contracts with improved provision for setting up the minimum wage mechanism for migrants would reduce instances of labour disputes between employees and employers, and improve workers' situation in an industry that faces a shortage in both labour and skills. In this respect, they were asked what measures they recommended to improve working conditions in general and the construction sector in particular.

3.6.3 Phase I: telephone interviews technique

The data was collected using in-depth interviewing techniques. This method is one of the key tools of qualitative research. Telephone interviewing can be a useful method for qualitative studies without reducing data quality (Sturges and Hanrahan, 2004). More recently, the COVID-19 that has an impact on various aspect of people's lift, face-to-face communication has been successfully replaced with an online platform such as Microsoft Team platform (Wea and Kuki, 2021). One of the great benefits of using these techniques in research is that the ease of recontacting the research population if there are concerns about the collected data. In addition, the snowball technique offers real benefits for studies which seek to access difficult to reach or hidden populations. It has long been known that this technique offers an established method for identifying and contacting target populations (Atkinson and Flint, 2001).

The researcher contacted colleagues and other possible personal contacts in the United Arab Emirates (UAE) and the Kingdom of Saudi Arabia (KSA) to explore the possible number of study participants. Potential participants were identified from the contact list provided by a number of contacts in the researcher's network. Participants were given more comprehensive written and verbal explanations about the research aim and asked whether they agreed to participate (see Appendix 9.2; 9.3; and 9.4). Conducting interviews with respondents provides an opportunity to learn the views of insiders concerning the current situation of migrant workers in the construction industry. Once informed consent was obtained, five telephone interviews in UAE and seven in KSA were conducted during the summer of 2015 (see Table 3. 6). It is important to mention that conducting an interview by telephone is typically seen as appropriate only in very specific situations (Sturges and Hanrahan, 2004). The reason behind conducting telephone interviews was the lack of a fieldwork visa for the proposed location. It is important in

unstructured interviews to take notes and audio-record responses to enable subsequent data immersion and accurate interpreting of the data.

Table 3. 5 Phase I- Summary of interviewees' profile and demography.

Site of study	Type of project Designation Interviewee		iewee		
			N	Ye	Total
The UAE	Hospital project- Abu Dhabi	Project manager	4	<20 Years	5
	Residential & Hospitality project- Dubai	Project Director	1	<30 Years	
	Residential & Retail complex- Dubai			<25 Years	
	Education Building- School phase IV- Abu Dhabi			>20 Years	
	Abu Dhabi Louvre- Abu Dhabi			>20 Years	
The KSA	Taibah University- Residence project- Al Madina Al Monawarah	Project Engineer	1	>20 Years	7
	Riyaadh Council- Public project	Project supervisor	1	>20 Years	
	Al Majmmah University- Education project- Rmaha	Project Director	2	>10 Years	
	Medical projects- Ministry of Defence- Around the KSA	Design & Supervision	1	<20 Years	
	Education project- School Building with Facilities	Program Manager	1	<10 Years	
	Skyscaper project- Financial center building- Riyadh	Senior Manager	1	<15 Years	
	Head Quarter Building- Ministry of Education- Riyadh			<20 Years	
Total					N = 12

Notes: (N) represents the number of interviewees; (Ye) represents the length of experience in years.

During the interviews, the questions were posed simply and clearly by the applied laddered questions technique, which is accessible to new researchers, and ethical for those investigating the experiences and actions of others. This technique has indeed been helpful in a research study that provides information on the connections between actions, meanings and beliefs that seem important to any qualitative study (Price, 2002). Therefore, all interviewees started with their employment history. Then, they were asked to describe their current job, their position and responsibilities. The structure and type of questions intended to produce a flowing interview, touching upon relevant issues while avoiding leading questions and the introduction of avoidable bias.

3.6.4 Phase II: the fieldwork in Thailand

In the summer of 2016, field studies took place in Thailand hosted by the Asian Institute of Technology (AIT) for a period of 40 days. Through a "snowball" technique, three main locations were selected based on arrangements with the participant coordinator. From these locations, two site projects were visited to carry out face-to-face interviews. The study is based on data collected from both migrant workers and employers that they have supervised or experiences with migrants. Thai contractors take the leading role in the construction process. Thus, most of the managers and staff are Thai. The construction workers are from many different nationalities and are mainly recruited through MOUs with neighbouring countries. In addition, all equipment operators are Thai, while all migrants are classified as general workers/unskilled workers. All migrant workers, whether skilled or not, are initially recruited as unskilled workers. In total, there were thirty-two respondents, including managers and migrant workers. Table 3. 7 shows the interviewees' profiles and demography. Managers were also interviewed, including project Manager/Director, Site engineer, Safety manager, HR manager and Foremen. The ten respondents were Thai and had long-term of experience in the construction sector as well as supervision of migrant workers in site projects. The main issues discussed were the situation of migrant workers and their contribution to the construction sector. This includes the role of migrant workers in the projects and also the positive and negative impacts of migrants in the sector (see Appendix 9.2; 9.3; and 9.4).

Table 3. 6 Phase II- Summary of interviewees' profiles and demography.

Type of organization	Type of project	Designation	Interviewee		e
			N	Ye	Total
	Building	Project manager	2	<30 Years	6
((N)		Project Director	1		
		HR manager	1		
CHRISTIANI & NIELSEN		Safety Officer	1		
CHRISTIANI & NIELSEN CO LTD		Project engineer	1		
Contractor		Migrant workers	12		12
	Transportation	Project Director	1	<30 Years	2
ITALIAN-THAI	Transportation	HR manager	1	(30 Tours	
DEVELOPMENT Public Company Limited		Migrant workers	10		10
		Wingrame Workers			
ITALIAN-THAI Development Public Company Limited					
Contractor					
บริษัท เพาเวอร์ไลน์ เอ็นจิเนียริ่ง จำกัด (มหาชน)		Project manager	1	<40 Years	2
Power Line Engineering Public Company Limited		Project Director	1		
POWER LINE ENGINEERING PUBLIC COMPANY LIMITED					
Contractor					
Total		1			N= 32
NI (AT)					

Notes: (N) represents the number of interviewees; (Ye) represents the length of experience in years.

32 in-depth, face-to-face interviews were conducted with migrant workers and managers. The 22 migrant workers were mostly from Myanmar which is the source of the majority of the construction workforce in all projects and presumably impacts the labour market in the construction sector. From the data, all workers are young labourers who entered the construction industry without a background in construction. In addition, all of them are economic labourers who came to Thailand with the hope of earning money and returning to their original country. They engaged in the construction projects under a temporary contract that lasted two years and were employed through an MOU agreement. All of these factors can put more pressure on employers in terms of potential training. Most of the migrant workers can be described as general labourers in site projects.

After this initial phase, migrant workers were questioned about their main reasons and motivations for migration and their career choices (see Appendix 9.2; 9.3; and 9.5). Respondents discussed the issues of migrant workers in general, with particular emphasis on the construction sector. This phase brought out issues that emerged in the various levels of the discussion. Before exploring these issues further, the researcher endeavoured to identify differences and similarities between respondents in terms of their observations, opinions, thoughts, and experiences. The interviews were conducted at times suggested by the participants. In the interviews with employers, the researcher discussed their experiences of employing migrant workers, their responsibilities, how can they get the best of their employees, and labour issues in the construction industry.

On average, the interviews lasted around 30-40 minutes, and all were transcribed and translated. All participants were informed of the purpose of the study and that findings would be reported to the contractor for possible improvement. The main themes discussed were the situation of migrant workers in construction sector in developing countries, and their contributions. All participants' responses were discussed in terms of the participants' working and living experiences in Thailand. Therefore, the expected output from this research is mainly investigating the effects of migrant workers in the construction sector and how to improve the migrants' situation.

3.6.5 Translation consideration

It is widely held that qualitative studies are considered valid only when the meanings of the experiences of the participants and the meanings of the interpretations are as close as possible. This thesis is written in the English language; therefore, translation of the data was essential for data presentation and analysis. However, it raised questions about translating the data without distorting it or making language-based errors. If translation is seen as a stage in the research process and data analysis, the discussion of issues associated with it is both necessary and significant methodologically in terms of comprehending the interpretations of findings. van Nes et al. (2010) point out that translation between languages includes interpretation. Whatever is communicated in the source language must be interpreted by the translator (often the researcher) and conveyed in the target language so that the receiver of the message understands the intended meaning. Translation, in effect of qualitative data, packages the data into a form that fits the tools we have for analysis it (Temple and Young, 2004).

In the study of migration and migrants, the language barrier between researcher and participants often complicates this communicative side of the research and the data. In this study, Phase I, this barrier was lessened, in relation to at least some participants: the researcher's competency in Arabic was helpful and meant that most of the interviews could be conducted in the biographical interviewees' native languages, or at least in the languages that they used on a regular basis at home. During the Phase II of the data collection, however, all the interviews were conducted in English using interpreter who was able to capture the content of the interviews so that they could be represented as texts in a complex discussion between participants and the researcher. However, the decision to translate research material in this way may present its own challenges.

The researcher is involved in the research process as an actor influencing the material that is created. Recorded the interviews create a source text, which is transcribed, edited and interpreted without the help and involvement of the interpreter.

3.7 Data analysis

There are many different approaches to qualitative data analysis, and these have been widely debated in social sciences studies (Bryman, 2016b, Maxwell, 2012, Creswell, 2009, Robson and McCartan, 2016). According to Miles (1979), qualitative data is an 'attractive nuisance' because its richness is attractive but finding analytic paths through that richness is difficult.

It is worth reconsidering the process of thematic construction in qualitative studies to improve the quality and rigour of data analysis. Vaismoradi et al. (2016) suggest that during qualitative data analysis, it important to take into account the four phases and stages of theme development as described below in Table 3. 8.

Table 3. 7 Phases and stages of theme development in qualitative content and thematic analysis:

Phases	Stages
	Reading transcriptions and highlighting meaning units;
Initialization	Coding and looking for abstractions in participants' accounts;
	Writing reflective notes.
	Classifying;
	Comparing;
Construction	Labelling;
	Translating & transliterating;
	Defining & describing.
	Immersion and distancing;
Rectification	Relating themes to established knowledge;
	Stabilizing.
Finalization	Developing the story line

Creswell (2009) points out that planning to analyse the data might have several stages. This involves preparing the data for analysis, conducting different analyses, moving more deeply into comprehending that data, representing the data, and making an interpretation of the larger meaning of the data. He suggests a linear hierarchical approach building from bottom to top as an interactive practice (see Figure 3. 4).

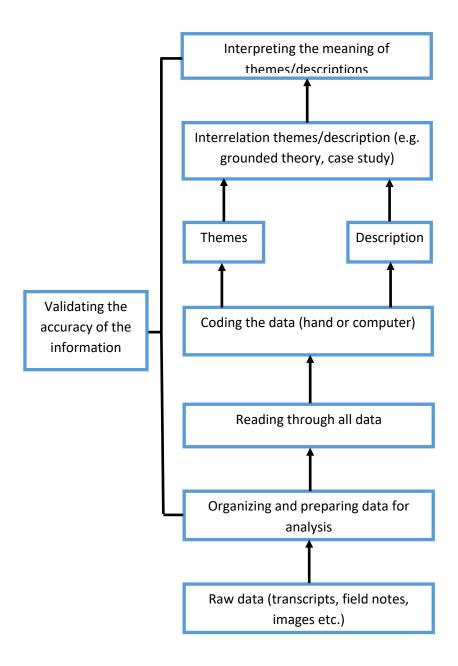


Figure 3. 4 Data analysis in qualitative research (adopted from Creswell, 2009)

One of the most frequently employed approaches to qualitative data analysis involves what is known as thematic analysis (Bryman, 2016b). In this research, the data were analysed using thematic analysis techniques. This method was selected because of its flexibility and accessibility to researchers without (significant) experience of qualitative research. In addition, this technique was believed to be a suitable tool as it aims to summarise key features of different sides of the data. All qualitative data were recorded on a digital audio recorder. According to Bryman (2016b), coding is the starting point for

most forms of qualitative data analysis. These data were transcribed, translated into English language, and coded to each theme according to the outcomes of the discussion with participants. The interview data were imported into NVIVO v11 software and were coded. Thematic analysis was applied. The searching tools in NVivo allow the researcher to interrogate the data at a particular level. This can improve the rigour of the analysis process by validating some of the researcher's own impressions of the data (Welsh, 2002). In addition, it enables researchers to code, retrieve and perform qualitative analysis of data from a number of interviews. The researcher checked the spotlessness of the transcript thoroughly by listening to the tape. The researcher then identified shortened meaning units of a paragraph with the same content. The preliminary codes across similar meaning units were identified. Similar codes were grouped with the intention of formulating emerging categories. Then, a number of themes that presented across categories were identified. Finally, thematic analysis was completed in six phases which include (1) familiarisation with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report.

3.8 Ethical considerations

According to Robson and McCartan (2016), there should be ethical consideration when carrying out real world research involving people. Ethics refer to rules of conduct, typically to conformity to a code or set of principles. Diener and Crandall (1978)have discussed and broken down the ethical principle in social research as follows:

- 1. Whether there is *harm to participants*.
- 2. Whether there is a lack of informed consent.
- 3. Whether there is an invasion of privacy.
- 4. Whether deception is *involved*.

(Diener and Crandall (1978)

De Vaus and de Vaus (2013) stated that the main goal of assuring confidentiality in qualitative research are enhancing the quality of responses when investigate sensitive issues, encouraging respondents to participate in the study, protecting the privacy of respondents. The researcher became aware of a number of ethical issues which including the potential for harm, stress and anxiety, and many other negative results for participants

in research. Thus, participants were informed that their responses were voluntary and that they can withdraw their participation from the interview at any time and also the data they had provided. It is always vital that, at the stage of preparing for data collection, serious thought is given to the ethical aspects of the proposal. This study was carried out according to the Research Practice Guidelines. It was approved by the School's Ethics Committee. Ethical approval was granted by the School of Energy, Geoscience, Infrastructure and Society, Heriot-Watt University. All data are kept anonymous. Disclosure of data can be done only for academic interest and individual information cannot be identified. The participants were informed about the objectives of the study for the interview process and were reassured that there would be strict confidentiality. Written consent is considered to be the preferred option, but it may have caused migrants discomfort with participation in the interview due to their potentially precarious legal status. Thus, migrant respondents were asked for verbal consent instead and the interviewer recorded this. The researcher ensured to inform participants that they were entitled to withdraw from the study at any time or to refuse to answer any question that caused them discomfort. Overall, all the information that have been provided which might reveal the identity of the participants was not included in the thesis. The participants are not identified in any part of this thesis because the responses are coded.

3.9 The systems thinking approach

Systems thinking is a methodology used for analysing social systems in an industrial context (Boateng et al., 2017). According to Arnold and Wade (2015), the ability of individual to perform effective systems thinking is vital to the future of the world. Systems thinking is used across a range of disciplines, supporting and connecting them in natural but powerful ways. The main elements presented in the system are as follows:

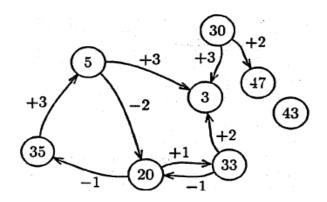
(1) Recognizing Interconnections, (2) Identifying and Understanding Feedback, (3) Understanding System Structure, (4) Differentiating Types of Stocks, Flows, Variables, (5) Identifying and Understanding Non-Linear Relationships, (6) Understanding Dynamic Behaviour, (7) Reducing Complexity by Modelling Systems Conceptually, and (8) Understanding Systems at Different Scales. Previous studies of system thinking have identified that there are seven critical thinking skills: dynamic thinking, closed loop thinking, generic thinking, structural thinking, operational thinking, continuum thinking, and scientific thinking. The second type of thinking process, closed loop thinking, is closely linked to the purpose of this study. Thus, thinking in terms of closed loops, causes

people to see the world as a set of ongoing, interdependent processes rather than list of one-way relationships between a group of factors and a phenomenon caused by these factors (Richmond, 1993).

The use of CLDs in social study

In a study conducted by Pocock et al. (2020), it is shown that a systems thinking approach facilitates comprehension of inter-relationships, interactions, and various perspectives of a system, including a reflection on the boundaries of the system. Systems mirror dynamic and often unpredictable interactions between diverse, constantly changing parts that constantly change in relation to each other and in relation to the collective environment. Relationships like this can be represented with causal loop diagrams (CLDs) that use reinforcing loops (representing feedback loops that speed up change) and balancing loops (representing feedback loops that resist change) to produce systems maps. This approach assists planners in comprehending possible leveraged points for policy, feedback loops, and negative effects of policy change.

Causal loop diagrams (CLDs) are a qualitative diagramming language for representing feedback-driven systems, and help to identify the linkages between different components within a complex system that can show the cause-effect relationships and feedback loops in such system (Richardson, 1986). According to Binder et al. (2004), CLDs are employed to record relevant factors and the causal relationships between them. CLDs consist of factors and links connecting them. A link has annotations about its polarity and delay. The polarity shows whether a dependency has positive polarity (if the cause increases, the effect will also increase compared with the situation where the cause does not change) or negative polarity (if the cause increases, the effect will decrease compared with the situation where the cause does not change). A feedback loop is a directed circle of the CLD graph. According to Schaffernicht (2007), people explicitly use a concept of causality in various disciplines and depend on a form of causal diagram to reflect upon it. There are different meanings and diagram languages of causality such as concept mapping, cognitive mapping, causal maps, and causal diagrams. These diagrams are more natural to construct and to read. It seems important to present the one proper to system dynamics (see Figure 3. 5). Causal maps force to specify the variable. This makes it more abstract to elaborate and to interpret.



- 3 Vision and strategic direction 5 Market share
- 20 Competition in market 30 Leadership in organization
- 33 Knowledge of market needs 35 Brand recognition
- 43 Bank connections 47 Efficiency/productivity

Figure 3. 5 Example of a causal map (source, Schaffernicht, 2007)

A causal map represents causal beliefs of an individual or a group of individuals. It consists of variables and links that possibly show a type of relationship ("positive" or "negative") and indicate its strength. The nodes in the diagram are numbered but represent variables not the "constructs" including particular values or events. In these diagrams, structure is explicitly represented while behaviour has been abstracted away (no verbs in the labels). Noticeably, *polarity* appears as the "strength" of the links, understood according to the "popular" definition.

The causal links have a direction and a polarity, and sometimes also a delay mark (Schaffernicht, 2010). Various definitions of polarity exist: 'complete' and 'truncated' (Lane, 2008). The 'complete' definition is positive (+) when the independent variable changes with a particular sign (+ or -), then the following values of the dependent variable will be above (or less) what they would have been. Negative (-) when the independent variable changes with a particular sign (+ or -), then the following values of the dependent variable will be less (or above) what they would have been (Toole, 2005). However, the 'truncated' definition is often preferred: positive (+) when the independent variable changes, then the dependent variable changes in the same direction. Negative (-) when the independent variable changes, then the dependent variable changes in the opposite direction.

For example, in a simple model of a boy receiving pocket money from his parents, we start with the CLD shown in Figure 3. 6. The more money the parents have the higher the amount they are likely to give to their son. However, the CLD has two feedback loops: one describes the likely scenario that boy's spending will increase as the amount of pocket money increases, and that spending decreases the amount available. The other feedback loop describes that an aunt gives money to the boy whenever he comes to visit. However, the child does not like the aunt so is less inclined to see her if his budget has increased (Binder et al., 2004).

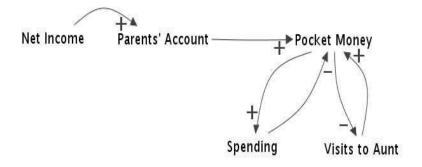
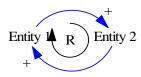


Figure 3. 6 The initial CLD of the pocket money model

According to Boateng et al. (2017), there are three components of system dynamics models (see Figure a, b & c). Casual loops can be built from three basic building blocks: positive feedback or reinforcing loops, negative feedback or balancing loops, and delays. Positive loops (reinforcing loops) are self-reinforcing, while negative loops (balancing loops) counteract change. Delays in causal loops show possible instability in the system. For example, in Figure (a), an increase in entity (1) leads to an increase in entity (2). The '+' sign indicates on the head of the arrow does not necessarily mean that the values produced in the system will increase but that entity (1 and 2) will change in the same direction.

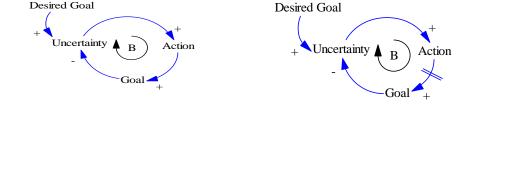


(a) A reinforcing loop

Desired Goal

(b) A balancing loop

A balancing loop as shown in Figure (b) is a structure that changes the current value of a system entity or a desired goal or reference entity through some action. A (-) sign shows that the values of the entities change in opposite directions.



The third basic element is a delay, which is used to model elapsed time between cause and effect. A double line, as shown in Figure (c) indicates a delay. Delays may cause unstable system behaviour and make it difficult to link cause with effect.

(c) A balancing loop with a delay

System thinking is used by researchers in many disciplines to understand various social, economic and environmental systems in a holistic way. It is used to design high leverage policies for continued improvement, and to prompt successful implementation and change (Boateng et al., 2017). A systems thinking approach is used in construction management to solve problems such as construction industry improvement (Omotayo et al., 2019), migrants qualitative study (Pocock et al., 2020), delays on construction projects (Aiyetan et al., 2011), and it can be used in various aspects include social, economic and environment to help achieve several SDGs (Martín et al., 2020). The evolution of the CLDs for this study is an approach to developing an understanding of the impacts of migrant workers in the construction industry, the complexity of the interrelationships of variable, the actions of the employer, and the influence of the immigration processes. Overall, systems thinking help to (1) identify a problem/issue; (2) develop a better understanding of the problem/issue by clarifying the cause-and-effect relationships and the feedback between different components in a system; (3) build a conceptual model of the system at the root of the problem/issue.

Using CLDs in this study

After providing the general knowledge about how the system thinking working in such social studies, the findings were developed under three thematic related to the situation of migrant workers in construction sector. These themes help to create Causal Loop Diagrams (CLDs), which were decided based on the findings of this research study. These themes include Migration system; Employment system; and Job satisfaction system. The attempt was to construct CLDs that can help to build a new knowledge on each stage of the migration processes which include pre-departure stage, staying in host country stage; and how satisfaction and return stage. It should note that the interviews with migrant workers have been conducted in host country that all issues they faced in both origin and host countries spotted from the data.

In the system of migration related problems, for example, the attempt was to construct CLDs from the early stage of preparation for migration (include the costs- factors- of migration), how they secured employment in proposed country, what they expect from their employment (include the income and saving), and what issues they faced during their migration experience. These issues have been identified from the findings of this study.

The issues related to employment, CLDs has been developed related to migrant workers' employment in construction sector in host country. The view of the employer in these issues was very important to find ways to improve the situation of migrant workers in the sector. It has been prober further to issue such as what issue effecting the construction processes, what issues impacting the demand for migrant workers, and how can improving the situation of the construction workforce.

The CLDs related to the job satisfaction has been constructed by using the experience of migrant workers in host country. This system plays a key role in this study because the CLDs constructed as feedback of the experience of the migrant workers in construction sector in host country. Such issues have been investigated include, how migrant workers satisfied in construction employment in host country, what they benefit from their experience overall, what the major problems they faced during their employment, and how likely be willing to be employed in the construction sector.

Overall, the CLDs associated in each system have been discussed in Chapter 6. CLDs played an important role for investigating the issues related to migrant workers in construction sector in developing country. It is interesting to mention that some problems can play as dual factor that could change the behaviour of the casual loops in such system. For example, the CL of (3R2) in Figure 6.6, the new skills gained from their construction employment can improve the migrant workers social status in origin country which in turn reduce the pressure to emigrate and improving the migration processes in migration system and positively contribute to their return (Figure 6.1).

3.10 Chapter summary

This research seeks to evaluate employers' and migrants' responses to the situation of migrant construction workers in developing countries. The objectives of this chapter have been addressed and research paradigms, strategies and data collection method have been identified and reviewed. A suitable research methodology for the study of migrant workers in the construction industry has been identified and elucidated, and the different techniques have been reviewed in terms of their advantages in the context of this research. The research uses a flexible design methodology, characterised by a pragmatic research paradigm. This will facilitate human problem solving, for example, the problems migrant construction workers face in terms of their working conditions in construction. This methodology will be employed with the use of data collection tools including face-toface interviews and telephone interviews to ensure that the data collected is rich and indepth data. These methodological approaches are believed to be the most appropriate ones to explore migrant workers' understanding of health issues in the workplace and to elicit their ideas to make their workplaces easier, safer or healthier. Detailed opinions and experiences must be collected from the migrant workers in order to explore these ideas; for this reason, interpretive or pragmatic approaches could be more suitable because of

their comprehensive, qualitative nature. It has already been shown that migrant construction workers from all age groups are unskilled, unqualified and required to carry out heavy manual work.

4 CHAPTER 4 DATA ANALYSIS- Part I

4.1 Introduction

As mentioned in chapter 3, data was gathered from three different sites of study: the UAE, the KSA, and Thailand (see Table 4.1). In this chapter, we will analyse the data obtained from managers who have experienced working with/supervising migrant workers in construction sector. The purpose of conducting interviews and gathering data was to understand the situation of migrant workers in the construction sector in developing countries. The analysis of the interviews exposed several sub-themes, which are discussed below under ten broad headings. The first set of analyses investigates the impact of migrant workers in the construction sector. This will be analysed under the main theme (the use of migrant workers in the construction sector). There are a number of similarities and differences between working in GCC6 countries and Thailand in the construction sector. Issues faced by the sector when recruiting migrant workers are skills assessment, health & safety issues, and potential of training.

Table 4 1 Summary table of qualitative data collection styles, associated sample sizes

Participant	Study Site	Designation	Inte	Interviewee		
ID			Interview style	Interview method		
UAE 1-5	UAE	Managerial	In-depth	Telephone	5	
		level	Interview	interview technique		
KSA 1-7	KSA			Telephone	7	
				interview technique		
Thai 1-10	Thailand			Face-to-face	10	
				interview technique		
Total						

4.2 The use of migrant workers in construction

The majority of interviewees offered an explanation for the importance of migrant workers to the construction sector. Participants reported that the role of migrant workers is very important as long as domestic workers not interested in construction work. All participants agreed that demand for migrants will increase and continue to be a key factor in the construction workforce. For example, one interviewee in the UAE, said:

'Indeed, migrant workers will remain vital due to the potentiality, ambitious development plans, and the expected demand that exceeds the local supply'.

Similarly, another interviewee in the KSA, when asked about the role of migrant workers, said:

'In Saudi Arabia, we are mainly dependent on migrant workers which are the important factor can affect any construction projects these days. The huge amount of construction projects operated at the same time, have put more pressure to the contractor in terms of the shortages of labour'.

Talking about this issue, an interviewee in Thailand, said:

'It is depending on the balance between local worker and migrant worker. In the past, this company doesn't need migrant workers. I introduce to use. Migrant workers are working hard, but lower skill. That workers have skills but lazy. So, we have to mix and balance them'.

There are a number of similarities amongst participants regarding the share of migrant workers in construction workforce. The majority of participants, for example, show that migrant workers are very important component of the construction workforce in developing countries. However, there were some negative comments about the shortage of skilled workers. For example, when talking about this issue, an interviewee in KSA, said:

'I can say that 95% of the workers are migrants and there are shortages of skilled workers that can deal with particular construction activities. For example, there is some workers (i.e., economic or manual workers) can undertake many tasks at the same time at different levels, and this is a problem we currently face'.

It is believed that there are several important differences between participants when using migrant workers. The reasons given for recruitment of migrants for skilled and unskilled roles amongst the participants were various. It is a widely held view that the reasons for using migrant workers in construction were:

- Lack of local labour
- The roles that migrants apply for
- Job roles suit migrant workers (i.e., unskilled positions)
- Unwillingness of local labour to perform roles
- Lower cost than local labour

Overall, these views surfaced mainly in relation to the role of migrant workers in construction. A variety of perspectives were expressed about the key reasons for the recruitment of migrant workers, mainly that Asian workers are cheaper labour and hardworking. A common view amongst interviewees was that the role of migrant workers in construction is important and that demand will increase. Concerns were expressed about the skills needs associated with such technology changes in construction activities and how these can impact the industry in terms of its contribution to achieving the UN SDGs. There were some negative comments about the shortages of skilled workers. For example, when talking about this issue an interviewee said:

'I can say that 95% of the workers are migrants and there are shortages of skilled workers that can deal with particular construction activities. For example, there is some workers (i.e., economic or manual workers) can undertake many tasks at the same time at different level, and this is a problem we currently face'.

Together, these findings provide important insights into the future demand for migrant workers in the industry. The majority of participants reported that the demand for migrant workers will increase, and that they continue to be the key driver for the construction workforce. Concerns regarding health and safety were more widespread, despite the importance of migrant workers. A number of participants agreed with the statement that migrant workers are a risk factor for any construction project in terms of safety issues. Concerns were expressed about the skills shortages and how to match skills requirements with the existing construction workforce. In their accounts of the current situation of migrant workers in the construction sector, there were some suggestions that migrant workers should be trained prior to starting a new job. It was also suggested that the recruitment route to the construction industry should be improved in line with the new requirements for construction activities.

4.3 The profile of the migrant workforce

This section studies the profile of the migrant workforce based on the responses from the interviewees. It examines the type of employment contracts, the age and gender profile, their occupations, pay and conditions, and countries of origin. Participants provided detailed information on all these areas. The majority of migrant workers employed by participants in this study were in low-skilled jobs.

4.3.1 Type of contract

The UAE and KSA share a number of key features when recruiting migrant workers. The majority of participants reported that they employed migrant workers through a local employment agency. In all cases, the *Kaffala* system was the main channel for recruiting migrant workers to the construction industry. Some employers used sub-contractors to supply workers. In contrast, in Thailand, all participants recruited migrant workers through MOU agreements with neighbouring countries. In addition, migrants moved around different building sites to keep the work coming in. Most employers reported that they employed migrant workers on the same contractual basis as the rest of the workforce. The majority of participants mentioned that migrant workers were employed on temporary or casual contracts, or through a sub-contractor who employed them directly.

It has been reported that migrant workers were usually employed on a temporary twoyear contract subject to review if the work permit could be extended. Some participants employed migrant workers initially on a fixed-term contract, and then on a permanent contract if suitable. It is possible that the type of contract is the same in the long term. It is possible also that these findings may not apply to domestic workers. There would, therefore, seem to be a definite need to tackle the contract period in terms of training grants. This is true as the literature confirms that the current systems for recruiting migrant workers to the industry needs to be improved in line with the current performance of the industry.

4.3.2 Countries of origin

The majority of participants reported that they had been recruiting workers from different countries. Strong evidence of cultural diversity related issues was found in the literature when recruiting different nationality in the workplace. A number of participants questioned whether the country of origin might be related to the need for an employee

with a specific language skill. In the UAE, one interviewee reported that the employer relied heavily on workers from Asia, and increasingly from India. A few participants reported that some employers recruited migrant workers from other countries such as Turkey, Arabic countries (i.e., with low income and large population), etc. The UAE and KSA share a number of key features; workers from both India and Bangladesh were most often mentioned by them in the context of employment. These countries used the available pool of labour, or workers supplied by agencies. There was a difference between GCC6 countries and Thailand in terms of the source of labour. These results are similar to those reported by Thai employers.

It is possible that employers used multiple sources of workers with the majority from Asian countries. Nationals from these countries were available and willing to work - largely in low-skilled jobs. For example, having a positive experience of employing Asians, a few employers had deliberately set out to recruit more people from these countries, either through direct advertising, a recruitment agency, or setting up their own contacts. Taken together, these results suggest that employers were looking for a readily available supply of labour and willingness to work in the jobs available and were rarely making specific choices about the countries from which that labour should come. A clear benefit of recruiting low-skilled labour in the industry could not be identified in this analysis.

4.3.3 Age and gender profile

The majority of participants reported that the migrant workforce is an overwhelmingly young one. The majority of migrant workers employed by the employers in this research were unskilled and had a low level of education and were aged around 20 to 30. A minority were in their forties. It is worth mentioning that the industry suffers from an aging population, and this is discussed in the literature, especially in the case of developed countries. Overall, aging did not affect males and females differently in these measures.

It has been reported that migrant workers are largely male. The jobs in construction are the most clearly demarcated by gender. Jobs that are very hard physically and involve a lot of lifting and carrying are generally carried out by men. It is almost certain that there is a strong pattern of gender segregation of occupations in construction. Overall, there is no evidence that the aging population in the industry has an influence on labour-related issues such as training.

4.3.4 Types of jobs

All participants were questioned about migrant workers' occupations on the construction site. A number of participants reported that the majority were in unskilled or semi-skilled jobs. Some migrant workers were employed as general labourers and others in semi-skilled trades. A few participants mentioned that they were aware that they were employing people in unskilled jobs, who had no qualification or diploma in construction activities. Further, the literature largely confirmed that the route to construction employment has changed, and that this required assessment in terms of skills needs and knowledge of construction activities undertaken.

It is likely that migrant workers in the lower-skilled jobs related to employers' perceptions of the likelihood of retaining them. As construction is a labour-intensive sector, employers are unwilling to invest in workers who they thought would not stay long. It is a widely held view that low-skilled jobs are often filled by migrant workers in temporary or seasonal posts because domestic workers will not take on these jobs. A possible explanation for this might be that migrants are prepared to take such jobs because they can earn more than in their home countries. Whilst a minority mentioned that they recruited migrant workers in construction to overcome labour shortages, all agreed that skills shortages could have even more impact on the industry.

4.3.5 Work-related conditions

Participants were asked to indicate whether there were any differences in the work-related conditions offered to migrant workers and those recruited from the domestic labour market. The majority reported that the wage rate of migrant workers is equal to that of domestic workers in the same jobs. This is in line with the current situation of the construction labour market. Any differences in pay are related to differences in experience or skill levels that applied to all workers. A few interviewees mentioned that they pay migrant workers less than domestic workers and that is one of the reasons that they use them. Some reported that they do not pay migrant workers as much because of lack of qualifications or knowledge related to the job.

It has been reported that migrant workers were employed on the same terms and conditions as domestic workers. In Thailand, for example, one interviewee commented that they even provide health insurance for their workers. Some participants mentioned benefits that were made available to migrant workers. One interviewee from Thailand commented that the main benefit was accommodation. Several interviewees reported that employers do not provide language classes for their workers because those appointed are expected to be able to do the job. It was rare for interviewees to mention that the employers paid food expenses for their workers. No significant differences were found between GCC6 countries and Thailand. Two separate reasons for this emerged. On one hand, migrants enter the construction industry as unskilled workers. On the other, accurate information about the labour market were unavailable. There is a clear linkage between entering the construction employment and information regarding the labour market of the destination countries.

4.4 The importance of migrant workers to employers

Migrant workers comprised a major part of the construction workforce in developing countries. It is almost certain that the importance of migrant workers to employers depends on the numbers employed, and on whether or not the employers have other sources of labour. The fact that many employers have turned to migrant workers suggests that there is a gap in the supply of domestic workers. It is not surprising that people are not interested in these jobs given the pay and conditions on offer. The following themes will explore the reasons for recruiting or not recruiting migrant workers in the construction sector, as well as the perceived advantages and disadvantages of recruiting these workers.

4.4.1 Reasons for recruiting migrant workers

The majority of participants reported that they recruited migrant workers because they could not get applications from domestic workers for low-skilled jobs. Reasons given for the lack of applicants varied by participants. According to one interviewee in the UAE, migrant workers were first recruited because of the difficulties in recruiting from the domestic market. The literature indicates that migrant workers are used in the industry as a solution to cope with the labour shortages.

Another interviewee in the KSA reported that employers had struggled to recruit locally, and that those local people who were taken on usually resigned after a few days. They found that the migrant workers were committed and worked hard. Similarly, in Thailand, one interviewee commented that employer had tried recruiting from the local market but found the candidates to be unsuitable and unemployable. It is a widely held view that there is no choice but to recruit migrant workers. Migrant workers tend to be keener and more motivated.

Similar views were expressed that employers found that domestic workers have poor attitudes compared to the migrant workers they took on. Another interviewee in Thailand suggested that migrant workers saw construction jobs as a way to get employment and improve their skills, and that they are more prepared than local workers to take on the low-skilled jobs for this reason.

With regard to the skills issue, it was unsurprising that there is a shortage of labour rather than skills. Participants repeatedly mentioned that they were looking for a large supply of migrant labour to offset the lack of domestic applicants. Several participants were aware that migrant workers might be more motivated to work in low-skilled and low-paid jobs. In addition, the low wages meant more to migrant workers than to domestic workers because it is more than they can earn at home. One interviewee in Thailand agreed with the statement that migrant workers are more likely than domestic workers to be willing to work in the construction sector for the minimum wage because it is worth more in their own countries.

When asked whether the reasons for recruiting migrant workers had changed, the majority of the respondents reported that the situations that had led to taking on migrant workers are still current and so the reasons remain the same. There is a strong possibility that the situation will remain the same in the long term.

4.4.2 Advantages of employing migrant workers

Participants with experience of employing migrant workers were asked for their views on the advantages and disadvantages of this practice. Whilst a minority of participants thought there were no particular advantages other than availability, all agreed that there are a range of positive attributes; the most frequently mentioned are: reliability, willingness to work hard, and general attitude to work. The reliability of migrant workers is often compared with domestic workers who cannot be depended on to turn up for work. While most participants used the expression "reliable" and did not expand, a few also pointed out lower absence rates amongst migrant workers.

Migrant workers are defined in terms of productivity and speed. This is related to their willingness to work long hours, beyond the normal working day. The literature, however, shows that working overtime could be related to workplace accidents, especially in the construction sector. Several participants mentioned that migrant workers did not mind doing overtime and, in fact, actively sought it to earn extra money. Willingness to work overtime was another advantage mentioned by some participants. It means that employers can ask migrant workers to change their hours or come in at short notice.

A possible explanation for this might be that migrant workers have a good attitude towards their work. One interviewee in the KSA expressed the belief that migrant workers have a more positive attitude to working in construction than domestic workers. Also, migrant workers are more likely to be satisfied with the minimum wages. It has been reported that migrant workers are always happy with the wage rate as it is worth more when they take it home and is more than they could earn at home.

The majority of participants noted the positive attributes of migrant workers. One interviewee in Thailand mentioned that they meet their deadlines and targets and have increased productivity. In all cases, the participants reported that migrant workers are very productive, and their output is higher than that of domestic workers.

4.4.3 Disadvantages of employing migrant workers

All participants were asked for their views on the disadvantages of using migrant workers on construction sites. The majority of participants reported that there were no disadvantages at all to employing migrant workers.

The disadvantage most mentioned was communication problems and the lack of local languages. This is in line with the findings from the literature which shows that communication issues can be associated with other factors making problems complex. A number of participants made some reference to language issues as a disadvantage.

Concerns were expressed about migrant workers speaking their own languages and not integrating with other staff.

All participants stated that employers stressed the need for migrant workers to have language skills to understand health and safety instructions. The literature confirms that a number of serious accidents have been reported on construction site due to the lack of successful H&S induction. A few participants commented that the administrative workload and carrying out the normal vetting procedure is a disadvantage. It is likely that the disadvantages mentioned are, with a few exceptions, not seen as significant enough to discourage an employer from taking on migrant workers.

4.4.4 Preference for migrant or domestic workers

All participants were asked whether they preferred to recruit local- or migrant workers. A number of participants mentioned that they did not consider they had a choice in this respect as local workers are not available. Some participants stated that they had no preference. Figure 4.1 shows that typical comments were that employers wanted the "best qualified and most suitable person" (Thailand), "there is no difference, it is about the individual and how skilled they are" (UAE), "not bothered whether they are domestic or migrant workers as long as they can do the job" (KSA). A small number of participants expressed a preference for either migrant or local workers. According to one interviewee in Thailand, their preference for migrant workers was due to their positive attributes. Others referred back to the recruitment difficulties in obtaining local workers. Another interviewee in KSA mentioned that employers would prefer to employ local workers but the recruitment difficulties in the domestic market prevented this.

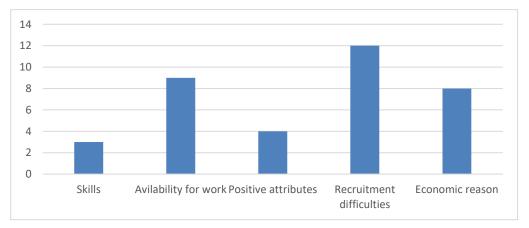


Figure 4. 1 Reasons for employed migrant workers in construction sector

A minority of participants expressed a preference for recruiting local workers. They referred to the additional costs of employing migrant workers, and the disadvantage of dealing with the paperwork. It is a widely held view that they recruit people who are suitable for the job, regardless of nationality. Some participants expressed the belief that the labour market could play a vital role in reducing the number of migrant workers in the industry, which may be of interest to policy makers interested in reducing the unemployment rate among local workers.

4.4.5 Overall importance of migrants to business

Participants were asked to sum up the overall importance of migrant workers to their employers. In addition, they were asked what the impact might be on their businesses if they were not able to recruit migrant workers. All participants stated that migrant workers were crucial to their businesses. Several agreed that their business would not survive without the migrant workforce. A few interviewees reported that they could find someone with the right skills and qualifications in the local labour market, if necessary, but that it would take longer.

One interviewee mentioned that it was impossible to recruit workers with the required skills from the domestic labour market and that without migrant workers their company would have to scale down the business and tender for less work. In addition, migrant workers were becoming more important to the business owing to labour shortages. The literature, however, confirms that the major challenge faced by the industry is a skills shortage rather than a labour shortage. This is issue needs an immediate solution. A number of participants welcomed the opportunity to focus on training opportunities that could improve the situation of their taskforce.

A few participants commented that they might have to increase the wages rates and that this would affect the company's profitability and viability. Moreover, they would have to pay above the minimum wage rate - more than they were currently paying. It seems possible that losing migrant workers would have a major impact. Migrant workers on construction sites are regarded as an asset as they bring a mix of cultures and a positive attitude.

4.5 Issues faced by the sector when employing migrant workers

4.5.1 Exposure to risk in work environment

Participants reported that they had experienced many health and safety issues linked with migrant workers. These issues include language skills, lack of knowledge about safety procedures, and workers needing more consideration on site projects. The issues identified in these interviews are presented in Figure 4. 1.

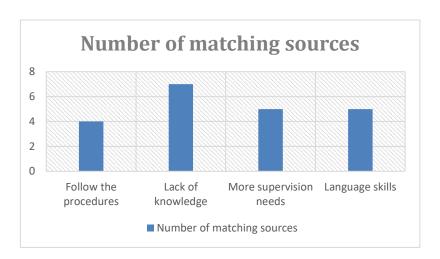


Figure 4. 2 The experiences of sampled employer participants regarding H&S issues

What stands out in the above figure is the increased lack of knowledge of construction activities in the industry's workforce. The majority of participants reported that migrant workers can be a risk factor for projects because they experience many issues directly related to safety at the workplace. For example, one interviewee in the UAE said:

'I would say that they are not aware properly about H&S procedure during operation. I mean that they do not follow the sign. We always do the induction to make sure everyone in-site is working in the save environment'.

In KSA, one participant commented:

'In general, workers are the most cost and risk factor that construction industry faces these days. Often, they do not pay attention to the H&S matter. They need high level of consideration from the management team as well as high level of supervision in site

construction project (supervised workers) led to follow the H&S procedure and be aware of the risk assessment in-site during undertaken tasks. Also, most of the workers are unqualified and low skilled, resulting a weak in H&S matter and important of following the H&S producer in and of-site of construction'.

Another response in Thai to this issue:

'Yes, we do face problems regarding health and safety of the workers. Even though we have safety training and sign boards in Thai and other languages, people still sometimes take things easy and don't understand the significance of all the safety measures taken. Therefore, because of negligence, we sometimes face minor and major accidents. The accidents are more observed with migrant workers based on a daily report'.

There was no difference between participants in terms of safety in the workplace. The majority of participants reported that migrant workers need more consideration in site projects. Some felt that safety in the workplace is cultural, while others considered that migrant workers are associated with communication issues which result in work-related accidents. In addition, foremen found the lack of languages among migrant workers to be a problem as they were undertaking potentially dangerous work. It seems possible that these findings are due to language problems, which made it hard for migrant workers to follow training programmes.

4.5.2 Skills assessment

This theme came up in discussion of the skills issues, selection criteria, how the employer assesses the skills needed, and skills matched with special requirements. A variety of perspectives were expressed with relation to skills assessment. From the data, Figure 4.2, it is apparent that the field test method is the most common practice used for skills assessment based on field tests and experiences of the workers in the field. The most interesting aspect of the graph below is that the traditional method of assessing the workers is still used, although findings from the literature confirm that there must be a skills assessment along with knowledge of construction.

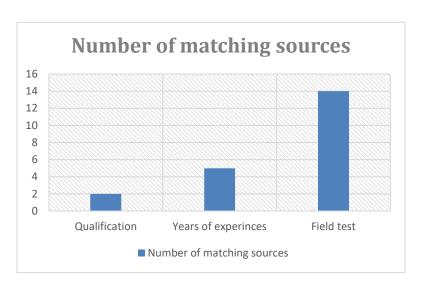


Figure 4. 3 Methods of skills assessment

When asked whether migrant workers have the right skills before they start work, most respondents reported that checks are made on the qualifications or skills needed for the job. For example, in Thailand, one interviewee said:

'We let start the work first and afterwards we can easily find out that who is right for which job. Some people are hard worker and also follow the orders properly. They take some time to get used to the language. Once they know the language, they can follow the orders. However, some people we have nag to do the job'.

Similarly, in the UAE, one interviewee said:

'Basically, we do through a Monitor Report that to see their quality and productivity during carrying out any work'.

In the KSA, one participant commented:

'I would say that we do in two ways, first, when we request the labour from the agency recruitment which should specify the requirement in advance before starting the work. Second, for the hiring workers, we need to do field test in order to assess their knowledge in the field of construction and also within a particular construction activity'.

Another response in Thailand:

'We let them work in the site after the initial safety training, and in the work their supervisor can easily observe if they have the right skills for the job. If they cannot do one job properly, we put them to do other jobs which are more appropriate for them'.

There are a number of similarities among participants. The majority of those who responded to this item felt that they use traditional methods for skills assessment for their workers, including monitoring reports. Concern was expressed about the correlation between the shortage of workers and unskilled workers. The difficulty of checking quality and qualifications put more pressure on the employers, who need much more guidance on these issues. As one participant said:

'However, because of the shortages of workers, we take the risk of recruiting low skilled workers. At this point, we provide them such training programme that regard to the task in order to be able to deal with'.

4.5.3 Potential for training

In the low-skilled jobs, training for new recruits usually takes the form of an induction session, sometimes followed by further on-the-job training. The majority of participants agreed with the statement that providing an on-site or off-site training programme is highly recommended for both workers and the business itself. In all cases, participants mentioned that employers must offer the induction and on-the-job training to all new employees, regardless of whether they are foreigners or nationals.

When the participants were asked about the potential of training programmes provided to their workers, a number commented that the initial safety training sessions were common practice. It was also suggested that they provide such training programmes only when the business experiences shortages of skilled workers. The reasons behind providing training programmes identified in their responses are shown in Figure 4. 3.

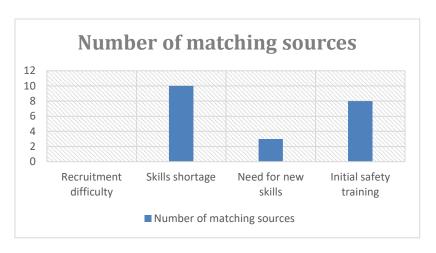


Figure 4. 4 Reasons for providing training programmes.

The data presented in the above figure is not surprising as the industry is facing a major challenge regarding skills shortages. In the KSA, one interviewee suggested that:

'Indeed, this is an important thing. I think it is essentially and mainly for workers to be trained in order to be ready for undertaken such construction task that needs high skilled labour. For example, if we provide training program for a particular task, this means reduced risk and improved quality'.

In Thailand, one participant commented:

'Provide Safety training 2 days/week according to safety program. Mostly, mentions about risk activities, unsafe behaviours. 2-5 days for skill training in office, tower crane driver, welding, brick laying. However, it depends on situation'.

In the UAE, the situation regarding training for workers is the same. One interviewee said:

'I can say that they have in-house training certificates, some from third party in certain aspects like crane operators and computerised concrete mix plant, and a prequalification from past experiences in such project'.

A variety of perspectives were expressed when discussing the training issues. Some felt that they provide such training programmes for their workers to avoid risk and uncertainty, while others considered that migrant workers should be trained before starting their work. For example, one interviewee said:

'Indeed, they should get training program before and in between their job. Especially, when we planning to use equipment, that needs to our project. It is an issue that to know what experience the workers had in such tools, equipment, or machines when just started working'.

There was a significant positive correlation between the usual provision for training and development and progression. Whilst a minority mentioned that language proficiency was not a requirement for the job at the recruitment stage, all agreed that it was obviously necessary to understand the training sessions. It is considered essential that all workers understand the health and safety provisions. A possible explanation for this might be that there was no additional provision to take account of any lack of language.

4.6 Future recruitment of migrant workers in the sector

This theme came up in discussion of the introduction of new technology in construction activities and how the industry could improve its workforce to cope with such changes. The majority of participants agreed that a transformation of the construction industry is necessary to meet low energy targets and address climate change, and with regard to the industry's contribution to the SDGs. These views surfaced mainly in relation to skills shortages within the industry. As one interviewee said:

'I had an experience about smart building when one of our clients was asking to deliver a project with special needs of technology that was about part of education building at University that required particular facilities such as electricity tasks, media tasks, security tasks, etc. These tasks, definitely, are needs to match with the skills that to carry out these tasks. In addition, we faced challenges that how to find labour with the requirement needs. In general, technology changes need top management plan in order to avoid any unexpected situation during the life cycle of the project'.

Other responses to this item included:

'Indeed, the main links is that we need to improve our workers in order to copy with new technology. Since we need the technology, there is some factor related to the workers which need careful consideration e.g., skills! I would say that construction workers will face some challenges in the future regarding the right skills that need to deal with such technology'.

Concerns were expressed about future employment in the construction industry and whether the industry could continue to be a big employer in the economy. Talking about this issue an interviewee said:

'I would say that Green Building is a new concept worldwide and applied in construction sector can increase the cost. However, the long-term benefit would be enhancing our environment. In my opinion, there are shortages of skilled workers and seems to be continuous problems and construction workforce should be trained to be able to deal with such technology'.

Overall, these findings suggest that there is a possible significant correlation between technology changes in construction activities and the location of skilled workers who can deal with these changes. As one interviewee said:

'Well, there is direct relationship between them. For example, the task of precast concrete and the relevant needs high level of skills which the task is complex and can be a risky task in terms of cost, time and quality. Again, here we pay much attention to the skills and experience about certain tasks in construction'.

Taken together, these findings suggest that there is an association between migration and the future jobs within the industry. As the literature shows, migration is one of the drivers of long-term change and it is likely to have the greatest impact on the future of the construction industry and its training needs. This means that by identifying future trends, a set of scenarios could be developed to support analysis of future jobs and skills needs in the industry.

4.7 Chapter summary

Data presented in individual interviews in this chapter provide a deep insight into the situation of migrant workers in the construction industry. The relevant data generated from various key players such as managers, acknowledges that the research method applied in this study is appropriate. The first part of this chapter presented the overall profile of the migrants who work abroad. It shows the importance of the migrant workers to the employers and the business overall. Most of the participants confirmed that migrant workers are unskilled, young, and with primary or no education. It was not surprising that migrant workers have no experience in the construction industry, and this is reflected in their lack of knowledge of construction activities.

Participants confirmed that migrant workers contribute to the industry and that their role is vital as long as locals avoid participating in the industry. Perhaps the most interesting finding is that employers are very keen to discuss potential training opportunities for effecting changes with their workers. However, some participants see training as a negative factor because some workers are not willing to remain in the sector. This is because construction employment is sometimes seen as a seasonal job for migrant workers, as discussed in Sections 5.2 and 5.3.

The second part of this chapter identifies the impacts of migrant workers in the construction industry. It seems that migrant workers have been associated with some factors that impact the sector. The data indicates that they are exposed to risk in workplace. For example, the language barrier makes the health and safety situation very complex, and this needs more attention. This initial finding is suggestive of a link between exposure to risk at the workplace and the potential for training and skills assessment, which needs to be regularly reviewed in line with the job requirement.

The data also indicate that migrants are overrepresented as casual workers outside the major groups of technicians and professionals. This pattern suggest that migrants are not less educated than local workers but that lack of recognition of qualifications may lead to this result. In general, skills mismatch is one explanation of such a high share of migrants in low-skilled occupations.

5 CHAPTER 5 DATA ANALYSIS- Part II

5.1 Introduction

This chapter describes the key themes generated from a thematic analysis of the interview data with the key target of this study (see Table 5.1). The analysis of the interviews revealed several sub-themes, which are discussed below under five broad headings. The analyses will focus on the experiences of migrant workers in the construction sector. These experiences can be analysed through three main aspects: migration experience, moving and living experiences, and experiences of working in the construction sector. The following sub-themes emerged and were discussed with relation to migrant workers in a foreign workplace.

Table 5 1 Summary table of qualitative data collection style, associated sample size

Participant	Study Site	Designation	Interview		Interviewee	
ID			Interview style	Interview method		
Thai-CN 1-12	Thailand- C&N	Migrant workers	In-depth Interview	Face-to-face interview technique	12	
Thai-IT 1-10	Thailand- Italian-Thai				10	
Total						

5.2 Migration push- factors

Factors affecting immigration are various, sensitive, and complex. Migrants move for different reasons associated with many factors. However, the majority of these factors can be discussed under, economic and financial difficulty, environmental, political instability, and encouragement from friends and relatives. The themes identified in these responses are shown in Figure 5. 1.

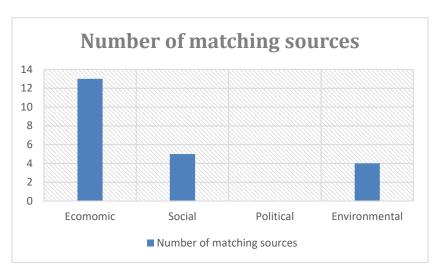


Figure 5. 1 Reasons for immigration

5.2.1 Economic and financial factors

These factors are mainly associated with the countries of origin. They play an important role in any migration process. The data, as shown in the above figure, indicate that the economic push-factors that motivate Myanmar migrants to leave their country and establish new careers are, lack of work opportunities, need to support family, and return to start new business.

Most of the participants thought that economic downturn in Myanmar was the main cause of the shortage of jobs, and that this can greatly affect lives. Participants also said that the lack of job opportunities may lead to difficulties in terms of maintaining households. Some of the participants argued that they faced great difficulties and struggled to meet the needs of their families. For example, one interviewee said that:

'Well, mainly because I want to make money. Since in Myanmar there are no jobs, so I went abroad'.

Another interviewee, when asked about their motivation to migrate to Thailand, said:

'As there are not plenty of jobs in Myanmar, I tried to come here. If I work in Myanmar, I will get just 1,000 or 1,500 Kyats per day. So, I decided to work in Thailand. Now, it is okay to work here. As I cannot afford to pay to work in Malaysia or Korea, I chose

Thailand. It will cost around 4,000,000 kyats to go to work in Korea and around 1,600,000 kyats to work in Malaysia'.

Other responses to this question included:

'I migrated because the wages are very low in Myanmar. I get only around 2000- or 3000-kyats per day, and it is not enough for me. I came to this country because my friend invited to come and work here, and I joined them'.

In addition, the income level is very low in Myanmar. As result, migrants experienced financial difficulties in supporting their families and in providing for extra family needs. This caused them to seek work abroad. This is in the line of the findings of the literature which discusses the three stages of migration including the pre-migration stage and the associated factors. Concerns were expressed by several workers who either borrowed money from friends and family or used family savings to fund the pre-departure cost to go abroad. The items identified in these responses are summarised in Figure 5. 2. It should be noted that the literature largely confirms that desperation to earn income abroad could lead to health and safety problems in construction employment.

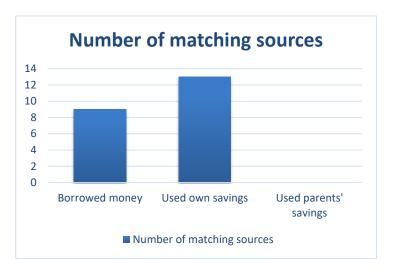


Figure 5. 2 Sources of funds to finance migration to Thailand.

5.2.2 Environmental factors

For a number of participants, an environmental factor was the reason for migration. Respondents were asked to suggest other reasons for migration. A number of interviewees expressed concern that farm work is not stable and they had no choice other than farming. Talking about this issue an interviewee said:

'I worked as a farmer before. Unfortunately, I lose in my farms. I almost lose my house too. But instead of selling my house, I decided to work in Thailand.

For the first time, I was trying to go and work in Malaysia but the conditions there is not good for Burmese now, especially for religion difference. So, I chose Thailand. Now in Myanmar, there is no work for farmers. Also, there is no profit in such business. We cannot sell our products, farms, in good price'.

Some interviewees agreed with the statement that working on a farm is a seasonal job. For example, one interviewee said:

'Back in Myanmar, I am a farmer and there is no job after the farming season. Moreover, my daughters can manage the firm well, so I come here to find another job. I came to Thailand because Thailand is the easiest place to migrate and do not cost that much'.

Another reported problem is that working on a farm does not allow migrants to save enough money to support their family and secure their future. One participant commented:

'I came here because what I can earn in Myanmar is just enough for my family and I cannot save any money. As a farmer, I also have to be careful about the weather and it is not okay all the time. Therefore, I came here hoping to earn more and it is okay here indeed. I came to Thailand because Job Agency sent me here'.

In all cases, the participants reported that working abroad always associated with some difficulties. For example, working in a different sector or new vacancy was not straightforward, especially in the construction sector. The literature confirms that the construction industry has moved away from the traditional way of employment.

5.2.3 Policy and regulation factors

This sub-theme came up in discussions of how the migrants managed to move to Thailand. The majority of the participants offered evidence that the policies and regulations of both the sender and receiver countries can be a motivating factor to go abroad. Participants came to Thailand mainly through an agency under MOU agreements with neighbouring countries. Participants offered evidence about engagement with their jobs and their decisions to leave the country. One interviewee said:

'As I came here with a connection of an agency, I got the job easily. I waited nearly two months in Yangon to contract with them. For the first time, I worked in water energy generating company for eight months. Now I have been moved here'.

Other responses to this question included:

'The agents have MOUs with the employers from here. We can choose the job and I wanted to work at a factory. However, even after waiting for two months, I cannot get the job at factory, so I decided to join the construction job'.

One interviewee stated that:

'The agent came to our village for recruitment, and he told us that we have to work in construction. As I am interested in construction, I decided to come and work here'.

Overall, a number of participants experienced the direct impact of policy and regulation on their decisions to start new careers abroad. This is another motivator for Myanmar migrants to explore work abroad. A number of participants, however, were particularly critical of the arrangement for the pre-departure including the costs and the proposed training.

5.2.4 Encouragement from friends and relatives

A number of participants stated that they received financial support and advice to go abroad with the hope of a positive return to their original countries to start a new life. This motivation can be from friends already in the host country or from relatives. Some participants expressed the belief that Myanmar society has large extended families and that family members are often dependent on each other for financial help and advice. For example, one interviewee said that:

'I heard from some friends that people are working in Thailand and wanted to come here because we can work every day here. Back in Myanmar, I do not have job every day. So, I went to Myawaddy (Myanmar-Thai border) to look for the job and I got this job through the Job Agent after waiting for one month'.

Another participant was encouraged by his friends to work in construction sector:

I have some friends working in construction sites. They told me that working in factories are not good and cannot get well-paid although it is a tiring job with no rest. Then, they encouraged me to work in construction sites. So, I agreed with them and working here. For the first time, the agent told me that I would work in constructing buildings but now I am in constructing underground stations.

The majority of participants had positive encouragement from friends and families to go abroad. They offered advice based on the situation of the origin countries at the time of the migration process. Therefore, friends and families played an important role in encouraging migrants to work abroad, indicating their role as a key motivator in migration decisions. There were some negative comments about misinformation in the host countries including the contract arrangement. This is supported by the literature that evidences that misinformation can play a major role for people working or preparing to work abroad.

5.2.5 Summary

Overall, economic downturn and a weak economy are the major reasons for Myanmar workers seeking to work abroad. The majority of participants were able to identify reasons that motivated them to come to Thailand. They have experienced financial problems including providing financial support to their families. A common view amongst interviewees was that the major reasons for moving to Thailand include environmental issues and support from friends and family. A number of migrant workers who had experienced farm work also sought employment abroad. In all cases, participants reported that the immigration regulations between the origin and host countries made it easier for them to make the important decision to seek work abroad.

5.3 Migration pull-factors

The literature identifies that the transit stage of the migration processes is most important for migrant workers. The push-factors described above, and all the associated factors are connected within the original country. This theme also has identified various pull-factors for Myanmar workers seeking jobs abroad that are linked with the destination country. Major sub-themes identified within the pull-factors include employment opportunities, remittance and foreign currency exchange rates, and networks. These sub-themes are briefly highlighted below.

5.3.1 Employment opportunities factors

A number of participants remarked that there are more work opportunities in Thailand. Migrants are attracted by employment and in particular by the income level compared with the country of origin. As one interviewee said:

'I knew the job opportunities are very high in Thailand through my friends in Myanmar. They suggested me to work here. As my business in Myanmar was very bad, I needed to go and work anyway. So, I am here now'.

The majority of the interviewees felt that they were unskilled and had no experience in construction activities. A few participants reported that the high demand for unskilled workers in construction attracted them to work in Thailand. For example, one interviewee said:

'The agent asked me since the beginning about where I want to work like in construction or factories. I know I can get more money in construction sites and more freedom. So, I chose construction although I did not have any experience'.

A common view amongst interviewees was that the high demand for workers in construction and the ease of entering the sector unskilled and unexperienced attracts Myanmar migrants to work abroad. A clear benefit of unskilled workers in construction employment could not be identified in this analysis.

5.3.2 Remittance and currency exchange rates

All participants agreed with the statement that the role of remittance in the migration process shapes development in both in the migrant host country and the regions from which migrants come. The majority of participants reported that they send the half of their income to their family every month. Figure 5. 3 shows the amount of money migrants send to their households compared to their income. For example, one interviewee said:

'It depends on exchange rate between Myanmar Kyats and Thai Baht. But I can usually transfer around 200,000 kyats per month. But sometimes we just save up by ourselves and transfer later in lump sum'.

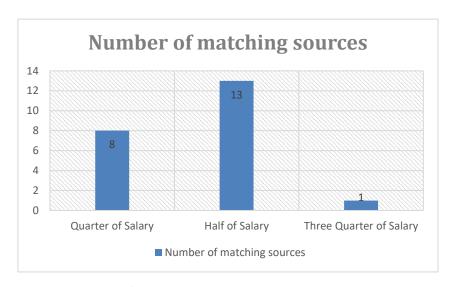


Figure 5. 3 Amount of money sent to migrants' households

A number of participants reported that the exchange rate for foreign currencies is high and translates into a considerable Myanmar income. For example, during the data collection period in 2016, the exchange rate of one Thailand Baht equalled 39.49 Burmese Kyat (\$0.030). Accordingly, a small saving in the host country could translate into a large amount of Myanmar Kyat. This has evidently driven some to go abroad. As one interviewee said:

'Yes, I can say the wage is not bad. It is more than what I can get in Myanmar. Normally, I get around 6000 Baht per 15 days and sometimes around 7000 Baht when I do OT. I have to work from 7:30 am to 4:30 pm'.

The majority of participants felt that there are more savings that can be sent back to their families. One participant commented:

'Normal wage is 300 Baht per day but with over time, I can get around 440 Baht. It is much more than what I can earn in Myanmar. I can save around 100,000 kyats per every 14 days. So, working in Thailand is highly worthy for me'.

One participant expressed concerns about the difference between working in Thailand and Myanmar, saying:

'I get 300 Baht per day. It is around 10,000 in Myanmar kyats. It is okay when I first come to work here because workers in Myanmar construction site only earn around 6000 Kyats per day at that time. But when I went back to Myanmar for Songkran holiday, I found out that a mason in Myanmar now can earn around 9,970 kyats so I can earn the same working in Myanmar too without living away from home. Thus, I think 300 Baht here is a bit less than what should be. However, I heard that Myanmar worker association is asking for a pay rise, and we will get around 360 Baht per day'.

In all cases, a possible reason behind migrant's ability to save is that they are working in large companies where they receive benefits such as health insurance, overtime, and help with accommodation from the employer. As a result, they are able to save some of the income they earn in Thailand.

5.3.3 Networks

There was a sense of networks during the migration process amongst interviewees. A few participants agreed with the statement that the key motivator that encouraged people to go abroad is suggestion from colleagues, friends and family members. For example, one interviewee said:

'My sister's husband has connection with an agent to go abroad and work there. He told me that working abroad is a tough job, but I can make more money. So, I came and work here'.

Another interviewee, when asked about the role of networks, said:

'I heard about the jobs in Thailand from my friends who were working here, and they introduced me to the job agent who finds us this job'.

The comments above illustrate that network make it easier for Myanmar workers to migrate. The participants on the whole demonstrated that social circles in the host countries are able to teach newcomers about, for example, the culture of the destination country, work environment including wages and work conditions, and information about shopping costs.

5.3.4 Summary

Overall, a variety of perspectives were expressed. A common view amongst interviewees was that they expect better income in the host country. The vision of employment opportunities and the hope of earning higher wages attracted most Myanmar migrant workers interviewed. It was no surprise that the high exchange rate of foreign currencies, remittance opportunities, and networks are other pull-factors for migration. Concerns regarding misinformation in host countries were more widespread.

5.4 Experience of moving to and living in Thailand

The following sub-themes appeared under the broad heading of 'experience of moving to Thailand'. This includes cultural and social activities; leisure time; and accommodation condition at the country of work. These are described and illustrated below.

5.4.1 Cultural and religion

The majority of participants agreed with the statement that working in a construction project with other workers who share the same culture and religion always benefits both the migrant workers and the employer. As one interviewee said:

'I live in site project, and I have to pay 75 Baht per week for my accommodation. And I think living on campus is better for me and other workers and also, we do not face any problems related to cultural or religion'.

Another interviewee, when asked about the role of the community, said:

'We all come from different parts of Myanmar, but we help each other in case of problem. For example, if someone faces any difficulties, we collect money from all Myanmar and help him. There are no roles in the community, we just help each other'.

There were some negative comments about working in a multicultural workplace. As one interviewee said:

'All migrants here are just basic workers. That is our role. Sometimes, they (Thai) like to insult us. If we are not patient enough, some workers fight back'.

A common view amongst interviewees is that culture and religion are the most important motivators for Myanmar workers, especially for creating a good relationship in the workplace. This is in line with the current literature that shows that cultural factors in the workplace could play a major role for enhancing productivity in the construction sector. For example, one interviewee said:

'There are some Myanmar workers around here, but we do not form as a community or a group because there aren't that much Myanmar people around here. We just help each other in case of problems. Overall, we wish to attendance on Myanmar community to enjoy our cultural activities on our free time.

5.4.2 Leisure time

A number of participants felt that there is no leisure time for them in the working week. Some felt that work should continue as it is seasonal work, while others considered that working extra hours could help with their savings and improve their family life. Talking about this issue, an interviewee said:

'I cannot work the whole month because busy traffic makes me more tired, and I cannot get enough sleep. I can sleep only at 11 pm due to traffic jam and wake up at 4 am, early morning'.

Another interviewee, when asked about how they spend their leisure time, said:

'Sometimes, the time we arrive to room is too late, so we are hungry and late to eat dinner and late to sleep. That is because of traffic jam although we have ferry. We leave work at 6:00 pm and arrive late to the apartment at 8:00 pm'.

A small number of those interviewed suggested that they preferred to work overtime rather than spend their free time resting, watching TV, etc. For example, one participant said:

'I have to work from 7:30 to 4:30 and I get 300 Baht. For over time, I get 56 Baht per hour and usually work up to 7 pm so in total, I earn around 400 Baht per day. I used to work up to 10 pm before, when we started this project. I am satisfied with my salary because it is more than what I can earn in Myanmar. And, on Sunday, they give us two times of our salary, so I get 600 Baht on Sunday'.

In all cases, free time or leisure time was largely absent from the work routine. This is because migrant workers are keen to work overtime, or the construction programme has an extremely tight deadline for completion. As the literature confirms, working beyond the agreed hours could impact health and safety.

5.4.3 Accommodation

The majority of participants reported that they lived in apartments provided by their employer. As one interviewee said:

'I live in the hostel the company provides us. The hostel is covered with copper sheets. We have to pay 75 Baht every 15 days as rent cost. They provide us water and electricity. The place is not very good, but it is ok. We have to share the room with others and usually two persons in a room'.

Another interviewee, when asked about the accommodation conditions, said:

'Campus is clean. It is a three-storey building. There are eight rooms in each storey including one toilet and shower room. We share it together. In a room, three people stay together. Staying here is okay'.

Several participants also felt that living in a campus provided by an employer is safe for workers, despite the cultural diversity in the workplace. Here is another example:

'I live in-site and I have to pay 75 Baht per week for accommodation. And I think living on campus is better for me and other workers and also, we do not face any problems related to cultural or religion'.

A few participants argued that they lived in apartments with limited space and facilities. For example, accommodation was perceived as not having enough space for the number of workers. Talking about this issue, an interviewee said:

'We sometimes have to stay three persons in a room when it is very crowded. There is nothing in the room. They gave us the pillows when we first came to stay at hostel, but we have to give money for that when we get our salary'.

A number of issues were identified within the theme of provision of accommodation. The literature evidence that enhancing accommodation for construction workers could improve their living conditions and, of course, the performance of the construction sector.

5.4.4 Summary

Some participants expressed the belief that working in foreign workplaces with other workers who share the same culture and religion is highly recommended because of the help and support they receive from them. Some interviewees argued that they lived in poorly maintained crowded apartments and had limited time for recreation and social activities, while others had rather positive experiences. In all cases, participants were satisfied with the accommodation provided by their employer, which can be a safe place to live and participate in social activities.

5.5 Experience of working in the construction sector

This theme describes the migrant workers' experience of the construction sector in Thailand. These experiences vary from very positive e.g., the recruitment path, to very negative e.g., communication problems, long working hours, and lack of training. The following sub-themes emerged: attitude to health & safety, competence, communication, working hours, income, and training.

5.5.1 Recruitment

The majority of participants reported that they were employed through an agency which uses MOU agreements with neighbouring countries. The role of the agency is to offer employment and sign a contract with workers prior to their departure. Methods of recruitments identified in these responses are presented in Figure 5. 4. For example, one interviewee said:

'The agent came to our village for recruitment, and he told us that we have to work in construction. As I am interested in construction, I decided to come and work here'.

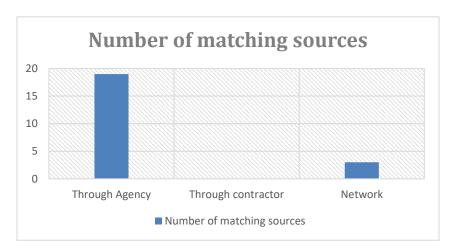


Figure 5. 4 Recruitment methods

Concerns were expressed about the costs associated with the recruitment process. Several participants commented that they had been charged high fees by recruiting agents. Talking about this issue, an interviewee said:

'I paid 300,000 kyats to get passport in Myanmar. The agents said that if I spend around 350,000 kyats overall, I don't need to spend more to work here. But after arriving here, I still need to pay 2,000 Baht per month for six months. They cut it out from my salary'.

Another interviewee, when asked about how pre-departure costs were funded, said:

'I spend 600,000 kyats overall in Myanmar to be here. As I am a poor man, I borrowed some money from my neighbours. Last year, I did pay my entire loan and could buy a house in my town'.

A number of migrant workers also experienced discrimination from the recruitment agencies in Myanmar. Upon their arrival abroad, migrants experienced a different reality to the one they had been expecting. Another reported problem was that the majority of participants had no experience or knowledge of construction activities. The issues identified in these responses are summarised in Figure 5.5. Talking about this, an interviewee said:

'No, I do not have previous experience concerning with current task. I worked at another site of this company before and working at this site. There, I had to do variety of tasks such as installing ceramic tiles and bending iron rods during my work day'.

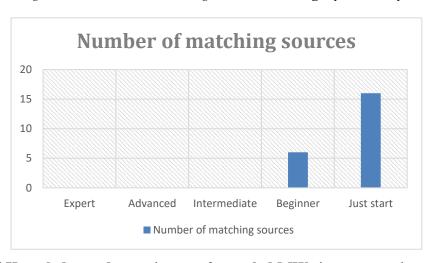


Figure 5. 5 Knowledge and experiences of sampled MWs in construction.

Opinions differed as to whether migrant workers chose and entered the construction industry with no knowledge or experience. A number of interviewees commented that the main reasons for working in construction were the employment opportunities in the sector. The items identified in these responses are summarised in Figure 5. 6. For example, one interviewee said:

'I have some friends working in construction sites. They told me that working in factories are not good and cannot get well-paid although it is a tiring job with no rest. Then, they encouraged me to work in construction sites. So, I agreed with them and working here. For the first time, the agent told me that I would work in constructing buildings but now I am working in constructing underground project'.

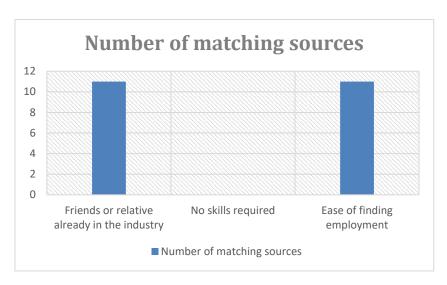


Figure 5. 6 Reasons why sampled MWs chose the construction industry

When asked whether workers need to be skilled to find a job in the construction sector, the overall response was poor. There was a sense of recruitment issues amongst interviewees. The majority of those who responded to this item felt that working in construction was not their choice during the pre-migration process but was the only option for them to enter and work in Thailand. There were some negative comments about the high costs of their pre-departure, including agency fees.

5.5.2 Attitude to health & safety

A number of issues were identified regarding health & safety amongst Myanmar workers on construction sites. The participants on the whole mentioned issues associated with safety matters on project sites. The issues identified in these responses are presented in Figure 5.7.

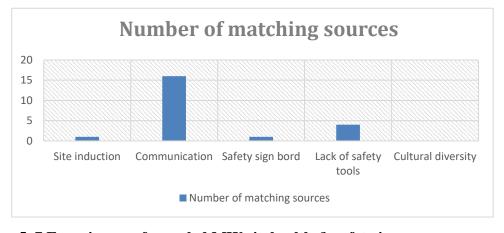


Figure 5. 7 Experiences of sampled MWs in health & safety issues.

The majority of participants reported that they had to attend a site safety induction twice a week with their foremen, and the communication related issues significantly impacted them in-site project. As one participant said:

'In site, we have to follow safety procedure which state clearly on the site. (Strict by laws). Also in construction project, company must follow the safety requirement. The employer has to hire safety officer to work on the site'.

Surprisingly, a number of respondents said that they do not understand the Thai language well and as a result, they get help from other workers who do. For example, an interviewee said:

'Here, the safety officer (we call him green head) usually gives safety briefing on Mondays and Thursdays. However, he only speaks in Thai so most of Myanmar workers cannot understand and they just do whatever they want. Before this project, I worked at a bridge project, and they also give safety briefing on Fridays and the safety officer usually asks a Myanmar who understands Thai to explain what he speaks to Myanmar workers. But there is no explanation here so we cannot understand'.

Some felt that their employer was very supportive and provided all necessary facilities and site safety rules including signage to be followed when working on site projects. However, others stated that workers have to buy their own safety tools and equipment. For example, one interviewee said:

'This site has safety rules we have to follow, and we also have to use personal protective equipment (PPE), but we have to buy them by ourselves'.

The majority of participants reported that the employer provided a health insurance card in case of accidents. Not all accidents occurred due to the poor work-related safety standards of the employers. A number of participants commented that they experienced accidents due to communication issues with other workers and managers, and by taking risks themselves. On a positive note, migrant workers are entitled to the same hospital as Thai workers. Some interviewees argued that despite the free treatment, they were not paid during sick leave. As one interviewee said:

'Before coming here back in Myanmar, we were told that in case of accident, we will be sent to hospital and will also get full wage even though we cannot come to work. However, I do not get salary if we cannot come to work whatever the reason is. One of my friends falls off from stairs in site but he does not get any compensation'.

These views surfaced mainly in relation to migrant workers in foreign workplaces in terms of health & safety on site projects. A variety of perspectives were expressed by migrants regarding working on construction sites. Some felt that larger employers were better because they provided health insurance cards, while others held that language was the only problem faced in the workplace.

5.5.3 Competence

A number of issues were identified regarding the migrants' competence. The majority of participants who hold low level qualifications also have low skill levels. A number of participants reported that family-related issues were the main cause of this. One individual stated that:

'I am satisfied about my skill and getting experience here. My education is Grade 4. I could not continue my education because my father was an alcoholic and I needed to work. I can read Burmese but not English'.

Another interviewee, when asked about skills and knowledge in construction activities, said:

'I am not satisfied about my skills because they don't teach us much and if I got a chance, I would like to work in Myanmar rather. I believe I can learn more if I work with Burmese supervisor'.

Another interviewee, when asked about work experience in terms of skills needs and qualifications related to construction work, said:

'No, I do not have anything. I also do not think we need any experience or education for construction work. No matter how educated or experienced you are, we will just have to do what they ask us to do'.

On a positive note, almost of those who were interviewed indicated that they gained new experiences working in construction. For example, they develop their skills and ability to do certain work, improve their communication skills, and increase their levels of confidence learning new things. As one interviewee said:

'Now, I have learnt new things. I had to do welding, carpentry, painting etc. I first worked at BTS construction site of this company, and I had to do welding, then I move to another site and do painting'.

Other responses to this item included:

'I have learnt a bit of Thai language, so my leader always asks me to do the tasks like getting equipment and to accompany other workers'.

A common view amongst interviewees was that they are unskilled workers, and experienced significant lack of education in their countries of origin. Some hoped to improve and enhance their careers in the construction sector, while were disappointed with their employers due to the lack of training programmes.

5.5.4 Communication issues

There were some negative comments about communication issues in foreign workplaces. The majority of participants felt that upon their arrival they had limited knowledge of the nature of their positions and poor ability to communicate with colleagues and supervisors. The literature confirmed that migrants were neither confident in foreign languages nor understood the language of the host country. As mentioned on Subsection 5.5.2, several participants reported that communication difficulties with other workers and supervisors might lead to increased risk of accidents and injuries at the workplace.

Talking about this issue an interviewee said:

'I just use body language. If I can communicate in Burmese like I am talking to you, it will be great and more understandable in working together. Now I just work according to their body language'.

A small number of participants were particularly critical of using body language with their supervisors. Other response to this question included:

'As I stay here long, I can understand Thai more and more and I try to learn it. So, I can communicate with them. If I don't know their words, they will point me out what I do by body language'.

Another interviewee, when asked about his experiences of facing language difficulties in workplace, said:

'My supervisor can understand some Burmese. And I can understand Thai a little that are related with work. So, it is okay to work with. I know what he wants me to do, and I can reply to him in Burmese langiage'.

A variety of perspectives were expressed when discussing communication problems in foreign workplaces. Concerns were expressed about the weakness of not understanding the local language. Whilst a minority mentioned that they could communicate in Thai, all agreed that they used body language for some work tasks.

5.5.5 Working hours

The majority of participants reported that they worked long hours at construction sites. This is associated with previous factors, such as leisure time. As one interviewee said:

'I have to work 8 hours every day from 7:30 to 4:30. After 4:30, we get over-time. I can rest on Sunday, but I did not get paid if I rest'.

There were some positive comments about working overtime. A number of interviewees commented that they can work more hours and get extra pay- per hour. For example, one interviewee said:

'I work every day from 7:30 am to 4:30 pm and work up to 7 pm as over time. There is no holiday in this job. We can rest a day or two if we want to, but we do not get paid on that day. But we get two times of our salary if we come and work on public holidays'.

Talking about this, an interviewee explained that they had the option of working short shifts. For example, one interviewee said:

'Working hour starts at 7:00 am to 12:00 am. Then, it is one hour for lunch. Work starts again at 1:00 pm to 4:00 pm. From 4:00 pm to 6:00 pm is over-time for two hours. So, we work normally from 7:00 am to 6:00 pm. Sometimes it is until 8:00 pm depending on workload. There is no off day, but Sunday is regarded as overtime, and we get paid double. We can take leave day as we want but after working two Sundays continuously, I have to take a leave on third Sunday automatically'.

Overall, these views indicate that migrant workers spend long hours working per day and they prefer to work overtime to get extra money. Despite the benefit of working extra hours, there were some negative comments about health and safety issues. For example, workers commented that arriving home late put pressure on them to prepare for the next day. As one interviewee said:

'Our hostel is too far from the work site. And there is only one ferry. So, sometimes, I cannot get a seat and it makes me tired for standing for whole journey. So, I need to take a rest in some days although I cannot work whole month. It would be better if I can get more salary'.

5.5.6 **Income**

Participants were able to explain their wages. They get 400 Baht (\$ 11.55) per day including overtime. The majority of participants reported that they were satisfied with their wages and were able to save money. For example, one interviewee said:

'Yes, I can say that the wage is not bad. It is more than what I can get in Myanmar. Normally, I get around 6000 Baht per 15 days and sometimes around 7000 Baht when I do OT. I have to work from 7:30 am to 4:30 pm'.

Another interviewee, when asked about his salary, said:

'I have to work from 7:30 to 4:30 and I get 300 Baht. For over time, I get 56 Baht per hour and usually work up to 7 pm so in total, I earn around 400 Baht per day. I used to work up to 10 pm before, when we started this project. I am satisfied with my salary because it is more than what I can earn in Myanmar. And, on Sunday, they give us two times of our salary, so I get 600 Baht on Sunday'.

Interestingly, there were no differences in the wage rate between Thai workers and migrants. As one interviewee put it:

'Thai worker also gets similar salary like us, and we cannot do anything if we are not satisfied. I think the salary is appropriate and we can also get overtime'.

A number of participants commented that they were able to save money and send it back to their families. Commenting on family life, an interviewee said:

'I get 300 Baht per day. After OT, we get around 400 Baht. So, I have to spend based on the salary. I also must save up to send some money back to my family. Usually, I cook by myself. All Myanmar workers around here cook by themselves'.

One concern was expressed about the wage rate compared to working in the country of origin. One interviewee said:

'Now, I just get 12,000 Baht per month. My income is not good as usual. So, I cannot save much money to go back. And now if I work in Myanmar construction companies, I think I will also get this amount of money. I am not satisfied much about my income now'.

A positive correlation was found between working overtime and migrants' satisfaction with their income. There were some negative comments about saving money. Some interviewees shared that they had to spend most of their salary on food, clothing, water and electricity and hardly saved any money to send home. For example, one interviewee said:

'I am not satisfied about my salary. I just get 300 Baht per day. I can work OT for only two hours a day and OT weights 50 Baht per hour. I can only get 12,000 Baht per month. It is not enough money to save and go back to Myanmar. Honestly, I want to work more OT and want to get more. But I can do nothing but just patient in this job'.

5.5.7 Opportunities for training

The majority of participants reported that they were not educated beyond primary level. In addition, they had no vocational training on the migration process. The training issues identified in these responses are presented in Figure 5. 8.

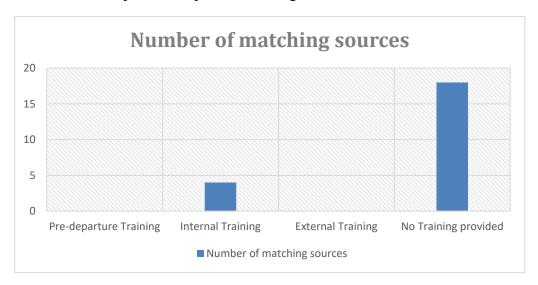


Figure 5. 8 Migrants by training opportunity

As shown in the above figure, all the migrants lacked external training programmes, and pre-departure training was largely absent. A common view amongst interviewees was that they had no training at their work. For example, one interviewee said:

'I do not have any training programme, but I am learning from other workers by watching how they do their task'.

There were some positive comments about internal training programmes provided by employer. As one interviewee said:

'Before working started, I and other Burmese guys watched video clips about how to build columns and construct walls one time. It was about one year ago. Only in this site, they did like this. In previous site, constructing 15 story building, they did not do like that,

and we just learned the jobs by working in site. Here is a good site that provides video clips for health and safety also, like warning to wear long boots in rain, otherwise bare foot can get electric shock'.

In all cases, participants welcomed opportunities for improving their careers and this was reflected in their decisions to work abroad. The data shows that employers must provide a training programme, despite the short duration of the employment contracts of their workers.

5.5.8 Summary

Overall, interviewees shared a number of construction work-related issues including methods of entering the construction sector, attitude to health and safety, competence, communication problems, wages earned, opportunity of training, and working hours. Not only were large proportions of the migrants young, married, and with little education and no vocational training, but the majority had had no experience of working in construction sector before they arrived in Thailand. However, there were some positive experiences: some reported that they had learnt new communication skills and techniques and had worked overtime and saved money.

5.6 Suggestions for improving migrant conditions

All participants were asked for suggestions to improve work relations in the construction sector. The majority suggested that employers, host governments and the Myanmar government all had roles to play to improve the current situation of migrant workers in construction. A number of workers highlighted the impact of lack of training opportunities and weakness of communication in the workplace to minimise accidents and injuries. As one interviewee said:

'I see no change here for Myanmar workers. We do not get much knowledge. We only get money. We cannot expect pay raise or promotion no matter how long we work or how efficient we are at our job. The workers who have been working for 4 years here get 300 Baht per day the same with the new worker'.

There were some negative comments about communication problems and changes to their roles in site projects. As one interviewee said:

'I think there is no hope for Burmese because we cannot understand their language much. And we cannot work long in the same site. My work is always changed by supervisor. So, I will be the same always and no change'.

A common view amongst interviewees was that the wage level was linked to the chance to continue working in the construction sector. For example, one interviewee said:

'I think there will be no difference, but I am considering the work situations. Now I just have extended one more year for visa. If I have more income because of more OT, I will still work here. If there is no OT in future and my income is the same, I will go back and work in Myanmar'.

There was a sense of the construction career amongst interviewees. Overall, nearly all the interviewees agreed that employers, workers, recruitment agencies in both host and sender countries should take more action to promote work relations. This is in line with the literature which shows that the requirements for entering the labour construction market have changed. This could be the starting point to share data regarding labour market for new candidates.

5.7 Chapter summary

Overall, it is not surprising that economic difficulty is the key driver of migration. In addition, there are other reasons for working abroad including political instability and support from friends and relatives. The chance of employment and earning higher income attracted most potential migrants to work abroad. These can all be considered as pull factors. However, there are many problems associated with the pre-departure stage which include the lack of understanding of their contract which in turn impacted their benefit of overall their migration. In addition, the literature confirmed that the return migrant associate with many issues such as the skills they gained and how they can contribute to the local market and their future in the construction sector.

In host societies, many migrant workers are not happy with their working and living conditions. Factors include poor housing, limited time for social activities, pressure at work, communication problems, long working hours associated with higher temperatures, and poor health and safety. Some mentioned general cultural issues at workplace. The

data confirmed that the communication problem impacted migrant workers and even more could play a significant role on their social activities in host society. The employer fails to pay more attention in these issues, and action to be taken regarding Health, Safety, and Well-being in-site, and how migrants working in safe environment. This can be avoided if there is a clear migration processes include understandable contract which the employer could play major part in this issue.

Migrant workers in construction experienced various problems with relation to construction activities in light of the introduction of new technology, which reflects the new skills needed in the sector. Most participants suggested that employers, both sending and receiving countries, and recruitment agencies needed to take action to improve working conditions. This includes resolving communication issues among other factors. Several participants mentioned that they faced major issues related to working in-site because they lacked sufficient language for the workplace. However, not all migrant workers were negative about their experiences in construction. Some reported that they were able to learn new skills, save money, and experience a safe working environment.

In this Chapter, the data played an important role to understand the employment of migrant workers in the construction sector, and what issues could influence their employment. Taken together, these findings suggest that there is a significant link between providing the relevant training programmes and improving the work conditions including communication issues that the migrant workers face in any construction projects.

6 CHAPTER 6 DISCUSSION

6.1 Introduction

This chapter presents the causal loop diagrams (CLDs) for migration and employment systems. These systems models were developed using findings from both employers and the migrant workers in construction sector (Chapters 4 and 5). This includes migration system, employment system, and job satisfaction system (M.E.JS.), which contains several complex variables and loops that indicate cause-effect interrelationships. The three systems are individually described to reveal their respective level of impact on the construction industry. CLDs were developed and presented to clarify the potential issues related to migrant workers in the construction sector, and to formulate potential strategies for decision-makers in developing countries.

6.2 The key feature of the systems models

The systems models were developed in three steps based on attributes that determine the key reasons for migration to work abroad, employers' preference for migrant workers, and issues influencing migrant construction workers' job satisfaction. Table 6.1 illustrates the key features of the immigration and the employment systems models.

Table 6. 1 The key characteristic features of the systems models

Migration and Employment Systems Models				
System		CLDs - title	Familiarity knowledge	Causal loop codes
Figure 6.1	Migration system	CLDs for the key reasons for migration to work abroad and employed by the construction industry system	Both origin- and host country	1B 1; 1B2; 1B3; 1B4; 1B5; 1B6; & 1B7
Figure 6.2	Employment system	CLDs for employers' preference for low-skilled migrant workers in the construction industry system	Host country	2R1; 2R2; 2R3; & 2R4 2B1
Figure 6.6	Job satisfaction system	CLDs for issues influencing migrant construction workers' job satisfaction in the host country system	Host country	3R1; 3R2; 3R3; & 3R4 3B1

The key variables in these models are a representation of how far into the future a modeller should consider and how far back in the past the origins of the issue lie. In addition, each variable in a system can improve/worsen the others and they work together to generate a range of impacts. These parameters define the boundaries of each system that can represent what their properties are.

In Figure 6.1, for example, the needs of the poor are simple and purely economical, i.e. to earn for subsistence. This need makes people willing to emigrate and work abroad. Another example is that increased pressure to emigrate leads to increased search for work abroad and acceptance of unfavourable conditions that also increase. As a result, external migration increases. This will reinforce exposure to health and safety, skills acquisition, potential to be a construction worker, and remittance to country of origin.

Employment in construction in Figure 6.2 depends on the construction company or employer's commitment towards the workers. For example, the effects of unfavourable conditions associated with construction employment can be minimized with the support of employers who provide adequate safety precautions, protection, and facilities. Workers' dissatisfaction can be reduced, and satisfaction can be improved by the employer. This reinforces the employer-worker relationship and increases workers' commitment to the organisation. Therefore, commitment of the employer is another factor which influences the willingness of workers to be employed in construction. The hypothesized causal relationships of each of these systems are described below.

Considering the variable in Figure 6.6, an important attribute which influences willingness to be employed is job satisfaction in the host country. The status of such factors affects job satisfaction level, which in turn affects determination and willingness to continue working in construction. For example, feedback loop (R2/4) is a virtuous circle within the system. It can be observed that growths in the level of income increase the level of willingness to be employed, which in turn increases job satisfaction in the system.

6.3 Migration and employment systems models

The migration and employment system (M.E.JS.) is made up of three different system models. These systems capture migrant workers effect on the construction sector. A

conceptual understanding of the occurrence of migrant workers in the construction industry has been developed in terms of a set of closed feedback loops. Scenario, migration and employment, as shown in Figures (6.1, 6.2, and 6.6), have been explained in order to understand the effect of the migration workforce on the construction industry.

6.3.1 Migration system

The migration system is the first model within the migration and employment system models. This model captures the reasons for external migration from the country of origin. Figure 6. 1 illustrates the CLDs for this system. The CLDs indicated in Figure 1 define the interrelation between different causes that lead to the occurrence of external migration in the system. This interconnecting chain of cause-effect loops makes variables a network of dynamic behaviours. It must be noted that this system is limited only to the variables associated with external migration. In addition, it contains reinforcing or positive loops (represented by 1R 1) and balancing or negative loops (denoted by 1B 1 – 1B 7). Details of these casual loops are explained below.

The negative casual loops ($1B\ 1-1B\ 4$) represent balancing loops. The basis of these loops is that such push factors (including domestic employment conditions, requirement of more income, community satisfaction and environmental conditions) may lead to a range of impacts on pressure to emigrate in the system. These results are in agreement with the findings of Van Hear et al. (2017) which show that in any migration flow there are several driver complexes that may interconnect to shape the subsequent direction and nature of movement. Therefore, the outcome of these causal loops can drag people to external migration. This balancing effect, as presented in ($1B1-1B\ 2$), is one of the main reasons that encourages people to work abroad.

As indicated in the feedback loop (1B 2), the need to generate income for survival will make the poor willing to migrate to seek work abroad. Domestic economic conditions cause an increase in pressure to emigrate that in turn increases the level of external migration in the system. In addition, acceptance of unfavourable conditions further reinforces external migration to form the loop (1B 3).

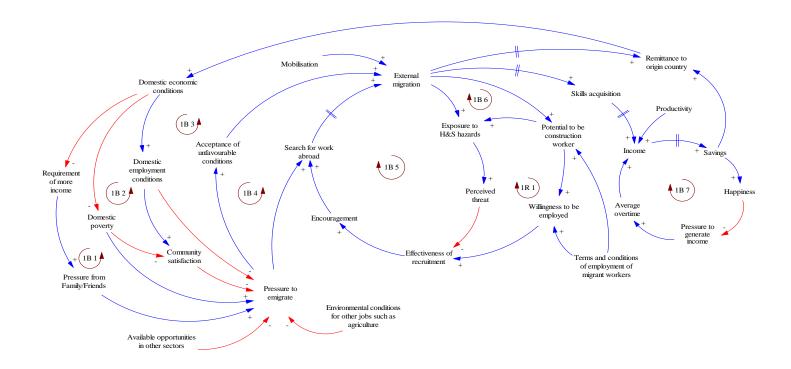
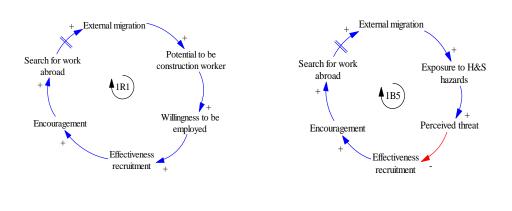


Figure 6. 1 Causal loop diagram for migration system

In feedback loop (1B 4), growths in the level of pressure to emigrate increase the level of search for work abroad in the system. This will drive migration to countries with better prospects to earn more income. Growth in workers' willingness increases motivation and they might be encouraged to acquire skills. The increase in mobilisation during the migration stage reinforces workers' willingness to migrate. Since their needs are small and basic, saving will increase. The growth of savings, over a period, will reduce the pressure to generate income. This will result in an increase in external migration that in turn increases remittance to origin country. Bahn (2014), however, states that migrants are vulnerable in that they can experience several stresses that include long periods of separation from their loved ones, starting a new job in an unfamiliar environment and resettlement tasks. Moreover, construction workers in LMIC are even more vulnerable that the sector have to deal with all the uncertainty of low wages and causality recruitment, however, they also face the additional risks of routine exposure to OHS which include injury, ill health and death due to unsafe working conditions in many workplaces. Additionally, COVID-19 increases the risks faced by construction workers and a coordinated response is needed to deal with issues of occupational health & safety; social protection; and wellbeing (EAP report, 2020).

Construction work is described as dirty, dangerous, and difficult (3D) and entails exposure to unhealthy and unsafe conditions. In addition, the construction industry experiences a relatively high rate of fatalities and injuries. For example, modular/prefabricated building construction requires better safety performance during both manufacturing and onsite processes, and construction requires long hours of hard work (Fard et al., 2017).

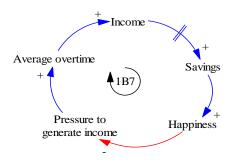


(a) A Reinforcing loop

(b) A Balancing loop

The positive feedback loop (1R1) represents the reinforcing loop in the system which operates as a cycle that drag on people to emigrate. It can be observed from the above Figure that exposure to health and safety hazards covers a range of impacts that migrant workers may face on construction sites. In feedback loops (1B 5 and 1B 6), people usually migrate to work abroad with assistance offered in terms of agencies. As migration increases, the potential to be a construction worker increases which in turn causes exposure to health and safety hazards to increase. However, improving the terms and conditions of employment in the host country leads to an increase in workers' willingness to be employed as construction workers. Additionally, exposure to safety and health hazards are reduced when workers' skill levels increase and when proper training is provided.

Income from construction employment can increases economic status and help many poor migrant workers to achieve social acceptance. However, failure to take into account labour market requirements in the host countries, including skills needed, may produce misleading wage effects of migration (Llull, 2018). As indicated in the feedback loop (1B 7), when income increases, the gap for satisfaction of survival needs is reduced, which in turn increases saving. As result, workers try to fulfil other needs, such as children's requirements, taking care of elderly parents, and saving to build a home.



(b) A Balancing loop

Therefore, due to these new needs, the saving rate is reduced and both required income and the pressure to generate more income increase. Additionally, unexpected changes in interest rate and exchange rate may have considerable impacts on remittances to countries of origin. This will result in an increase in working long hours, which in turn increases willingness to work in construction. In construction, working long hours have

increasingly become a routine part of work life, especially for low skilled workers who wish to increase their income. However, long work hours have severe effects on workers' health and well-being, and reflect the dark side of the working conditions (Tsai et al., 2016).

The whole set of feedback loops presented in Figure 6. 1 attempts to describe the widely observed migration phenomenon because of which people tend to move for work abroad. The effects of the migration workforce on the phenomenon of employment in construction in host countries will now be explored.

6.3.2 Employment system

The recruitment system is the second model of the migration and employment systems. The purpose of this system is to understand the interactions of its variables in the context of the unfavourable conditions associated with the causal recruitment practices in construction work in developing countries. However, the negative impacts can be reduced and the positive impacts can be increased with commitment from the employer. This depends highly on the economic conditions. The feedback loops of this system are represented in Figure 6. 2. This system contains reinforcing or positive loops (represented by $2R \ 1 - 2R \ 4$) and a balancing or negative loop (denoted by $2B \ 1$). Details of these casual loops are explained below.

Migrants' ability in their native languages is of little use when the official language in the host country is different. In accordance with the present findings, previous studies have shown that people from different backgrounds and cultures express themselves and understand the behaviours of others in different ways, which can lead to health and safety problems (Bust et al., 2008). In addition, high rates of work accidents in the construction industry are due to several factors, one of which is the involvement of unskilled workers (Maryani et al., 2015). In feedback loop 2B 1, when commitment from the employer is high, the training budget increases, which in turn causes communication issues to decrease.

Given that, this result may explained by the fact that migrants are unlikely to learn local languages, and even when they attempt to do so, there is a delay given the length of time required to acquire sufficient proficiency for effective communication. As result of the

training received, workers are often more suitably qualified for jobs available in host countries. Therefore, construction work in host countries will be more suitable than in countries of origin and thus migrants prefer to work in construction. Moreover, the effect of this loop contributes to growth in migration volume.

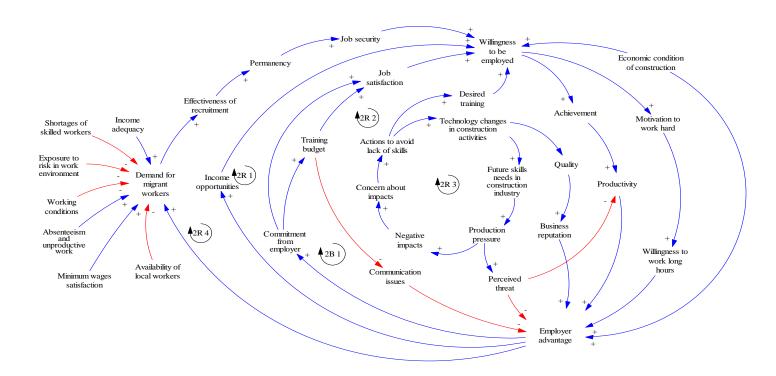


Figure 6. 2 Causal loop diagram for employment

The behaviour of the feedback loop $(2R\ 1)$ is identified and discussed in previous feedback loops $(2R\ 2-2R\ 3)$. This indicates that when commitment from the employer is high, job satisfaction increases, which in turn increases workers' willingness and attachment to the construction industry. This linkage makes the recruitment process a challenge to the industry's employers who wish to get the best out of their workers.

Based on the data, Figure 6. 3 shows that demand for migrant workers in the construction industry is based on several factors that could decrease or increase the involvement of migrants in the industry. This means that any changes in these variables could affect the systems as whole. For example, shortages of skilled workers in the industry decreases the demand for migrant workers, which is likely to have consequential economic impacts on any construction programme (Boateng et al., 2017).

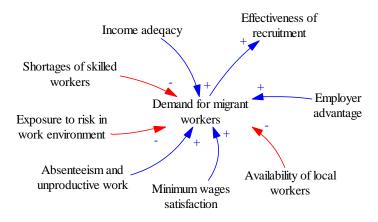


Figure 6. 3 Causality of demand for migrant workers

Employers still prefer to recruit migrant workers for reasons which are identified in Section 4.4. In feedback loop 2B1, growth in the level of commitment from employers increases the training budget, which in turn decreases communication issues in the project resulting in an increase in employer advantages.

From Figure 6. 4, we can see that the basis of the loop 2R3 is that technology changes in construction activities may cover a range of impacts on whole systems. The positive feedback loop 2R3 represents a reinforcing loop and acts as a key player in the whole system. This loop operates as positive cycle that can explain the technology changes in the construction industry in light of the current demand for labour.

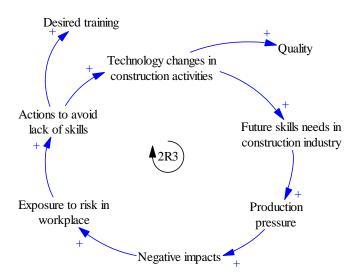


Figure 6. 4 Positive feedback loop with relation to force to change in the construction industry

It is widely mentioned that the higher the complexity of any construction programme, the more technical changes can generate an increase in the project uncertainties. In addition, pressure on the construction industry is higher than at any time before because of its role in contributing to the SDG targets, which need attention in order for employers to cope with the introduction of such technology in the sector (see Subsection 1.2.2). All the variables involved in this loop could increase the rate at which technology changes impact on any construction project. Therefore, increasing the desired training from employers could strengthen this motivation. However, it could also have unplanned outcomes if employers, for example, recruit undocumented workers who have limited experience and are from countries where the language barriers are especially high (2B1).

6.3.3 Job satisfaction system

The job satisfaction model is the last model under the migration and employment system models (M.E.JS.). The variables of this system are often issues related to migrant workers in construction in host countries. Most of these factors are dependent on the industry's employers. Because of the dependability involved, system variables are interrelated to the personalities and the statuses of the people involved, and these are complex and dynamic in nature. This type of system performs a pure analysis by modelling cause and effect, as indicated in Figure 6. 6. In addition, the loops that show the effect of job satisfaction on migrant workers' willingness are illustrated. This system contains reinforcing or positive loops (represented by $3R\ 1 - 3R\ 4$) and a balancing or negative loop (denoted by $3B\ 1$). Details of these casual loops are explained below.

Considering the relation of the job satisfaction variable in Figure 6. 5, by pure logic, it can be observed that it builds up by several variables which indicate cause-effect interrelationships for the whole system.

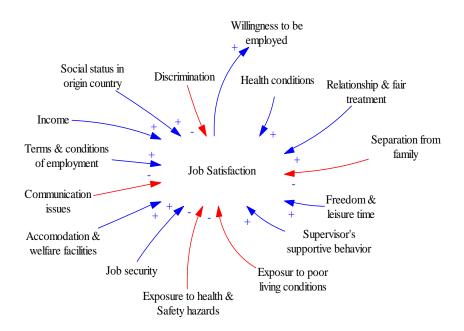


Figure 6. 5 Causality of job satisfaction

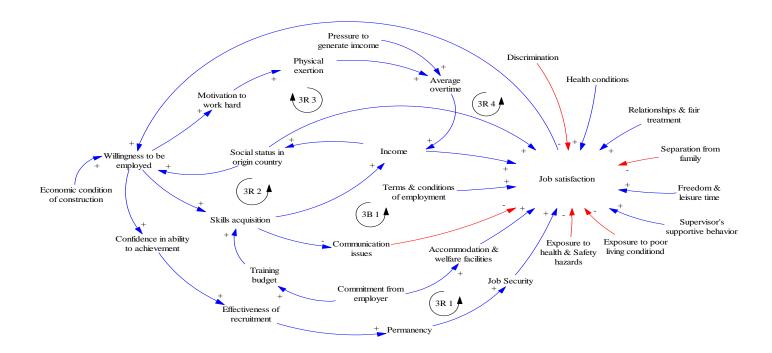


Figure 6. 6 Causal loop diagram for job satisfaction system

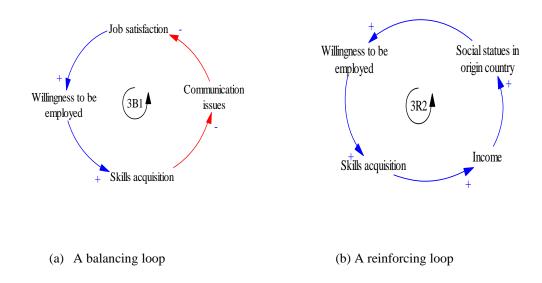
The basis of the loop (3R1) is that when willingness is high, workers wish to have permanent employment and secure jobs, which lead to an increase in job satisfaction. With permanency, workers enjoy special benefits such as health insurance, which in turn increases their responsibilities. This can increase job satisfaction, which leads to increased willingness. However, factors such as health conditions, relationships and fair treatment, separation from family, freedom and leisure time, supervisor's supportive behaviour, exposure to poor living conditions, and discrimination may cover a range of impacts on job satisfaction. These effects may either increase or reduce satisfaction and willingness.

Migrants willing to be engaged in construction work try their best to acquire skills and experience to earn more and to secure their jobs. As indicated in feedback loops (3R2 – 3R3), when workers' willingness is high, they are highly motivated and may physically exert themselves for long hours to earn more pay. The workers willingly engage in overtime shifts. This can lead to increased pressure to generate income. Skills increase workers' mobility and satisfaction leading to increased willingness. As a result, income increases, which in turn helps to achieve social acceptance for many poor workers. This leads to an increase in job satisfaction, which makes them more willing to be employed in the construction industry.

Workers physically exert themselves to earn more when their willingness is high. In the long term, physical exertion may cause a decline in health. This can decrease job satisfaction and makes workers less willing to continue with employment. The feedback loop (3R 4) shows how physical exertion leads to overtime shifts to generate more wages, which in turn increases income. In this way, satisfaction and willingness to continue employment in construction sector increases.

Feedback loop (3B1) shows that when willingness is high, workers tend to acquire skills faster. Typically, employers wish to retain skilled workers permanently. Additionally, an increase in skills leads to a decrease in communication issues, which in turn increases job satisfaction. However, if the commitment of employers is strong, this issue can be solved so that job satisfaction and willingness to be employed both increase. Thus, when commitment from employers is high, they provide good occupational safety and health

measures. This reduces exposure to unsafe and unhealthy conditions associated with the job.



It can be observed from the above Figure that the positive feedback loop 3R2 represents a reinforcing loop and operates as a cycle that can increase willingness to be employed in the construction industry. As indicated in the 3R2 loop, skills acquisition causes an increase in income, which in turn increases the social status in the country of origin in the system. However, skills are acquired in an opportunistic way, often during a program for newly hired employees, with unexperienced employees lacking the resources and the time to pass on their know-how (Delgoulet et al., 2012). Furthermore, even when migrants attempt to improve their knowledge by getting involved in a programme of training, there is often a delay given the length of time required to acquire the skills needed to make effective progress in the job and overcome the communication problem in the workplace. This is with the line of one of the findings in system 2, especially presented within CLDs related to the benefits the employers gain of decreasing the communication issues within the construction processes.

6.4 Key discussion points

As mentioned in Section 3.9, a system thinking approach is a suitable qualitative method to solve real-world problems to describe relationships among variables in complex real systems. In addition, this chapter presents how applied systems thinking can be used to understand the issues of migrant workers in construction in different ways, such as by combining migration, employment, and job satisfaction.

This chapter has provided a summary of the findings of this thesis and discussed them in light of the existing literature on migrant worker issues in the construction industry. The pre-departure issues, including the potential involvement of migrants in construction, investigated in this thesis are similar to those of other studies based on pressure to migrate (Section 6.3.1). The data, for example, confirms that migrant workers have experienced problems with relation to exposure to health and safety hazards in the workplace. A possible explanation for this might be that the key factor to migrate is economic and based on the need to support families (see casual loop 1B7). This finding, thus, confirms the association between the disinformation about employment in host countries and the main reason for migration. It is interesting to note that some migrant workers do have positive experiences in terms of better savings with relation to current salaries status in the construction industry.

Perhaps the most important finding is that workers who have a poor work environment are more likely to experience poor health and safety and are also less willing to work in the industry. They are likely to be unsuccessful in their migration overall. In addition, poor communication skills with foremen and managers and not following workplace safety can lead to work-related issues. The lack of appropriate training programmes is more likely to put more pressure on the industry in terms of the shortage of skilled workers who can cope with the new technology is introduced in this sector (see casual loop 2R3).

Another important finding is that the current skills assessment of migrant workers compared to native workers highlights the vulnerable position migrant workers usually have in the labour market. It is important to bear in mind that there are important differences in the position of migrants in the labour market between countries. For example, migrant workers enter the construction labour market and accept low skilled positions despite being overqualified (see Section 2.5.1). This finding confirms the association between migration to work abroad and the situation of the labour market in the host country. In fact, analysis of the data on over-education at the country level is likely to give a more wide-ranging picture. For example, in terms of access to new jobs, recognition of foreign qualifications could improve any potential training program, which supports the decision to establish construction training schemes based on informal labour market information only (Watson and Sharp, 2016). This is not only beneficial

for the migrant workers themselves, but also helps receiving countries to benefit economically from migrants. Employers in turn ensure decent work for migrants and improve the labour market for host and origin countries alike.

It is not surprising that due to the difficult nature of construction activities, construction work is considered as a 3D job (dirty, difficult, and dangerous). It can thus be suggested that construction employment is not considered as adequate, which in turn creates an image that construction employment is an easy point of entry for low skilled workers. Despite its unattractiveness, the construction sector provides many job opportunities, which reflects the high number of migrant workers in the sector (Section 1.2). Several factors could explain this observation, such as the temporary and casual nature of employment, seasonal opportunities, and alternative sources of income.

Furthermore, workers who enter as unskilled workers learn skills on-the-job and become a skilled with experience. This could increase the satisfaction of workers who are willing to work in the construction sector and build a strong attachment to their employers. It is important to bear in mind that training for construction workers is unlikely to happen in the light of the casual nature of the labour market. This finding might help the industry to design training schemes that include short courses tied to rises in income which increase workers' willingness to continue as construction workers. Overall, increasing the financial advantages might motivate workers to perform in the short term, however, it will not affect their commitment to work in construction in the long run.

Finally, the current construction labour market indicates that the labour shortages within the sector will be a continuous need for low-skilled workers in the sector. It is notable that there are a restrictive policy relating to the employment of migrant workers in construction such as the *Kafala* systems which is a popular recruitment system in the GCC6 countries to supply workers, and the MOUs framework in facilitating legal migration in Thailand. The failure of these policies has increased the employment conditions where they exposed to mistreatment as argued in Chapter 2, subsection 2.3. To tackle these issues, it is suggested that both sending and hosting governments reconsider their recruitment framework by strengthening the recruitment system (see Appendix 9.7).

6.5 Strengths and limitations of the study

Through the life cycle of any research, each stage has its own strengths and weaknesses. In qualitative research, for example, the researcher plays a crucial role in the research processes from the data collection to decisions taken about the research design and analytical approaches used, to interpretation and conclusion drawing (Queirós et al., 2017, Choy, 2014). This research is based on data collected with relation to migrant workers in the construction industry. This thesis investigates the issues of migrant workers working abroad in the construction sector. This section highlights the key strengths and weaknesses of this research.

6.5.1 Strengths

A key strength of this study is that it uses a triangulation approach to measure the phenomenon of migrant workers in construction in order to overcome their issues (Love et al., 2002). Data was collected at different times and from different sources using the same data collection method and analysis. The triangulation method has been viewed as a qualitative research strategy to test validity through the convergence of information from different sources (Carter et al., 2014). This research remains one of its field in the target population of migrants and employers in the construction industry. Since the dynamic flow of migrants in the target countries (data sourcing) has not changed over the past years (see Section 1.2), the findings are still highly relevant.

As well as the high number of participants in this study (44 interviewees), a further strength is that the findings are based on data from both employers and employees. Chapter 4 presents the key findings from the managerial level with relation to migrant workers' involvement in the construction industry, and improvement of their situation in light of the new vision of the industry. Chapter 5 presents the key findings about migrants' issues in the construction industry and how they could be solved. This study has been able to discuss a significant issue by applying a system thinking approach that describes and identifies issues for governments and policy makers to address (see Section 7.2.3). The use of this technique helped to deeply investigate the aims of this research project.

6.5.2 Weaknesses and limitations

It is always worth mentioning the limitations of any study to help others to improve the quality of the outcomes. Even though effort has been made to overcome the study weaknesses, it was difficult to address them completely. The following are key limitations of which the reader should be aware.

A major weakness of this study is that it did not use a mixed-method approach combining both quantitative and qualitative methods. For example, the absence of a structured questionnaire technique decreases the opportunity to enhance the research design in terms of multiple data collection methods used. The issues could better be investigated by ranking the most significant issues to narrow the research and avoid an overwhelming volume of information. While the qualitative analyses explored the living and working conditions of migrants in their host countries, quantitative analyses could better understand the associations between various factors and the outcome. This could be investigated in detail to answer questions with relation to factors associated with working in construction and the reasons why migrant workers are more vulnerable to these factors. Overall, if there had been a quantitative element, the study could have included more participants, and some of the statistical analyses may have shown stronger associations with a larger sample.

This study interviewed mainly unskilled workers with low levels of education. The question of whether skilled workers face similar issues in construction could not be ascertained by this study's findings. Therefore, the findings are less likely to be applicable to educated, skilled migrant workers involved in construction activities in host countries. Furthermore, the findings relating to health and safety should be treated with caution as the workplace in different countries varies greatly. For example, the methods and the types of building are different from country to country (i.e., houses constructed in Asian countries are completely different to those constructed in Europe). These on-site variations could include the physical workplace as well as legislation and adherence to health and safety rules.

One of the limitations of the study population is that the voices of migrant workers from GCC6 countries were largely silent (see Section 3.6). To develop a full picture of

migrant construction workers in developing countries, additional studies will be needed to make a comparison between Thailand and GCC6 countries.

6.6 Chapter summary

In this Chapter, CLDs are played an important tool for constructed the three systems that associated with the research objectives. The first system builds up with relation to the migration issues that the migrant workers go through from the decision for emigrate to the staying in host country and return to origin. The second system builds up regarding the employment of migrant workers in host country and the issue that they face in construction sector and what the role of the employer should be for their experience in construction sector and their migration overall. The third system is working as feedback from migrant workers in host country and how they could benefit from working in construction sector. This could help improving the construction workforce in the future.

The whole set of feedback loops presented in the first system are attempts to describe the widely observed migration phenomenon because of which people tend to move for work abroad. This system helps to discuss many issues related to migration processes which in turn affected migrant workers in construction sector. Issues include the pressure to emigrate increase the entry to construction employment without any knowledge of construction processes could increase the exposure of H&S hazards. Overall, this system has provided a clear picture about migration related issues. The second system is the employment system that describe the employment of migrant workers in construction sector and the employer's commitment to them. This system has been constructed by feedback loops related to the demand of migrant workers, the employer's advantage of using migrant workers, what issues could be faced by using them and how likely migrant workers to be attached to the construction sector. It concludes that the future demand for migrant workers dependence about the employment conditions; the commitment from the employer; and what could benefit from their migration. The third system is the job satisfaction system that constructed of CLs related to migrant workers in host country. In this system, many variables have been used such as the willingness to be employed in the construction sector, how satisfied on their employment, and what should be done to improve their knowledge and skills regarding construction employment. Increase the employer's commitment with relation to facilitate training programme and decrease

issues such as communication problems in workplace could highly benefit both migrant workers and their employers.

To conclude, the three systems have been constructed in light with the research objectives. The first system high light issues related to the migration processes that the migrant workers issues have been identified and discussed as present Objective 1, the second system discussed the employers' view on migrant workers and the issues that could influence the construction process represented by Objective 2. The Objective 3 has been discussed within the third system that represent the issues that influence the migrant workers employment in construction sector in host country. It is interesting to note that the employment and migration system has provide a deep understanding of the situation of migrant workers in construction sector in developing countries. It allows the researcher to recognise the issues and at the same time to provide possible solutions. For example, the recruitment system for employment of migrant workers in construction sector faces major negative feedback such as the lack of information about the contract and the costs of recruitment. The next Chapter attempt to provide such recommendations to overcome the concerns of the situation of migrant workers in construction sector that clearly presented in this Chapter.

7 CHAPTER 7 SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

7.1 Summary

This Chapter summarises the research and formulates conclusions and recommendations based on the findings of the studies presented in this thesis in conjunction with previous literature. It also presents the contribution to new knowledge based on these findings. This thesis has addressed the issues and challenges faced by migrant workers involved in the construction sector. This research was conducted to investigate construction labour market issues in general, and specifically, migrant workers' issues faced by the construction sector. This puts considerable pressure on the industry because of the share of migrants in its workforce.

The research presented in this thesis has addressed the objectives identified in Chapter 1. The first question asked what challenges the industry faces, including its contribution to the economic situation of its workforce. This is discussed by asking some questions such as what the labour market issues in developing countries are, with specific focus on the construction industry. These issues were discussed and identified. More specifically, the focus was on the issues faced by migrant workers involved in construction activities. These issues were identified and discussed. In the case of migrant workers working abroad, for example, the most significant issues faced are how they can benefit from their migration outcome (see Section 1.1). This could influence a later stage of their migration process such as return-related issues. This could shed light on and raise questions such as what the potential workers have to entering the labour market, how they can improve during their employment, and what impacts could occur. Most of these issues were discussed in line with the requirements needed to enter construction employment (see Section 1.2).

Chapter 2 draws together related academic literature on migrant workers in the construction industry. It provides an overview of migrant workers in the construction industry and the challenges and issues that they face. These issues were discussed and identified; this research could not discuss all the issues that relate to the migrants but did shed light on the most significant issues that could impact both employers and

employees. The participation of migrant workers in the construction industry is one of the most critical issues facing the policymakers. The starting point was how migrants enter construction employment and why the employers are interested in recruiting migrants in construction programmes. Further, questions were asked about the potential risks of migrant workers in the workplace. This includes communication issues, health and safety, skills and knowledge in construction activities, and living conditions. The attempt was to review the most relevant literature and analyse the data to inform all stakeholders of this research about migrant workers in construction and provide possible recommendations regarding their situation. This would improve their knowledge about construction activities undertaken, including the knowledge and skills the workers should have to be equipped to adapt to the introduction of new technology in the construction industry.

Chapter 3 discussed the methodology for conducting qualitative data collection. The indepth interview technique was used to collect data. The data were collected in two parts: first managers with experience of supervision of migrant workers, and second the voice of the migrant workers. Conducting individual interviews with participants was key to investigating the views and opinions of insiders concerning the current situation of migrant workers in the construction industry. This research adopted a qualitative approach as a methodological tool for data collection. This methodology was considered useful as it enabled the approach to be flexible and open to detection of previously unconsidered themes and ideas. The triangulation form applied for data collection and analysis was based on two components: migrants from the perspective of the employer, and the voice of migrants in the construction industry. Love et al. (2002) suggest that we can better understand phenomena that influence project performance in construction by applying a data triangulation approach. In addition, the field research was a vital source of data that identified the roots of migrant workers' issues in construction industry. Furthermore, migrant workers usually have unique features and unprecedented historical data on various aspects with relation to construction activities. Therefore, the systems thinking approach was briefly introduced and applied to the analysed data. Three systems models were developed: migration, employment, and job satisfaction. The proposed outcome could be used by construction stakeholders, including the project manager and policymakers, to enable a system thinking approach to improve the construction industry and its workforce, including migrant workers.

The qualitative data presented in Chapter 4 reflects the views of the employers of migrant workers. It was found that the issues of migrant workers in construction are rooted in the labour recruitment policies and procedures. Migrant workers involved in construction projects could also increase the potential risk. It was very important to include managers' voices in this research which could improve the situation of migrant workers and project delivery. The significant issues related to migrant workers have been identified and discussed, and include potential training provided from employers and experience gained from employment overall.

Chapter 5 summarises the findings from the in-depth interview study, which reflects the voice of migrant workers in the construction industry. The thematic results are about migrant workers in construction and the immigration experience that they share. The data related to migration has been widely discussed in the literature of migration and the findings are confirmed by the researcher. This includes the two key components of migration - the push and pull factors of migration. It is interesting that factors that influence the migrants in host countries such as culture and religion, leisure time, and accommodation could improve their wellbeing. On the other hand, migrants confirm several factors that impact their experience in the construction industry. These factors include recruitment policies, attitude to health and safety, communication issues, skills and knowledge of construction activities, working hours, opportunity for training, and income. The data confirmed that the skills and knowledge needed for construction workers, represent among the other factors which could influence in any stage or level of construction employment.

Chapter 6 investigates issues related to migrant workers in the construction industry by applying the systems thinking approach to better understanding their situation. In this chapter, three systems have been developed in an attempt to improve the knowledge of migrants during the process of migration and when they are engaged in the construction industry. From the immigration systems, for example, the construction industry has been seen as the easiest way to find a job in host countries, as confirmed by the network to work during the immigration process. However, with the new process and techniques introduced in the construction industry, it is necessary to improve the skills and knowledge of migrant workers during the migration process if they are to benefit from their migration outcome. Another example from the employment system is that the

employer must provide the relevant training and improve the assessment procedures related to the skills needed in construction activities. Considering the variables in the job satisfaction system, wages have the most influence on work satisfaction. The data, however, confirms that wages can be influenced by the skills needed for any tasks. Therefore, it is necessary to tackle some issues related to job satisfaction such as training provided, effective management of overtime, enhanced communication channels in the workplace, and skills and qualifications assessment.

7.2 Conclusions of the study

This study set out to find ways for improving the conditions of migrant workers in the construction sector in developing countries. This study shown that migrant workers play a significant role in the industry's workforce, which could be a dual factor for the sector. However, migrant workers experience a variety of issues, include living and working conditions, work-related risks in construction, health problems and related factors. This thesis therefore aimed to tackle these issues by exploring responses of both the employer and migrant workers in the construction sector and by systematic discussion of the key findings of this study. To this end, a qualitative approach was applied.

The thesis consisted of four objectives. The first objective was to identify the issues being faced by migrant workers in the construction sector in developing countries (Chapter 2). Data was collected through document review. The findings showed that most migrant workers, especially unskilled migrants, experience various problems in the construction sector. It noted that common problems identified among migrant workers include communication and cultural barriers. Moreover, there is complexity in the recruitment system applied by both sending- and receiving countries. In addition, the data indicates that the mistreatment of the migrant workers in construction sector is shaped by their status in the sector as cheap and flexible unskilled labour. Some of the findings help to understand why migrant workers take these risks and accept the working conditions they find in host societies.

Chapter 4 sought to address study objective 2, that is, to understand employer's view on the value of migrant workers to construction process. It is often argued that the point of entry to construction employment has changed, and new skills are required to be able to undertake construction activities. For example, skills and training are misfits to the needs of the construction industry that there are serious concerns about the availability of the skilled workers and the training available to upskill the workers into the new roles (CITB, 2021). However, the construction industry remains a key employer in the economy of any country and its workforce must cope with any demands of changes. As discussed, the research has also shown that migrant workers should be more open to the changes introduced in the industry by keeping up to date on the labour market requirements in the country of work.

With the above challenges, these issues clarify why the current recruitment system do not effectively play a significant role in enhancing the situation of migrant workers in the host country. The important of migrant workers understanding of their employment and issues that influence their employment in the sector, as explored in the third study objective (Chapter 5). The findings showed that migrant workers often have experience of working and living under similar risk in country of origin, however, they need to focus on the labour market requirements in the host countries prior to or during their search for work abroad. It is important, for example, to note that construction activities require caution, and that health and safety regulations need to be followed, but the concern is that some findings revealed that low skilled migrant workers are very vulnerable to health and safety because of communication issues and related factors. For example, during the recent pandemic in 2020 (Che et al., 2020), unskilled workers suffered one of the highest death rates. This is alarming for the construction industry light must be shed on employment and skills levels and how to address them.

In conclusion, these findings suggest that both sending and hosting governments should recognise the special situation of low-skilled migrant workers and their families which the current recruitment systems does not act in accordance to protect them during employment in construction sector. Furthermore, the issues surrounding migrant workers in construction employment can be explained by three main themes (Chapter 6). Firstly, there are significant issues related to the migration processes, starting from the unclear decisions to emigrate at the transit stage (employment in construction in host country), to the return stage (experiences from employment abroad). Secondly, the migrant workers, working in construction, all share common problems related to employment in construction sector. The study confirms that unclear recruitment system creates inequalities which lead to increased mistreatment of unskilled migrant construction

workers. The findings of this study confirmed that the employer is responsible for most of the misused of the recruitment system. Overall, this study strengthens the idea that employers pay more attention on unskilled migrant workers and take serious action to improve their situation in host society (Subsection 6.3.2). Thirdly, this study found that factors influencing job satisfaction were used to facilitate the basis for providing recommendations. The findings, for example, from the fieldwork revealed that policies are often changed by host governments depending on labour market demands. The lack of knowledge of the host society and the language barrier are major issues for migrant workers in the construction sector (Subsection 6.3.3). Such a discovery suggested that there might be migrants who entered construction employment in host society were not able to perform in the local labour market (and the outcome from qualitative chapters confirmed this observation). Unless effective recruitment system to protect this population are put in place, poor access to the construction labour market will continue being a serious problem, not only to sending countries but also to host society in general.

7.3 Recommendations

The findings of this research project indicate that there are several opportunities for the construction industry and its key players to tackle the knowledge and experience of its workforce, including migrant workers. The recommendations provided from this research focus on the following areas: the importance of labour market data and information, recommendations for migrant workers and employers, recommendations for policymakers, recommendations for training providers, recommendations for other industries, and recommendations for further research. To make this section clear for the potential reader who may take up these recommendations, some questions need to be asked to help get the most of these recommendations such as who should benefit from these recommendations, why they should be done, and how they can be done. Note that, the below recommendations provided here are just a starting point which much more work needs to be done to adopt these recommendations in reality.

7.3.1 The importance of labour market data and information

It is widely cited that data is very important for any piece of research which could help for investigation into issues and providing such solutions. For example, the world faced a tough time during the 2020 pandemic which the data played a vital role for getting through this health issues. However, one of the key challenges identified in this research is the lack of official data and poor academic studies on Libyan institutions related to the local labour market. This could lead to unreliable research which is insufficient to determine the actual needs of the labour market for the demand of industrial labour recruited from abroad. Therefore, the providing of this recommendation is to claim the sponsor of this research to take necessarily action to make the data regarding labour market available for further research regarding migrant workers, especially the country approaching critical rebuild trends after years of conflict.

This research recommends that the data and information collected should include annual assessment of the market needs for demand of labour, forecasting of recruitment policies and the migrant workers profile which include nationality, education, skills, gender, age, and sector of employment. The failure of both the sender and receiving countries and the slow acting of the relevant government department could create illegal employment in the local labour market. Thus, this research suggests that these issues could be tackling by establishing good communication channel of databases and making the employment of migrant workers subject to the concept of supply and demand and the needs for the construction sector. For example, Libyan institutions fail to provide necessary information about migrant workers issues in the labour market. However, having the right information and reliable data could assist both the sending and receiving countries to interact based on the knowledge and address the concerns of migrant workers on construction employment.

It is highly recommended that collecting reliable data based on annual basses regarding labour market, would improve the academic research by informing the UN data and information in labour market issues to help for providing advice based on these data. This could enhance government strategy regarding managing migrant workers for both sending and receiving countries. If adopted, these recommendations would make a significant change in delivering clear migration pathways that are safe and efficient.

7.3.2 Recommendations for migrant workers and employers

These recommendations are provided to improve the situation of migrant workers in the construction sector. Migrant construction workers and their employer are the most likely to benefit from these recommendations. This study concluded that a proportion of migrant workers experienced work-related issues in the construction industry (see Subsections 4.5 and 5.5) and many more involved were discussed within the CLDs. It can be seen, for example, from the feedback loop (2B1) that the employer advantage increase when their commitment increases which in turn the situation of migrant workers increases in the construction employment. The findings and conclusions obtained from this research indicate the need for considerable amendment with relation to work conditions in the construction industry. There is another example when job satisfaction has been discussed. One finding came from the feedback loop (3B1) that communication problems could increase the risk of accidents in the workplace. At the same time, the willingness to be employed in the sector and the skills acquisition from their experience increase when the communication related issues decrease. Therefore, there are several key recommendations for the key players at a typical construction site, which includes migrant workers and those working with and supervising them.

Firstly, migrant workers often work without clear guidelines in the workplace as they do not sufficiently understand the local language. This might be because of the misinformation regarding their employment arrangements during their stay or upon their arrival in host countries. Thus, the employers in the host countries should provide very clear directions for their workers in the workplace including on-site signage and directions. Additionally, where possible, they should employ a foreman who shares the same language and culture as the migrant workers to minimise potential accidents.

Secondly, employers in the host societies should be familiar with and monitor the implementation of the recruitment processes and the health and safety standards at work. Additionally, employers should enhance the daily induction at the construction sites and improve the work environment as a priority. It is important, therefore, that workers in the construction industry are provided with an appropriate training program as part of their contract during the migration process.

Thirdly, migration is likely to continue and increase in the future and the construction industry faces a major labour shortage (Subsection 1.2.1). There seems to be an obligation for host employers to revise their strategies regarding employment contracting with relation to the working and living conditions of migrant workers. This would enhance the work environment for both employers and employees and improve and facilitate effective social integration of migrants in host societies.

Fourthly, the key challenges identified in this research are the lack of strong data related to the construction labour market, and poor academic studies. Data related to labour markets including basic information about employment issues in the construction sector are available from different governments and agencies. This might lead to unreliable data that is insufficient to determine the actual needs of the construction labour market in terms of its taskforce recruited from abroad. Thus, this research suggests that the issues of migrant workers could be solved by establishing databases and making their recruitment subject to the concept of supply and demand rather than advantage to employers. This would assist both the sending and receiving countries to interact based on reliable information and full knowledge to address the concerns of migrant workers in the sector.

Finally, this study also identified that there seems to be a lack of protection for migrant workers in host countries, thus employers provide all possible action to protect them. For example, during the pandemic in 2020, low skilled workers were among those highly likely to die due to the many factors discussed within the CLDs in Chapter 6.

Taken together, the above recommendations should be applied immediately. Some recommendations could enhance the current recruitment system by revising the employment contract for migrant workers. There are some challenges facing the application of these recommendations which include the time scale for this, and the involvement of several organisations to contribute for policy development which is crucial to ensure effective collaboration for raising awareness of the situation of migrant workers.

7.3.3 Recommendation for policymakers

It is necessary here to clarify exactly what is meant by policymakers. It is always mentioned that politicians make policy, especially someone in a government or political position who decides on new policies with the effort to tackle some issues with public interest. In general, the target audience of this research for influencing such policy should be the government- both local and national governments, politicians, and civil servants. To be more specific, these recommendations are for the policymakers who make and influence policies for migration.

In this section, attempt is made to provide some recommendations to both the governments of sending and hosting countries. More specific, these recommendations can be used by the decision makers for facilitating the recruitment processes for migrant workers for both sending- and receiving-countries which include the HR management, agencies, and brokers that play an important role on work related-issues. The findings of this study shed light on some key areas that need the attention of the policymakers to improve the situation of migrant workers and allow them to take advantage of their employment and overall migration. For example, some findings stressed that migration issues that represented by feedback loops (1B1, 1B2, and 1B3) lead to acceptance of unfavourable conditions in host country. Another example came from the feedback loop (2R4) when discussed the future demand for migrant workers in construction sector that the job security and the employer's commitment could increase migrant workers willingness to be employed in construction sector. There is a real example of the current situation in Libya that need more workers to be involved in the rebuilding target. The following are the recommendations that the research findings contribute and helped to provide them.

First, the main recommendation is to review the pre-departure processes, including clear information for potential migrants regarding their contract conditions. The host country should take responsibility of ensuring that the policies devised are in line with existing knowledge of migrants working abroad.

Secondly, the findings confirm the skills mismatch among migrants in comparison with local workers. This highlights the vulnerable position migrants typically have in the construction labour market. Thus, migrant workers may have difficulties transferring

their skills and experience across countries. A reasonable approach to tackle this issue could be that the recognition of skills and qualifications to be part of the recruitment processes. It is important that the employers keep skills recognition processes in mind when assisting applicants through recruitment system. This should cover initial assessment and identification of gaps that could help for facilitating training programmes.

Thirdly, providing health insurance and getting appropriate treatment when working abroad are key suggestion from migrants to improve work relations. Thus, the employers in host countries need to take action to develop such policies to protect migrants' health and offer easy access to healthcare for all workers.

Finally, the receiving countries, such as GCC6 countries and Thailand, have implemented government-mandated pre-departure programmes for migrant workers which have worked poorly in practice (Appendix 9.7). Therefore, countries of origin need to play a greater role in taking effective action to implement and review policies that could be of advantage to all migrant workers abroad.

A key policy priority should therefore be to plan for long-term treatment of migrant workers in the construction sector. Now a days, policy makers focus on how to find ways to control migration in host countries, but such issues need cooperation between governments at the national level. An implication of these recommendations is that both migration related issues and employment conditions in host country should be taken into account when planning policy related to migrant workers in the construction sector.

7.3.4 Recommendations for training providers

A training provider is the organisation who suppliers the training element of apprenticeship. It enables the candidate to access, identify and undertake appropriate training courses that meet their needs. They are separate organisation from the large employer, but in many cases the employer act as training provider.

The findings of this research confirm that the majority of migrant workers enter the labour market of the host countries with either no education or only primary level education. In all cases, migrants were less confident to express themselves and

communicate in the host local language. For example, migration could increase exposure to H&S in host country as presented by the feedback loop (1B5) when discussing migration related issues. However, increased training budget could significantly decrease communication related issues which is represented by feedback loop (2B1) when discussing employment related issues. Moreover, many workers left their home countries to work abroad without any proper knowledge of their work and what they could expect from the host societies. Taken together, these findings caused them frustration and increased the risk of work-related issues, including health and safety in the workplace. The findings of this study support the recommendations that cover key areas that need more attention from both sending and receiving countries.

Firstly, migrants in workplace should be informed about the risks related to some construction activities and could be achieved by providing training programmes. These should be provided to migrants based on their background in terms of language barriers. Also, these training programmes could be implemented by the countries of origin (Section 1.3.1), and/or by the host countries before starting work with paying with more focus on culture. Such programmes would help to protect migrant workers from accidents and disability if implemented successfully. Moreover, recruitment agencies in both origin and host countries should bear responsibility for such training.

Secondly, governments of countries of origin should provide appropriate training programmes that cover living conditions and cultural background in host societies. This includes a programme designed to educate potential migrants and their managers about different cultures in order to build clear relationships between migrants and their supervisors in the workplace.

Finally, host societies should provide such programmes free of charge to benefit every migrant worker with relation to employment and health and safety in the workplace. In this section, the data is vital for both origin and receiving countries. Therefore, better relationships between governments could greatly benefit the labour market and determine supply and demand.

Greater efforts are needed to ensure the implementation of these recommendations because they do not benefit the migrant workers only, but the employers could benefit most from providing such training programmes for their employees. For example, the CITB organisation plays an important role for facilitating and providing training programmes in construction sector in the UK. The only concerns the employers discussed is the length and the cost of such training courses. This could be tackled at early stage of the recruitment processes by informing the policy makers about their needs. Cole and Kelly (2015) defined training needs as any shortfall in terms of employee knowledge, understanding, skill and attitudes against what is required by the job, or the demands of organisational change.

7.3.5 Recommendations for other industries

It is interesting to note that some of the findings of this study could be applied in other industries and may be relevant when addressing issues related to labour market. Indeed, there are many industries needing to take part in the UN's SDGs. For example, the car industry has played a significance role in the economy worldwide. However, the current data suggested that there is evidences of environmental damage caused by cars which put a considerable pressure on governments to provide such policies and solutions to tackle this issue (Mikler, 2009). As solution, the electric cars have been identified as being a key technology in reducing CO2 emissions and energy consumption in the mobility sector, however, these solutions needs advanced infrastructure that would be very expensive to build (Helmers and Marx, 2012). Based on this, the following recommendations are for other industries:

- Ensure sharing the data and advice of the ILO regarding the increased opportunities for workers based on labour market requirements.
- Encourage the workforce to take part in funded training programmes to improve knowledge transfer in organisation.
- Improve the communication channels within the organisation that can encourage workers to consider their working conditions and their feedback are supported.
- As the situation of the labour market indicates that due to the labour shortages
 there would be a continuous need for both skilled and low-skilled workers, thus,
 it is recommended that the restrictive policies related to the employment needs
 to be more flexible.

7.3.6 Recommendations for further research

Research improves services and treatment of any concerns, and one of the suggestions for further research is building on a particular finding in such research. This research has focused on the issues of migrant workers in the construction sector who take advantages of their migration to the developing countries. The recruitment of migrant workers is of crucial significance because it influences socio-economic status in both origin countries and host societies. The study should be repeated using a comparison approach including data from migrant workers in construction sector in developed countries and using the same methodology. It is recommended that further research be undertaken in the following areas:

Firstly, there is a need to study the views of employers in host societies in relation to the recruitment of migrants and their experiences of working with migrant workers. Proposals that involve in-depth studies may be able to establish causes of discrimination in the workplace and provide ways of dealing with them.

Secondly, as the voice of migrant workers in the Middle East was largely silent in this research, more study is required to investigate the attitudes of migrant workers regarding their workplaces to identify how their attitudes influence in-site work in terms of health and safety issues. This would provide lessons about what can be done to improve work relation-issues. More recently, there are negative news regarding the treatment of migrant workers, especially in Qatar during the preparing to host the World Cup 2022.

Thirdly, issues related to migrant workers abroad, such as factors that are associated with improved health abroad, were widely ignored in this research. It is therefore recommended that issues related to migrants' health, such as mental health and migrants with HIV in the construction industry, should be further investigated in host societies.

Fourthly, since the factors that encourage migration could apply to any potential migrants (Sections 5.2 and 5.3), more research is needed to involve all migrant workers, including females and those with illegal status, not just legal migrant workers.

Finally, every country has its unique feature based on the background of its construction labour market and its experiences in migration. Therefore, another interesting area for further studies must conduct a comprehensive survey that extends to other developed

and developing countries, and the data should be ranking the most effective factors on construction labour market in various countries.

7.4 Contribution of the study

The findings from this study make several contributions to the current literature. First, it is expected that this thesis will contribute to knowledge on the issue of migrant workers in the construction sector by identifying the key factors in the existing situation of migrants in developing countries. This is achieved by examining the current construction labour market issues, which include recruitment procedures, employment situation in host countries, and working conditions. It also significantly contributes to understanding existing policies for managing migrant workers, including overwhelming volume of information and regulations.

Second, at the host societies level, this research presents a contribution to knowledge that the experience of migrant construction workers can be utilized and employed to improve working conditions in the construction sector, which can in turn be used to facilitate any training programme. This research also found that employers were supportive in developing any implementation of changes which could be crucial to the construction workforce.

Third, at the international level, since the construction industry is moving from traditional methods in terms of employment conditions and the new force to change, lessons from GCC6 countries and Thailand might be useful to both developing and developed countries. This is because these countries have made significant steps towards achieving the UN 17 goals of the SDGs.

Forth, while most existing literature has discussed the present constraints to managing migrant workers in the construction industry from the angle of language diversity and cultural issues in the workplace, this study attempts to explore these issues throughout the whole migration process. Further, the contribution of this study goes beyond the construction sector, as it sheds light on the challenges of the construction labour market for both sending and receiving countries.

Fifth, this work contributes to existing knowledge of labour migration to construction sector by providing a comprehensive and systematic discussion of the current migration and employment for migrant workers in the construction sector. This research extends our knowledge of using the system thinking which provided different advantages in the process of discussing the research findings. First, it has helped to show the complex interconnections and feedback processes within the system that helping to produce benefits to the situation of migrant workers in the construction sector. Second, it has supported the integration of the qualitative variable, knowledge, and issues that are not well-defined. Finally, besides the system, the whole process itself has helped understanding and motivation of those taking part in decision- or policy- making processes with relation to migrant workers in construction sector in developing countries. Overall, the interaction among the several elements within the migration and employment system that have been used within system 1 Migration related-issues, system 2 Employment related-issues, and system 3 Job satisfaction related-issues, can help in better understanding the problem and design possible action plans.

Taken together, this thesis has provided a deeper insight into labour migration to construction sector in developing countries. This study provides the first comprehensive assessment of the migrant workers situation in the construction sector. The discussion of the migration and employment issues undertaken here, has extended our knowledge of issues influencing migrant workers employment in the construction sector. The methods used for this discussion may be applied to other sectors elsewhere in the world. To sum, these findings contribute in several ways to our understanding of migrant workers in the construction sector and provide a basis for further research.

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9 APPENDICES

9.1 Appendix 1 Strategy used for reviewing literature

A literature review needs to draw on and evaluate a range of different types of sources in order to support the identification of the research questions (Rowley and Slack, 2004). As well as a vital search strategy is important to review the current relevant literature that is cover all possible aspects with relation to the research topic (Creswell, 2009). Therefore, several essential searches were employed on migrant workers in construction with specific focus on developing countries. This is to help putting the research on its context and improve the searching strategy. The Boolean search tools were employed within electronic databases. The purpose of using this technique is to identify the existing relevant studies on the proposed subject to allow the researcher to comparing the findings of other researcher's work in the topic. This is including articles, reports, and books which used for the main references for this thesis by using the EndNote X8 technique. In searching for this thesis, specific key words/terms have been used based on the natural of the topic (see the table below).

Search strings				
Database searched	Key words/terms	Boolean Operators		
ARCOM (Association of	Migration	AND		
Researchers in Construction	Migrants	OR		
management)	Migrant workers	NOT		
ScienceDirect	Construction workers	Quotation Marks '' ''		
Google Scholar	Construction labour market	Parentheses ()		
	Construction industry			
	Health and Safety in construction			
	Employment in construction			
	Working conditions in construction			
	Living conditions in construction			
	Green building			

Websites visited regularly:

International labour Organisation (ILO)	https://www.ilo.org/global/langen/index.htm
International Organization for Migration	https://www.iom.int/
(IOM)	
International Migration Institute	https://www.migrationinstitute.org/
Network (IMI-n)	
The Centre on Migration, Policy, and	https://migrationobservatory.ox.ac.uk/
Society (COMPAS)- The Migration	
Observatory at the University of Oxford	
World Band Group	https://www.worldbank.org/en/home
The Organization for Economic	https://www.oecd.org/
Cooperation and Development (OECD)	
Amnesty International	https://www.amnesty.org/en/
Construction Industry Training Board	https://www.citb.co.uk/
(CITB)	
PWC- Engineering & Construction	https://www.pwc.co.uk/industries/engineering-
	construction.html
Global Construction Review	https://www.globalconstructionreview.com/category/trends/

9.2 Appendix 2 Research Information Sheet

Research Title:

A Study of Unskilled Migrant Construction Workers in Developing Countries

Participant Information Sheet

Researcher	Abdulfatah Hantish	am889@hw.ac.uk	HWU, ISBD
1st Supervisor	Prof Stephen Ogunlana	s.o.ogunlana@hw.ac.uk	HWU, ISBD
2 nd Supervisor	Dr Bilge Erdogan	b.erdogan@hw.ac.uk	HWU, ISBD

Research Purpose: What is the purpose of this studies?

The construction industry is long being described as a labour intensive that involved many migrants in its workforce. The goal of this proposed research is to better understand of the actual experience of migrant workers in construction industry and whether labour relations and employment in construction are designed to consider the special situation of migrant workers in both sending and receiving countries.

Who is doing this research and why?

This research will be carried out by myself, Abdulfatah Hantish. I will interview a number of people dealing with construction activities. This research is partially sponsored by Libyan government to tackling the issues of construction labour market in Libya in specific period of time.

If you agree to participant in this research, can I change my mind?

Yes! You have the right to withdraw from the interview at any time and any information you have provided. Also, you can ask any questions you may have after reading this information sheet, I will ask you to sign an informed consent form.

How long will it take?

Interview sessions will last between 30-40 minutes.

Is there anything I need to prepare before the interview?

No. once give consent to take part, we will conduct the interview.

What will I be asked during the interview?

The researcher will be asking some questions regarding your working experiences in construction activities. This is including any challenges you have been faced before or during employment in construction sector which how you think these can resolved.







Research Information Sheet continued

What personal details needed from me?

Basically, your name, age, nationality as well as your position in the project will be required, but in the write up of the described data you will be coded. The information will be recorded and safely stored in a safe and secure device at HWU, UK.

Are there any risks involved with the participant?

No. there is no risks to participant in this research and Ethical Form has been approved regarding contacting these interviews.

After participant, how I know the findings of this research?

The findings of this research will be used for my thesis, and for future publication regarding any aspects of migrant workers in construction.

If I have some more questions after participant, how should contact?

We are welcoming any further question and feel free to contact me or my supervisors.

What if I am not happy with the way the research was conducted?

Heriot-Watt University published and monitoring a policy to deal with these issues regarding research misconduct. The HWU Research Ethics Policy Report is available online at, https://www.hw.ac.uk/documents/research-ethics-policy.pdf

Yours Sincerely,







9.3 Appendix 3 Study informed consent form Participant code: **Research Title:** A Study of Unskilled Migrant Construction Workers in Developing Countries Pre-interview form- Informed consent form To be completed prior to the interview and after participant has read the study information sheet and I have agreed to the following: The purpose of this research has been explained to me and understand that this research is carried out for further scientific knowledge which all the research procedures have been approved by Heriot-Watt University Ethics Approval Committee. I have read and understood the study information sheet. I have the right to ask questions during and after my participation in this interview. I understand that there is no obligation to participate in this study. I understand that I have the right to withdraw from this study without providing any reason for this. I understand that all the details provided will be treated in confidence and will be coded. I agree to use a recorder during the interview which will stored in a confident and safe store. I am happy to take part in this study. Interviewee **Investigator** Name **Signature Date**







9.4 Appendix 4 Employers interview guide

Background & Experience

- How long have you been working in the construction sector?
- How would you describe your experience in construction sector?
- What are the challenges/problems that you might be face in construction projects?
- How would you describe the current situation of the construction workforce?

Recruitment procedure

- How would you describe the entry of migrant workers into the construction labour market?
- Do you recruit migrant workers through a recruitment agency or broker in their country, or you need to contact the Government Recruitment Department to recruit migrant workers on your behalf?
- How do you describe the recruitment agencies in sending countries in terms of explaining the terms and conditions of contracts before sending labours to their receiving country of employment?
- Do you think the recruitment agencies are not likely do their job professionally to supply the right workers for your request?

Worker conditions in construction

- How would you describe the current working conditions in the construction sector?
- Do migrant workers fully aware of their contract's terms and conditions which include working hours, wages, the nature of work, freedom to move to other job, living conditions, etc.?
- How do you describe the employer's knowledge of the labour laws of the country of employment?
- How do you describe the discrimination in the workplace in terms of ethnic background, religion, nationality, etc.?
- Do you think that improved contract law in terms of enhancing migrant workers working and living conditions could minimize the amount of conflict and discrimination?

Worker issues

- How would you describe the type of job in construction sector and what is involved?
- What issues do migrant workers face in construction sector?
- How do you describe the current construction activities and the ways to carry out them?
- How do you describe the participation of migrant workers in the local labour market in terms of attending training programs and enhancing their education level?
- What effective selection criteria can be used for the skills demand?
- How would you describe the H&S measures in-site projects?

Employer's vision for the future

- How would you describe the future of the construction industry?
- How would you describe the employment of migrant workers into construction sector?

9.5 Appendix 5 Migrant workers' interview guide

Background & Experience

- How would you describe the main motivation for working abroad?
- What are the reasons for choice to work in this country?
- How would you describe your employment in the construction sector? Is this the first time you have worked in this sector?

Recruitment procedure

- How did you know about employment in construction sector? Did you employ through a recruiting agency, broker, or family member?
- How would you describe your pre-departure cost in terms of any money have been paid throughout your migration processes?
- Throughout your migration processes, have you attended and courses (pre-or post-arrival) to gain an experience of the host country in terms of its law, culture, language, lifestyle, etc.?
- How would like to describe the role of the recruitment agencies in your home country in terms of explaining your contracts' terms and conditions before sending workers to country of employment?

Employment conditions in construction

- How would you describe working conditions in the construction sector in general?
- How would you express your experience in the following points:
 - o What type of job do you perform? Have you got any experience before?
 - o How do you describe the working days and working hours?
 - o How would you describe the workplace in terms of the breaks time?
 - o Do you have health insurance to cover you and your family?
 - o How would you like to describe the H&S in the workplace?
 - o How would you describe your accommodation?
 - o How would like to describe you wages? Did you work overtime?
 - o Do you have any certificate that related to construction activities?
 - o How would you describe your skills related to construction job? What is your level of education?
 - Have you attending any training program recently or before? Is it part of your employment contract?
- Working in construction sector is a hard job, is your employer using and providing equipment to help with your task?
- How would you describe the new technology introduced into construction jobs?

Employer and supervisors' relationships with migrant workers

- What is your opinion about dealing with respect in your job?
- Do you need to seek permission to change job, travel, take holidays from your employer?
- What is your opinion about discrimination at workplace in terms of your background, nationality, religion, etc by the employer or its staff?
- In your opinion, what is the key reasons for changing employment?

Migrant workers' vision about construction employment

Do you think that there is any possibility of enhancing the recruitment processes?

- Do you think your contract involved reliable and realistic terms and conditions that could resolve such dispute with your employer and improve your knowledge in construction activities?
- Do you think that you have knowledge of the labour and residency law of the host country?
- What do you think your job in the construction sector in future?
- What advice would you give to an emigrant who going to work abroad in construction sector? Who would implement your advice?

9.6 Appendix 6 Field-based research project issues



September 23, 2014

TO WHOM IT MAY CONCERN

This is to confirm that Mr.Abdulfatah Hantish is a registered student at Heriot-Watt University Edinburgh Campus. Mr.Abdulfatah is conducting his research on the topic of 'Migrant Construction Works issues in Dubal'. He will be hosted by SBE Heriot-Watt University Dubal Campus as a Visiting Researcher for the purpose of the fieldwork of his research and meetings with his co-supervisor (Dr.Assem Al Hajj) based in Dubai. His research visit will be for two months starting from October 2014.

Yours faithfully, For HERIOT-WATT UNIVERSITY DUBAI CAMPUS

DR ASSEM AL-HAJJ

PhD MSc BEng PgCert MLSEA MPMI MEFMA FAIQS

Academic Head/Director of Studies CMS

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Edinburgh Campus • Scottish Borders Campus • Dubai Campus



22nd March 2016

Royal Thai Embassy 29-30 Queen's Gate London SW7 5JB

Dear Sirs

Abdulfatah A. Mohamed Hantish

I can confirm that the above named person is a registered student at Heriot-Watt University and is required to visit Klong Luang, Pathumthani to conduct some research work with the Asian Institute of Technology from 14th April – 1st June 2016.

I confirm that Abdulfatah A. Mohamed Hantish is covered under the University Travel and Liability Insurance Policies a copy of which is attached for your attention.

Should you require any further information please do not hesitate to contact me.

Yours faithfully

Lorraine Loy

Head of Risk & Audit Management

Enc

Heriot-Watt University, Edinburgh, EH14 4AS, United Kingdom. Lorraine Loy, Head of Risk 8 Audit Management Tet 0131 451 8967 email: LLoy@hw.ac.uk

Edinburgh Campus



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(For local calls, dial C2 before the tel/fax nos.) Tel. (66-2) 524-5032-37,524-5065 Fox: (56.2) 516.0120 http://www.ait.oc.th

12 February 2016

Mr. Abdulfatah A Mohamed Hantish [CE70G201601000347] 26/6 Hutchison Avenue Edinburgh Scotland UNITED KINGDOM

Dear Applicant,

Congratulations. We are pleased to inform you that, after a rigorous evaluation of your qualifications and upon special approval by the School Dean, you are hereby offered admission to the Asian Institute of Technology for the following sludy program:

Program of Study:

SPECIAL

School:

School of Engineering and Technology

Field of Study:

Construction Engineering and Infrastructure Management

Duration of Study:

18 April 31 May 2016

Arrival Period:

14 April - 17 April 2016

This offer of admission is subject to the following financial conditions:

Registration fee:

10,000 Baht

An estimate of your personal expenses should include living expenses and accommodation (approx. USS 300 400 per month). Please also allow for your round trip travel costs and visa fees.

This offer of admission to AFT as a Special Student is made in the spirit of the agreement cancluded between the Healot-Watt University, U.K and the Asian Institute of Technology (AIT). Its objective is to enable individual students to study at ATT to gain knowledge and experience in an Asian international academic setting.

Currently, on-campus accommodation is limited. When accommodation is not available on-campus, you may choose to live off-campus. Please be advised that no spouse or family member is ellowed on-campus accommodation until availability of married unit has been confirmed in writing by the Student Accommodation Officer. Please refer to the enclosed Guidance for Applicants Offered Admission.

This admission does not qualify you for the award of the AFT academic degree. Admission to the program mentioned above is conditional on our receipt of the following document:

- 1. Salisfactory Cortificate of Health written in English and signed by an examining physician. The examination should include a chest X-ray but do no send the X-ray film to AIT.
- 2. Acceptance Form, duly signed and certified

Pertinent documents on this offer of admission to enable you to enroll at the Institute will only be issued after you have complied with the requirements stated above. Please reply as soon as possible and not later than 17 April 2016. We look forward to your acceptance of this offer.

ours sincerely,

Pelizin Rabgyal

Coordinator, Admissions and Scholarships

1

Asian Institute of Technology

CERTIFICATE OF ADMISSION

This is to certify that

MR. ABDULFATAH A MOHAMED HANTISH

has been accepted for admission to the Institute beginning 18 April 2016

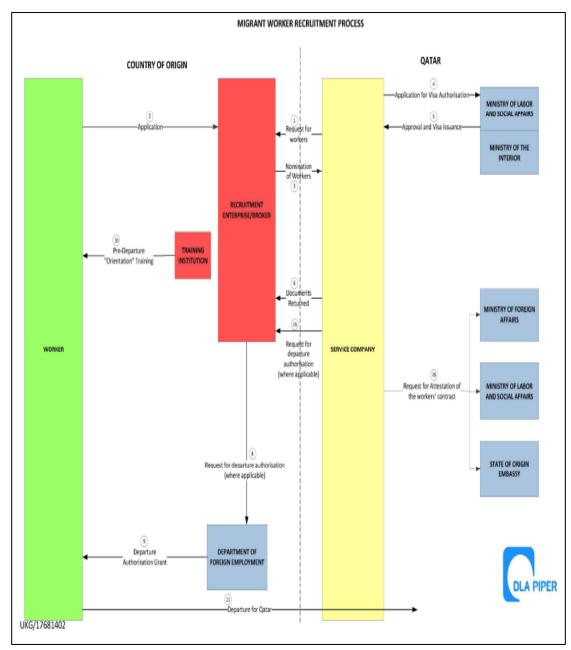
TENZIN RASGYAL

Coordinator, Admissions and Scholarships
ASIAN INSTITUTE OF TECHNOLOGY
P.O. Box 4, Klong Luang
Pethumthani 12120, Theiland
12 February 2016

9.7 Appendix 7 Recruitment process framework for migrant workers

9.7.1 Illustration of the migrant worker recruitment process in case of Qatar

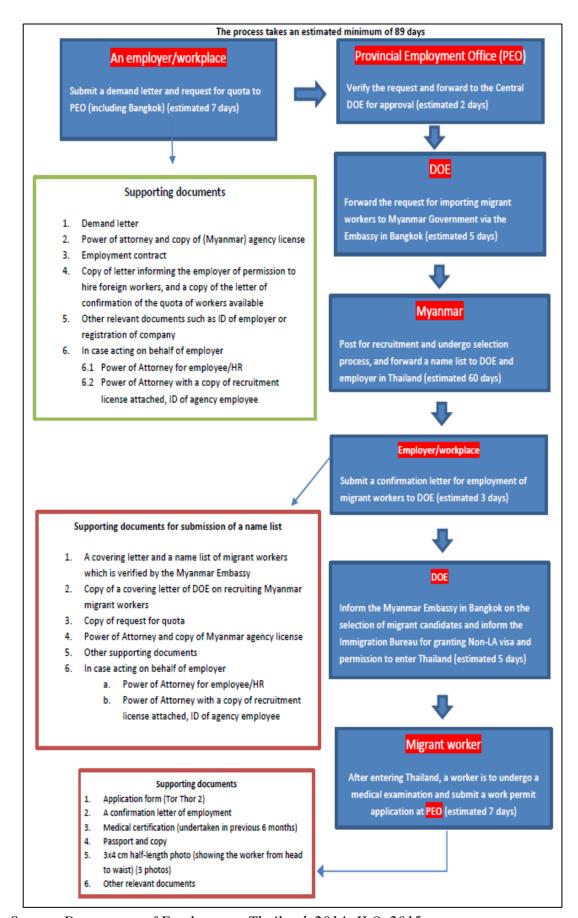
Ducanes and Baruah (2020) stated that ''Recruitment is a major function of the labour market where employers seek workers and workers seek jobs''. The literature confirmed that there are many issues linked to the recruitment processes of migrant workers. According to Piper (2014), the use of foreign recruitment agents employed to source migrant workers for employment in Qatar, however, many recruitment agents and brokers in the states of origin require fees from prospective workers to arrange for and facilitate their employment in Qatar. For example, the feature of the Kafala system is the requirement for an annual fee to be paid to national sponsors; while this is supposed to be covered by employers, it is often illegally extracted from workers, either by employers deducting a 'fee' from workers, by workers paying this fee to labour brokers (often with additional illegal fees collected by the broker in the process) or by paying it directly to the kafeel (Buckley et al., 2016). In addition, migrant workers go through complex recruitment processes that many of them may end up putting them into dept (Diop et al., 2020).



Source: Adopted from DLA Piper, 2014

9.7.2 MOUs recruitment process framework for workers from Mayanmar, 2014 Kusakabe and Pearson (2013) reported that Thailand is heavily dependent on migrant workers to do many of the 3D jobs that Thai workers do not want to do. According to IOM (2011), as low-skilled labour shortages continue, and Thai government allows more hiring of migrants from neighbouring countries, debates on migration policies in Thailand remain vital. Pholphirul (2011) mentioned that migration is creating an economic dilemma in the labour market of Thailand. The dilemma is that Thai workers lack the skills to perform jobs requiring high skills but at the same time the wage structure discourages these workers from competing with low-wage migrants from neighbouring countries for low-skilled employment. Around more than three million migrants in Thailand continue to contribute to growth, development and social and ethnic diversity but significant challenges in managing migrant flows under MOUs framework (Sakulsri et al., 2020). However, there are many issues related to migration under the current MOUs recruitment system identified by Sakulsri (2020) that are as following:

- Lack of knowledge of authority and procedure,
- Perceived expense of the recruitment process,
- Migrant's perspectives concerning formal and informal recruitment, and
- Limited capacity for assessing labour market needs (Sakulsri, 2020).



Source: Department of Employment, Thailand, 2014; ILO, 2015