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# **MNEs, Local Capability Building and Development:**

**Chinese and European MNEs in Ghana**

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PRELIMINARY DRAFT

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This report concerns the Ghana case study within the MNEmerge project. Professor Xiaolan Fu, Director of Technology and Management Centre for Development at Oxford University, led the study in collaboration with colleagues of STEPRI, Ghana. This document was authored by Xiaolan Fu (chapters 1, 2, 3, 6, 7, 8, 9, 10, and Executive Summary), Serena Masino (chapters 3, 5, 8 and 9), George Essegbey (chapter 4, 8 and 10), Godfred Frempong (chapters 4, 8 and 10), Jun Hou (chapters 6, 7, and 8), and Mavis Akuffobe (chapters 4 and 8). Shaheen Akter contributed to the impact indicators section of the methodology chapter. The Ghana case study benefited from the support of the United Nations Industrial Development Organisation (UNIDO).

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## **Executive Summary**

Economic and human development have long been the focus of international development practice and study. While the more traditional approaches of international development such as aid still play an important role, recent frontiers of development research have argued economic growth as a fundamental mechanism for poverty reduction and human development. The direct and indirect effects of economic growth (of which foreign direct investment (FDI) serves as one of the major engines) may lift masses of people from poverty; just as China has achieved in the past three decades. The managerial and technological knowledge transferred or spilled-over to the local community may increase the capability of the local management and workforce, and enhance economic and human development in various aspects.

The first aim of this project is to fill the gap in academic, policy, and practical research by examining the transfer of managerial knowledge from MNEs to local enterprises in Ghana. The second aim is to investigate the nature of this knowledge transfer: What are the possible transmission mechanisms? How is this process affected by exogenous factors, such as country of origin of the MNEs? How do the effects differ between western MNEs from developed countries and the MNEs from other developing countries such as China? Overall this case study focuses on the linkages through which knowledge is transferred to local firms and people. We aim to understand how this contributes to capability building at both the firm and individual level. We analyse how this empowers local people and changes their aspirations.

This case study is part of MNEmerge, a three-year international research project funded by the European Union under the Seventh Framework Programme. Dr Xiaolan Fu, Professor of Technology and International Development at Oxford University, led this study in collaboration with Dr George Essegbey and Dr Godfred Frempong of STEPRI, Ghana. The research was conducted in collaboration between researchers at Oxford University and STEPRI. This study employs a mix of qualitative and quantitative methods to explore our research questions. These include in-depth interviews, statistical analysis and social network analysis. At the base of this

work was a large-scale individual-level survey of managers and workers at 8 broadly comparable European and Chinese MNEs across 4 industries in Ghana.

Our analysis found that in both European and Chinese MNEs, that managerial knowledge did transfer and spill-over within the MNEs to their local employees and managers. Two things had a significant and direct impact on workers' aspiration for their future development: longer working time experience at the firm and the training they received. We found that advanced management practices adopted in the MNEs also increased the levels of aspiration of the local workers for future development., such skills enhancement opportunities and spiritual recognition in the form of non-monetary rewards or positive feedback. However, we found that management practices and activities that only serve to exploit workers' existing skills and capabilities may well enhance the productivity of the workers, but not their aspiration for future development.

Amongst both workers and managers, we found that learning potential was higher in the western MNEs than in Chinese MNEs. Cultural and language barriers are brought forward to contextualise such evidence. The Chinese companies do make efforts in order to bridge this gap. It emerged that employees in the European MNEs perceived the foreign managerial staff to be less approachable. While the foreign managerial style was preferred in both cases, local management staff was preferred. The combination of this evidence highlights the role of cultural embeddedness, which should be investigated at length when evaluating the knowledge diffusion potential of FDI.

With regard to the diffusion of managerial knowledge between organisations, our case studies have shown that for both European and Chinese MNEs, much is still left to be achieved in terms of local outsourcing, partnership creation, and collaboration. The extent of local-foreign exchange between MNEs and local firms was found to be limited, with variations between sectors and firms; and a clear improved performance in those instances where national policy took an active role in promoting the diffusion of knowledge. Such results highlight the crucial role of national policy in reaping the numerous potential benefits of FDI.

Moreover, the research found that some Chinese MNEs outsource to local contractors, while others do not due to quality concerns. This suggests local capability building is also crucial for successful FDI-facilitated knowledge transfer. Our case study also evidenced the ongoing deepening of localisation strategy among Chinese MNEs in Africa.

Our survey data finds that gender and skill inequality patterns are not eliminated by an MNEs presence. Indeed, male and more highly educated workers are more likely to be employed by MNEs. On the other hand, MNEs are more likely to offer permanent than fixed term contracts, which provides certainty and stability to employees. However, overall, in both Chinese and European MNEs, workers were found to be more satisfied with foreign sector employment due to improved working conditions, health and safety enforcement, learning opportunities, and employment benefits.

Findings from the research have important policy implications. The critical issue is how Ghana can enhance such transfer and spill-overs for the greater good of its economy? The policy options to address this issue emanate from the following, among others:

- Strengthening good bilateral relations between Ghana and the investing countries
- Promoting education
- Creating incentives for managerial knowledge flows and spill-overs
- Encouraging MNEs to contribute to socio-economic development.

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Appendix

## **Chapter 1. Introduction**

Poverty reduction and human development have long been at the centre of concern in international development. While the traditional approaches of international development practice such as aid still play an important role, recent frontiers of development research have argued for economic growth as a fundamental mechanism for poverty reduction and human development. The direct and indirect effects of economic growth, of which foreign direct investment (FDI) serves as one of the major engines, may lift masses from poverty just as China has in the past three decades. The managerial and technological knowledge transferred or spilled-over to the local community may increase the capability of the local management and workforce, and enhance economic and human development in various aspects.

The objective of this project is to investigate the impact of MNEs on economic and human development through local managerial capability building, which is often the bottleneck for economic growth in Africa (Sutton and Kpentey, 2012) but very much under researched. We will focus on the linkages through which knowledge is transferred to local people. We pursue how this contributes to capability building at the individual level, and how this empowers local people and changes their personal aspirations, especially for women.

Industrial development has widely been regarded as a major engine for economic growth, which serves as a crucial mechanism for poverty reduction in the developing countries (OECD, 2006; Ferreira, et al., 2009). A recent review on the economic development in African economies by Sutton and Kpentey (2012) finds that the bottleneck for economic growth in these countries is not owing to a lack of technology but the lack of managerial capability in these economies. Advanced managerial techniques are often regarded as a major source of the ‘ownership’ advantage of MNEs (Dunning, 1980; Cantwell, 1991). MNEs are found to have adopted more advanced management practices than local firms (Bartlett et al., 2002). Although there has been some research on technology transfer through foreign direct investment (FDI) in Africa and other low income countries, little is known about the role of MNEs in local managerial and organisational capability building. Given the pressing demand to break the capability bottleneck

for growth (and hence job creation and poverty reduction), it is imperative to understand whether and how MNEs can help local firms to build up the much needed managerial capability in developing countries.

In recent years, FDI flows from China to Africa have been increasing rapidly. Most imported products and 22% of China's total FDI stock in Africa relates to the manufacturing sector (CAJCCI, 2011). Unlike the MNEs from developed countries, outward foreign direct investment (OFDI) from emerging economies normally 'goes global' without the usual strong ownership advantage in technology and management (Dunning & Narula, 2004; Mayer, 2011). Most of them have not mastered advanced management techniques, yet they have developed the capabilities to deal with adverse governance and institutional environments in the home market (Lecraw, 1993). Therefore, the impact of Chinese FDI on local firms in Africa is likely to be different to that which is found in the existing literature. However there is limited research about Chinese invested firms in the resource sector in Africa (Brautigam, 2009), and little systematic empirical research on the impact of Chinese FDI on managerial capability of local firms in Africa, with rare exceptions (e.g. Auffray and Fu, 2015).

There are also many practical dilemmas that have to be considered in emerging , such as gender equality. We already know that women in countries like India proactively engage themselves in all social and commercial activities, which in itself speaks in behalf of gender equality. However their presence is not actually appreciated in some situations, for example sales negotiations. This makes gender related investigations challenging as finding female managers still proves difficult.

The first aim of this project is to fill the gap in academic, policy, and practical research by examining the transfer of managerial knowledge from MNEs to local enterprises in Ghana. The second aim is to investigate the nature of this knowledge transfer: What are the possible transmission mechanisms? How is this process affected by exogenous factors, such as country of origin of the MNEs? How do the effects differ between European MNEs and the MNEs from another developing country such as China? Overall this case study focuses on the linkages through which knowledge is transferred to local firms and people. We aim to understand how

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This study contributes to the literature by providing a large set of novel, survey based evidence on knowledge transfer to local workers and managers at an individual level, which is rare in the literature. It also contributes to our understanding of managerial knowledge transfer within MNEs, which is very much under researched, especially in the context of Africa. The comparison of Chinese MNEs and more traditional MNEs from industrialised countries also provides useful insights into the research of emerging market MNEs.

The rest of the report is organised as follows: Chapter 2 provides a review of the literature and the analytical framework for the research. Chapter 3 explains the design and methods of the research. Chapter 4 provides an overview of FDI and industrial sectors in Ghana. Chapter 5 reports a case study comparing the characteristics and performance of MNEs of and domestic companies in Ghana. Chapters 6 and 7 examines the impact of Chinese MNEs in Ghana in general and in the construction sector, respectively. Chapter 8 reports findings from the individual level survey of 242 workers and managers in eight MNEs. Chapter 9 presents findings from the statistical analysis of selected themes based on the survey data. Chapter 10 concludes.

## Chapter 2. Literature Review<sup>1</sup>

### 2.1 FDI and Development

The impact of foreign direct investment (FDI) on host economies has long been of interest to academics and policy-makers. FDI is expected to bring a bundle of capital, technological and managerial knowledge to the host countries, benefitting their economies by enhancing productivity and competitiveness (Dunning, 1958; UNCTAD, 1995). However, despite the huge volume of literature on various forms of spill-overs from FDI (Görg and Strobl, 2001), research on managerial knowledge spill-overs from FDI is limited, fuelling continuous debates on the topic. This is because of the interest in its potential for growth in both the host and home economies. On the other hand, it has become apparent that beneficial impacts and spill-overs are by no means a necessary consequence of FDI, and that several mediating factors need be considered (Moran et al, 2005). These include the technological intensity of the FDI in question, the managerial and business organisation background of the investing country, and the absorptive capacity of the host country.

In this study, we are particularly concerned with the developmental effect of inward FDI in a relatively advanced sub-Saharan African economy, Ghana. We will therefore present a literature background that bears relevance to this context, in an attempt to draw on general evidence available so far and to contextualise its applicability to the case at hand. We should bear in mind that FDI can influence various equilibria in the host country at once, including its impact channels. In this study, we focus specifically on employment and knowledge transfer dimensions, including the indirect impacts linked to them. In doing so, we pay close attention to

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<sup>1</sup> This chapter is developed based on excerpts from Fu, Pietrobelli and Soete (2011) and Fu (2012).

<sup>2</sup> Dr Shaheen Akter made valuable contributions to the discussion of impact indicators. <sup>16</sup> Dr George Essegbey and Dr Godfred Frempong made valuable comments and suggestions on the

the transfer of tangible (i.e. technologies) and intangible knowledge (i.e. know-how and managerial capability).

One of the most recognised development effects of FDI on low income countries is the overall employment levels and any associated income, gender, and regional inequality patterns. Such impacts can not only be negative or positive, but also direct or indirect (Te Velde and Morrissey, 2004; Jenkins, 2005). More specifically, the employment effect of FDI can be direct – through the labour creation directly generated by MNEs - or indirect by sparking activities involving a large number of local subcontractors, suppliers, and service providers (Sibunruang and Brimble, 1988; Pigato, 2000). Meanwhile, employment creation can at the same time effectively impact income and skill inequality in the host country. Robbins (1996) explains that higher demand for labour in the sectors where MNEs concentrate translates into higher wages in those sectors. This can lead to rising unemployment among the traditional sector labourers. Feenstra and Hanson (1997) explain that the activities outsourced by developed countries MNEs are low-skill from the perspective of developed countries, but are relatively skill-intensive to the developing country host. The skill premium might therefore be increased by FDI. Technology spill-overs to the domestic sector can contribute to increasing domestic firms' demand for skilled labour too, thus raising the skill wage and the skill premium even further (Driffield and Taylor, 2000).

In addition, MNEs may offer greater job security relative to locally-owned firms, as their resilience better insulates employees from economic cycles. Employees in larger enterprises tend to be better protected by labour legislation and are more likely unionized and receiving benefits (Braunstein, 2006). On the other hand, it has been argued that to cut costs and maximise profits, MNEs are increasingly adopting the practice of sub-contracting to locally-owned firms. This implies labour standards enforcement becomes weaker (Richards and Gelleny, 2007). Similar considerations can be made with regards to the gender gap. Whether FDI will widen or close these gaps will depend on a series of factors. For example, MNEs operating in sectors such as textile and electronics usually tend to employ more women. So job opportunity and employment creation is boosted in the long-run, and women's empowerment is encouraged (Cotton and Ramachandra, 2001; Braunstein, 2006).

## **2.2 FDI, knowledge transfer and local capability building**

Knowledge spill-overs can be achieved between firms and across regions and countries through various transmission mechanisms (Pietrobelli, 1996). These include: the movement of goods through international trade; the movement of capital through inward and outward foreign direct investment (FDI and OFDI); the movement of people through migration, travel, and foreign education of students and workers; international research collaboration; diffusion through media and internet of disembodied knowledge; and integration into global value chains to benefit from the foreign technology transferred within the supply chain.

When starting businesses and setting up productions, MNEs bring advanced technologies to the host countries. Knowledge is non-rival and the public-good nature of knowledge suggests that it can generate positive externalities (spill-overs) to others who are also exposed to this knowledge in various ways. The presence of FDI and technologies has created opportunities for local actors to learn via forming multiple linkages. The geographic proximity and face-to-face interactions will not only allow local firms to acquire codified technologies, but also technological knowledge which is tacit (Jaffe et al., 1993).

## **2.3 FDI and Technology Transfer**

The role of FDI in bringing advanced technology to host economies has been confirmed in many previous studies (Dunning, 1994; Lall, 2003). With a relatively abundant resource pool, FDI induces technological spill-overs, as well as managerial knowledge. Their presence in developing countries therefore means that the availability of accessible technology increases, given the internal incentives to transfer technology across borders between parent companies and subsidiaries (Markusen, 2002).

Horizontal technology spill-overs may occur from foreign firms to local firms in the same industry and/or the same region via demonstration effects and the movement of trained labour from foreign to local firms (Caves, 1974; Fosfuri et al., 2001). By imposing strong competition in the industry of the host economy, the presence of MNEs is expected to increase local productivity by crowding out inefficient domestic firms and to force innovation in other local firms in order to remain competitive.

There may also be vertical technology spill-overs taking place between foreign and local suppliers and customers within the value chain through forward and backward linkages (Javorcik, 2004; Pietrobelli and Rabellotti, 2007; Pietrobelli and Saliola, 2008). Driven by the profit maximization orientation, MNEs intend to help local suppliers upgrade their technological capability to international standards so that they may avoid choosing high transaction cost suppliers globally. Local contractors can also benefit from the demonstration spill-over effect while collaborating with MNEs. They are also likely to offer training to their workers, albeit in an uneven fashion depending on the case/industry.

Therefore, it is expected that in the long run, local firms benefit from MNEs spill-overs and linkages. Empirical research shows that technology transferred through FDI has positive effects on developing countries (Kokko, et al., 1996; Eden, et al., 1997; Buckley, et al., 2002). It is worth noting that some of these studies suffer from several limitations: they are carried out at the industry level and are likely to be affected by the endogeneity between industry productivity and industry level FDI intensity, and they fail to control for firm level heterogeneity.

Despite the possible benefits of technology transfer and FDI spill-overs, these may also have significantly negative effects on technological upgrading within local firms. This may be due to a variety of reasons. First, FDI may make the competing domestic firms worse off, and even crowd them out from the market (Aitken and Harrison, 1999; Hu and Jefferson, 2002). The strong competition from foreign subsidiaries may reduce local firms' R&D efforts (OECD, 2002). Moreover, foreign subsidiaries may remain as enclaves in a developing country with a lack of effective linkages with the local economy.

## **2.4 Conditions for FDI-facilitated knowledge transfer**

The process of knowledge transfer is neither automatic nor costless. The same applies to FDI embedded knowledge. There are many necessary pre-conditions to meet for effective technology transfer and knowledge receiving process. First, investment and trade policy instruments matter. It is argued that openness facilitates linkages and directs resources to the “right” sectors, as well as a competitive and dynamic environment (Balasubramanyam et al, 1996). Heavy restrictions on foreign investors and import substitution policy provide foreign affiliates with low incentives for technology transfer (Aitken & Harris, 1999). Second, legal and regulatory schemes, especially those related to intellectual property rights (IPR) are important. It is unlikely that MNEs would bring core technology to their subsidiaries if IPR protection in the local economy is weak. They would also have little incentive to invest in R&D and become innovative.

Third, forming sufficient linkages is necessary to make effective technology transfer. For a period, China required joint venture as a condition for FDI inflows. China and Brazil both negotiated export and local content requirements on FDI in certain industries such as the automobile industry. This enforces linkages between foreign and local firms. They also imposed training requirements on FDI in some cases, e.g. Motorola in China. Fourth, technological gaps between foreign and local firms also matter. The relationship between the strength of spill-overs and the technology gap follows an inverted-U shape. Spill-overs are found to be present when the technology gaps are moderate and also when they are much larger (Kokko et al., 1996, Meyer, 2004). Finally, the most necessary condition for effective technology transfer is sufficient absorptive capacity, which we will discuss below.

Several studies have investigated the role of FDI in helping developing countries upgrade their technological capability. Fu and Gong (2011) contributed to this debate in an original fashion. They explored the sources/drivers of technology upgrading in China and their results suggest that FDI serves as an effective vehicle transferring advanced foreign technology from global reservoirs of knowledge. Firm-level evidence from India further supports this hypothesis. Using

an unbalanced set of panel data from 1843 Indian manufacturing firms operating during the period 1994-2005, Sasidharan and Kathuria (2011) examined the relationship between FDI and domestic firms' R&D in the post-liberalization regime. In most regression specifications, they find that the foreign equity participation acts as a disincentive for investment in R&D. The presence of foreign firms in the local industry had a positive effect on the R&D intensity of only new domestic firms, which were incorporated after 1985, during the newly liberalized regime.

Technology spill-overs from FDI may also take place along the spatial/regional dimension. Although knowledge is a non-rival public production asset, which can generate positive externalities or spill-overs to others (Nelson, 1959; Griliches, 1979), knowledge spill-overs are known to be geographically localized (Jaffe, Trajtenberg and Henderson, 1993; Audretsch, 1998), and there may be geographic boundaries to information flows or knowledge spill-overs among the firms in an industry (Marshall, 1920 and Krugman, 1991). Social bonds fostering trust and frequent face-to-face exchanges may facilitate knowledge and information flows among agents located within the same area (Breschi and Lissoni, 2001). These spatially bounded knowledge spill-overs allow companies operating nearby important knowledge sources to introduce innovations at a faster rate than rival firms located elsewhere.

## **2.5 FDI and managerial knowledge transfer**

While all these factors have been studied at length in the literature on FDI, another powerful channel for FDI impact has received much less attention: the transfer of management know-how. This has strong developmental potential as managerial knowledge is likely to spill-over from MNEs to indigenous firms through several channels. One channel is the movement of labour from foreign to local firms. Most MNEs invest in labour through training to improve their own productivity. When trained employees move from foreign to indigenous firms for higher salaries or senior positions, they carry with them new management practices which they acquired in foreign firms (Almeida and Kogut, 1999; Fosfuri et al., 2001). The second channel for managerial knowledge spill-overs is the demonstration effect. The concept and routines of

explicit management practices used by MNEs can be observed by their competitors, suppliers and clients through demonstration-by-implementation and word-of-mouth. These can allow both industry-specific and general managerial knowledge (e.g. equal opportunities, performance related pay) to diffuse within and cross-industries (Fu, 2012). Thirdly, the diffusion of management practices may take place within the supply chain, through unintended leakage of knowledge (Fu, 2012).

Management practices are likely to transfer from MNEs and expatriates to local managers and employees within a MNE. Training domestic employees is a commonly adopted strategy to improve MNEs' productivity. Although the volume and quality of training by MNEs is uneven, with the increasing indigenisation of the workforce in MNEs, more and more local employees receive managerial training (Gershenberg, 1994). When trained managers move from foreign to indigenous firms for higher salaries or senior positions, they carry with them new management practices which they acquired in foreign firms. This could be the most important channel for the diffusion of management practices (Almeida and Kogut, 1999; Fosfuri et al., 2001). The movement of labour not only facilitates the diffusion of codified international practices but also enables the diffusion of tacit practices and allows for further knowledge-building (Kim, 1997).

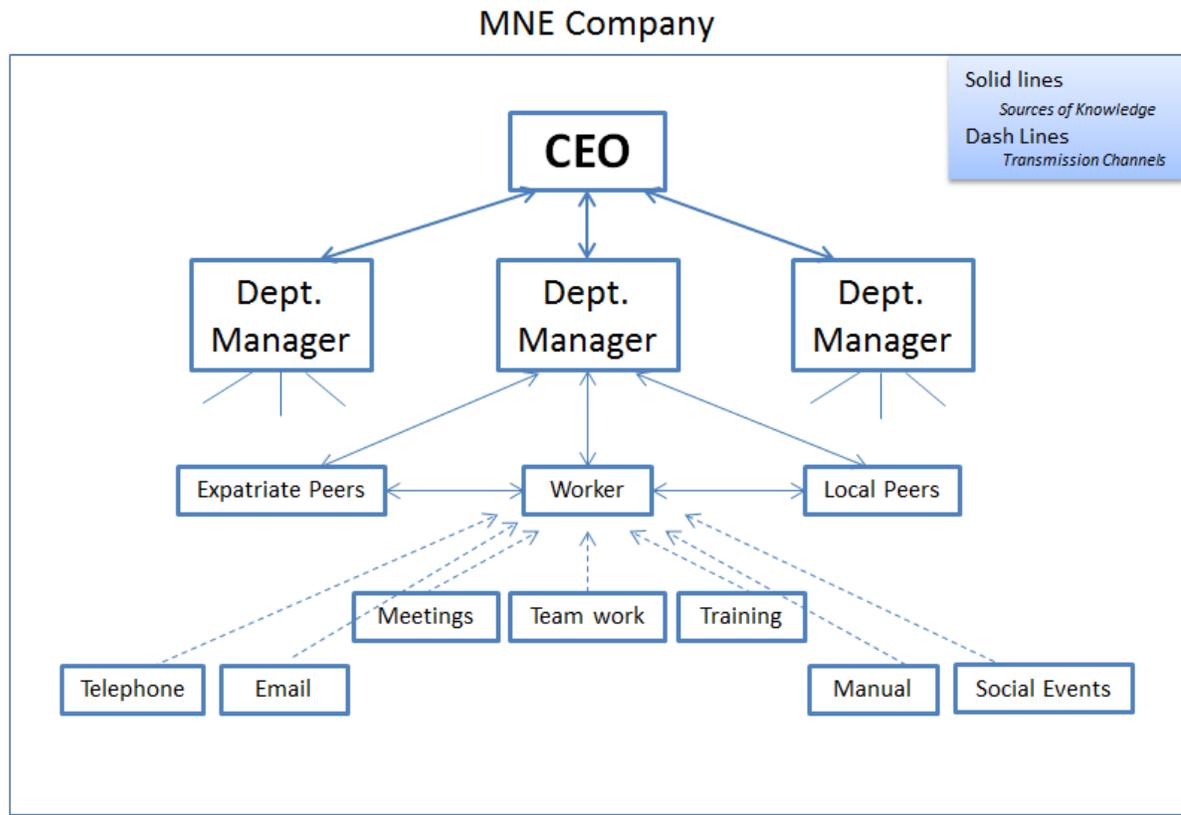
Another channel for managerial knowledge spill-overs is the demonstration effect. The concept and routines of explicit management practices used by MNEs can be observed by their local competitors, suppliers and clients through demonstration-by-implementation and word-of-mouth. Examples of such explicit practices include: teamwork methods, management briefing groups, staffing plans, and customers loyalty programs. These potential local adopters may also observe the consequence of a practice and decide whether to imitate the practice. Because of the explicit nature of these practices, local adopters will be able to take on the concept of a practice although the interpretation and implementation may vary. The Chinese banking sector is one such example. When multinational banks entered the Chinese market, their modern management practices in human resources and marketing management had strong demonstration effects on local banks (Fu, 2004). Kipping and Bjarnar (1998) also suggest that MNEs played significant roles in disseminating management know-how across national borders by acting as successful

examples in Europe. All this suggests the possible existence of horizontal spill-overs within the same industry. Unintended spill-overs often take place through this channel.

Moreover, the diffusion of management practices may take place within the supply chain. In addition to unintended leakage of knowledge through demonstration effects and labour movement, MNEs may purposely transfer relevant knowledge to their suppliers or customers. For example they may transfer relevant knowledge to their suppliers in order to improve product quality and reduce production costs. They may also be asked to demonstrate their advanced management practices to assure customers of the quality of their products and services. Such inter-firm linkages within the supply chain are found to be a critical mechanism for the exchange of tacit knowledge (Saxenian, 1991). It provides an effective channel for spill-overs of management practices, especially for supply chain management, production quality management and marketing management. All this increases the vertical spill-overs of management practices as a result of intended or unintended knowledge transfer through forward and backward linkages.

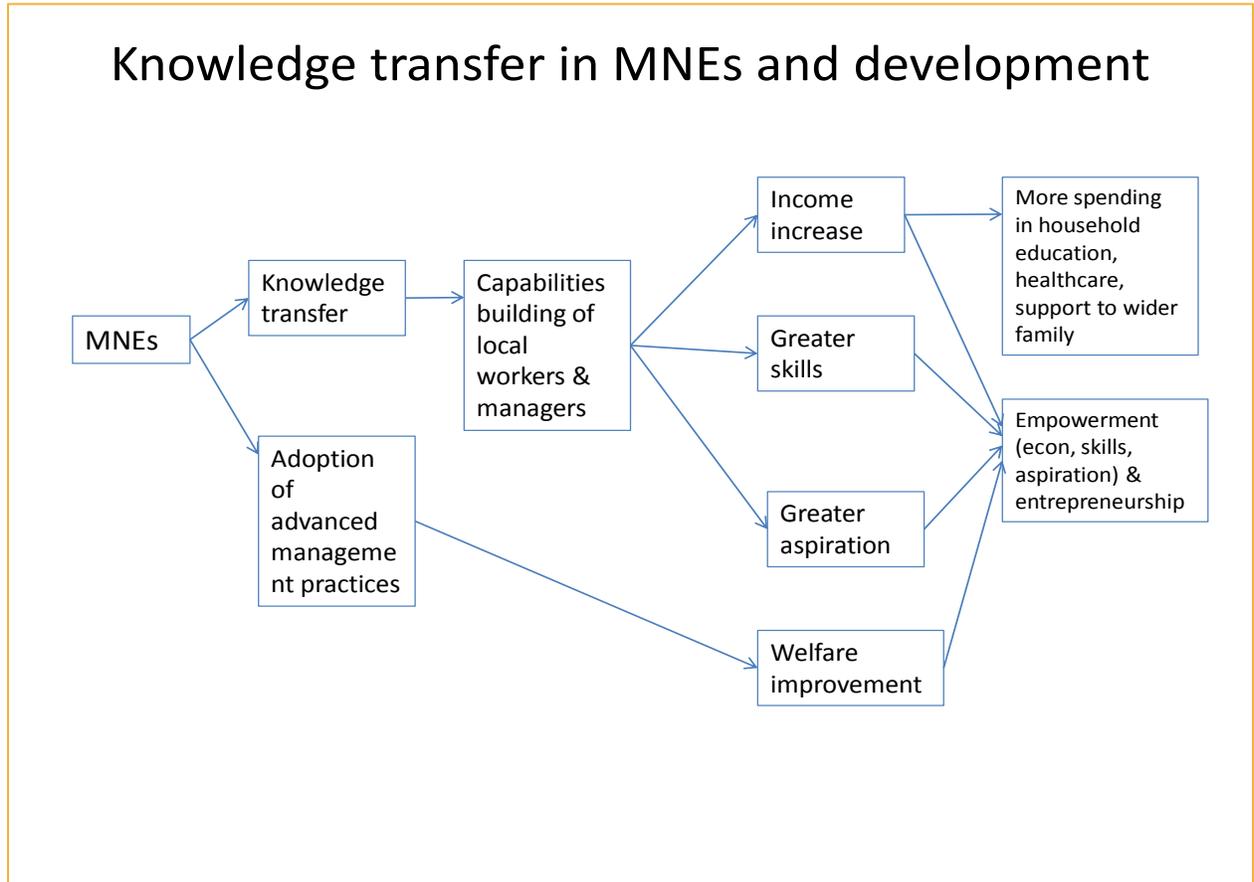
Engaging in the internal communication systems in MNEs has enabled local workers to effectively acquire better management skills such as socialization, decision-making and problem-solving. The effective relationships among individuals and groups fosters team communication practices that helps them coordinate activities to achieve their goals (Harris and Nelson, 2008). Through daily interactions with foreign expatriates and other domestic workers, local employees not only learn about their jobs, organization, environment and colleagues, they also learn workplace social skills such as how to motivate, build trust, create shared identity and spur engagement with their colleagues, which will eventually benefit their future career and life (Jones et al., 2004). Figure 1 below summarises the sources and the mechanisms through which managerial knowledge may be transferred within an MNE.

Figure 1. Framework for the interviews in regard to managerial capability



The capabilities of local workers develop through the adoption of advanced management practices, and through knowledge transfer and to local employees. As a result, we see a rise in income, skills development, aspirations, and welfare amongst the local employees. This not only empowers the local employees financially, but also alters their skills and aspirations. The increase in income levels and job opportunities enables households to spend more on education, healthcare, and familial obligations. Figure 2 below summarises the mechanisms through which MNEs may impact economic and human development through an increase of knowledge, capability and management practices in the MNEs.

Figure 2. Knowledge transfer in MNEs, local capability building and development



## **Chapter 3. Research Methodology<sup>2</sup>**

### **3.1 Objectives**

The objective of this project is to study the transfer of managerial knowledge from MNEs to local firms and workers. The aim is to examine the impact that such knowledge transfer has on local capability building, and the impact it has on economic and social development.

#### **Management Practices and Knowledge Diffusion**

The first part of our research question and objective is to understand which channels MNEs' management practices and technology are transferred to local actors. We also consider what settings are more conducive to local firms' learning of these practices and what potential barriers exist for knowledge transfer. Finally, we will also attempt to shed light on any differences between the impacts of Chinese and European MNEs.

#### **Socio-Economic Development Impact**

The study combines qualitative and quantitative analysis to answer the second part of our research question. Specifically, we consider whether there has been any direct and/or indirect employment creation among the local workforce as a consequence of MNEs' activities. We will also analyse the interaction landscape and whether MNEs are engaging with local suppliers and sub-contractors.

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<sup>2</sup> Dr Shaheen Akter made valuable contributions to the discussion of impact indicators. Dr George Essegbey and Dr Godfred Frempong made valuable comments and suggestions on the industry and MNE selection and the questionnaire.

These questions will serve our overarching objective of assessing whether MNEs' presence has raised living standards and improved working conditions in Ghana. Specifically, we will provide aggregate and case study evidence on wage formation dynamics, income inequality between sectors of the economy (or so called duality), employment contract length, and improvement of capabilities and production skills through training opportunities.

## **3.2 Research Design**

We investigate the knowledge transfer process at two levels: the individual level and the firm level. In particular, we pay attention for channels of knowledge transfer and their effectiveness. We also consider how MNEs of different country origins affect this.

### **3.2.1. Impact Indicators and Survey Tools**

To measure 'socio-economic development impact' as described above, we rely on a combination of case studies and quantitative evidence. This was collected via in-depth interviews with workers, managers, and policy-makers, in addition to an extensive survey. In this section, we will describe the socio-economic development impact indicators we focus on in the econometric analysis to detect aggregate patterns. We also describe the scope and content of the survey tools which were used to elicit workers' and managers' answers on socio-economic development indicators, managerial capability and knowledge transfer within each MNEs. Detailed accounts of the methodology used for the case studies are contained in the respective case study chapters.

#### **Impact Indicators**

In this study, 'impact' can be observed through changes in the chosen impact indicators. Choice of impact indicators depends on whose and what impact is to be evaluated. For example, Fu and Akter (2016) measured the impact of mobile phone technology on the delivery of agricultural extension services and justified the use of indicators such as – an improvement in knowledge,

capabilities and aspiration due to these ICT based services. In general, development indicators could be any measurement of performance, income, job creation, productivity, savings, investment, health, nutrition, education, labour allocation, empowerment, environment etc. Echavez et al. (2014) used various indicators to measure the impact of skill training on several dimensions of socio-economic development. These could include - an increase in the perception of the benefits of training, improvements in business/agriculture, changes in employment patterns, and the ability to influence decisions.

Benefits of MNEs on a local economy can be seen through its impacts on various socio-economic development indicators. MNEs are expected to bring a bundle of capital, technological and managerial knowledge to the host countries and to benefit their economies by enhancing productivity as well as creating more job opportunities (Fu, 2012). Knowledge is often measured by the number of patents, sales of new products, or R&D expenditure (e.g. Singh, 2007; Driffield and Love, 2007; and Mancusi, 2008). Some studies attempt to infer knowledge spill-overs indirectly by estimating the change in productivity of domestic firms as a result of increasing foreign share in total output, employment or assets in the industry or region (e.g. Aitken and Harrison, 1999; Buckley et al., 2002; Driffield and Girma, 2003; Javorcik, 2004).

MNEs often provide complementary workers to the local industry from abroad. However, the impact to the local workforce could be higher if instead local workers were trained and employed. An example of this is the Hyderabad government in India. They trained local computer programmers and then convinced Bill Gates to employ these local workers in Microsoft's global production chain (Pritchett, 1997). These computer programmers eventually teamed with other specialists in advanced economies and were then hired by the Microsoft companies worldwide. In this perspective, employment of local employees could be an indicator of complementary skill development and a signal for the local economy's eventual economic development.

MNEs may offer managers premium wages that are higher than local firms and other reward packages to attract the best employees (Jain, Lawler and Morishima 1998). If these managers

are recruited from the host country then there may be more knowledge and skills spill-overs to the local economy. So the presence of wage premiums and the nationality of managers could be indicators of local development.

Higher R&D investment by MNE subsidiaries may trigger innovation by way of improving competitiveness of local resources. R&D investment therefore could reflect the knowledge-seeking motives of MNEs in host countries (Pearce, 2012) and may well be a good indicator of sustainable economic development. These selective involvements by MNEs could improve the capacity of the host countries' national system of innovation to drive sustainable development for their economy. China is an example where MNEs are already contributing to an emerging national system of innovation to develop products that build their competitiveness into the large and fast-growing host market. R&D stock is often used as a proxy indicator for the technology stock.

The literature finds that multinational spill-overs occur through R&D activities, but not through production activities (Todo, 2006). Labour turnover across firms facilitates technology spill-overs embodied in human capital because local employees working for multinationals with R&D activities gain much more knowledge than employees of foreign firms without R&D activities. Employee turnover could therefore be an impact indicator along with R&D investment and productivity.

If the training given to temporary MNE employees are transferrable to local firms, then these employees could find a job in local firms after their contract ends with the MNEs. In such cases, the training could be translated into local economic development. Therefore we may use transferrable training programmes as impact indicators.

In this study, we have chosen impact indicators that consider various learning dimensions, types of training and knowledge transfer mechanisms etc. and combine them with a wellbeing indicator (such as living standards, social status, etc.), in order to concurrently analyse these two aspects. The literature provides evidence that greater capabilities/knowledge/education leads to higher productivity and incomes (Fu & Akter, 2016). Also, having low aspirations of their future

opportunities means that people may ignore some potentially profitable options for investment. The questionnaire was designed with this particular aim in mind. Thus, we asked workers as well as middle-level managers the question of whether they thought their future aspirations improved as a result of being employed by the MNE. We also asked them whether they thought that, as a result of this employment, their capacity of running their own business had increased; or if their living standard and social status had improved. We also collected data on reward packages (such as allowances, insurance, and pension) and their aspirations for future employability.

These questions capture expected improvements in future living and working conditions, associated with the capabilities acquired through employment in MNEs (see appendix for a table with the exact wording of the questions). Specifically, we ask whether their exposure to MNEs' management style, practices, and knowledge improves the employee's current capability and future ability to improve their working/living standard, as well as their own managerial capability.

### **3.2.2. Questionnaire Design**

Two questionnaire tools were used to carry out the quantitative survey and the qualitative analysis. The first tool was divided into two sections: one for managerial practices and the second for economic development and wellbeing outcomes. Three versions of the survey questionnaires existed: one for CEOs of the MNEs, one for mid-level managerial staff (henceforth simply managers), and one for workers. The CEO questionnaire included all the questions asked to managers, with the addition of questions regarding overall firm strategy and planning. The questions for workers were a subset of those asked to managers, and were more focused on aspects of knowledge transfer and supervision (see the appendices for a sample version of the three questionnaire tools we used).

More specifically, the survey questionnaires included an introductory section which gathered general demographical information about surveyed person and their working status within the firm (i.e. role and seniority). Then there is a section on managerial innovation and practices. Finally there is a section on socio-economic impacts.

The section on managerial management innovation and practices is divided in cost management (including finance and production management), marketing (including branding and retail strategy), HR (including performance-based rewards and assessments), and IT (including communication methods). A common thread uniting all management practice dimensions is the provision of training, which will be one of the core variables we use to assess knowledge transfer.

In the questionnaire, special attention was paid to the channels through which knowledge is exchanged within the firms.

The section on socio-economic development indicators covers a broad range of questions about the individual's family, living standards, personal aspirations, and working capability acquired through employment in the foreign sector. Questions addressing wage and income directly were not possible, due to the sensitive nature of such information. A quantitative survey tool was not deemed appropriate to enquire on such dimensions, however, the data collected through the survey was complemented with more in-depth qualitative data collected through a second set of open-ended questionnaires (described in detail in the case study chapters). Though these, we were able to complement and contextualise the aggregate data and analysis.

### **3.2.3. Survey implementation**

We conducted a pilot questionnaire, which allowed us to identify additional analytical categories in respondents' narratives. These informed the initial theoretical framework for the final qualitative and quantitative questionnaires that were implemented.

From there we proceeded with qualitative interviews and issuing the quantitative survey, at the same time. The qualitative interviews both preceded and followed the quantitative analysis so as to allow in-depth discussions to inform and qualify some of the survey findings. Qualitative interviews were carried on until data saturation was achieved. To triangulate the information, some of the managers and policy-makers were re-interviewed at the end of fieldwork to clarify issues that emerged during the interviews with the workers. Interviews for the quantitative data

collection were carried out according to a pre-specified sampling framework, applied at two levels: the company level and the individual level. The section below will provide detailed criteria regarding the sampling framework, while the case study sections will provide similar information for the qualitative analysis.

### **3.3 Sampling Framework**

#### **Selection of Companies**

The MNEs involved in this study were companies selected from an official list provided by the Ghana Chamber of Commerce, following a purposive sampling framework. Eight MNEs were selected according to a number of criteria, these included their market power and size in the chosen sector, the nationality of the firm (four Chinese, four European), the technology intensity of the firm, and the type of sector. Specifically, four sectors were chosen, with two high tech companies (ICTs and pharmaceuticals) and two low tech companies (textiles and construction). These choices were motivated by the wish to analyse whether knowledge transfer patterns differed depending on the technology intensity of the industry and the nationality of the investors. Sectors such as the oil, gas, and mining were excluded, as they are prevalently extractive and less appropriate in a study regarding a transfer of managerial knowledge.

The company list for European MNEs is as follows: Vodafone (British, ICTs), Gokals Laborex (French, pharmaceuticals), Tex Styles Ghana (Dutch, textiles), Acticon (Portuguese, construction). The list of Chinese MNEs is: Huawei (ICTs), San Bao (pharmaceuticals), Akosombo Textiles (textiles), Top International (construction). The response rate for all these was 100%.

#### **Selection of Individual Respondents**

For the survey part, we conducted a total of 242 interviews across the eight MNEs, categorised as in Tables 2 and 3. For the selection of managers, we used purposeful sampling techniques.

Specifically, we aimed to always interview the Human Resource (HR) manager for questions regarding working conditions; and we interviewed at least one manager for each strategic key area in each firm (typically marketing, finance, product development). Overall, in each firm we aimed to interview between 5 and 10 managers, plus the CEO or Deputy CEO.

Workers were selected using a combination of snowballing techniques and purposive sampling. The incorporation of purposive sampling ensured a balance in terms of skill level, role, and work experience. Once inside the firms, we relied on the indication of supervisors, team leaders, and other workers, to identify different roles and positions. We aimed to interview around 20 workers, in each MNE.

Table 1. Workers and Manager Survey sample composition - pooled

Managers (including 8 CEOs)	69
European MNEs	37
Chinese MNEs	32
Workers	173
European MNEs	82
Chinese MNEs	91
Total	242

Table 2. Workers and Managers Survey sample composition – MNE breakdown (European)

<b>Vodafone</b>		<b>GoKals Laborex</b>		<b>Textile Ghana</b>		<b>Acticon</b>	
<i>Managers + CEO</i>	<i>Workers</i>						
<b>10</b>	<b>21</b>	<b>5</b>	<b>20</b>	<b>11</b>	<b>21</b>	<b>7</b>	<b>20</b>

Table 3. Workers and Manager Survey sample composition – MNE breakdown (Chinese)

<b>Huawei</b>	<b>Sanbao</b>	<b>Akosombo</b>	<b>Top International</b>
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<i>Managers + CEO</i>	<i>Workers</i>	<i>Managers + CEO</i>	<i>Workers</i>	<i>Managers + CEO</i>	<i>Workers</i>	<i>Managers + CEO</i>	<i>Workers</i>
9	21	8	23	6	23	5	24

A detailed data break-down for the qualitative data will be provided in the respective case study sections below.

### 3.4 Quantitative Analysis

The logistic model is used to estimate the probability of a binary response variable based on one or more predictors. In our case, our chosen dependent, or response, variables are binary, in that it takes the value of 1 (yes) or 0 (no), as a built-in answer to the survey questionnaire tool. Table 4 below provides the extended definition of all the dependent and independent variables used in the analysis.

Thus, the estimated coefficients refer to probabilities of particular outcomes. More specifically, the logistic regression follows a logistic function and measures the relationship between the categorical dependent variable and the independent co-variables, by estimating probabilities. Given that our data is cross-sectional in nature, we run a pooled design.

The model we estimate in this analysis is the following:

$$Y_{i,j} = \alpha + \beta X_{i,k} + \gamma Rewards_{i,l} + \delta Superv_{i,m} + \theta ICT_{i,n} + \mu Training_{i,q} + \varepsilon$$

Where  $Y_{i,j}$  refers to the individual workers' outcome variable in terms of their future aspirations and work ambitions and perspectives, as improved after MNE employment. (See Table 4 for a detailed description of the variables.) The  $\beta X_{i,k}$  vector refers to basic demographic and working status characteristics of labourers such as gender, age, education level, years spent in the MNE and in the industrial sector of reference, and an interaction between education and MNE experience to capture the reinforcing effects these two variables may have on each other.

The vector  $\gamma Rewards_{i,l}$  refers to various types of incentive provided by managers, namely, monetary, non-monetary, and positive feedback rewards. The  $\delta Superv_{i,m}$  vector includes covariates related to the HR managerial supervision workers receive, specifically on workers' space for initiative and managers' setting of clear targets. The  $\theta ICT_{i,n}$  vector contains variables related to the use and learning of ICT technologies, such as the time spent on PC and the learning of new software for work purposes. The  $\mu Training_{i,q}$  vector refers to the provision of on-the-job training to workers employed by the surveyed MNEs.

Table 4. Worker and Manager Survey Variable Definitions

<i>Variable</i>	<i>Definition</i>
<b><i>Aspirations (dependent variable)</i></b>	Do you think working for this company has provided you with knowledge, skills, and information that you are going to be able to use after employment with the company terminates. E.g. to access a better/higher position? Yes (1) or No (0).
<b><i>Gender</i></b>	Interviewee's gender: Female (0) Male (1)
<b><i>Age</i></b>	Interviewee's age measured as a continuous variable in years
<b><i>Education</i></b>	Interviewee's highest qualification with basic school (1), secondary school (2), and tertiary school (3)
<b><i>MNE Experience</i></b>	Interviewee's years of experience in the current MNE, continuous variable
<b><i>Field Experience</i></b>	Interviewee's years of experience in the current industrial sector, continuous variable
<b><i>Monetary Rewards</i></b>	Have you received in the last three years (2012-2014) any monetary reward packages e.g. bonuses, cash award for high performance? Yes (1) or no(0)
<b><i>Non-Monetary Rewards</i></b>	Have you received in the last three years (2012-2014) any non-monetary rewards e.g. products of the enterprise, coupons to shop, ticket to travel, etc.? Yes (1) or no(0)
<b><i>Positive Feedback</i></b>	Have you received in the last three years (2012-2014) positive feedback such as praising good performance and encouragement? Yes (1) or no(0)
<b><i>Space for Own Initiative</i></b>	During the three years 2012 to 2014, did your supervisor or manager leave you with enough space for your own initiative? Yes (1) or no (0).
<b><i>Clear Targets</i></b>	During the three years 2012 to 2014, did your supervisor or manager provide you with clear targets? Yes (1) or no (0).
<b><i>Computer Use (Hrs x day)</i></b>	How many hours per day do you spend on the computer for work purposes? Continuous variable
<b><i>ICT Learning</i></b>	During the three years 2012 to 2014, did you learn to use any new ICT device or software in your job? Yes (1) or no (0).
<b><i>On-the-job Training</i></b>	After starting employment, did you receive on-the-job training? i.e. training while performing job tasks, learning by doing? Yes (1) or no (0).



## **Chapter 4. FDI and the Industrial Sector in Ghana**

### **4.1 FDI Inflow to Africa**

According to the World Investment Report 2015, FDI inflows to Africa stayed at \$54 billion in 2014 (UNCTAD, 2015). North Africa experienced a decline in FDI inflow while the inflows increased for Sub-Saharan Africa. Specifically, North Africa went down by 15% to \$11.5 billion, while FDI flows to Sub-Saharan Africa increased by 5% to \$42.4 billion (UNCTAD, 2015). Overall, Africa's share in global FDI inflows increased to 4.4% from 3.7% in the previous year. The report further indicated that the critical drivers shaping FDI flows within Africa are intra-African FDI flows. The expansion of emerging-market firms from Western Asia, and non-traditional actors such as private equity, or growing consumer markets in the food and beverage industry.

The services sector accounts for the largest share in the stock of FDI in Africa. Between 2001 and 2012 it recorded a four-fold increase (UNCTAD, 2015). In 2012 the share of the services sector in Africa's total stock of FDI stood at 48%. The agricultural sector accounted for 31%, while the manufacturing sector accounted for 21% of Africa's total FDI stock.

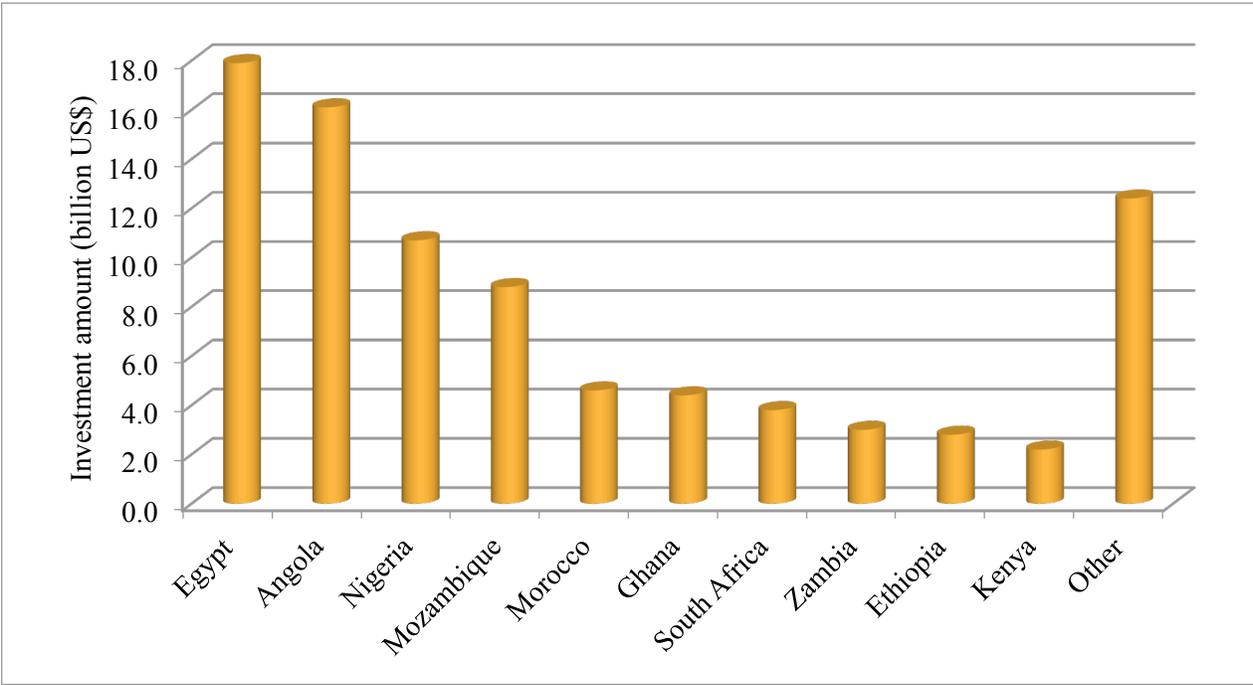
In terms of investors' composition, Africa attracts a lot of FDI from emerging economies in Asia. China's share of Africa's trade of FDI stood at 7% in 2014 making it the continent's fourth largest trading partner after France, Greece and the United States (The Africa Investment Report, 2015). China's FDI stock in Africa currently amounts to \$6.1 billion (The Africa Investment Report, 2015). The UK and France remained top investors in Africa with \$18.3 billion worth of investment in 2014. However, the United States ranked number one, followed in descending order by the UK, France, South Africa, Germany, UAE, China, Portugal, Spain and India (see page 6 of The Africa Investment Report, 2015).

In terms of the number of FDI projects registered in African countries in 2014, South Africa is ranked 1<sup>st</sup> with 116 projects recorded. However, the country recorded a 15% decline in relation to projects in 2013. According to the Africa Investment Report 2015, South Africa was ranked

the highest on the African continent for quality of trade and transport related infrastructure in 2014. This among others factors may have contributed to significant inflow of FDI projects into the country. Ghana is ranked 7<sup>th</sup>, after Nigeria, in the total number of projects registered.

In terms of capital investments, Egypt recorded the highest in FDI in Africa with \$17.9 billion worth of investments, with Angola ranking second, as shown in figure 3. Ghana emerged 6th with \$4.4 billion of investments. It is worth noting that, although South Africa was ranked first in terms of FDI projects, it was ranked 7th in terms of investment capital.

Figure 3. FDI flow to Africa by capital investment in 2014 (Source: The Africa Investment Report 2015)



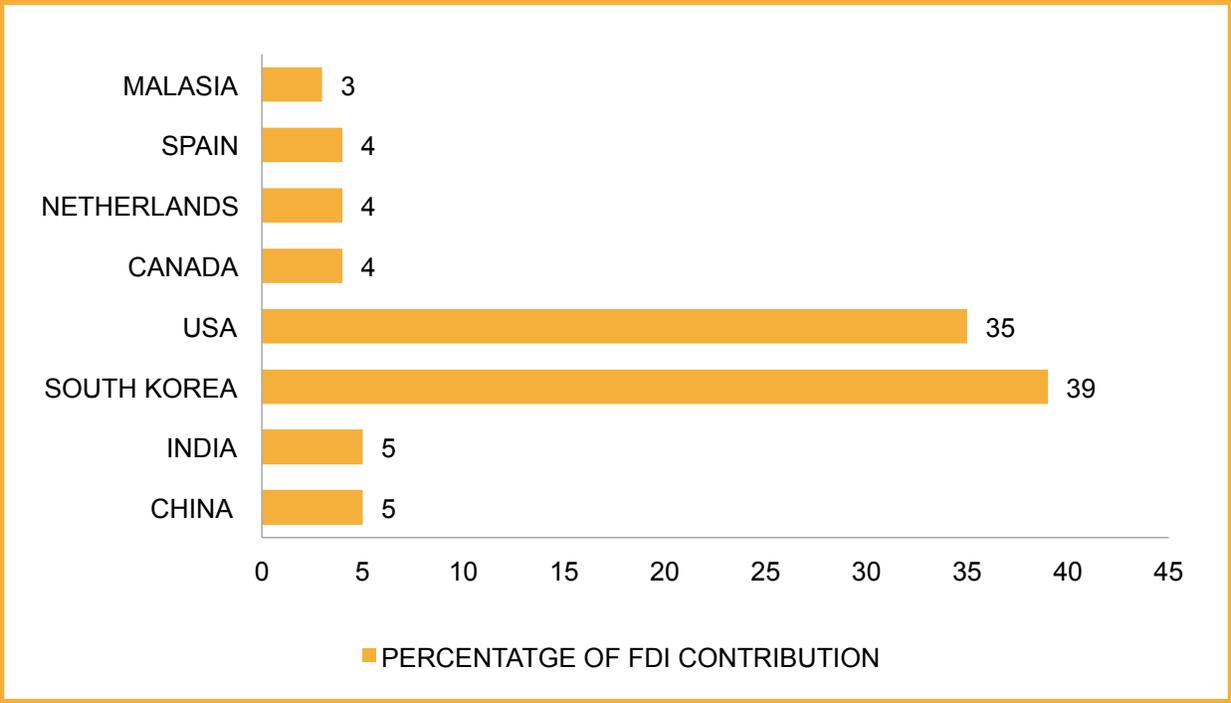
#### 4.2 FDI flows into Ghana

Ghana has recognized the significance of FDI as critical issue in development, which has led to an considerable improvement in the local climate for FDI after it shifted into a market economy (Amoah, 2014). China is perceived as a key investor in Africa. Chinese FDI in Sub-Saharan

Africa increased rapidly in recent years, focusing mostly on Ghana and Nigeria (UNCTAD, 2012). Currently, Sub-Saharan Africa attracts about \$9 billion out of the total \$16 billion China’s FDI stock in Africa. Ghana has over the years achieved moderate success in attracting FDI. It is ranked as the 6<sup>th</sup> largest recipient of FDI in Africa and the 4<sup>th</sup> in Sub-Saharan Africa. According to Ghana Investment Promotion Centre (GIPC), Ghana attracted over 2,000 individual foreign investors from more than 20 different countries, with the majority of them coming from China. Projects registered in Ghana by Chinese investors in 2012 totalled 56 with an estimated value of US\$236.03 million (GIPC, 2012).

However, when considering the overall period from 1993 to 2013, USA and South Korea were major sources of FDI in Ghana. They made up about 35% and 40% of Ghana’s FDI inflow respectively. The countries that invested the least were Japan, Pakistan, Indonesia and Germany. Each contributing less than a percentage point to total FDI recorded over the same period. Figure 4 shows each country and its sector’s contribution in terms of FDI, in monetary terms.

Figure 4. Proportion of overall FDI inflow to Ghana by country, 1992-2013 (Source: GIPC, 2014)



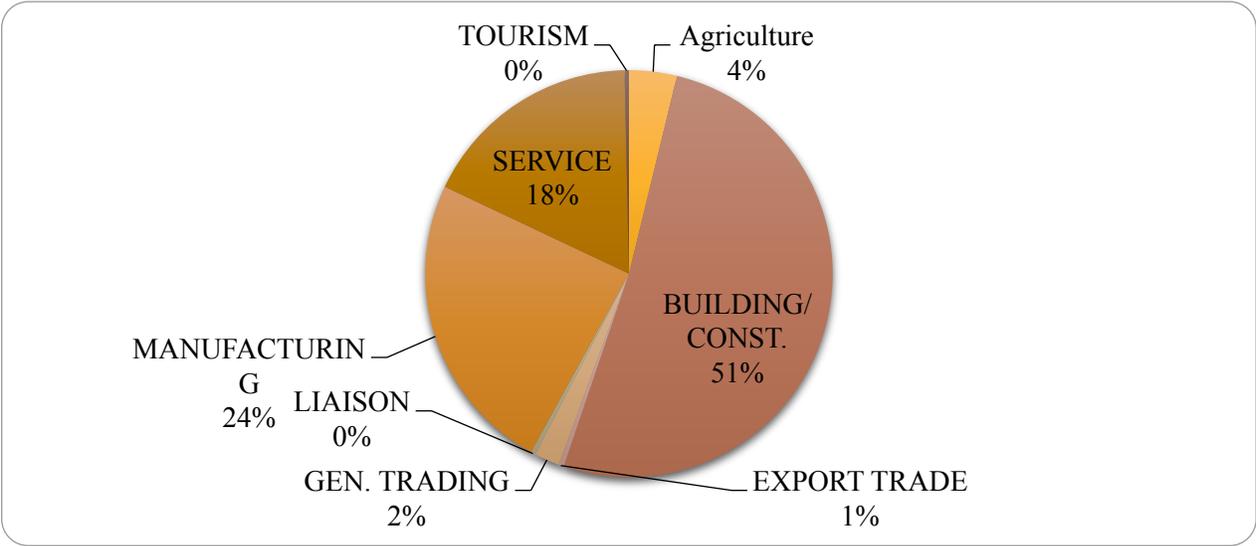
South Korea's investment is mainly in the building and construction sector; USA in the manufacturing; India in agriculture; Canada in services and China in manufacturing as well (see table 5). It is expedient on the government and all stakeholders to make concerted efforts towards attracting more investments to the agricultural sector if the country looks forward to achieving a goal of a domestic food security.

*Table 5. FDI sector contribution by country in million(s) USD, 1993-2013 (Source: GIPC, 2014)*

<b>Country</b>	<b>Agriculture</b>	<b>Building/Const.</b>	<b>Manufacturing</b>	<b>Service</b>	<b>Tourism</b>
China	5.36	211.28	256.84	52.13	10.74
<b>India</b>	353.43	43.55	71.38	43.89	4.57
<b>South Korea</b>	14.23	4,780.01	17.43	23.45	2.47
<b>USA</b>	57.35	942.04	2,319.57	918.59	15.7
<b>Canada</b>	0.26	24.01	35.12	374.32	0.18
<b>Germany</b>	2.04	10.79	13.7	13.64	1.98
<b>Netherlands</b>	16.89	162.14	115.98	172.21	3.49
<b>Spain</b>	16.89	162.14	115.98	172.21	3.49

Again, data from GIPC show that about one-third of all FDI inflows to Ghana in the last decade were directed to the manufacturing sector. The construction sector accounts for the largest share of FDI inflow to Ghana, while tourism attracts the lowest share (see figure 5).

Figure 5. FDI by Sector 1993-2013 (GIPC, 2014)



### **4.3 Emergence and operations of MNEs in Ghana**

Prior to 1983 the economy of Ghana was plagued with price controls, heavy state involvement, newly established parastatal organisations, inflation, an unstable political environment and so on. These conditions were hostile to both foreign and domestic investment decisions and so did very little to attract potential foreign investors.

In 1983 there was a total collapse of the economy due to mismanagement on the part of the government. As a result, the Government of Ghana, with the help of the Bretton Woods Institution, the International Monetary Fund (IMF) and the World Bank, initiated the Economic Recovery Program (ERP) in April 1983 in order to stabilize the economy and reform the market. The need to attract foreign direct investment (FDI) became a major policy objective of the ERP program (Abdulai, 2005). During the second phase of the reform (1987–1992) most state-owned enterprises were privatised due to inefficiencies. Price controls were removed and the export retention program for non-traditional exports was discontinued to ensure exporters retain all their revenues.

The privatisation initiative embarked upon during the reform contributed to attracting a significant inflow of private foreign capital into the economy. About 300 state owned enterprises were sold with the majority of the firms acquired by foreign investors and the others acquired through partnerships between local and foreign investors. In addition to the reform, Ghana enacted a series of laws such as the Minerals and Mining Law of 1986, the Investment Code of 1994 and the Free Zone Act of 1995. These laws were considered market-friendly and they helped to attract investors into the country.

Additionally, Ghana attracted a lot of multinational enterprises to invest in the economy due to having a stable political climate, an abundance of natural resources, an excellent geographic position, easy access to markets (both in Europe and the sub-region) and incentives offered under the Investment Code. Adding to the number of MNEs is the emerging oil industry which in the last three to five years has attracted a large number of oil companies and other related service companies.

The Ghana Economic Review Report in 2009 indicated that the transport and communication, banking, mining and real estate sectors accounted for 49%, 18%, 15% and 6% of foreign direct equity investments into Ghana in 2007 respectively. The construction and manufacturing sectors each accounted for 4% while various other sectors accounted for the remaining 4%. The report further revealed that out of the 45 multinational clients surveyed across all sectors of the economy, 37 were incorporated as subsidiaries versus 8 that registered as local branches of foreign firms.

Foreign capital participation in the economy of Ghana can be traced back to the pre-independence era. The colonial era saw foreign companies trading in raw materials which they acquired from what was then - Gold Coast (now Ghana) and exporting them to Europe. Due to the composition and nature of the economy at that time, multinationals were dominant in the extraction industry (GIPC, 2014). As such MNEs have contributed significantly to the development of this industry. Since then the activities and operations of multinational enterprises have spread to other sectors of the economy.

The World Rainforest Movement (2004) has noted that foreign companies own more than 70% of the ownership structure in Ghana's mining sector. Statistics from the Ghana Investment Promotion Centre (GIPC) shows that about one-third of all FDI to Ghana in the past ten years is registered in the manufacturing sector. The 4<sup>th</sup> quarter report of GIPC in 2007 shows that out of 39 registered manufacturing companies, only 7 are wholly owned by Ghanaians while the rest were either owned by foreigners or joint ventures between Ghanaian investors and foreign investors (GIPC, 2008). Also, the construction sector has attracted a considerable number of foreign companies in large scale projects such as the construction of roads, dams, stadiums, office complexes, hospitals, and others. It can be said that Ghana has created the enabling environment – security, infrastructure and human capital – to facilitate the smooth operations of MNEs over the years.

## 4.4 Ghana's Industrial Sector

### **Institutional Framework for the Industrial Sector**

The core public institution managing the sector is the Ministry of Trade and Industry and its allied agencies such as the Ghana Investment Promotion Centre (GIPC), Ghana Export Promotion Council (GEPC), National Board for Small Scale Industries (NBSSI), Ghana Standards Board and, the GRATIS Foundation of Ghana. There is also the Association of Ghana Industries, which is a voluntary organisation of all industry players in the country which plays an advocacy role in policy making and implementation. The Ministry of Trade and Industry develops the industrial policy which guides all activities and actions of the industrial sector in Ghana.

### **Industrial Policy<sup>3</sup>**

The main document supporting the industrial sector of Ghana is the Industrial Policy developed by the Ministry of Trade and Industry. The Industrial Policy is designed to promote increased competitiveness and enhanced industrial production, with increased employment and prosperity for all Ghanaians. It is also to provide a broader range of fair-priced, better quality products for the domestic and international markets. The key development objectives of the Industrial Policy are to:

1. expand productive employment in the manufacturing sector
2. expand technological capacity in the manufacturing sector
3. promote agro-based industrial development
4. promote spatial distribution of industries in order to achieve reduction in poverty and income inequalities

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<sup>3</sup>Accessed from

[http://www.moti.gov.gh/home/index.php?option=com\\_docman&task=doc\\_view&gid=24&tmpl=component&format=raw&Itemid=128](http://www.moti.gov.gh/home/index.php?option=com_docman&task=doc_view&gid=24&tmpl=component&format=raw&Itemid=128) on 3<sup>rd</sup> June, 2016

The various issues that the policy aims to address are:

- Labour and industry relations
- Incentive frameworks for industrial development
- Privatisation and public-private partnership for development
- Technology in industry
- Intellectual property rights in industrial development
- Financing for industrial development
- Gender equity in industry
- Health and safety guidelines in industry
- Micro, small and medium enterprises development

The Industrial Policy underscores that Ghana's manufacturing sector has not responded well to the various economic and trade policy reforms pursued over time. Manufacturing firms have faced considerable challenges in the form of increased competition in the domestic and export markets and high production and distribution costs arising from high interest rates, obsolete equipment, inefficient infrastructural services and low productivity. As part of the policy, the Government intends to initiate and implement programmes to develop requisite skills, ensure adequate and cost-competitive production inputs and services, and also provide financing for industrial development.

The overdependence of Ghana's industrial sector on exports, resulting in higher pricing of raw materials was acknowledged by the Industrial Policy. The policy objective for this particular constraint is 'to ensure availability of competitively priced imported raw materials for manufacturing'. Hence, government has spelt out policy directions to ensure that this is achieved and it includes the following:

1. Encouraging the private sector to set up consignment stocking of critical imported raw materials in a customs bonded warehouse by the government
2. Supporting industry groups to negotiate favourable port charges and shipping costs
3. Improving handling facilities and turn-around times at the ports
4. Exploring opportunities with private sector partners for regional and sub-regional joint sourcing arrangements.

In recent times, the industrial sector has suffered some setbacks owing to the poor electricity and water supplies in the country. This has led to some industries reducing their outputs drastically, causing the retrenchment of labour, thereby increasing the unemployment rate in the country. The policy clearly addresses this issue with an objective to ‘ensure adequate, sustainable and cost-effective delivery of electricity and water to industry and also to promote efficient use of electricity and water’. In addressing this issue, government has pledged a commitment to the following policy prescriptions:

- Ensuring that industry’s requirements of electricity and water are met at competitive prices and in an environmentally sustainable manner
- Encouraging private sector participation in the supply of electricity and water
- Designing and implementing energy and water efficiency and conservation programmes

Even though all these plans have been targeted by the government to boost the industrial sector, much of it has not materialized as the country continues to experience serious setbacks of power cuts every now and then. The majority of the policy directions for a ‘cost effective and adequate supply of electricity and water’ have not been met, and these plans are still being debated. If the industrial sector is to see a significant boost and a greater contribution to the country’s growth, adequate infrastructure systems are critical.

### **Composition of the Industrial Sector**

The industrial sector of Ghana comprises of the following industries;

- Mining and Quarrying (Bauxite, Gold, Manganese and Diamond)
- Manufacturing (e.g. Iron and Steel; Food and Beverages, Cement, Metal. Pharmaceuticals, Sawmill and Wood Products)
- Electricity, Water and Sewage Plants
- Construction
- Petroleum

The mining industry has been a huge contributor to the growth of the industrial sector in Ghana, though it has been set with a number of challenges in recent times resulting in staff retrenchment to reduce operational cost. In 2012, the sector performed appreciably well with gold leading the

industry at a growth rate of near 24%. According to the Gold Fields Mineral Survey, Ghana was the 8th leading producer of gold in the world, and its output increased by 6%; a rise in position in 2011 from 9<sup>th</sup>.

The strong performance of the mining industry was reflected by its impact to the country's economy in 2012. The Bank of Ghana reported that the mining industry's contribution to total merchandise export earnings was about 43% in 2012. In terms of tax collection, the sector maintained its lead, as the largest contributor to the country's domestic tax revenue. The total payments from the mining industry to the Ghana Revenue Authority (GRA's) totalled approximately GH¢1.5 billion in 2012. This amount represents about 27.04% of GRA's total domestic collections in the year, an increase of 45% from 2011 levels (Ghana Chamber of Mines, 2013).

Petroleum was part of the manufacturing sector until 2012 when the country begun producing oil in commercial quantities. The sector was based on the state-owned Tema Oil Refinery (TOR), which produces refined products from imported crude oil. It accounted for about 19% of manufacturing output. The major products are petrol, kerosene, and diesel. After 1996, locally refined petroleum products are no longer exclusively supplied to oil marketing companies in Ghana by the Ghana National Petroleum Corporation. The state-owned Bulk Oil Storage and Transport Company (BOST) was established to deal with bulk distribution of petroleum products nationwide. The first production of petroleum products locally was recorded in 2012 and since then it has made great contributions to the growth of the sector and the country at large.

### **Performance of the Industrial Sector in Ghana**

The industrial sector is the second largest sector in Ghana. The sector grew by only 0.8% in 2014, a far cry from its growth rate of 6.6% in 2013 (ISSER, 2015). Performance over the years in the sector has been underpinned primarily by growth in the mining and quarrying industries, with petroleum being the main contributor. The exception from this is the manufacturing and the water/sewage plant industry, which recorded marginally higher growth rates on their 2013 figures, all other sectors grew more slowly than this in 2014 (ISSER, 2013; 2014 & 2015 ).

However, Ghana's performance in terms of global industrial innovation has improved over the years. The World Economic Forum Global Competitiveness Index Report in 2013 indicates that out of the 148 countries that were studied, Ghana was ranked 103<sup>rd</sup>. An improvement over the rank in 2012 which was 114<sup>th</sup>. Ghana's performance in some key areas of innovation, which is the Pillar 12 of the Global Competitiveness Index, indicates the following rankings for Ghana:

- Capacity for innovation - 55<sup>th</sup>
- Quality of scientific research institutions - 61<sup>st</sup>
- Availability of scientists and engineers - 75<sup>th</sup>
- University-Industry collaboration in R&D - 78<sup>th</sup>

The statistics suggest that globally, Ghana's capacity for innovation and scientific capability (in terms of human resources and institutions) is respectable. However, the low score for university-industry collaboration suggests there is a need for an improvement. This further implies that should Ghana create an effective bridge between the R&D system and the Industry, Ghana's global competitiveness can be enhanced. Therefore, the industrial sector of Ghana could have an improved outlook if it is augmented with effective R&D support systems and collaboration.

#### **4.5 Role of FDI in Ghana**

FDI has contributed to the country's development in diverse ways; including as an injection of capital, and as a creation of employment. Between 2010 and 2015, Ghana registered 2,035 foreign projects with a total investment value of about 21.6 million USD. For the same period, the projects provided over 262,000 jobs to Ghanaians. The provision of these jobs reduce poverty and contribute to the general well-being of the Ghanaian economy, since income from jobs will increase the purchasing power of the people to consume goods and services.

FDI also brings the technology and management skills needed for economic growth and development through enhanced productivity. However, there is uneven distribution of FDI across the various sectors of the Ghanaian economy. Sectors such as agriculture, where issues of

backwardness and capital constraints prevail, are not benefiting much from foreign investments. Only 4% of total FDI received went into the agricultural sector. This is relatively far less to the other sectors like the manufacturing (24%), services (18%), construction (51%) and others (3%) (GIPC, 2014).

FDI constitutes an important resource for Ghana and Africa in general. It remains critical to the developmental efforts of most African countries. Africa attracts huge FDI from emerging economies in Asia with China being the continent’s third largest trading partner after the United States and France.

Ghana has over the years achieved moderate success in attracting FDIs and has attracted over 2,000 foreign investors from more than 20 different countries, with the majority of them coming from China. The greatest share of the FDI that Ghana receives goes into industry (mainly building/construction and manufacturing). While this sets the country on its path towards the building of its industrial base, the agricultural sector has been relegated to the background in spite of the fact that it still employs the majority of the rural population and that it has been the backbone of the economy for years.

**4.6 Contributions of MNEs to Industry growth and development in Ghana**

The role MNEs play in expanding the frontiers of globalisation raises both opportunities and challenges for a country’s economic development needs. Some scholars believe MNEs are crucial to economic and social development of developing countries with inadequate domestic sources of investment capital, while others are of the view that MNEs are a threat to national development and sovereignty. Nonetheless many governments, especially those of developing countries have increased their promotional efforts in order to attract MNEs and FDIs for socio-economic development.

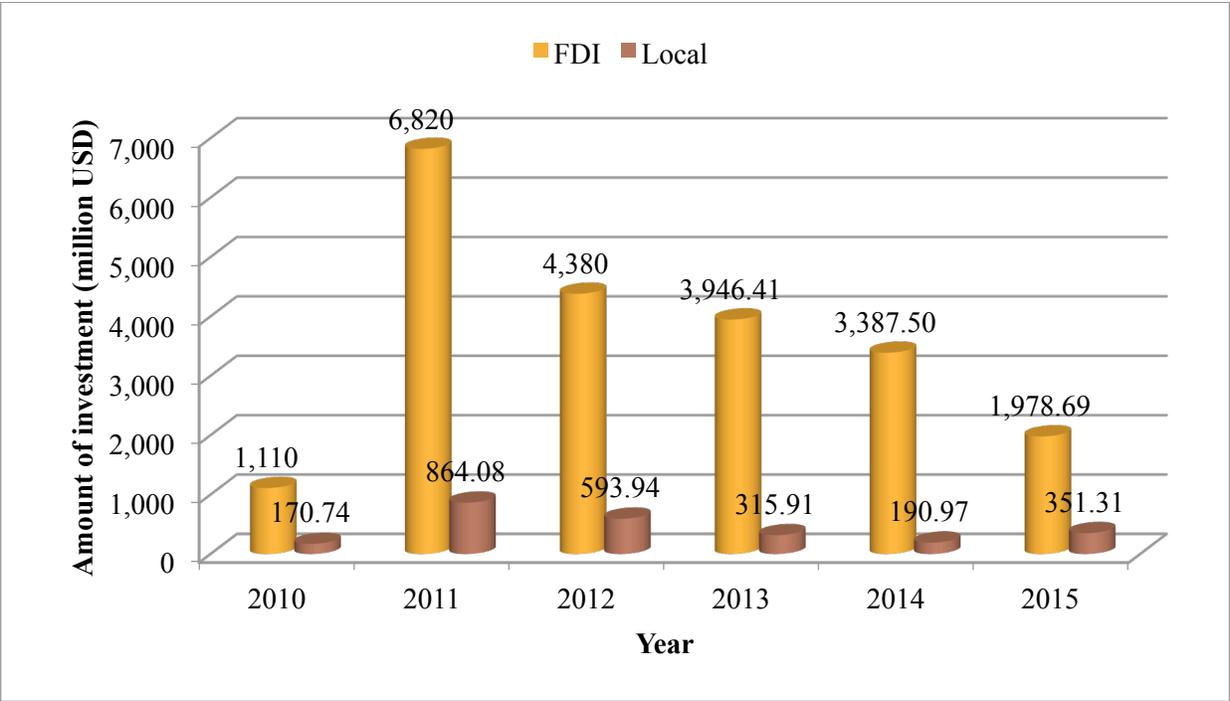
*Table 6. Investment projects in Ghana since 2010 (Source: GIPC, 2016)*

Year	Projects
2010	385

2011	<b>514</b>
2012	<b>305</b>
2013	<b>477</b>
2014	<b>184</b>
2015	<b>170</b>

Ghana, like other developing countries, has an abundance of labour and natural resources but lacks the capital to harness these important economic resources. For this reason, investments by MNEs are important. They provide access to foreign capital and investments which enable the host country to invest in human and physical capital. The investments by multinational firms serve as a major source of capital for the development activities in developing countries. Table 6 above presents the amount of investments projects in Ghana since 2010. The number of investment projects registered was highest in 2011 (514 projects). The number increased in 2013 following a decline in 2012. By 2015 the number of registered investment projects was 170, a number lower by 14 projects compared to the previous year. In figure 6, investment by FDI and their local counterparts are displayed. Again the FDI component of the total registered projects over the years highest reached a high in 2011. But it declined consistently until it was lowest in 2015 with an estimated value of 1,978.69 million USD. Meanwhile the local component largely followed the same trend (with the exception of 2015 where it went up).

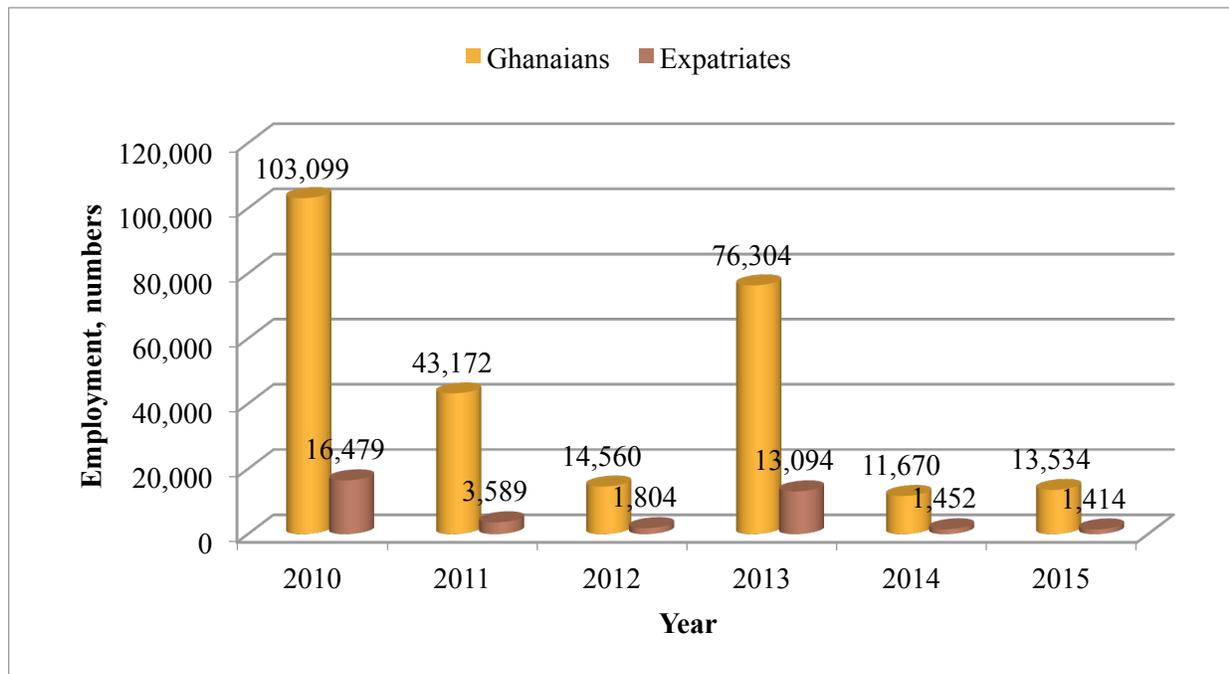
*Figure 6. Investments by MNEs in Ghana 2010-2015 (Source: GIPC, 2016)*



**Employment Created by MNEs**

MNEs and their activities significantly contribute to employment creation, resource mobilisation, and technology transfer. Figure 7 presents employment created by MNEs in Ghana. Similar trends can be observed in the employment created for Ghanaians and expatriates (except in 2015). More jobs were created in 2010 (103,099 job for Ghanaians and 16,479 for expatriates) compared to all years under review. Growth in employment generation for both Ghanaians and foreigners followed the same declining trend until 2013, which saw an increase, this then declined. Yet while the number of jobs created for Ghanaians increased in 2015, that for expatriates continued to decline since 2014.

Figure 7. Employment created by MNEs in Ghana 2010-2015 (Source: GIPC, 2016)



The MNEs provide a lot of assistance to firms that supply them with raw materials (suppliers) including the provision of training to their supplier’s employees. For instance, Nestlé Ghana and Blue Skies PLC collaborate with the local farmers to build their capacity for supplying quality raw materials. Nestlé Ghana collaborated with the Ministry of Food and the International Institute of Tropical Agriculture (IITA) in programmes such as the Northern Rural Growth Programme, which developed training programmes to help farmers increase the quality of cereals (maize and millet) used to produce their Cerelac infant cereal. More than 50,000 farmers, including 24,000 women, 1,200 agriculture extension officers have been trained through this intervention.

#### 4.7 Summary of FDI in Ghana

Foreign capital participation in the economy of Ghana can be traced back to the pre-independence era. Since independence in 1957, the post-reform era has seen much more MNE

activities compared to the pre-reform era. This owes to the liberalization measures pursued during the reform, which led to a significant inflow of private foreign capital into the economy. Ever since then market-friendly initiatives have been introduced, including the Minerals and Mining Law (1986), the Investment Code, among others.

Moreover, the heavy presence of multinational enterprises in the Ghanaian economy today can be attributed to the following factors - having a stable political climate since the 1980s, an abundance of natural resources, ease of access to European markets and those in the sub-region, and finally incentives offered under the Investment Code. Additionally, the oil and gas industry contributed to attracting a large number of oil companies and their service providers into Ghana during the last five years.

Several policy measures and initiatives have been introduced to attract foreign investors into the country: including incentive packages such as tax exemptions, long tax holidays for companies, permitting enterprises to retain large proportions of their profits in foreign accounts; and guarantees such as profit, interest or dividend transfers arising from any investment. The role of government and its institutions have changed markedly due to changes in overall economic policies. Government's intervention in the economy has been reduced and institutions regulating investment are working to create an investor friendly environment for FDI.

New laws including the Ghana Investment Promotion Centre (GIPC) Act, 2013 (Act 865) and the Free Zones Act, 1995 (Act 504) amended by the Free Zones (Amendment) Act in 2002 have been enacted to substitute obsolete ones that were considered to be stifling investment. This was to encourage and promote both foreign and Ghanaian investments to promote economic development.

The role MNEs play in expanding the frontiers of globalisation raises both opportunities and challenges as far as the country's economic development needs are concerned. MNEs provide access to foreign capital and investments which enable the host country to invest in human and physical capital. They also significantly contribute to employment creation, resource

mobilisation, and technology transfer. Further, MNEs provide assistance to local firms that supply them with raw materials including training to the latter's employees.

## Chapter 5. Ghana Case Study: Comparing MNEs and Domestic Firms

### 5.1 The construction sector in Ghana – an overview

The importance of the construction sector's contribution to the Ghanaian economy has visibly increased in the last decade. Data from the Ghana Investment Promotion Centre (GIPC) shows that, on average, the construction sector's investment made up to 6-7% of the total national investment value between 1994 and 2007, and jumped to an average of 33% in the 2008-2014 period.

Figure 8. Ghana's construction sector - investment patterns 2008-2014 (Source: GIPC, 2015)

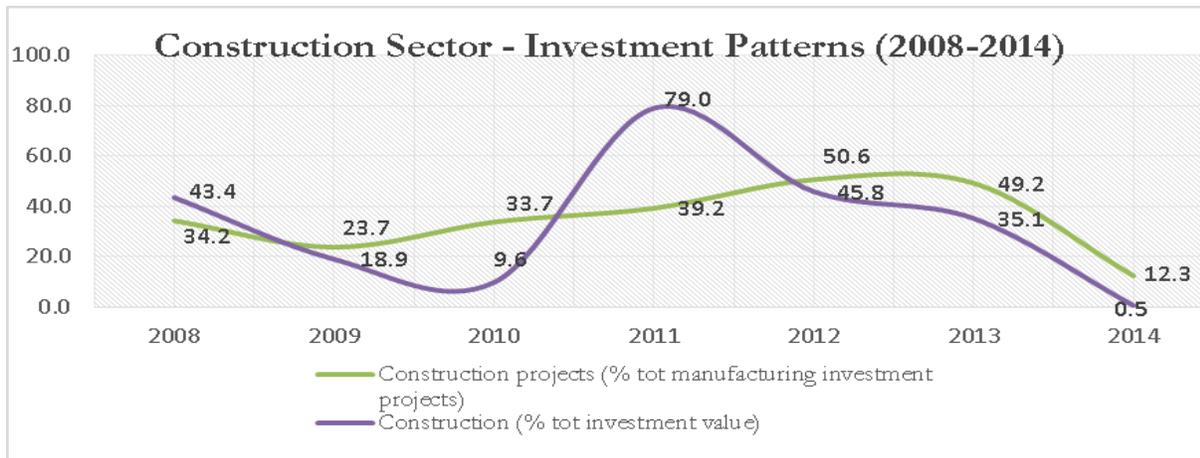


Figure 9. Ghana's construction sector - employment creation 2008-2014 (Source: GIPC, 2015)

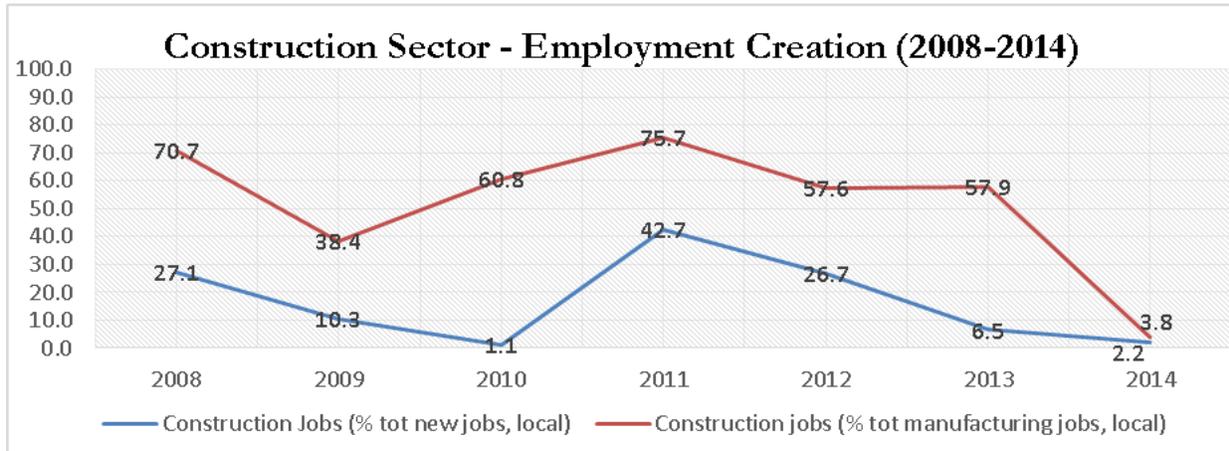


Figure 8 tracks the construction industry's share of total investments and total new manufacturing projects. The first series shows a peak of 71% in 2011, while 50% of all manufacturing projects were initiated in the construction sector between 2012 and 2013. The share of construction projects as a fraction of overall investment projects fluctuated less and grew from 8.6% in 2008 to 14.6% in 2013. Figure 9 plots the employment creation in the construction industry in Ghana between 2008 and 2014. The figure shows that, in 2011, 43% new employment across all manufacturing jobs was created by the construction sector alone. In addition, between 2008 and 2013, the construction sector accounted for an average share of 60% of new employment that was created in the manufacturing sector overall.

Alongside this progress, however, a recent study by Osabutey et al. (2014) points towards the inadequacy of the existing policy frameworks and the lack of foreign-local technological transfer and collaboration in the Ghanaian construction sector. In this case study, we analyse such policy framework and the co-existence between foreign and domestic construction companies to evaluate what type of impact FDI has and how this was mediated (if at all) by national policy.

## 5.2 Research methods

The case study relies on in-depth interviews with workers and managers of four construction firms and with institutional actors. Companies were selected from an official list provided by the

Ghana Chamber of Commerce, following a purposive sampling framework. Specifically, the four firms in the sample were chosen to represent progressively higher degrees of exposure to international business models and practices, with the highest degree among them being a Southern European MNE and the lowest of them, a small Ghanaian firm which mostly relied on public contracts. The other two companies included a fast developing mid-sized domestic contractor operating in the private luxury real estate sector, and a Ghanaian owned company that used to be a European MNE affiliate up to two years prior to interview.

We conducted a total of 54 interviews across the four firms, categorised as in tables 7 and 8 below. In selecting respondents in all the categories, we used purposeful sampling and snowballing techniques. We interviewed two to four managers in each firm. Workers (in the three firms that allowed access to their project construction sites) were interviewed by trying to keep a balance in terms of skill level, role, and work experience. We interviewed between 12 and 15 workers in each firm. Institutional respondents were also purposively sampled within the Ministry of Water Resources, Works, and Housing; the Ministry of Trade; the National Development Planning Commission; and the Ghana Investment Promotion Centre.

The questionnaire for managers was divided in three sections: the first described the firm’s activities and characteristics; the second compared activities in foreign and local companies, and gathered information on their collaboration/competition interactions; the fourth collected information on employment conditions in the firm. The questionnaire for workers only covered the employment conditions section. Finally, the questionnaire for policy-makers all sections above, but with additional questions on policy-making priorities and constrains.

*Table 7. Worker and Manager Survey sample composition - pooled*

<b>Managers (Project and Site Managers; HR Managers)</b>	<b>11</b>
<b>Construction Workers</b>	<b>36</b>
<b>Officers from regulatory bodies and institutions, Policy-Makers</b>	<b>7</b>

*Table 8. Worker and Manager Survey sample composition - breakdown*

<b>Small Ghanaian Contractor</b>	
Managers	<b>3</b>
Workers	<b>12</b>
<b>Medium Ghanaian Contractor</b>	
Managers	<b>2</b>
<b>Large Ghanaian Contractor (ex-Multinational)</b>	
Managers	<b>2</b>
Workers	<b>15</b>
<b>Multinational Enterprise</b>	
Managers	<b>4</b>
Workers	<b>15</b>
<b>Institutions (Advisors, Officers, Policy-makers)</b>	
Ministry of Water Resources, Works, and Housing	<b>2</b>
Ministry of Trade	<b>1</b>
National Development Planning Commission	<b>3</b>
Ghana Investment Promotion Centre	<b>1</b>

### 5.3 Results

From the interviews with workers, what emerged was that almost all interviewees both in foreign and domestic companies preferred to be employed in the foreign sector due to two main factors:

1. MNEs provide more employment benefits despite that MNEs' wages are almost always lower than the wages offered by domestic companies.
2. MNEs guarantee more employment stability and continuity. In other words, work in domestic companies is not guaranteed for every day of the week, and when one project ends there is no guarantee that another project will start after. But MNEs are able to provide both of these employment security guarantees.

To this, the majority of workers added that the quality of training, materials, equipment, and techniques were far superior in MNEs. This is why they thought that working for MNEs improved their skills and capacities more than working for domestic companies.

One thing to take into account is that workers indicated that they found the communication and working environment to be preferable in domestic companies as standards in MNEs were stricter and the managerial staff are seen as less approachable.

A second dimension to highlight is that of how foreign-domestic interactions contribute to raising standards in the domestic sector, and how national policy can contribute to these types of interaction. We found that almost no competition existed between foreign and domestic contractors, because domestic contractors were outcompeted even prior to tendering due to a lack in financial and physical capacity. A very limited amount of learning and knowledge transfer occurs when considering relationships between companies. Institutional respondents informed us that, although legislation exists requiring foreign firms to establish partnerships with local firms when entering Ghana, the enforcement of such legislation is reserved to the oil and gas sectors, which are currently the national priority.

To summarise, we found that in a low tech industry such as construction, the main contribution of MNEs' presence was in terms of:

- sheer employment creation, mainly of unskilled labour
- more stable and continuous employment for these labourers
- provision of additional benefits and allowances which are not offered by many domestic firms
- better opportunities for training and capability enhancement

The knowledge transfer component was mainly mediated through training; as not much transfer was taking place at all between firms. If national policy enforcement is not there to help local firms make the most out of foreign firms' presence, the spill-over of knowledge is reduced or inexistent. Partnerships or subcontracting were very rare in our case study, thus additional scope for knowledge transfer could be created by enforcing national regulations to foster exchange.

## Chapter 6. China's FDI in Africa and Its Impact

As the world brings itself onto the path to post 2008-crisis recovery, one of the major forces that pushes forward the world's economic growth is to rely on the expansion of South-South economic integration. In particular, the increasingly deep Sino-Africa strategic partnerships and economic engagements have attracted much attention in recent years. In 2009, China surpassed the United States as Africa's largest trade partner and the Sino-Africa trade volume hit a historical high totalling 221.88 billion USD in 2014. Coupled with the expansion of trade, this economic integration also exhibited positive momentum in terms of FDI. China concluded bilateral investment treaties with 32 African countries by the end of 2012 and according to statistics of the Chinese Ministry of Commerce, the outflow of China's FDI to Africa reached 3.5 billion USD in 2014, making the total stock nearly 30 billion USD with a yearly average growth rate of 46% over the last decade. China has also become Africa's second largest overseas project contracting market, with a total turnover of 46 billion USD in project contracting completed in 2014. More than 2500 Chinese enterprises operate their business in Africa across a broad range of sectors such as agriculture, telecommunications, energy, manufacturing etc.<sup>4</sup>

In recent years, China's presence in Africa has not confined itself to the activities initiated by the central Chinese government. There has been an increasing trend of economic engagement carried out independently by China's local governments as well as various non-state actors including multinationals, small and medium-sized enterprises (SMEs), and even individual Chinese migrants. While many African countries are now experiencing a period of transformation both political and economic, an increasingly heated debate arises on whether China's presence on the continent provides timely and valuable assistance to this transformation or whether it remains as pure market - and resource - exploiting behaviour? More importantly, can the engagement of

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<sup>4</sup> Data obtained from Ministry of Commerce of the People's Republic of China (2015). Website: <http://www.mofcom.gov.cn/article/i/dxfw/gzzd/201503/20150300910506.shtml>

Chinese multinationals with their host countries' economies serve as the major engine for the forthcoming socio-economic development in Africa and subsequently lift mass groups of local people from poverty?

Varying by the nature of companies' ownership structure and scale, Chinese FDI penetrates into different layers of Africa's economy with diverse strategies. Following the strong guidance of policy, state-owned enterprises mainly invest in strategic sectors such as infrastructure, oil, or ores. The improvement of infrastructure, as one of the fundamental needs in Africa's path to achieve industrialization, directly serves and stimulates economic development. A large number of municipal roads, highways, flyovers, railway, and port projects have been undertaken by Chinese state owned enterprises since the first Forum on China-African Cooperation (FOCAC) held in 2000. An example is the railway restoration project in Angola carried out by a Chinese railway construction company successfully linked the country's eastern regions with the western regions and greatly facilitated the mobility of assets and resources within Angola.

Besides physical infrastructure, other investments have grown rapidly in recent years. Large Chinese enterprises from the private sector are mainly involved in non-infrastructure projects such as in manufactured goods, telecommunications and wholesale trade. Having already established their competitiveness, large Chinese multinationals are eager to undertake international activities to strengthen their global market share. Through linking local partners, their presence is expected to induce positive spill-overs that enhance the technological and managerial capability of local industries. A notable example would be the information and communication technology (ICT) industry. Chinese telecommunication companies (e.g. Huawei Technology) participate in the construction of local ICT facilities which include fibre-optic cable systems, telephones, mobile communication, and internet services etc. This is not only improves their own services in terms of coverage, quality and pricing, it also offers potential technological spill-over to the local actors, enabling them to upgrade their own strategic capability. As another equally important component of Chinese FDI, SMEs have also created enormous technological learning potential for African enterprises. Some of them are dominant in the lighter industries., where the Chinese technologies mastered by local businesses are found to be more appropriate

for African engineers to learn, as compared to the technologies from more advanced countries. Other SMEs mainly operate in the retail sector. Products and services provided by them are closely linked to people's lives in African localities. Their presence in Africa has played an important role in absorbing local employment, as well as promoting Sino-Africa economic and trade engagement.

During China's transformation from a labour-intensive economy to a knowledge-based economy, Chinese enterprises and even individual Chinese migrants have been continuously seeking international business potential. Africa has become an important market given the low cost of labour, abundant natural resources, and the potential of unexplored markets. The competition brought by the presence of Chinese competitors is likely to force the African companies to improve their strategic capability. Meanwhile, compared to FDI from more advanced countries, China's FDI brings relatively more appropriate technologies for the African economy since the technological distance is smaller. Through various channels, local actors are able to access advanced technologies, management practices, and entrepreneurial orientation during the interaction with Chinese multinationals. Our research also suggests a significant job creation effect by Chinese FDI in their host economies, developing across Africa (Fu, 2013). Based on a study of the construction sector (Auffray and Fu, 2015), different patterns were observed between Chinese and non-Chinese construction MNEs regarding the composition of their employees' nationalities. Chinese MNEs tend to bring more skill-embedded staff with them to Africa while the average ratio of foreign employees in non-Chinese foreign construction companies is substantially lower.<sup>5</sup> A balanced foreign/local employment ratio would create a more learning-friendly environment and accommodate knowledge transfer to the local workforce.

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<sup>5</sup> The data given was for one project site only, and may not reflect the totality of the company's workforce

Another channel through which multinationals contribute to local socio-economic development is Corporate Social responsibility (CSR). Since its implementation in 2006, the Corporation Law of China has provided the legal foundation of CSR for Chinese enterprises. Many Chinese multinationals have incorporated CSR into their business strategy, as they are the most exposed to international CSR debates and CSR standard compliance out of all types of Chinese businesses. One of the notable examples of this is Huawei Technology. Since its first entry into the African market in 1997, the company has hired over 65% of its total employees from Africa, and provided over 10,000 job opportunities indirectly. Training programmes have also been offered to 12,000 African employees annually across its six training centres across the continent.

Yet technology spill-overs and catch-up do not come without conditions; they are determined by multi-dimensional complementarities and host country-specifics such as basic technology capability and supportive institutional settings, all of which are crucial to attract and retain MNEs (Fu, 2013). Despite the fact that the technology gap with China is smaller than with advanced economies, stakeholders in Africa are urged to build up their strategic capacity which empowers them to effectively acquire the appropriate technologies from Chinese MNEs. Furthermore, the presence of Chinese FDI may also create immense challenges to the economic development of African countries. Chinese FDI may intensify competition and hamper the development of domestic industries. Without adequate resources and efforts to build up competitiveness, African countries may be pushed out from both domestic and global markets.

To sustain the rapid growth of China, there have been increased demands for natural resources and the nature resource-oriented FDI may act no differently from earlier ones which by and large cast Africa as the supplier of cheap raw materials. In addition, in spite of progressive achievements with regard to the CSR of multinationals, the strategic importance of CSR is not always acknowledged in small-sized Chinese multinationals in Africa. Government and civil society should urge Chinese multinationals to fulfil their legal and moral responsibilities. In addition, many serious internal challenges still remain unsolved in Africa, such as the lack of transparency, as well as widespread corruption and inequality. There are voices arguing that,

given the tendency to highly centralized government, African countries are less likely to be motivated to improve governance.

Although the development of the African continent can be achieved through integrating various resources, every aspect across each level of the development path, such as economic growth, poverty reduction, employment, environment and governance, needs to be controlled by African countries. The economic partnership with China should be designed to be inclusive. National level policies, as well as regional one should take into account people who mostly remain disadvantaged in their livelihoods.

## **Chapter 7. Case Study: Chinese Construction MNEs in Ghana**

### **7.1 About this study**

The main objective of this case study is to examine the extent of knowledge transfer to local employees in the Chinese MNEs through a case study of the MNEs in the construction sector. In particular, it aims to identify the key channels of knowledge transfer between MNEs and local actors at both organizational and individual levels. In total, three Chinese MNEs participated in our study. Two were interviewed with in-depth discussions following the designed open questions and both interviews were undertaken with the participation of senior managers. In order to understand the potential knowledge transfer from the workers' perspective, a series of intensive interviews were carried out within the third MNE, involving a semi-structured questionnaire surveyed across 5 managers and 24 workers. Most of the workers' interviews were conducted at the same project site due to limited access to the company. It is worth noting that we selected the same Chinese construction firms which were included in the previous study by Auffray and Fu (2015). Similar methodologies were adopted in order to collect comparable evidence. Thus, another objective is to reveal the dynamics of localization strategies of these Chinese MNEs in the construction sector.

## *7.2 Chinese construction MNE in Africa*

Although there is a growing number of private Chinese investors in Africa, the construction sector is still dominantly run by state-owned enterprises (SOEs). In terms of the internationalization, Chinese enterprises in this sector appear to be inexperienced and less institutionalized compared to their European counterparts (Henley et al., 2008). Several managers have affirmed that the competitiveness of Chinese MNEs mainly exist in the following areas:

- General aptitude for hard work;
- Easy fit-in technologies in the developing countries context;
- Flexible and hands-on management style;
- Low cost of products and services provided.

Given their past experiences in China, Chinese construction MNEs are willing to adapt themselves to tough working environments where the required facilities and infrastructure are less developed. The same applies to their management styles. The lack of institutionalized management systems allows the project site managers to adjust their working methods and adopt local-friendly practices, for example adopting weekly payment arrangements. However, the low level of institutionalization could also lead to the risk of being inefficient, as pointed out by one Chinese manager. He indicated that the Chinese construction MNEs are less efficient in response to emergencies and accidents compared to the European rivals. Regarding the management knowledge spill-overs, Ghanaian national managers state that the knowledge transferred is limited and the amount of knowledge transfer is also subject to other conditions such as language barriers and the positions held by local employees.

Locals choose to work for foreign construction companies, especially the Chinese ones, due to the following reasons. First, they are in general offered competitive wages compared to domestic companies, with the exception at the entry level. As a new entrant to the company, local workers receive a similar salary as domestic firms. However, the salary scale is likely to go up once the performance is assessed and accepted by site supervisors, even though the assessment is purely

based on site observation. There seems to be a consensus among workers that receiving payment in time is an advantage when working in MNEs. Company benefits such as pensions, accommodation and uniforms are also provided in Chinese construction firms but the standards are likely to be lower compared to European ones.

Second, most of the respondents pointed out that employment stability is another important factor that attracts them to work for multinationals. It is common to see someone hold their employment for over 10 years in the sampled firms. The average working experiences of the 24 workers in our sample averaged 6 years by the time of the interviews. With a stable and ensured long-term income source, local employees are empowered to plan their family's future such as their child's education plans, purchasing property etc. Apart from the aforementioned reasons, domestic workers are also attracted to foreign companies for the potential opportunities to advance personal skills, especially to those engaged in management positions. This eventually benefit workers' personal career development and open up new employment opportunities in both domestic and foreign companies. With regards to any knowledge transfer between the firms to domestic workers, it is mainly realized by demonstration effects occurred through the interaction with their Chinese supervisors at construction sites.

### **7.3 Localization and knowledge transfer**

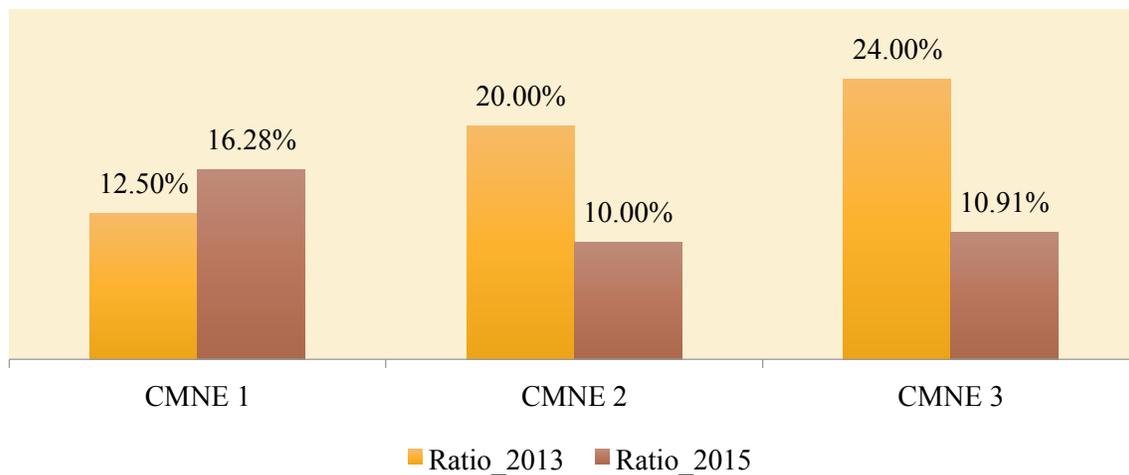
Chinese FDI in Africa has been acknowledged as more labour-intensive and is expected to lead to significant job creation, especially for a low-skilled workforce (Sanfilippo, 2010; Fu, 2012). The relatively low presence of local content and limited employment of local labour in management positions were the concern of many previous studies (Burke and Corkin, 2006; Alden and Davies, 2006; Auffray and Fu, 2015). In order to address this issue and outline any dynamic changes, we have matched some basic statistics with Auffray and Fu's previous study (2015). As shown in the table below, only one firm reported employing locals in the management positions in 2013. Three years after, all three firms had strengthened the local presences by hiring local managers. As to the ratio of foreign to local employment. Two out of three sampled MNEs have increased significantly in their ratio of local workers. Whereas the

other one reduced the number local employees because of the completion of several big projects. Not only the number but also the positions held by locals matters. The likeliness of hiring local managers are also enhanced for roles in human resources, or a position dealing with local laws and legislation.

*Table 9. Locals engaged in management positions (Chinese MNEs surveyed)*

	2013	2015
Chinese MNE 1	<b>Yes</b>	<b>Yes</b>
Chinese MNE 2	<b>No</b>	<b>Yes</b>
Chinese MNE 3	<b>No</b>	<b>Yes</b>

*Figure 10. Ratio of foreign/local employment 2013 and 2015: Chinese MNEs*



We identified several obstacles undermining the potential knowledge transfer between locals and foreign workers. They are linguistic issues, cultural gaps and a general unfamiliarity with the hosting market (Lall and Streeten, 1977). Removing these barriers is critical to improving the intra-organizational communication and facilitating knowledge flows. During the period under

survey, there had been gradual improvements regarding the language barriers and culture clashes within the Chinese MNEs.<sup>6</sup> Managers also pointed out that practices were adopted to remove the potential language barriers. An example is hiring motivated and fluent English speaking graduates from China. Nowadays an increasing number of recent graduates from China are willing to come and work in Africa because of the competitive salary and intensified competition in Chinese job markets. They are in general, better equipped with English language skills and more willing to adapt to the hosting country's environment and culture.

In line with the intensified China-Africa relationship, many Ghanaians are also offered opportunities to study in China through government funded scholarships. As a result, a growing number of Ghanaian students returned to Ghana with Chinese language skills. They have been playing an important role in bridging the communication between investors from China and locals. One of the managers that participated in the interview had previously lived in China for several years. He started as a translator and was promoted to procurement manager in the Chinese MNE.

In the attempts to remove cultural barriers, limited effort is observed from the company's part. Only one Chinese construction firm in our sample reported introducing team building activities and games to help workers from both sides integrate.

At the inter-organizational level, knowledge spill-overs occur via industrial value chains. Chinese MNEs have put great efforts in helping the development of local contractors and suppliers, given these actors are directly linked with their operation costs and performance. All three companies have attempted to establish long-term collaborations with local suppliers and contractors. Knowledge transfers are generally expected to happen via demonstration effects in joint working projects like this. Nevertheless, the results were mixed. One firm claimed to have successfully helped a local contractor develop their skills and capability while the other two

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<sup>6</sup> The barriers were measured by scale rating, 1 denotes insignificant and 5 means a severe obstacle to the firm.

MNEs have decided to change to importing rather than purchasing locally after several years of working with local suppliers. The latter case was mainly due to a dissatisfaction with the quality of products and services offered. Therefore, the potential knowledge transfer exists between linkages with MNEs, but the success of receiving the knowledge from Chinese MNEs and the extent of knowledge to be transferred will depend upon the learning capability and absorptive capacity of any local collaborators.

To summarize, the presence of Chinese MNEs in the construction sector has put extra pressure on local competitors in Ghana. Given their characteristics and developing country experiences, they have successfully established their competitiveness in Ghana and gained the market recognition. There have been great efforts to improve localization such as strengthening the share of local employees both in workers and managers, recruiting more qualified language personnel and carrying out team building activities. The results are incremental and there is great potential to improve.

## **Chapter 8. Findings from the Manager and Worker Survey in Ghana**

### **8.1 Background and General information**

#### **Education across European MNEs and Chinese MNEs**

We referred, in the literature review, to the skill inequality dimension that can be introduced or reinforced by an MNEs' presence. One of the questions addressed in the MNEmerge Ghana survey questionnaire focused on the educational levels of workers who participated in the interview. The pie chart on the left of figure 12 displays that more than half of the employees in the sample MNEs have received tertiary level education or technical training. There are exactly

one third of the workers who completed secondary school before moving to the job market, whereas 14% of the workers only completed basic education.

Figure 11. Education levels of workers: All MNEs surveyed

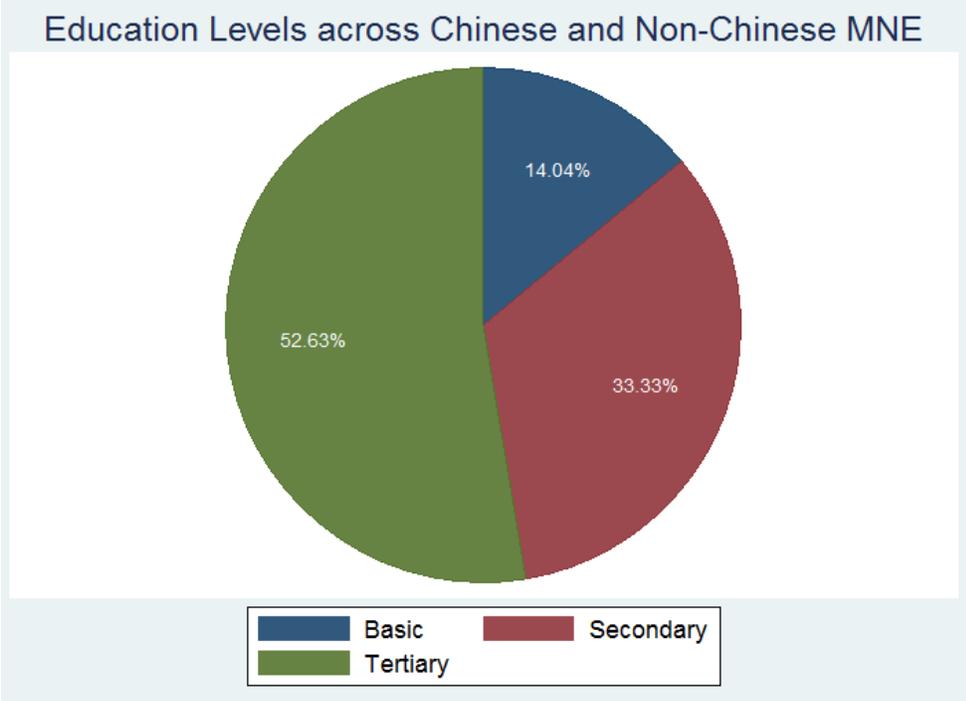
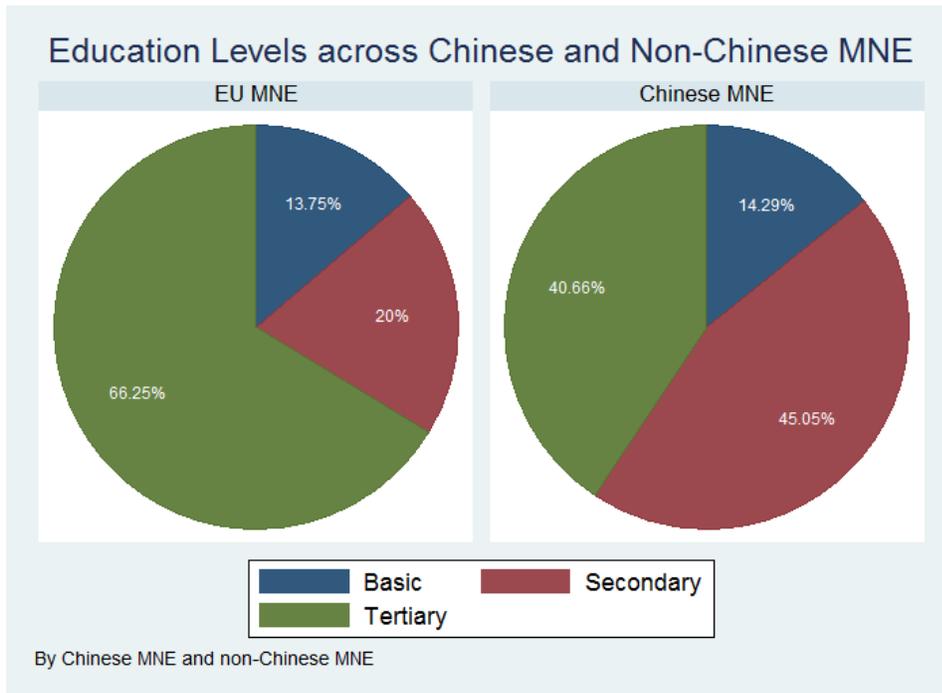


Figure 12. Education levels of workers: European MNEs vs. Chinese MNEs



The right part of figure 12 compares the difference in workers' educational level between the European MNEs and their Chinese counterparts. Compared to the Chinese MNEs, European companies in Ghana tend to hire more skilled and educated employees. 66.25% of employees obtained a tertiary level education. Workers who completed secondary school comprises one fifth of employees within the MNEs. A different pattern regarding the education level of workers was observed among the Chinese MNEs. Nearly 60% of the individuals interviewed among the Chinese MNEs were below tertiary level education. Secondary school graduates take the majority of employment. Workers with the lowest education level are less likely to be employed by both the European MNEs and the Chinese MNEs. This is because the job opportunities in these MNEs are more knowledge or skills-intensive and education is the means to acquire the necessary knowledge and skills.

## Gender composition

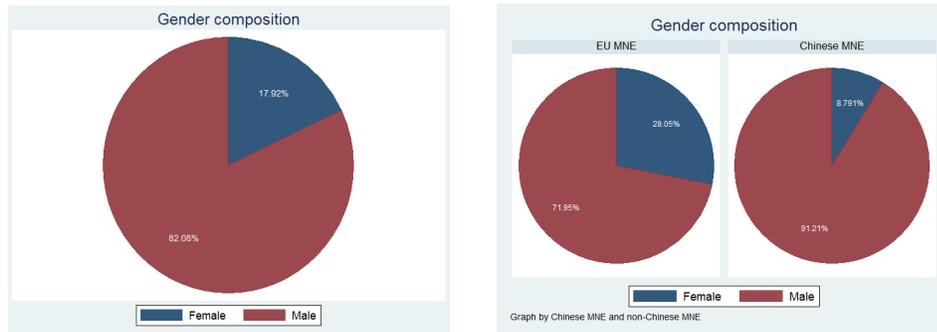
Corporations that operate globally are acknowledged to have a great capacity to influence women's empowerment and gender equality in developing countries. Their impacts can be reflected by patterns of employment, wage differentials, and potential transfers of knowledge. In general, multinationals' investments in developing countries have increased women's employment. Particularly in the more labour-intensive sectors (UNCTAD, 2014). The presence of MNEs in a host country may push domestic competitors to raise wages due to the higher payment they offer. Despite progress made, gender gaps still remain and MNEs in developing countries do not have uniform outcomes for women. In Ghana however, the Labour Act of 2003, Act 651, while protecting the rights of employers, protects the rights of employees including receiving equal pay for equal work "without distinction of any kind." In theory, women in Ghana therefore enjoy a status in their employment equal to their men counterparts generally.

Figure 13 summarises the number of male and female workers who participated in our individual interviews. In general, the gender distribution in our sample is consistent with the proportion of male and female workers within the MNEs surveyed.<sup>7</sup> As the right pie chart shows, 82.2% are male and only 17.92% of workers are female among the 173 workers in our sample. It is worth noting that the statistics are based on the employees in different positions across different departments within the MNEs. Staffs in managerial positions are not included. There is clear evidence showing that gender inequality exists in the employment pattern of MNEs. The number of male employees is four-fold more compared to the corresponding number for female employees.

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<sup>7</sup> The gender statistics are derived from the sample in our study. The gender distributions do not represent other Chinese or European MNEs in Ghana, nor the industry at-large gender structure.

Figure 13. Gender composition of all employees: European MNEs vs. Chinese MNEs



Owing to the differing cultures and understandings of social responsibility between European and Chinese MNEs, there is a large variation in gender composition between them in our interview sample. Typically female labour-force participation is addressed in European MNEs' corporate social responsibility (CSR) programmes while Chinese MNEs spend relatively less effort on this issue. Specifically, western MNEs for example Walmart, emphasises gender equality, a diverse workforce and appointing women to top management positions (Torres, et. al., 2012). As shown in figure 13, female labour-force participation is significantly greater in European MNEs compared to that of the Chinese MNEs. Of course, we need to bear in mind that the one manufacturing firm surveyed was European and hence we need to be cautious in drawing such cross group difference based on only 4 firms which comes from 4 different industry.

### Working Conditions

With regards to working conditions, we asked about their contract lengths to proxy for employment certainty, duration, and stability. We found that the majority of contracts for the sample labourers were permanent, as shown in table 10 below. This was the case both for European and Chinese MNEs, though the latter were considerably more likely to offer a permanent contract than the European MNEs. In European MNEs, 38% of the workforce was on a fixed term contract, while this figure is 15% in Chinese MNEs. As it will be clear in the case study on the Ghanaian construction sector, work stability and continuity accounts for one of the

main reasons behind workers’ preference for being employed by MNEs, as opposed to local construction companies. This evidence is therefore important when assessing the impact of MNEs on working conditions and living standards in the country.

### **Employment type**

*Table 10. Employment types across all MNEs surveyed*

	Type of Employment		
	Permanent	Fixed term	Total
European MNEs	<b>53 (58%)</b>	<b>38 (39%)</b>	<b>91 (57%)</b>
Chinese MNEs	<b>70 (85%)</b>	<b>12 (15%)</b>	<b>82 (43%)</b>
Total	<b>123 (71%)</b>	<b>50 (29%)</b>	<b>173</b>

## **8.2 Performance Reviewing and Tracking**

Although multinationals have normally accumulated sizable experiences at their origin country before investing abroad, the challenge of successfully running a global operation requires an effective managerial skill set. A lack of these skills would make them become less efficient global players, or worse, lead to the failure of their overseas investments. Managing the daily operations in developing countries, which include working with local regulations a limited skilled labour force, has proven challenging to many MNEs in the past. In particular, MNEs from Europe and China operating in Ghana have to seek ways to bridge gaps in culture. They are dealing with unfamiliar legal and institutional environments and very different compliance landscapes from that of their homeland. Adopting appropriate managerial practices will not only ensure the quality and consistency in operations, but also have a large impact on cost efficiency and business performance.

The MNEmerge Ghana survey covers a series of managerial practices adopted by the European and Chinese MNEs. Each of the individuals in our sample was asked if they had a supervising

team leader to guide and track their performance during the past three years. Almost all interviewees in our sample reported having at least one supervisor at their work as table 11 presents. Only 1 worker said they were not under someone’s supervision. Meanwhile, the questionnaire also asks if the respondent also plays as the role of a tutor to supervise other colleagues. Among the 173 MNE workers, 60% of them are involved in tasks relating to supervision, monitoring, or training any workers in his/her team or in other team within the firm. The remaining 40% are exclusive learners and under someone’s supervision within the MNE.

*Table 11. Teaching or learning: across all MNEs surveyed*

	Yes (1)	No (0)
Do you have a supervisor or team leader within the firm?	<b>172 (0.99)</b>	<b>1 (0.01)</b>
In this firm, do you supervise, monitor, or train any workers in your team or in other teams?	<b>103 (0.60)</b>	<b>70 (0.40)</b>

### **Reward and incentive practices received by European MNEs and Chinese MNEs**

Performance appraisals and incentive packages play a vital role in assisting MNEs to achieve performance goals. When operating in developing countries, correctly understanding cultural nuances and devising reward programs with the consideration of local contexts will increase an employees’ interest in work, attract quality employees, and eventually improve the performance of the organization. Moreover, rewards and incentive systems may also determine whether a local employee decides to remain with a company, or resigns to accept a more lucrative offer from rivals.

Four practices with respect to any appraisals and incentive system were listed in the questionnaire. Workers were asked to report if they received any rewards and incentives during the three years between 2012 to 2014. These included reward packages such as bonuses in the form of a cash award for high performance; non-monetary rewards such as products from the business, coupons to shop, travel tickets, etc.; incentives that motivate to improve performance

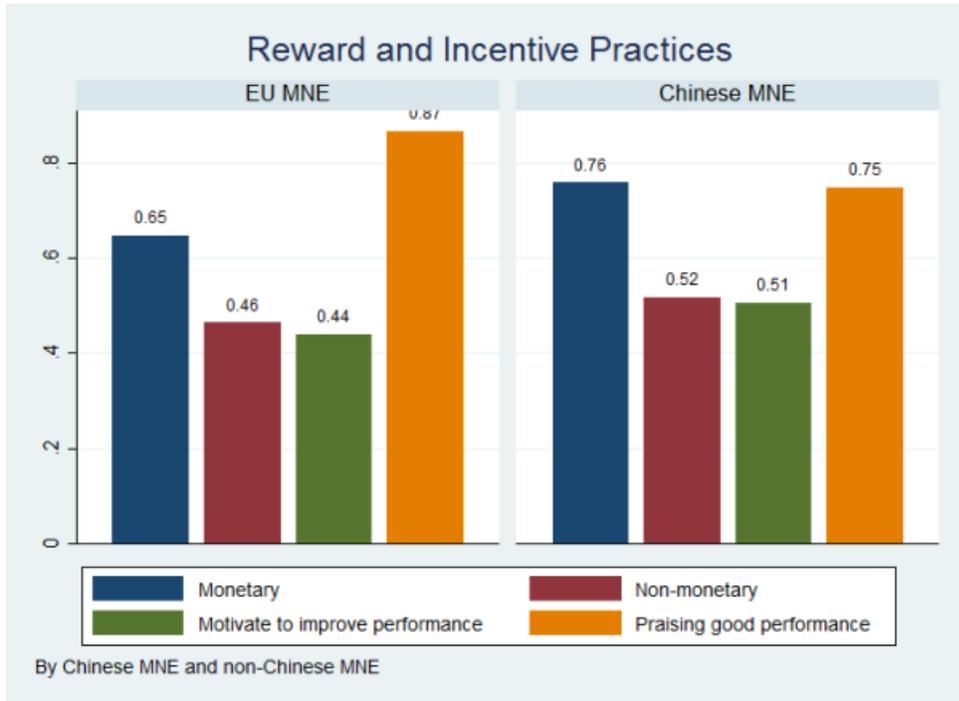
such as a promotion, the best employee of the month award; and finally positive feedbacks such as praising good performance and various forms of encouragement.

Figures 15 and 16 exhibit the statistics of workers benefiting from the aforementioned rewards and incentive practices. Figure 15 is based on the total of 173 workers while figure 16 shows the comparison between European MNEs and Chinese MNEs. Apparently, all four types of appraisal and incentive practices are commonly adopted among these MNEs in Ghana. 80% of the workers in the sample claimed to have received positive feedback from their managers in the past three years. The proportion of workers who have taken advantages of monetary rewards reaches 71% while relatively fewer (less than half) of them were motivated by non-monetary rewards and incentives to improve performance. Turning to figure 16, the most commonly received appraisals practice among European MNEs is giving positive feedbacks on good performance (87%) whereas the Chinese MNEs tend to use monetary rewards to motivate their workers to achieve high performance (76%). It is worthwhile noting that more than half of the workers in Chinese MNEs have enjoyed appraisals during 2012-2014.

Figure 14. Reward and Incentive practices received by all MNEs surveyed



Figure 15. Reward and Incentive practices received by Chinese and Non-Chinese MNEs



Several questions were also included to understand intra-organization supervision systems from the perspective of workers. Respondents were asked to confirm if the targets they are given were clear, do they receive frequent feedbacks to their performance, and do they have opportunities to take up initiatives and responsibilities. Compared to domestic companies in the same industry in Ghana, MNEs are normally characterized as advanced and efficient management systems. This has also been confirmed by workers who participated in our interview. As table 12 displays, majority of the workers have received clear targets, frequent feedbacks, and been encouraged to take on responsibilities in the past three years. Less than 20% of the workers reported not receiving any of these aforementioned points.

Table 12. Reward and Incentive practices received by Chinese and Non-Chinese MNEs

During the three years 2012 to 2014, did you receive any of the	Yes (1)	No (0)
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following supervision regarding target, feedback and empowerment?		
Are the targets you are given quite clear or could they be clearer?	144 (0.83)	29 (0.17)
Do you receive frequent feedback to your performance from manager?	148 (0.86)	25 (0.14)
Do you have enough space to take up your own initiative and responsibility?	138 (0.80)	35 (0.20)

### 8.3 Information and Communication Technology

ICT is one of the major components of organizational capability. Since the early 1990s, Ghana has considered the use of ICT as a means to leverage the country's development process. To this effect, the first five-year plan for accelerated development was launched in 1994. More recently, Ghana has developed its ICT for Accelerated Development (ICT4AD) policy statement, which was officially adopted in 2004. The ICT4AD is a product of the National ICT Policy and the Plan Development Committee set up by the Government. They were tasked to develop an ICT-led socio-economic development policy for the country. It aims to help Ghana to formulate a number of socio-economic development policy frameworks and has identified a number of key developmental objectives to address the developmental problems facing the country.

Since the formulation of ICT4AD policy document a number of initiatives have been carried out to enhance ICT application for development. The Ministry of Communications has been established to facilitate reliable, cost-effective and world-class communications infrastructure services for Ghana. More specifically, there is the Ghana Investment Fund for Electronic Communication (GIFEC) established by the Electronic Communications Act 775 in 2008. It addresses the need for electronic (or digital) services including ICT, broadcasting, internet and multimedia especially in the marginalized areas. MNEs from Europe and China have participated in diverse ways in the development of Ghana's ICT infrastructure and services. However,

beyond enhancing the national capacity in ICT, all segments of the populace including workers of MNEs need to improve on ICT adoption and usage in socio-economic activities. The survey therefore assessed the extent of ICT capability building in the European and Chinese MNEs covered in the study.

Upgrading specific ICT capabilities within a MNE subsidiary in developing countries can effectively enhance their competitive advantage, especially against the backdrop of cultural gaps and an unfamiliar working environment. Accompanied with direct investment in the host country, advanced managerial skills and ICT infrastructure are also expected to arrive with MNEs from Europe and China. During the process, local employees may also receive opportunities to upgrade their ICT capabilities via directly interacting with foreign expatriates and participating in ICT skill training. Therefore, knowledge spill-over effects may be induced with the improvement of human IT resources and intangible IT-enabled resources, including technical IT skills, managerial IT skills, customer orientation and knowledge assets.

Several aspects regarding ICT have been addressed in the MNEmerge questionnaire. Table 13 summarizes the average hours workers spend on computers, telephones and the internet in their daily work. There is a general increase in adopting these three practices in MNEs located in Ghana during 2012 – 2014. Computers are the most commonly used ICT practice among the three. The average time a worker spends on a computer increased from 1.83 hours in 2012 to 2.46 hours in 2014. During these three years, the average hours for European MNEs’ workers spending on computers increased from 2.33 to 2.90 hours per day whereas a significant increase was also found among Chinese MNEs, from 1.50 to 2.07 hours per day. Slight increases have also been observed in the time spent on mobile phones and the internet during the period under survey. In general, the workers in the European MNEs spend more of their working hours with ICT compared to workers in Chinese MNEs.

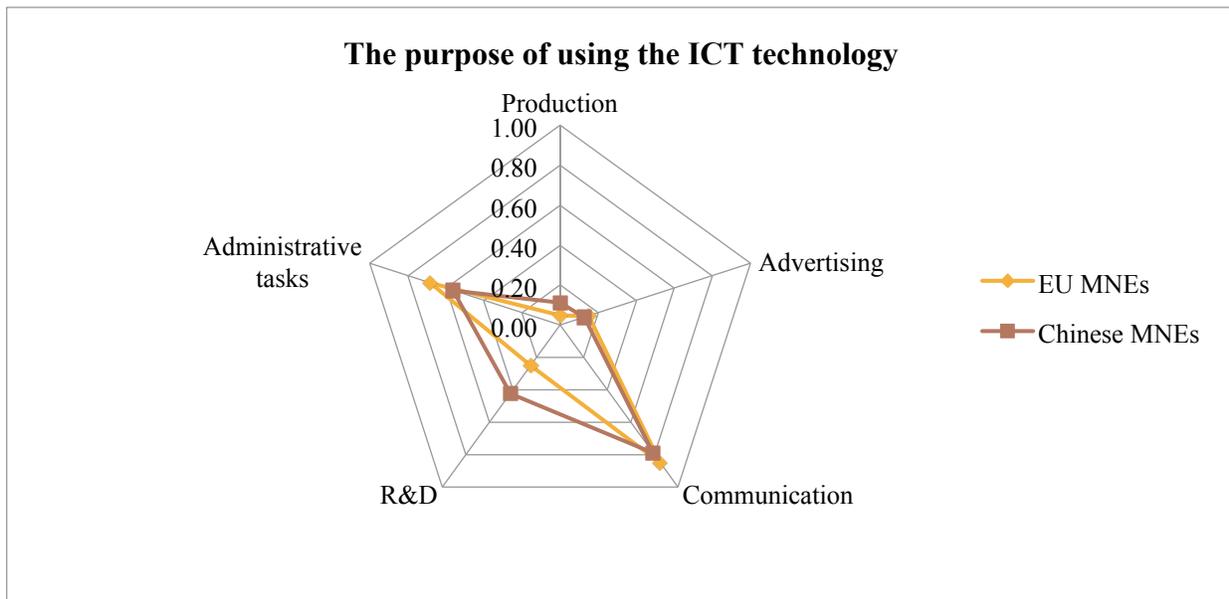
*Table 13. The use of ICT across MNEs surveyed in 2012 and 2014*

		2012 (Mean)		2014 (Mean)	
		EU	China	EU	China
<hr/>					

How many hours per day do you spend on the computer for work purposes?	<b>2.33</b>	<b>1.50</b>	<b>2.90</b>	<b>2.07</b>
How many hours per day do you use the mobile phone for work purposes?	<b>0.96</b>	<b>1.03</b>	<b>1.19</b>	<b>1.20</b>
How many hours per day do you spend on the internet for work purposes?	<b>0.97</b>	<b>0.59</b>	<b>1.01</b>	<b>0.78</b>

Given the different roles and positions, workers in MNEs use and learn ICT skills for various reasons. Among those who reported using ICT practices in their daily job, the survey also captures the purpose of using them. Respondents are given five options regarding why they use computers and mobile phones during work. Figure 17 presents the summary statistics. The prominent function of ICT usage in European and Chinese MNEs is to facilitate efficient communication amongst colleagues, partners, clients and the public. The results are consistent between European and Chinese MNEs. The second critical purpose of using computers and mobile phones is to facilitate administrative and management tasks within the company. Very few respondents agreed that the ICT practices have helped them in production or advertising. More than 20% workers from the Chinese MNEs (among those who reported using ICTs) used computers and mobile phones for the R&D of new products and services. A clear discrepancy was found among workers employed in European MNEs with regard to computer usage.

Figure 14. The purpose of using the ICT technology across European and Chinese MNEs



To further investigate which specific ICT knowledge workers have gained, figure 18 and 19 reports the statistics on 7 types of the ICT practices from the both learners' and tutor's perspectives. Learner and tutors are not mutually exclusive groups, indicating that one can be a learner in a specific type of ICT and, at the same time, can be a tutor who transfers knowledge to other colleagues. As the learner's graph (figure 18) and tutor's graph (figure 19) exhibit, the types and extent of knowledge flow between two groups are highly consistent. There are 62% (learner) and 46% (tutor) of workers acknowledged of learning and teaching a specific type of ICT software through 2012-2014. It also indicates that specific professional software, such as accounting and inventory records of supplies and products, are the type of ICT knowledge that actively flows within the organization. More than 40% of them claimed that they gained new knowledge in basic computing skills(e.g. Windows, Microsoft Office products etc.) during the surveyed period whereas 33% of workers stated they taught someone else in the company this knowledge. ICT practices also assist production, operations, intra-organizational communication, and manage information systems. Such skills are also commonly taught and learnt among

workers in MNEs. ‘Purchases for the production’ (i.e. purchasing) is the type of ICT practice that have been least transferred.

Figure 16. Learning and Teaching ICT practices – ‘Learner’s perspective’

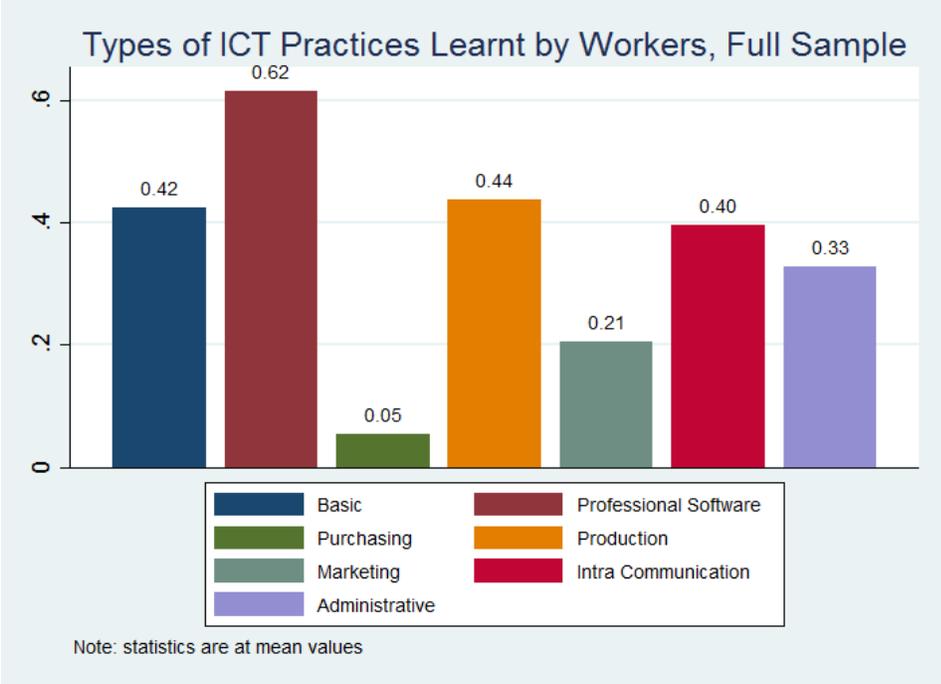
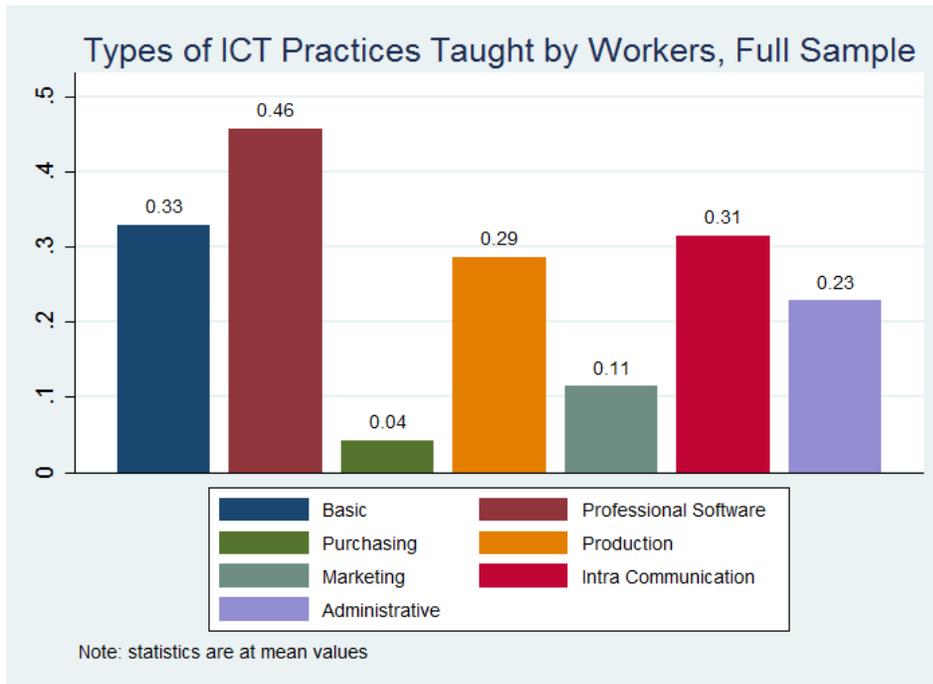


Figure 17. Learning and Teaching ICT practices – ‘Tutor’s perspective’



Interesting patterns are revealed when comparing European and Chinese MNEs in internal ICT knowledge flow. Figure 20 and 21 depicts the same types of ICT skills but when separated by Chinese and European, clear gaps emerge. The extent of knowledge learnt and taught within the Chinese MNEs is significantly greater than their European counterparts, especially in the areas of the ‘basic computer use’, ‘Intra-organizational communication’, and ‘management information systems e.g. human resources database, customer database’. The differences are more profound in the statistics reported from the tutors’ perspective since almost all ICT practices are reported more in Chinese MNEs compared European MNEs.

Figure 18. Learning of ICT practices across European and Chinese MNEs

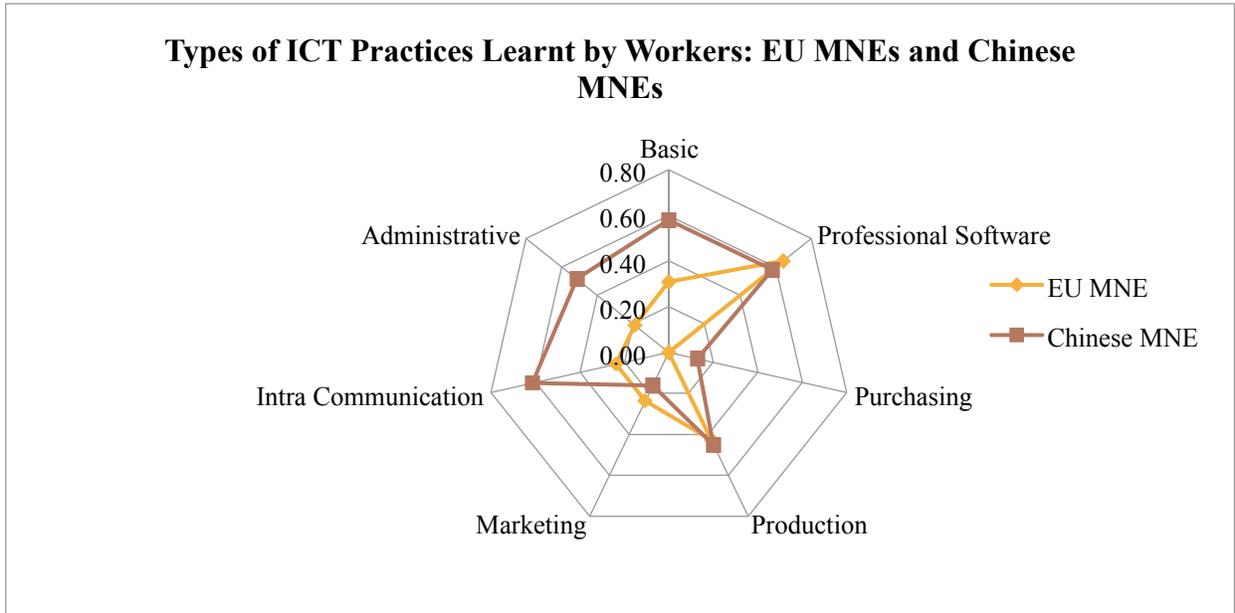
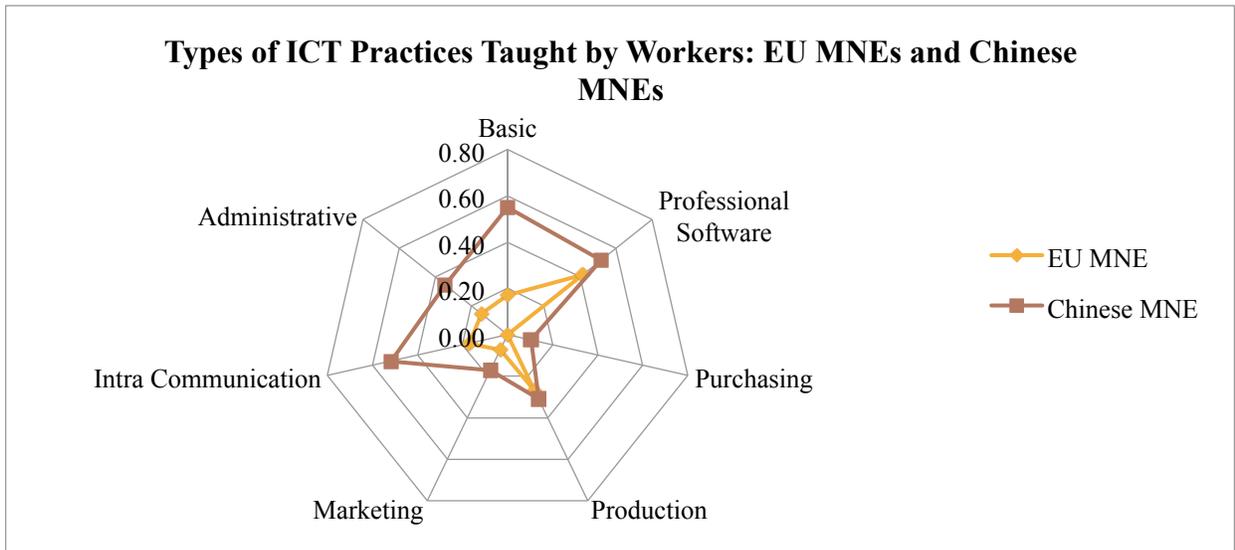


Figure 19. Teaching of ICT practices across European and Chinese MNEs



## 8.4 Learning Patterns in Management Practices

This section presents descriptive statistics on cost, marketing and HR management practices adopted by managers of interviewed MNEs. Those surveyed were asked questions of the following nature: “During the years 2012 to 2014, have you learned any new cost/marketing/HR management practices?” A number of categories were created to classify MNEs and employees according to nationality (Ghanaian vs Non-Ghanaian; European vs Chinese); and to the nature of the business (low tech vs high tech). The first part presents evidence comparing Ghanaian to non-Ghanaian managers, the second part presents evidence comparing European to Chinese managers, and finally the third compares managers in high tech companies to managers in low tech companies. Each section presents a category break-down as well as summary evidence.

### Ghanaian vs. Non-Ghanaian managers

Table 14 below refers to cost management practices. It is worthy of note that although both Ghanaian and no-Ghanaian managers learnt to a similar extent, Ghanaian managers were also more likely to have learnt nothing new compared to non-Ghanaian managers. This somehow dampens the overall knowledge transfer effect.

*Table 14. Cost Management Practices: Ghanaian vs Non-Ghanaian Managers*

Learned new cost management practices			
	<b>Yes</b>	<b>No</b>	<b>Total</b>
Ghanaian	20(33%)	17(28%)	37 (61%)
Non Ghanaian	19(31%)	5(8%)	24 (39%)
Total	39 (64%)	22 (36%)	61

Table 15 below refers to marketing management practices. It shows a similar pattern to the above, although significantly more non-Ghanaian managers also did not pick up new marketing management techniques.

*Table 15. Marketing Practices: Ghanaian vs Non-Ghanaian Managers*

Learned new marketing practices			
	<b>Yes</b>	<b>No</b>	<b>Total</b>
Ghanaian	15(25%)	22(36%)	37 (61%)
Non Ghanaian	13(21%)	11(18%)	24 (39%)
Total	28(46%)	33(54%)	61

In terms of HR management, many more Ghanaian managers picked up new management techniques than non-Ghanaians. This could reflect that HR functions tend to be a prerogative of local managerial personnel. The difference between the two categories of managers is also considerably smaller with regards to non-learning patterns.

*Table 16. HR Management Practices: Ghanaian vs Non-Ghanaian Managers*

Learned new HR management practices			
	<b>Yes</b>	<b>No</b>	<b>Total</b>
Ghanaian	26(43%)	11(18%)	37 (61%)
Non Ghanaian	15(25%)	9(15%)	24 (39%)
Total	41 (67%)	20(33%)	61

A variable was created (taking the value of 1) if a manager had learned any one management practice among those listed above. The variable equals zero if a manager has learned no management practice at all.

Overall it appears both categories learnt at least one new managerial practice, but Ghanaian managers more so than non-Ghanaians. Only 5% overall did not learn new practices at all. This supports the hypothesis that knowledge transfer is occurring and concentrates mostly among local managerial staff.

*Table 17. Summary of management learning: Ghanaian vs Non-Ghanaian Managers*

Learned any new management practice			
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	Yes	No	Total
Ghanaian	<b>35(57%)</b>	<b>2(3%)</b>	<b>37 (61%)</b>
Non Ghanaian	<b>23(38%)</b>	<b>1(2%)</b>	<b>24 (39%)</b>
Total	<b>58 (95%)</b>	<b>3 (5%)</b>	<b>61</b>

### European vs Chinese firms

It appears that out of 61 responding managers, two thirds of them learnt new practices. While for Chinese MNEs, just over half reported learning new cost management practices. For European MNEs, the proportion is just more than two thirds.

*Table 18. Cost Management Practices: Chinese vs European MNEs*

#### Learned new cost management practices

	Yes	No	Total
Chinese MNEs	16(26%)	12 (20%)	28 (46%)
European MNEs	23 (38%)	10 (16%)	33( 54%)
Total	39 (64%)	22 (36%)	61

Table 19 describes the learning of new marketing practices. Managers from Chinese MNEs are split in half between those who have and those who have not learnt new practices. For European MNEs, over half of managers have not learnt new marketing practices.

*Table 19. Marketing Management Practices: Chinese vs European MNEs*

#### Learned new marketing practices

	Yes	No	Total
Chinese MNEs	14 (23%)	14(23%)	28(46%)
European MNEs	14(23%)	19(31%)	33(54%)

Total	28(46%)	33(54%)	61
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Coming to HR management practices, table 20 presents the rate of learning new HR management practices. It emerges that two thirds of the Chinese MNEs' managers did not learn new HR practices. While almost all European MNEs' managers said they learnt new HR practices

*Table 20. HR Management Practices: Chinese vs European MNEs*

Learned new HR management practices

	Yes	No	Total
Chinese MNEs	9 (15%)	19 (31%)	28 (46%)
European MNEs	32 (52.5%)	1 (1.5%)	33 (54%)
Total	41 (67%)	20(33%)	61

Finally, in table 21 below, it appears that almost all managers but three have learnt at least one new management practice. The three managers who have not learnt any new management practice are concentrated in the Chinese MNE sector, and two out of three are in high-tech sectors.

*Table 21. Overall Learning of Management Practices: Chinese vs European MNEs*

Learned any new management practice

	Yes	No	Total
Chinese MNEs	25 (41%)	3 (5%)	28 (46%)
European MNEs	33 (55%)	0	33 (54%)
Total	58 (95%)	3 (5%)	61

### Low tech vs High Tech

When considering the difference between low tech (construction and textile sectors) and high tech (telecommunications and pharmaceuticals), it appears that over two thirds of the low tech

MNEs' managers have learned new cost management practices, while for high tech companies the amount is just over a half.

*Table 22. Cost Management Practices: Low tech vs High tech MNEs*

Learned new cost management practices			
	Yes	No	Total
Low tech MNEs	20 (33%)	9 (15%)	29 (47.5%)
High tech MNEs	19 (31%)	13 (21%)	32 (52.5%)
Total	39 (64%)	22 (36%)	61

For learning new marketing practices, in table 23, two thirds of the managers of the first type of MNEs have not learnt any new marketing practice, while just over half of the European MNEs managers have.

*Table 23. Marketing Management Practices: Low tech vs High tech MNEs*

Learned new marketing practices			
	Yes	No	Total
Low tech MNEs	10(16%)	19(31%)	29 (47.5%)
High tech MNEs	18 (30%)	14(23%)	32 (52.5%)
Total	28(46%)	33(54%)	61

Table 24 presents the rate of learning of new HR management practices and shows that two thirds of both categories have learnt new practices in this area.

*Table 24. HR Management Practices: Low tech vs High tech MNEs*

Learned new HR management practices			
	Yes	No	Total
Low tech MNEs	20 (33%)	9 (15%)	29 (47.5%)
High tech MNEs	21(34%)	11 (18%)	32 (52.5%)
Total	41 (67%)	20(33%)	61

Table 25 below confirms again that almost all managers but three have learnt at least one new management practice. Two of the three managers who have not learnt any new management practice are in the high-tech sectors.

*Table 25. Overall Learning of Management Practices: Low tech vs High tech MNEs*

Learned any new management practice			
	Yes	No	Total
Low tech MNEs	28 (46%)	1 (1.5%)	29 (47.5%)
High tech MNEs	30 (49%)	2 (3%)	32 (52.5%)
Total	58 (95%)	3 (5%)	61

## 8.5 Overall Conclusions

Overall, we find significant correlations to say that the existence of learning patterns is concentrated among local managers. This supports the hypothesis that transfers of knowledge from foreign companies to local managerial staff takes place. It is mostly concentrated in the HR sector, where local managers tend to be preferred over foreign managers.

From the tables presented above, the most interesting results are the contrast between Chinese and European MNEs when it comes to HR management learning. In fact, two thirds of the managers in the Chinese MNEs indicated that they did not learn any new HR management practices, while the near totality of the managers in European MNEs indicated that they did. This could point in the direction of a culture effect, as HR management is the sector in which cultural differences may play the biggest role.

The other interesting result relates to the learning of marketing practices: in all sectors but marketing, the majority of managers indicated they had learnt new practices. Only with regards to marketing, do we find that there is a slight majority of managers who have not learnt any new management practices.

## 8.6 Diffusion of Knowledge

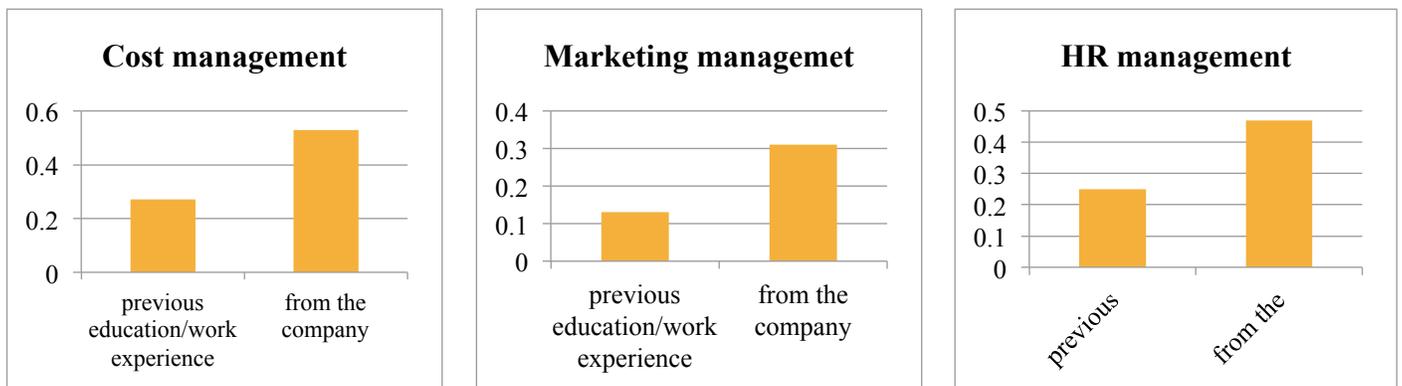
### Sources of Knowledge

Table 26 and figure 22 below show that most managers thought that their newly acquired practices in cost management, marketing, and HR within the last three years (2012-2014) were learned from their current company. For every field, the managers who thought that the new practices were the result of their own previous education and work experience, represented half the amount of responding managers who thought the practices were acquired from their current company.

Table 26. Source of Knowledge in Management Practices

	Previous education/work experience	From the company
Cost management	0.27	0.53
Marketing management	0.13	0.31
HR management	0.25	0.47

Figure 20. Sources of management knowledge



## Channels of Diffusion

Figures 23 and 24 below show that meetings and team work are the most used and useful sources of knowledge transfer among workers. When asked how they learned and transferred their knowledge, they mostly mentioned joint work and face-to-face interaction. Training was also ranked highly in terms of knowledge diffusion potential. Telephone and emails were less useful in this sense, but this could be because workers in construction sites or on textile production lines communicated much less via telecommunications needs than in person. Similarly, manuals and expert advice did not seem to be very common as a channel of knowledge. Finally, channels involving social dimensions such as social events and industry association meetings were not used to transfer knowledge either. Industry association meetings, in particular, were the least used source of knowledge diffusion. This is most likely due, in the workers sample, to the fact that unskilled workers tend to participate less in industry association activities than managers do.

*Figure 21. Channels of Knowledge Diffusion (Workers)*

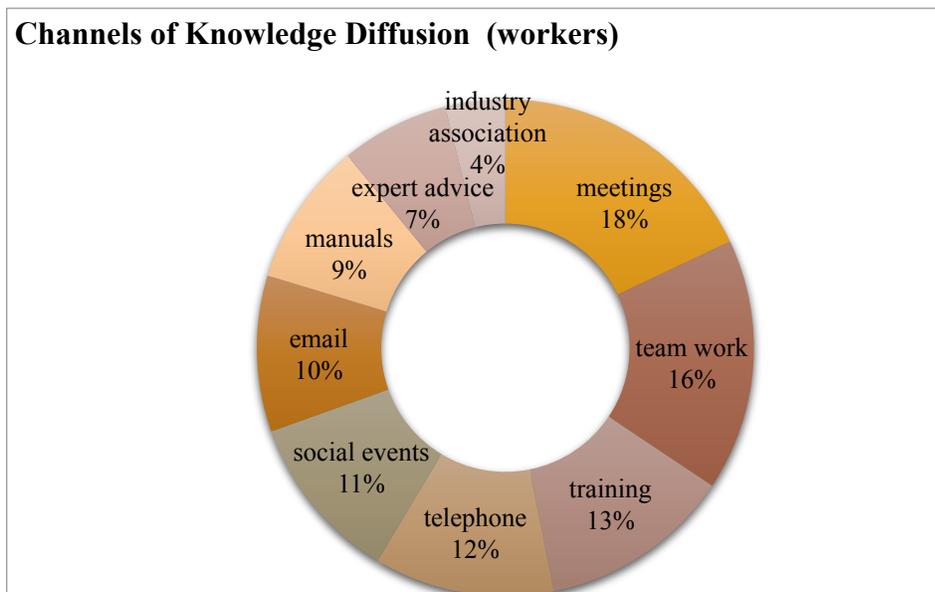
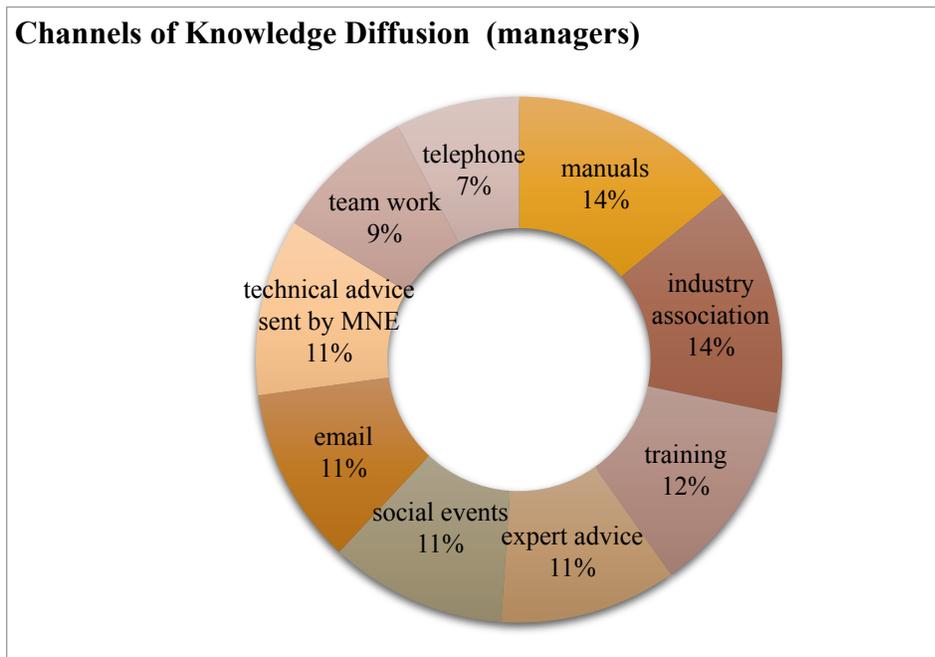


Figure 22. Channels of Knowledge Diffusion (Managers)



In fact figure 24 industry association meetings are one of the top two sources of knowledge diffusion for managers. The first is ‘manuals’ and the third is ‘training’. Trainings therefore are a dominant and useful source of knowledge diffusion among both workers and managers. However, it is visible from figures 23 and 24, that knowledge diffusion channels are otherwise fairly different between workers and managers. Notably, teamwork appears among the least used channel of learning for managers.

### Networks of Knowledge

In terms of networks, it appears in figure 25 that workers most often exchange knowledge with colleagues of the same level. Around 50% of them indicated they also transfer knowledge to managers often, thus upwards. Whereas, the least amount of workers indicated they transferred knowledge to subordinate workers the most often. This is due to the fact that most workers did

not consider themselves to have subordinates, and recognised in other workers mostly colleagues. On the other hand, figure 26 shows that managers were most likely to transfer their knowledge to subordinate workers. Whereas they transferred knowledge to superior managers and colleagues of the same level to a roughly equal level.

Figure 23. Networks of knowledge diffusion

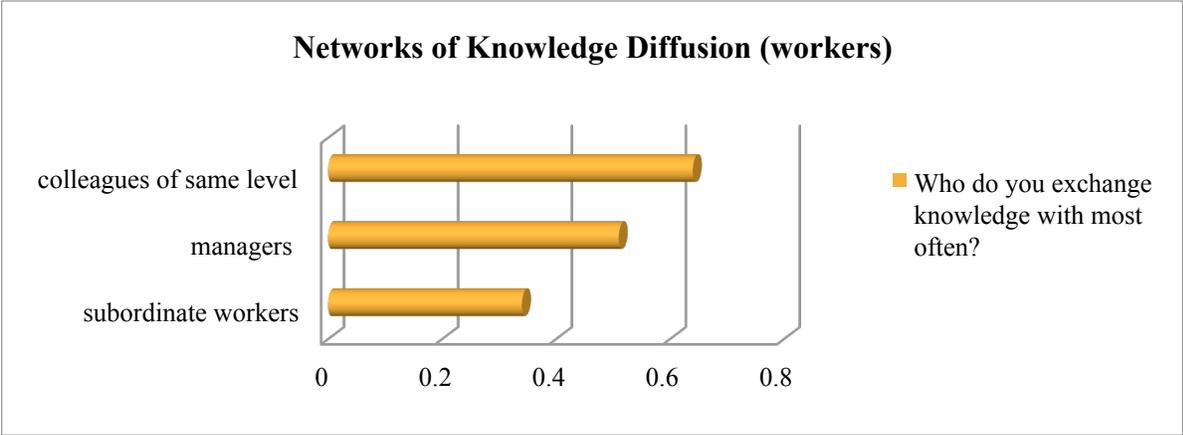
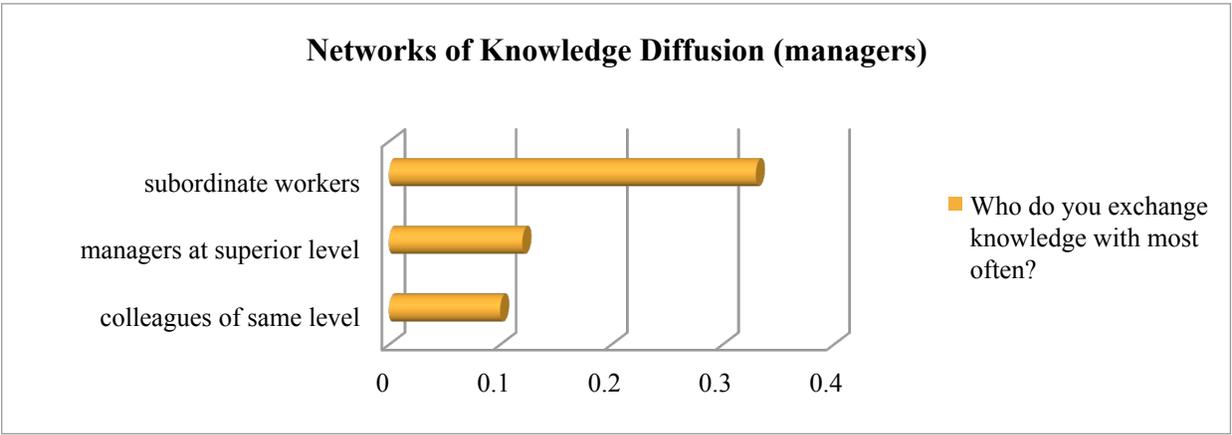


Figure 24. Networks of knowledge diffusion



**Training patterns**

With regards to training, 64% of workers thought their production capabilities had increased in the last three years as a result of employment for the MNEs. On the other hand, only 44% of

managers had the same opinion regarding their capabilities. This is not due to the definition of 'production capability'. We insured that the notion of production capability was extended to work performance for managers who were not involved in the production process.

Figure 25. Training patterns: Workers vs Managers

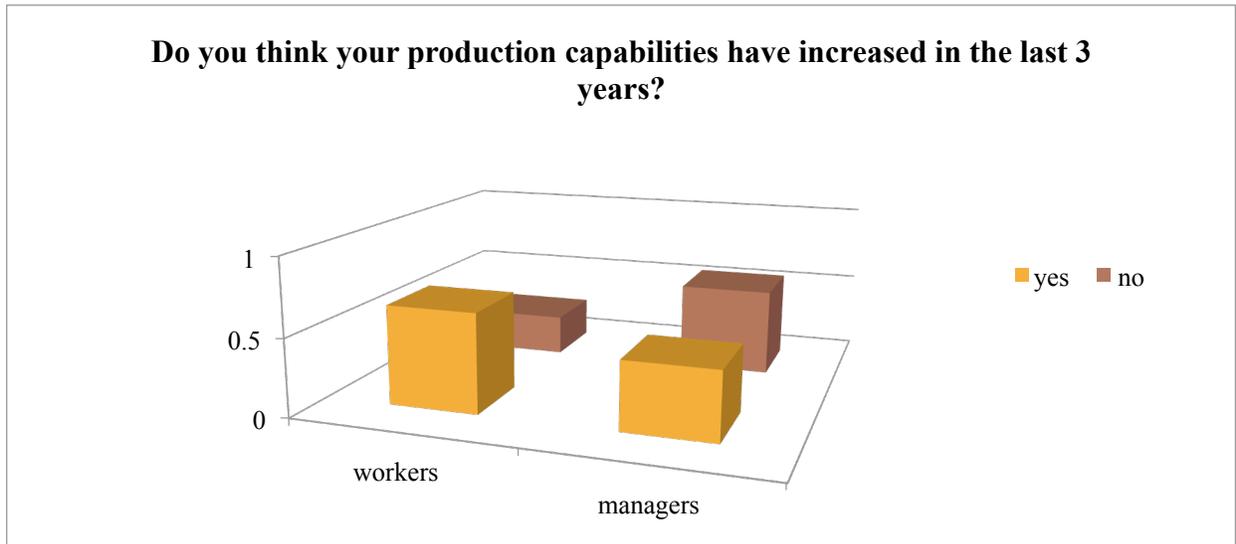
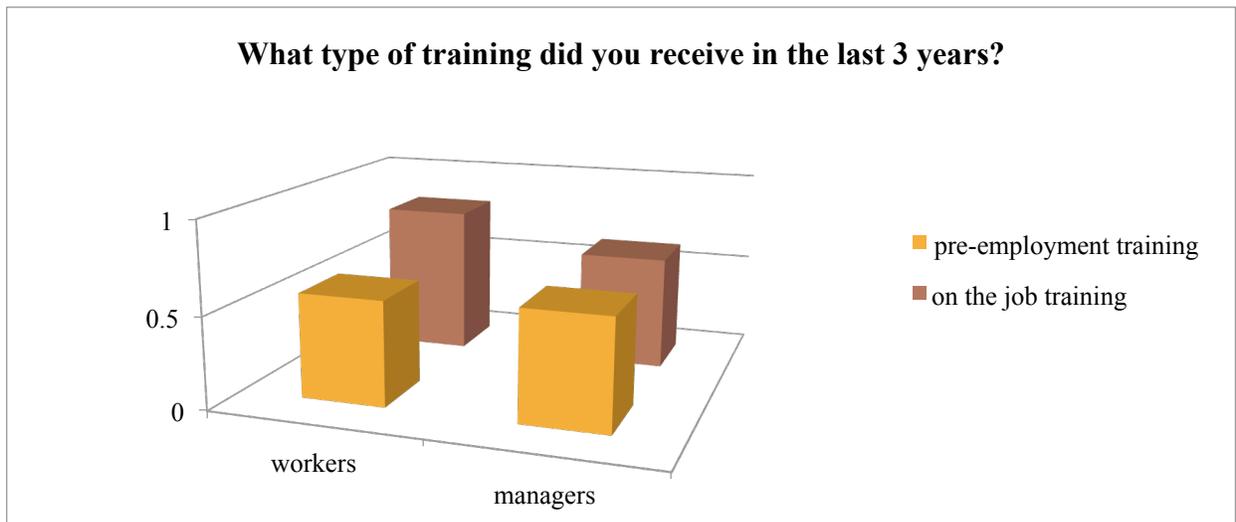


Figure 26. Training types: Workers vs Managers



## 8.7 Impact of Managerial Innovation

Managerial respondents were asked to rate how innovative managerial practices impacted their companies' success under a variety of dimensions. These dimensions were cost management, marketing, HR, and IT management practices. A list of success indicators in terms of adoption of these practices were provided and the impact of innovative management was rated on a low to high scale, as shown in table 27 below.

*Table 27. Impact of managerial innovation on success indicators*

What was the impact of the cost, marketing, HR, and IT managerial practices on the following targets?

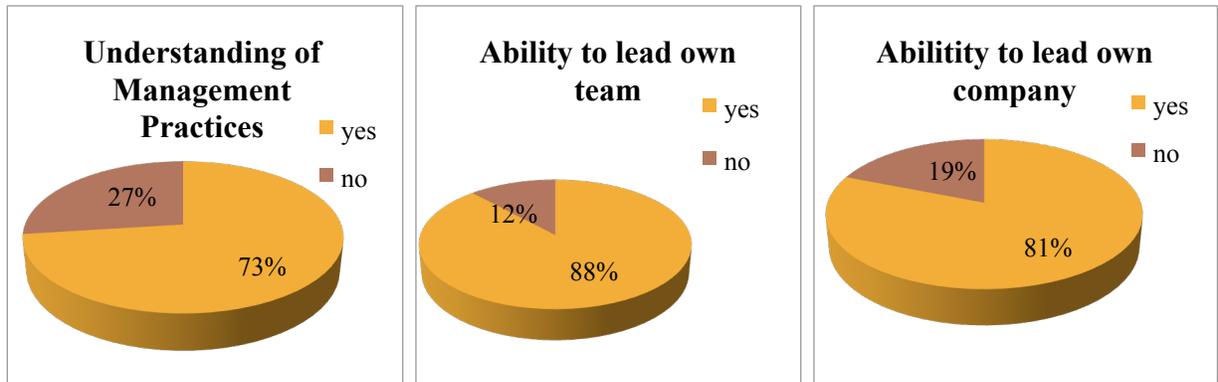
Success Indicators (Targets)	Low (% managers)	Medium (% managers)	High (% managers)
reduced cost	0.05	0.32	0.37
increased productivity	0.05	0.18	0.72
increased sales	0.03	0.19	0.53
reduced environmental impacts	0.04	0.16	0.37
improved working conditions (health & safety)	0.02	0.2	0.52
met governmental regulatory requirements	0.02	0.1	0.56
CSR	0.12	0.1	0.4

It appears that most managers recognised a medium to high impact of managerial innovation. In their opinion, increased productivity, conformity to governmental regulations, increased sales, and improved working conditions were the most frequent improvements. This was followed by improved Corporate Social Responsibility (CSR) strategies, reduced costs, and reduced environmental impacts.

## Workers' Capability and Wellbeing Outcomes

As a result of their employment with the MNE, 72% of the interviewed workers gain an understanding of how management is done. In addition, 88% of workers indicated they feel they would be able to lead their own team and 81% own company.

Figure 27. Workers' Learning and Aspirations as a result of working for MNEs



When divided by company nationality, heterogeneities emerge. Specifically, 64% of the employees of Chinese MNEs felt they learned how management is done, but this proportion stands at 82% in European MNEs. The perceived ability to run their own team is similar for employees of Chinese MNEs (87%) and European MNEs (90%). Finally, the perceived ability to run their own company stands at 84% in the Chinese MNEs and 78% in the European MNEs. Thus, overall, it seems that learning is more explicit in European MNEs, while in Chinese MNEs the perceived autonomy and capacity of employees is more accentuated.

Figure 28. Workers' Learning and Aspirations as a result of working for MNEs – Chinese MNEs

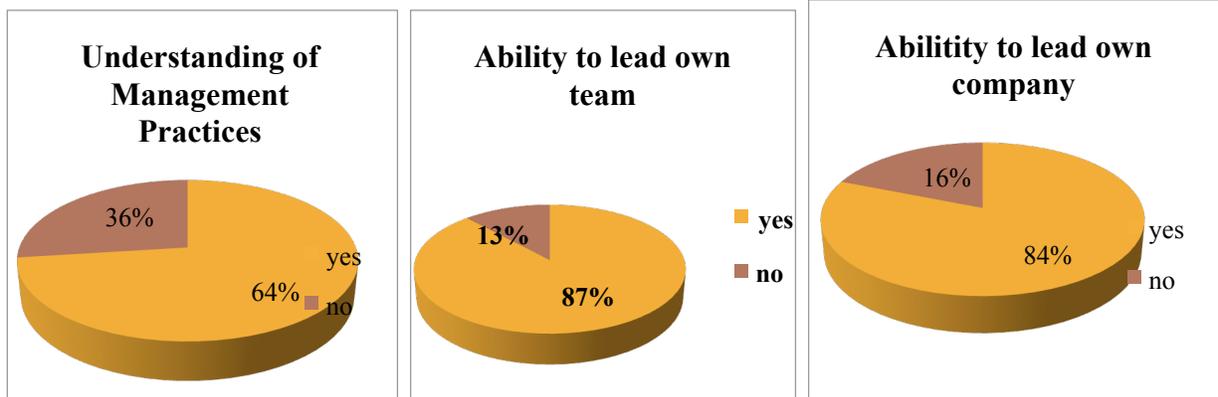
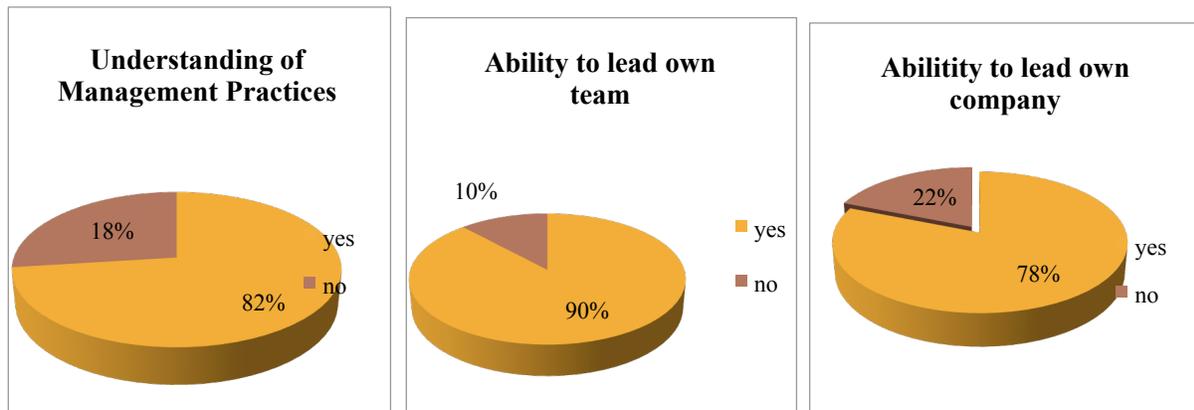


Figure 29. Workers' Learning and Aspirations as a result of working for MNEs – European MNEs



Furthermore, we find that, overall, 34% of the interviewed workers perceived that if they worked in the domestic sector as opposed to the foreign sector, their pay would be higher; fewer workers (22%) thought it would be lower, while 7% thought it would be similar, and 37% did not know.

When dividing the patterns by MNE nationality, we find that such average results are driven by heterogeneities. In fact, in European MNEs slightly more workers believed their pay would be lower if they worked for Ghanaian companies (30%), than the 29% that believed the pay would be higher in the domestic sector. These shares change considerably in Chinese companies, were

only 13% believe the pay they earn is higher than in the domestic sector, while 37% think they would be better off working for Ghanaian companies.

Figure 30. Workers' Perceptions on Remuneration: Overall

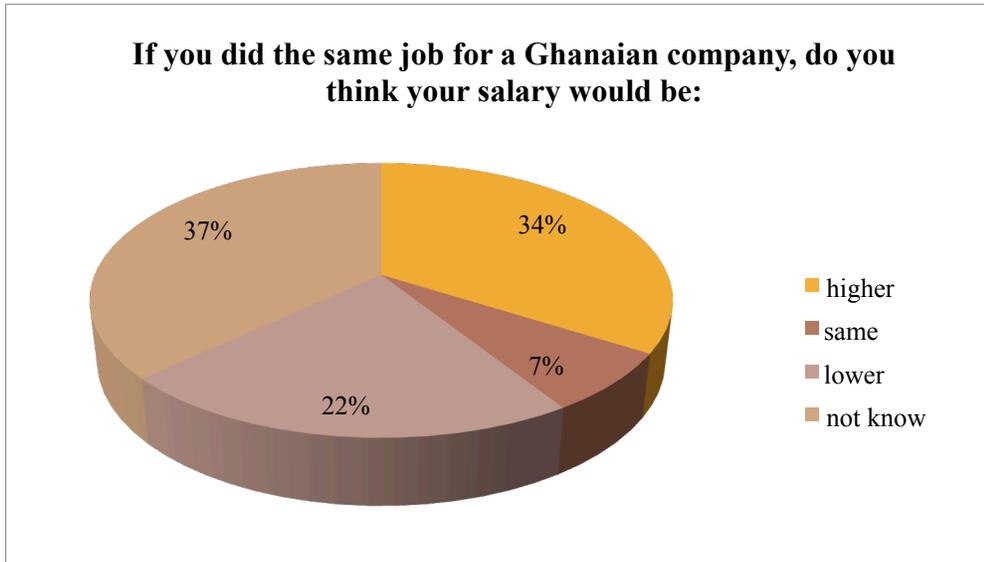


Figure 31. Workers' Perceptions on Remuneration: European MNEs

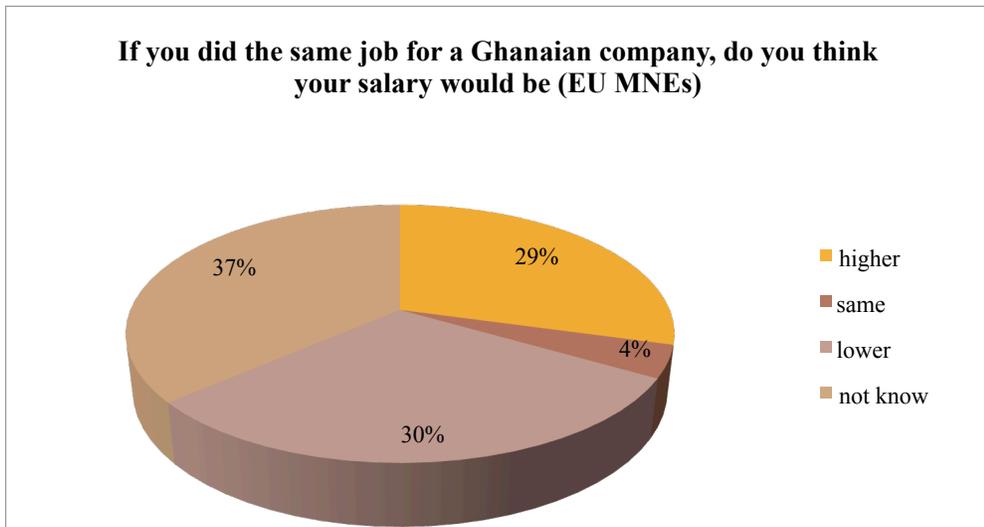


Figure 32. Workers' Perceptions on Remuneration: Chinese MNEs



## Chapter 9. Findings from Econometric Analysis

Table 28 reports the econometric estimation results on the impact of MNE work experience and management practices adopted on workers' aspirations. The results are divided across nine columns, with the first presenting the basic model when only baseline characteristics are included and the following ones adding one variable at a time. Specifically, in columns two to four, variables related to incentive mechanisms are included one at a time. In columns five and six two variables related to HR management are added, in columns seven and eight variables related to IT sophistication and computerisation of the firm are included, finally in column nine a variable related to on the job training is also added. In each column the regressions are corrected by the inclusion of sectoral dummies. In other words, a dummy for each of the industrial sectors but one is included. This is meant to proxy for the invariant and unobservable sector specific effects that may bear relevance to the aspiration level of workers, i.e. the technological intensity of some sectors as opposed to others or the link between favourable national industrial policy and each targeted or non-targeted sector.

The results show us that, among the basic characteristics of workers, age and education are the ones that stay consistently related throughout to their aspirations level. Specifically, younger workers have higher levels of aspiration. As expected, higher educational levels are also related to higher aspirations. The estimated coefficient of the MNE experience variable is positive and statistically significant at the 10% level. The estimated results are also robust across different model specifications, affirming that longer experience in the MNE where they are interviewed contributes to higher levels of aspirations. However, the estimated coefficient of the interaction term of education level with the length of MNE experience is negative and marginally significant in some instances, suggesting that, keeping either variable constant in turn, increasing qualification levels or years of MNE experience lowers the positive effect of these two variables on aspirations. This may be due to the glass ceiling in management jobs for those highly educated senior local employees in the MNEs. Interestingly, gender does not appear to exert a

significant effect on the level of aspirations. Nor is experience in the industrial field hold significant explanatory power in the series of regressions presented.

When the human resources management practices related to work incentives are added, it appears that it is not monetary rewards that improves the aspiration level of workers. Instead, it is the provision of non-monetary incentives, and the provision of positive feedback when deserved, which relates positively to workers' aspirations. This is consistent with the findings in the literature that non-peculiar incentives have a more significant effect on longer term activities.

Other management practices such as the provision of clear targets and leaving space to workers for them to take their own initiative have not shown a statistically significant impact on workers' aspirations of future career development. This is not surprising because however these management practices may empower the workers and enhance their performance, it may not necessary inspire them in future development.

Learning how to operate a new software for the purpose of their job leads to higher future aspirations for workers. This is to be expected and it indicates that higher firm computerisation also leads to positive outcomes for workers' ambitions and future perspectives. The amount of computer use per day is not significantly related to the dependent variable. This may indicate that it is not the simple use of ICT that inspires workers in future career development, but rather the learning process. In other words, knowledge and value added creation through the diffusion of ICT practices within the firm is the relevant factor in improving a worker's capability, skills, and future career objectives.

The estimated coefficient of the training variable is positive and marginally significant at the 10% level. More specifically, workers who received on-the-job training in their workplace reported higher levels of future ambitions and aspirations. This provides direct evidence suggesting that on-the-job training and the related transfer of knowledge taking place within the MNE has a significant positive connection with aspirations of future employment outcomes for MNE employees. Of course, different content and methods of training may offer different

significance in their impact. A clearer picture may be obtained in future studies when we make deeper exploration on these fronts.

Of the sectoral dummies, the construction sector dummy is positively related throughout. This means that, when compared to the aspiration level of the base group, which is the ICT sector, working in the construction sector have higher levels of aspirations among workers. The opposite is true for the pharmaceutical sector, although this result is only marginally significant and only discontinuously. Finally, the textile sector dummy is in this context never significant.

In summary, longer time experience working in the MNEs and the training received at the MNEs have had a significant direct impact on workers' aspiration for future development. Some advanced management practices adopted in the MNEs, non-monetary rewards, positive feedbacks, as well as skills enhancement increase the levels of aspiration of the local workers for future development. Management practices and activities that serve only to exploit workers' existing skills and capability may enhance the productivity of the workers but not their aspiration for future development.

Table 28. Impact of MNE work experience and management practices on workers' aspirations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Gender</b>	0.041	0.046	0.049	0.051	0.042	0.046	0.045	0.055	0.038
	(0.053)	(0.054)	(0.054)	(0.052)	(0.053)	(0.054)	(0.053)	(0.053)	(0.053)
<b>Age</b>	-0.002*	-0.002*	-0.003**	-0.003**	-0.003**	-0.003**	-0.002*	-0.002*	-0.002*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
<b>Education</b>	0.17***	0.17***	0.167***	0.16***	0.17***	0.17***	0.15***	0.146***	0.155***
	(0.046)	(0.046)	(0.046)	(0.044)	(0.046)	(0.046)	(0.047)	(0.046)	(0.047)
<b>MNE_Experience</b>	0.014*	0.014*	0.014*	0.013*	0.014*	0.014*	0.015*	0.015*	0.012
	(0.008)	(0.008)	(0.008)	(0.007)	(0.008)	(0.008)	(0.008)	(0.007)	(0.008)
<b>Field_Experience</b>	0.003	0.003	0.003	0.003	0.003	0.003	0.004	0.002	0.003
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
<b>MNE_Exp_Educ</b>	-0.004	-0.005*	-0.005*	-0.004	-0.004	-0.004	-0.005*	-0.004	-0.004
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
<b>Monetary rewards</b>		-0.057							

(0.042)

**Non-monetary rewards**

0.07\*

(0.04)

**Positive Feedback**

0.16\*\*\*

(0.048)

---

**Space for own initiative**

0.008

(0.047)

**Clear targets**

-0.024

(0.052)

---

**Computer Use**

0.022

(0.01)

**ICT Learning**

0.125\*\*\*

(0.048)

---

**On-the-job training**

0.086\*

									(0.048)
<b>D_Construction</b>	0.2***	0.19***	0.22***	0.2***	0.2***	0.21***	0.27***	0.28***	0.176**
	(0.075)	(0.075)	(0.041)	(0.072)	(0.075)	(0.075)	(0.081)	(0.079)	(0.076)
<b>D_Textile</b>	0.006	-0.004	0.000	0.006	0.006	0.009	0.028	0.045	-0.006
	(0.059)	(0.059)	(0.059)	(0.057)	(0.059)	(0.06)	(0.06)	(0.06)	(0.059)
<b>D_Pharmaceutical</b>	-0.097*	-0.093*	-0.074	-0.054	-0.098*	-0.096*	-0.07	-0.058	-0.104*
	(0.056)	(0.056)	(0.057)	(0.056)	(0.056)	(0.056)	(0.059)	(0.057)	(0.056)
<b>Observations</b>	170	170	170	170	170	170	167	170	170
<b>R-squared</b>	0.18	0.191	0.195	0.237	0.181	0.183	0.211	0.214	0.197

Notes: Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## **Chapter 10. Conclusions**

### **10.1 Overview**

The study of technology transfer from the perspective of managerial capability in Ghana is an important contribution to the increasing wealth of knowledge on innovation. Ghana is not only a country that bears the distinctive features of the African context, but it models the characteristics of an emerging economy where innovation is central for further progress. In that regard the questions of how innovation can further be stimulated to enhance growth sustainably is of keen interest to critical stakeholders, policy makers, development actors, innovation scholars and others alike. The focus on managerial knowledge transfer is a major effort to understand and address one of the crucial challenges facing emerging economies – how to effectively and profitably manage economic entities.

There are two overarching questions posed to guide this study which covers a sample of European and Chinese MNEs. Firstly, what is the nature of the technology transfers and their channels? What MNEs' management practices and technology are transferred to local actors? Secondly, what socio-economic development has come to Ghana as a result of MNEs' activities; in terms of raising living standards and improved working conditions? Both questions have led to interesting findings that enriches the body of literature on innovation in important ways. Our conclusions are organized in the following four categories: Local Firms and MNEs; Chinese MNEs; European MNEs; and General. Based on these conclusions, we then discuss the policy implications.

### **10.2 Local Firms and MNEs**

The study broadly indicates that workers at MNEs prefer employment in MNEs over domestic or local firms. The reasons given include better job security, higher workplace standards and access to enhanced conditions of employment. Whilst this is largely true of all the industries covered in

the study (ICT, Pharmaceuticals, Textiles and Construction), there are variations in each industry and each sector has its peculiarities regarding an MNE's relative attraction as an employer. For instance in the construction sector, the workforce is dominated mainly by unskilled labour. In the MNEs, workers enjoyed a more stable and continuous form of employment. They were also provided additional benefits and allowances which are not offered by many domestic firms. They also found better opportunities for capability enhancement.

Yet knowledge transfer is rather absent between MNEs and local firms. Even though there is existing national policy on local content creation to stimulate this, the enforcement has been absent and thus local firms have not benefited from knowledge spill-overs in the operations of foreign firms in Ghana. Nor have any significant benefits such as partnerships and subcontracting been observed. It underscores the importance of policy implementation and enforcement in order to enhance knowledge transfer from MNEs to local firms.

### **10.3 The Chinese MNEs**

A crucial objective in the study was to compare managerial knowledge transfer between the Chinese and European MNEs. Whilst there are some important similarities between MNEs of Europe and China (these are summarized in chapter 10.5) there are also clear differences. For example, the study evidently affirmed the competitiveness of Chinese MNEs with regards to a general aptitude for hard work, an adaptability to technologies in the developing countries context, flexibility in their hands-on management style and maintaining low costs. However, in terms of knowledge transfer, Chinese MNEs are found to be handicapped by linguistic and cultural barriers.

Nevertheless, Chinese MNEs have seen a rise in the employment of locals for management positions. Generally, there are on-going efforts to remove any barriers to knowledge transfer, especially of the linguistic kind. Interpreters are hired and in the long term, the Chinese government is offering scholarships for Ghanaians to study in China. It is a far-sighted policy

which will contribute greatly to the strategic expansion of Chinese industry in Ghana and Africa. Overall, one sees a definitive strategy for globalizing on the part of Chinese MNEs. The efforts to achieve this come from both within the MNEs as well as externally – from the MNEs place of origin.

#### **10.4 European MNEs**

The study has shown that the European MNEs have quite contrasting approaches to their operations in Ghana and managerial knowledge transfer. Going by the findings of the survey, European MNEs are more gender-sensitive in their employment. They engage more locals in managerial positions that have higher levels of education and offer better job security. It has facilitated better knowledge flows to local managers.

Indeed as far as learning is concerned, local managers learn more in European MNEs than in Chinese MNEs. We found that, for both workers and managers, learning potential was higher in European MNEs than in Chinese MNEs. The role of cultural and language barriers has been brought forward to contextualise such evidence. And the efforts that Chinese companies are making in order to bridge such gaps have also been discussed.

#### **10.5 General**

There are conclusions that can be drawn of a more general kind. The amount of time and experience working in the MNEs, and the type of training received at the MNEs have the most significant direct impact on a given workers' aspirations for future development. Some advanced management practices adopted in the MNEs, especially those of the intangible kind such as achievement recognition, non-monetary rewards, positive feedbacks, as well as skills enhancement increase the levels of aspiration of the local workers for future development. Management practices and activities that serve only to exploit workers' existing skills and

capabilities may enhance the productivity of the workers but not their aspiration for future development.

With regard to the diffusion of managerial knowledge between organisations, our case studies have shown that for both European and Chinese MNEs, much is still left to be achieved in terms of local outsourcing, partnership creation, and collaboration. The extent of local-foreign exchange between MNEs and local firms was found to be limited, although this depended on the sectors; with a clear improved performance in those instances where national policy took an active role in promoting the diffusion of knowledge. Such result highlights the crucial role of national planning in reaping the numerous potential benefits of FDI and operations of MNEs in Ghana.

### **10.6 Policy Implications for Ghana**

Overall, the findings indicate that managerial knowledge transfer and spill-over did take place in the MNEs to the local employees and managers, in both European and Chinese MNEs. The critical issue is how to interpret these findings for Ghana to deliberately enhance such transfers and spill-overs for the greater good of the economy? The policy options to address this issue emanates from the following, among others:

- Strengthening good bilateral relations
- Promoting education
- Creating incentives for managerial knowledge flows and spill-overs
- Implementing policies to encourage MNEs to contribute to socio-economic development.

Strengthening bilateral relations between Ghana and Europe and also between Ghana and China is crucial. In the case of the European MNEs, there are traditional socio-economic ties which bind Europe to Ghana. These can be further leveraged to emphasise specific strategies for knowledge transfers and spill-overs to local firms and managers. It is important especially because Europe is a leading source of FDI. The UK and France alone provided 18.3 billion USD worth of investment in Africa. Strengthening bilateral ties with these countries will enable Ghana to gain more from the economic relationships.

In the case of the Chinese MNEs, we note that Ghana-China relations continue to grow along with the development of Sino-Africa relations. So does the growth of Chinese FDI. As discussed earlier, the outflow of China's FDI to Africa reached 3.5 billion USD in 2014, making the total stock nearly 30 billion USD with a yearly average growth rate of 46% over the last decade. This certainly is remarkable and points to the opportunities that come with strengthened China-Ghana relations. Policies must be re-oriented in Ghana to incentivise MNEs in increasing the transfer of managerial knowledge.

A policy to promote education that it is important in ensuring Ghana maintains a highly skilled workforce that is qualified for employment in technology-intensive sectors such as telecommunications and pharmaceuticals. In the European and Chinese MNEs studied, managerial positions go to educated employees, and skilled employees must have the technical basis to perform their duties in the MNE plants. Ghana's higher educational strategies especially in Science, Technology and Engineering should aim at producing high-quality graduates capable not only of working in the MNEs but also contributing to innovations within the firms.

Incentives for knowledge spill-overs must be reflected in Ghana's industrial policies and investment promotion programmes. Whilst tax rebates and concessions seem appropriate so far, there must be clearer incentive structures to encourage MNEs to transfer knowledge. This includes knowledge transfer to local employees and transfers to local firms. In some cases, this implies the enforcement of existing policies such as those regulating local content creation.

There is also the need to establish mechanisms for policy implementation relating to the industrial sector. For example, industrial policy lays a strong emphasis on sub-contracting to enable SMEs to learn and benefit from the capabilities of the MNEs and large local companies. In practice, this has been left in the hands of the operatives in the market. This is evident in the construction sector where our results show little sub-contacting activities among the indigenous and MNE companies. Consequently, there is the need for establishing a mechanism that will encourage and reward companies that sub-contract locally.

There is also the subject of corporate social responsibility (CSR). The Ministry of Trade and Industry, this year finalized the National Policy on Corporate Social Responsibility. Whilst CSR remains an optional commitment, economic actors including MNEs are encouraged by imposing moral obligations for CSR programming. MNEs already have a number of CSR portfolios that contribute to socio-economic development in the realms of education, healthcare, recreation, environment etc. The CSR policy, when launched and implemented, should enable Ghana to experience enhanced socio-economic development associated with the presence of MNEs.

### **10.7 Limitations of the report**

It is important to acknowledge the limitations in the research. These pertain to data and the boundary of the network analysis. A definitive sample had to be drawn, in order for the survey to be conducted within scope and any budgetary confines. As much as we wish to extend the network analysis, we had to draw the limits at the key elements in our study. Moreover, cutting data collection of comparable domestic firms during fieldwork also made some of the important analysis lose the comparable benchmark. There is also the time constraint for data analysis and writing. Nevertheless, there are still several months before the MNEmerge project concludes overall, within this time we will make a further exploration of knowledge transfer between organisations and at individual level.

## **BIBLIOGRAPHY**

- Abdulai, I. (2005). Sectoral Analysis of Foreign Direct Investment in Ghana. Working Paper, WP/BoG-05/15, Bank of Ghana.
- Africa Investment Report (2015): The Africa Investment Report 2015 - An FDI Destination on the Rise.
- Aitken, B. J., & Harrison, A. E. (1999). Do domestic firms benefit from direct foreign investment? Evidence from Venezuela. *American Economic Review*, 89(3), 605–618.
- Alden, Chris, and Martin Davies. (2006). A Profile of the Operations of Chinese Multinationals in Africa. *South African Journal of International Affairs* 13 (1): 83–96.
- Almeida, P. & Kogut, B. 1999. Localization of knowledge and the mobility of engineers in regional networks. *Management Science*, 45(7): 905-17.
- Amoah, G.O-A. (2014). Foreign Direct Investment: Attracting foreign direct investment to Ghana: Lesson from the Republic of Korea. Graduate School of International Studies, Seoul National University.
- Audretsch, D. (1998). Agglomeration and the location of innovative activity. CEPR Discussion Papers 1974.
- Auffray Cyrielle and Xiaolan Fu, (2015). Chinese MNEs and managerial knowledge transfer in Africa: the case of construction sector in Ghana. *Journal of Chinese Business and Management Studies*. 13(4): 285-310.
- Balasubramanyam, V. N., Salisu, M., & Sapsford, D. (1996). Foreign direct investment and growth in EP and IS countries. *Economic Journal*, 106, 92–105.
- Bhagwati, J. (2004). *'In Defence of Globalisation'*. Princeton: Princeton University.

- Braunstein, E. (2006). 'Foreign Direct Investment, Development and Gender Equity: A Review of Research and Policy'. UNRISD OPGP/12.
- Breschi, S., & Lissoni, F. (2001). Knowledge spillovers and local innovation systems: A critical survey. *Industrial and Corporate Change*, 10(4), 975–1004.
- Buckley, P. J., Clegg, J., & Wang, C. (2002). The impact of inward FDI on the performance of Chinese manufacturing firms. *Journal of International Business Studies*, 33(4), 637–655.
- Caves, R. E. (1974). Multinational firms, competition and productivity in host-country markets. *Economica*, 41(162), 176–193.
- Chen, D., Li, J., & Shapiro, D. (2008). FDI Knowledge Spillovers and Product Innovations of Chinese Firms. University of Oxford, SLPTMD Working Paper, No. 028.
- Cotton, L. and Ramachandran, V. (2001). 'Foreign Direct Investment in Emerging Economies: Lessons from Sub-Saharan Africa'. UNU-WIDER Discussion Paper, no. 2001/82.
- Driffield, N. and Taylor, K. (2000). 'FDI and the Labour market: A Review of the Evidence and Policy Implications'. *Oxford Review of Economic Policy*, 16(3): 90-103.
- Dunning J.H. and Sarianna M.Lundan, (2008). *Multinational Enterprises and the Global Economy*, Edward Elgar Publishing Limited, UK. Edition
- Dunning, J. H. (1994). Multinational enterprises and the globalization of innovatory capacity. *Research Policy*, 23, 67–88.
- Eden, L., Levitas, E., & Martinez, R. J. (1997). The production, transfer and spillover of technology: Comparing large and small multinational as technology producers. *Small Business Economics*, 9(1), 53–66.
- Feenstra, R. and Hanson, G. (1997). 'Foreign Direct Investment and Relative Wages: Evidence from Mexico's Maquiladoras'. *Journal of International Economics*, 42: 371-393.

- Fosfuri, A., Motta, M. & Ronde, T. 2001. Foreign direct investment and spillovers through workers' mobility. *Journal of International Economics*, 53 (1): 205-222.
- Free Zones Board (2016). Accessed from <http://www.gfzb.com.gh/> on 31.05.2016
- Fu, X. and Gong, Y., (2011). 'Indigenous and foreign innovation efforts and drivers of technological upgrading: evidence from China', *World Development*, V39, no 7, 1214-1225.
- Fu, Xiaolan (2013). Multi-dimensional Complementarities and the Growth Impact of Direct Investment from China on Host Countries. *TMD Working Paper TMD-WP-50*. Oxford University.
- Fu, Xiaolan (2012) 'Managerial knowledge spillovers from FDI through the diffusion of management practices', *Journal of Management Studies*, v49, no 5, 970-999.
- Gerschewski, S. (2013): Do Local Firms Benefit from Foreign Direct Investment? An Analysis of Spillover Effects in Developing Countries. *Asian Social Science*; Vol. 9, No. 4; 2013
- Gershensberg, I. 1994. Gender, training, and the creation of a managerial elite: multinationals and other firms in Jamaica. *Journal of developing Areas*, 28(3): 313-325.
- Ghana Chamber of Mines (2013): Performance of the Mining Industry in 2012. Accessed from [http://ghanachamberofmines.org/media/publications/Performance\\_of\\_the\\_Ghana\\_Mining\\_Industry\\_in\\_2012.pdf](http://ghanachamberofmines.org/media/publications/Performance_of_the_Ghana_Mining_Industry_in_2012.pdf) on 10th November, 2014
- Ghana Revenue Authority (GRA, 2016) Accessed from <http://www.gra.gov.gh/> on 31.05.2016
- GIPC (2008): 'Ghana Investment Promotion Centre Report – 2007,' 4th Quarter Report, Volume 3, Issue 4, Accra-Ghana.
- GIPC (2012): 'Ghana Investment Promotion Centre report – 2012,' 4th Quarter Report, vol. 8 no. 4, Accra-Ghana.
- GIPC (2014): Ghana Investment Promotion Centre database on FDI

- GIPC (2015): 'Ghana Investment Promotion Centre report – 2015,' 1st Quarter Report, vol. 11 no. 1, Accra-Ghana.
- GIPC (2015): 'Ghana Investment Promotion Centre report – 2015,' 2nd Quarter Report, vol. 11 no. 2, Accra-Ghana.
- GIPC (2015): 'Ghana Investment Promotion Centre report – 2015,' 3rd Quarter Report, vol. 11 no. 3, Accra-Ghana.
- GIPC (2015): 'Ghana Investment Promotion Centre report – 2015,' 4th Quarter Report, vol. 11 no. 4, Accra-Ghana.
- GIPC (2016): 'Ghana Investment Promotion Centre report – 2016,' 1st Quarter Report, vol. 12 no. 1, Accra-Ghana.
- Griliches, Z. (1979). Issues in assessing the contribution of research and development to productivity growth. *Bell Journal of Economics*, 10(1), 92–116.
- GSS (2013): National Account Statistics: Revised Gross Domestic Product for 2012
- GSS (2014): National Account Statistics: Revised Gross Domestic Product for 2013
- Harris, T. E., & Nelson, M.D. (2008). *Applied organizational communication: Theory and practice in a global environment*. New York: Lawrence Erlbaum.
- Henley, John, Stefan Kratzsch, Mithat Külür, and Tamer Tandogan. (2008). Foreign Direct Investment from China, India and South Africa in Sub-Saharan Africa: A New or Old Phenomenon? 2008/24. Research Paper, UNU-WIDER, United Nations University (UNU).
- Hu, A. G. Z., & Jefferson, G. H. (2002). FDI impact and spillover: Evidence from China's electronic and textile industries. *World Economy*, 38(4), 1063–1076.
- ISSER (2012): *The State of the Ghanaian Economy in 2011*. A publication of the Institute of Statistical, Social and Economic Research of the University of Ghana

- ISSER (2013): The State of the Ghanaian Economy in 2012. A publication of the Institute of Statistical, Social and Economic Research of the University of Ghana
- ISSER (2014): The State of the Ghanaian Economy in 2012. A publication of the Institute of Statistical, Social and Economic Research of the University of Ghana
- Jacobson, M. (1998). “Alleviating Poverty Through Foreign Direct Investment: Company Case Studies (Nike and Levi Strauss)”, Paper prepared for High Level Roundtable on FDI and its Impact on Poverty Alleviation.
- Jaffe, A. B., Trajtenberg, M., & Henderson, R. (1993). Geographic localization of knowledge spillovers as evidenced by patent citations. *The Quarterly Journal of Economics*, 108(3), 577–598.
- Javorcik, B. S. (2004). Does foreign direct investment increase the productivity of domestic firms? In search of spillovers through backward linkages. *American Economic Review*, 94(3), 605–627.
- Jenkins, R. (2005). “Globalisation, Corporate Social Responsibility, and Poverty”, *International Affairs*, 81(3): 525-40.
- Jones, E., Watson, B., Gardner, J., & Gallois, C. (2004). Organizational communication: Challenges for the new century. *Journal of Communication*, 54(4), 722-750.
- Kim, L. 1997. *Imitation to Innovation: The Dynamics of Korea's Technological Learning*. Boston: Harvard Business School Press.
- Kipping, M. & Bjarnar, O. 1998. *The Americanisation of European business: the Marshall Plan and the transfer of US management models*, London: Routledge.
- Kokko, A., Tansini, R., & Zejan, M. (1996). Local technological capability and productivity spillovers from FDI in the Uruguayan manufacturing sector. *Journal of Development Studies*, 32(4), 602–611.

- KPMG (2012). *Doing Business in Ghana*. Accra
- Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99(3), 483–499.
- Lall, Sanjaya, and Paul Streeten. (1977). *Foreign investment, transnationals, and developing countries*. London: Macmillan.
- Maertens, M., Cole, L., and Swinnen, F. (2011). “Globalisation and poverty in Senegal: A worst case scenario?”, *European Review of Agricultural Economics*, 1-24.
- Markusen, J. R. (2002). *Multinational firms and the theory of international trade*. XXII. Cambridge, Mass: MIT Press.
- Marshall, A. (1920). *Principles of economics*. London: Macmillan and Co., Ltd..
- Meyer, K. E. (2004). Perspectives on multinational enterprises in emerging economies. *Journal of International Business Studies*, 35, 259–276.
- Moran, T., Graham, E., and Blomstrom, M. (2005). “Does Foreign Direct Investment Promote Development”, Washington DC: Institute for International Economics and the Center for Global Development.
- Nelson, R. R. (1959). The simple economics of basic scientific research. *Journal of Political Economy*, 67, 297–306.
- OECD (2002). *Organization for Economic Cooperation and Development. Science and Technology Industry Outlook*. Paris: OECD.
- OECD (2008). *OECD Benchmark Definition of Foreign Direct Investment*, 4<sup>th</sup> Ed.
- Onyewuchi O. G and Obumneke. (2013). *Multinational Corporations and the Nigerian Economy*. *International Journal of Academic Research in Business and Social Sciences*. Vol. 3 No. 5. ISSN: 2222-6990

- Pietrobelli, C. (1996). *Emerging Forms of Technological Cooperation: The Case for Technology Partnerships—Inner Logic, Examples and Enabling Environment*. Science and Technology Issues, Geneva: UNCTAD, United Nations.
- Pietrobelli, C., & Rabellotti, R. (Eds.) (2007). *Upgrading to compete: SMEs, clusters and value chains in Latin America*. Cambridge Mass: Harvard University Press.
- Pietrobelli, C., & Saliola, F. (2008). Power relationships along the value chain: Multinational firms, global buyers, and local suppliers' performance. *Cambridge Journal of Economics*, 32(6), 947–962.
- Pigato, M. (2000). 'Foreign Direct Investment in Africa. Old Tales and New Evidence'. Africa Region Working Paper Series No. 8, The World Bank.
- Richards, D. and Gelleny, R. (2007). 'Women's Status and Economic Globalization'. *International Studies Quarterly*, 51: 855–876.
- Robbins, D. (1996). 'Evidence of trade and wages in the developing world'. Paris: OECD Development Centre Technical Paper n. 119.
- Sanfilippo, Marco. (2010). Chinese FDI to Africa: What Is the Nexus with Foreign Economic Cooperation? *African Development Review* 22: 599–614.
- Sarpong, S. and Otoo, I. K. (2009). Survey on the Implementation of the MNE Declaration in Ghana. Ministry of Employment and Social Welfare/Ghana Employers' Association.
- Sasidharan and Kathuria (2011). Foreign Technology and Indigenous Innovation in the Emerging Economies. *World Development*, V39, no 7pp. 1204-1270
- Sibunruang, A., and Brimble, P. (1988). 'The Employment Effects of Manufacturing Multinational Enterprises in Thailand', International Labor Office Working Paper No. 54.

- Te Velde, D. and Morrissey, O. (2004). 'Foreign Direct Investment, Skills, and Wage Inequality in East Asia'. *Journal of the Asia Pacific Economy*. 9: 348-369.
- Tetteh, M. L. and Okantey, P. C. (2016). *Multinational Subsidiary Performance: Evidence from the Ghanaian Banking Sector*
- Torres, C., M. Garcia-French, R. Hordijk, K. Nguyen and L. Olup (2012). Four case studies on Corporate Social Responsibility: Do conflicts affect a company's CSR policy? *Utrecht Law Review*, Volume 8 Issue (3).
- UNCTAD (2008). Foreign Direct Investment Database (online), Internet Posting: <http://www.unctad.org/Templates/Page.asp?intItemID=1923&lang=1>
- UNCTAD (2012). 'Trade and Development Report 2012,' United Nations, Geneva
- UNCTAD (2014). *Investment by TNCs and Gender: Preliminary Assessment and Way Forward*. United Nation, New York and Geneva, 2014.
- UNCTAD (2015). *World Investment Report 2015: Reforming International Investment Governance*. United Nations Conference on Trade and Development, UN, Geneva.
- World Bank (2002). *Foreign Direct Investment in Africa – Some Case Studies*. IMF Working Paper, WP/02/61. International Monetary Fund.
- World Economic Forum (2013): *The Global Competitiveness Report in 2012*

## **Appendix: Survey Questionnaires**



## **MNEmerge ‘The Diffusion of Managerial knowledge in Ghana’ WP3 Q2**

*(For Local and Foreign Workers of MNE subsidiaries in Ghana)*

### **■ About this survey**

This questionnaire asks for information relating to MNE subsidiary linkages formed with local firms and managerial knowledge diffusions during the three-year period 2012 to 2014 inclusive.

The University of Oxford works in strong collaboration with other research institutions from Ghana, Finland, Netherlands, Brazil, UK, and India, and is the lead local partner for this survey as part of the European Union-funded Multinationals and Global Development (MNEmerge) Project.

### **■ Confidentiality**

All information gathered by this survey will be held in strictest confidence. Under no circumstances will STEPRI, Oxford University, or the MNEmerge project publish, release, or disclose any information on, or identifiable with, individual persons or firms.

### **■ Scope**

The statistical unit for the survey is the foreign or local engineers and workers in the enterprises. The coverage of the linkages is confined to interactive activities between individuals within the selected MNEs.

### General information

<b>G1. Interviewee ID</b>	
<b>G2. Company name</b>	
<b>G3. Department</b>	
<b>G4. Interviewee's position</b>	
<b>G5. Gender</b>	
<b>G6. Age (tick as appropriate)</b>	Under 30 (1) 30-40 (2) 40-50 (3) 50+ (4)
<b>G7. Interviewee's country of origin (present nationality)</b>	
<b>G8. Interviewee's highest qualification</b>	Primary school (1) Secondary school (2) University (3)
<b>G9. Interviewee's years of experience in the current MNE</b>	Under 5 (1) 5-10 (2) 10-15 (3) 15-20 (4) 20+(5)
<b>G10. Interviewee's years of experience in the relevant field</b>	Under 5 (1) 5-10 (2) 10-15 (3) 15-20 (4) 20+(5)
<b>G11. Short description of your main role in the department</b>	

(If interviewee's name is not given, then assign a 4 digit code to the interviewee)

### B. Performance reviewing and tracking

	YES	NO
<b>0a. Do you have a supervisor or team leader?</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>0.b Do you supervise, monitor, or</b>	<input type="checkbox"/>	<input type="checkbox"/>

<b>train any workers in your team or outside?</b>		
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<b>1. How is your performance, or that of the people you supervise, tracked and reviewed?</b>	<b>Learning</b>		<b>Tutoring</b>	
	Yes (1)	No (0)	Yes (1)	No (0)
<b>1a.</b> There are some pre-set target indicators ( Key Performance Indicators (KPI))	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>1b.</b> Please list the targets and indicators that are used to track and review performanc	_____			
<b>1c.</b> Is performance frequently tracked and reviewed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>1d.</b> How frequently? 1-Daily; 2-Weekly; 3-Monthly; 4-Quartly; 5-Yearly	_____			

### **C. Information and Communication Technology**

(Including internal, computer, mobile phone technologies, printers, terminals, optical and magnetic reader, operating system and software etc.)

	2012	2014
<b>2a.</b> What percentage of your daily work regularly involves use of computer?	%	%
<b>2b.</b> What percentage of your daily work regularly involve use of mobile	%	%

phones?		
2c. What percentage of your daily work regularly involve use of internet?	%	%

3. Please indicate what the purpose of using the above ICT technology is	Yes (1)	No (0)
A. Buy things to be used during production work	<input type="checkbox"/>	<input type="checkbox"/>
B. Promotion of the company and Brand	<input type="checkbox"/>	<input type="checkbox"/>
D. Communication with staff, customers, and public	<input type="checkbox"/>	<input type="checkbox"/>
E. Do research and development on new products and services	<input type="checkbox"/>	<input type="checkbox"/>
F. Organisation of management and administrative tasks internal to the company (incl. HRM)	<input type="checkbox"/>	<input type="checkbox"/>
G. Other please specify: _____		

	Yes (1)	Examples	No (0)
7. During the three years 2012 to 2014, did you engage in learning or using any new ICT in your job?	<input type="checkbox"/>		<input type="checkbox"/>
8. During the three years 2012 to 2014, did you engage in tutoring or teaching other colleagues on the use of ICT in your job?	<input type="checkbox"/>		<input type="checkbox"/>

9. Please indicate which specific ICT practices	Using		Learning		Tutoring	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)

A. Basic computer using including windows, Ms word, excel etc	<input type="checkbox"/>					
B. Specific or professional software e.g. preparation of accounts, inventory of supplies and products	<input type="checkbox"/>					
C. Purchases for the production	<input type="checkbox"/>					
D. Production and operations	<input type="checkbox"/>					
E. Marketing, sell and finding customers	<input type="checkbox"/>					
F. Intra organizational communication	<input type="checkbox"/>					
G. Management information systems e.g. human resource database, customers databases	<input type="checkbox"/>					
H. Other please specify:						

## D. Channels of knowledge transfer

1. What are the channels through which you learn (tutor/supervise)?	Learning	Tutoring
A. Telephone	<input type="checkbox"/>	<input type="checkbox"/>
B. Email	<input type="checkbox"/>	<input type="checkbox"/>
C. Manuals	<input type="checkbox"/>	<input type="checkbox"/>
D. Training sessions incl. mentoring, workshops, seminars.	<input type="checkbox"/>	<input type="checkbox"/>
E. Expert advice	<input type="checkbox"/>	<input type="checkbox"/>

F. Technical advice sent by MNE	<input type="checkbox"/>	<input type="checkbox"/>
G. Joint work at the MNE's site	<input type="checkbox"/>	<input type="checkbox"/>
H. Industry association	<input type="checkbox"/>	<input type="checkbox"/>
I. Social events incl. church, weddings, clubs, outdoor activities and family occasions	<input type="checkbox"/>	<input type="checkbox"/>
J. Other. Please specify _____	<input type="checkbox"/>	<input type="checkbox"/>

<b>2. Who have you transferred your personal knowledge to? Or whom have you learned from?</b>	<b>Transfer to your colleagues</b>	<b>Learning from your colleagues</b>
A. Production workers	<input type="checkbox"/>	<input type="checkbox"/>
B. Managerial staffs incl. department managers	<input type="checkbox"/>	<input type="checkbox"/>
C. Clerks	<input type="checkbox"/>	<input type="checkbox"/>
D. Engineers	<input type="checkbox"/>	<input type="checkbox"/>
E. Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>

	Yes (1)	Hours	No (0)
<b>3. Do you receive pre-employment training from your enterprise? If yes, how many hours per month on average?</b>	<input type="checkbox"/>	/month	<input type="checkbox"/>

<b>4. Do you receive on-the-job training? (training while performing job tasks)</b>	Yes <input type="checkbox"/>	/month	No <input type="checkbox"/>
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<b>5. Do you receive on-the-job training from other department?</b>	Yes <input type="checkbox"/>	/month	No <input type="checkbox"/>
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<b>6. During the three years 2012 to 2014, did you receive any of the following rewards and incentives?</b>	Yes (1)	No (0)
A. Reward packages (monetary) e.g. bonuses, cash award for high performing workers	<input type="checkbox"/>	<input type="checkbox"/>
B. Non-monetary rewards e.g. some of the products of the enterprise, coupons to shop, stocks of the enterprise, ticket to travel, parcels given out at the annual end of year parties.		
C. Incentives that motivate you to improve performance e.g. promotion	<input type="checkbox"/>	<input type="checkbox"/>
D. Praising and encouraging good performance (e.g. letter or certificate of appreciation, verbal praise by superiors)	<input type="checkbox"/>	<input type="checkbox"/>
E. Clear targets	<input type="checkbox"/>	<input type="checkbox"/>
F. Feedback to your performance from manager	<input type="checkbox"/>	<input type="checkbox"/>
G. Empowering to take responsibility	<input type="checkbox"/>	<input type="checkbox"/>
H. Other please specify: _____		

<b>7. Training: Have you ever participated in the following programs?</b>	2012		2014		Domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
A. Mentoring relationship	<input type="checkbox"/>					
C. Leadership training	<input type="checkbox"/>					
D. Training workshops (of max. one week duration)	<input type="checkbox"/>					



## E. The Achievement of Socio-Economic Development Goals in Ghana

	Yes (1)	No (0)	Domestic enterprises?
<b>1. Does your enterprise have a career plan for you? How does this compare to the domestic firm sector?</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>2. What is the length of your contract? If you have sufficient knowledge on this, how does it compare to what happens in domestic enterprises?</b>	No. Years		No. Years

<b>3. After you became an employee in this MNE, do you think you and/or your families have improved living standards, future prospects, social status? Examples?</b>	Yes (1)	No (0)
3a. Your family's living standard	<input type="checkbox"/>	<input type="checkbox"/>
3b. Your children's education	<input type="checkbox"/>	<input type="checkbox"/>
3c. Your social status	<input type="checkbox"/>	<input type="checkbox"/>
3d. Your personal career future	<input type="checkbox"/>	<input type="checkbox"/>
3e. Built or bought a house or houses	<input type="checkbox"/>	<input type="checkbox"/>

7. Does your enterprise provide any of the following support to you? And how does this compare to employees in domestic enterprises?	2012		2014		Domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
A. Cost of Living Allowance (COLA, equivalent of Hardship fund)	<input type="checkbox"/>					
B. House allowance	<input type="checkbox"/>					
C. Transportation allowance	<input type="checkbox"/>					
D. Education allowance	<input type="checkbox"/>					
E. Medical insurance	<input type="checkbox"/>					
G. Pension scheme	<input type="checkbox"/>					
H. Maternity leave	<input type="checkbox"/>					
E. Other, please specify _____	<input type="checkbox"/>					

8. Do you think that your skills have improved during the years 2012-2014? And are these skills higher than employees of domestic enterprises?	Improved compared to three years ago, 2012		Skills are significantly higher than employees of domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)
A. Production capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Leadership skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Internal communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Problem solving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Decision-making capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Customer relation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>9. Aspirations: do you think working for this company has provided you with knowledge, skills, and information that you are going to be able to use even after employment with the company terminates?</b>	Yes (1)	No (0)	Examples	If not, why?
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<b>10. when your contract for the MNE terminates, would you prefer to</b>	Yes (1)	No (0)
A. renew the contract with the current MNE	<input type="checkbox"/>	<input type="checkbox"/>
B. work for another MNE	<input type="checkbox"/>	<input type="checkbox"/>
C. work for domestic enterprises	<input type="checkbox"/>	<input type="checkbox"/>
D. start your own business	<input type="checkbox"/>	<input type="checkbox"/>

<b>11. Was there an increase in your salary during the years 2012-2014? Is your salary significantly higher than that of employees of domestic enterprises?</b>	Increased compared to three years ago, 2012		Significantly higher than employees of domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Salary range:.....</b>				



# MNEmerge ‘The Diffusion of Managerial knowledge in Ghana’ WP3 Q2

*(For Top managers of MNE subsidiaries in Ghana)*

## ■ About this survey

This questionnaire asks for information relating to MNE subsidiary linkages formed with local firms and managerial knowledge diffusions during the three-year period 2012 to 2014 inclusive.

The University of Oxford works in strong collaboration with other research institutions from Ghana, Finland, Netherlands, Brazil, UK, and India, and is the lead local partner for this survey as part of the European Union-funded Multinationals and Global Development (MNEmerge) Project.

## ■ Confidentiality

All information gathered by this survey will be held in strictest confidence. Under no circumstances will STEPRI, Oxford University, or the MNEmerge project publish, release, or disclose any information on, or identifiable with, individual persons or firms.

## ■ Scope

The statistical unit for the survey is the **foreign or local managers** in the enterprises. The coverage of the linkages is confined to interactive activities between individuals within the selected MNEs.

### General information

<b>G1. Interviewee ID</b>	
<b>G2. Company name</b>	
<b>G3. Department</b>	
<b>G4. Interviewee's position</b>	
<b>G5. Gender</b>	
<b>G6. Age (tick as appropriate)</b>	Under 30 (1) 30-40 (2) 40-50 (3) 50+ (4)
<b>G7. Interviewee's country of origin (present nationality)</b>	
<b>G8. Interviewee's highest qualification</b>	Primary school (1) Secondary school (2) University (3)
<b>G9. Interviewee's years of experience in the current MNE</b>	Under 5 (1) 5-10 (2) 10-15 (3) 15-20 (4) 20+(5)
<b>G10. Interviewee's years of experience in the relevant field</b>	Under 5 (1) 5-10 (2) 10-15 (3) 15-20 (4) 20+(5)
<b>G11. Short description of your main role in the department</b>	

(If interviewee's name is not given, then assign a 4 digit code to the interviewee)

## A. Adoption of High performance Management practices

### I. Cost management practices (Including quality and target management)

	Yes (1)	Examples	No (0)
1. During the three years 2012 to 2014, did you engage in <i>learning or using</i> any new or significantly improved cost management practices in your work?	<input type="checkbox"/>		<input type="checkbox"/>
2a. During the three years 2012 to 2014, did you engage in <i>tutoring or assisting</i> other colleagues on any cost management practices in your work?	<input type="checkbox"/> Go to 2b		<input type="checkbox"/> Go to 3
2b. Where did you acquire this knowledge?	Own previous education/ work experience	From the company	Other [please specify]
	<input type="checkbox"/>	<input type="checkbox"/>	

### 3. Do these practices relate to

	Using		Learning		Tutoring	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
A. Supply chain costing  (Direct, activity-based, and transactions cost to account for all costs in a supply chain and find the right partner to control them)	<input type="checkbox"/>					

B. Proactive cost management  (Proactive cost management is a market-oriented, anticipatory system. Specific techniques are used to coordinate activities, as a case study from the car industry shows)	<input type="checkbox"/>					
C. Lean management accounting  (Linking strategic and operational levels to understand customers and processes, and thus enhance customer value)	<input type="checkbox"/>					
D. Interorganizational cost management  (Managing supplier and customer costs in coordinated cost reduction programs are carried out during product design and manufacturing)	<input type="checkbox"/>					
E. Lean production  (The approach to management that focuses on cutting out waste, whilst ensuring quality. This approach can be applied to all aspects of a business – from design, through production to distribution.)	<input type="checkbox"/>					
F. Kanban management  (Kanban is a system to control the logistical chain from a production point of view, and is not an inventory control system)	<input type="checkbox"/>					
G. Other please specify:	<input type="checkbox"/>					

## II. Market innovation practices (Branding, using of internet etc)

(A marketing innovation is the implementation of a “*new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing*” or sales methods to increase the appeal of your goods and services or to enter new markets.)

	Yes (1)	Examples	No (0)
<b>4. During the three years 2012 to 2014, did you engage in learning or using any new marketing methods?</b>	<input type="checkbox"/>		<input type="checkbox"/>
<b>5a. During the three years 2012 to 2014, did you engage in tutoring or assisting other colleagues on any new marketing</b>	<input type="checkbox"/> to 5b		<input type="checkbox"/> to 6

<b>methods?</b>			
<b>5b. Where did you acquire this knowledge?</b>	Own previous education/ work experience	From the company	Other [please specify]
	<input type="checkbox"/>	<input type="checkbox"/>	

**6. Please indicate which specific methods**

	<b>Using</b>		<b>Learning</b>		<b>Tutoring</b>	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
A. providing customers with high quality products and services	<input type="checkbox"/>					
B. pricing products competitively	<input type="checkbox"/>					
C. having a strong brand/ image in the market place	<input type="checkbox"/>					
D. market research - gathering and listening to customer feedback	<input type="checkbox"/>					
E. advertising and promotions	<input type="checkbox"/>					
F. Using internet or telephone or mobile for marketing	<input type="checkbox"/>					
G. Using internet or telephone or mobile to collect feedback	<input type="checkbox"/>					
H. Customer loyalty reward scheme	<input type="checkbox"/>					
I. Other please specify:	<input type="checkbox"/>					

**7a. What changed for local businesses after your firm entered the market? Do you think that you compete on different markets, or that there is some competition with local firm?**

**7b. Are there any examples in which local businesses have learnt by being forced in competition with the MNE?**

**III. Human resource practices (Mainly for the staff at the HR department)**

(New methods of human resource management (i.e. team work, decentralisation, empowerment, performance related pay, training systems))

	Yes (1)	Examples	No (0)
<b>8. During the three years 2012 to 2014, did you engage in learning or using any new human resource practices?</b>	<input type="checkbox"/>		<input type="checkbox"/>
<b>9a. During the three years 2012 to 2014, did you engage in tutoring or assisting other colleagues on any human resource practices?</b>	<input type="checkbox"/>		<input type="checkbox"/>
<b>9b. Where did you acquire this knowledge?</b>	Own previous education/ work experience	From the company	Other [please specify]
	<input type="checkbox"/>	<input type="checkbox"/>	

		Using		Learning		Tutoring	
		Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
<b>10. Please indicate which specific types of practice,</b>							
<b>Managing human capital</b>	A. attracting strong candidates for job vacancies	<input type="checkbox"/>					
	B. retaining and developing talent throughout the organization	<input type="checkbox"/>					
<b>Rewarding high performance</b>	C. rewarding related to performance and effort	<input type="checkbox"/>					
	D. thoroughly appraising staff on a regular basis	<input type="checkbox"/>					
<b>Promoting high performers</b>	E. moving poor performers to a different role in organization	<input type="checkbox"/>					
	F. moving poor performers out of the enterprise	<input type="checkbox"/>					
	G. identifying, developing and promoting top performers	<input type="checkbox"/>					
<b>Training staff</b>	H. training staff in customer service and selling	<input type="checkbox"/>					
	I. developing staff to the best of their abilities	<input type="checkbox"/>					
K. Labour laws – educating employees on rights and responsibilities		<input type="checkbox"/>					
L. Promoting teamwork and good work ethics in the enterprise		<input type="checkbox"/>					
M. Other please specify: _____							

**11. Could you give me an idea of a general salary range (wage per hour/week/month) for different categories of workers in your company? E.g. a generic long term experienced worker earns between 400 and 600 GHS per month – depending on contracted etc.**

	GHC per hour/week/month
A. Unskilled, short tenure	GHC
B. Skilled and/or experienced	GHC
C. Engineer/technician	GHC

12a. How do you determine these wage levels?

12b. How do these levels compare to those of the wages offered by local companies?

**B. [for all respondents] Performance reviewing and tracking**

Target management: performance tracking and reviewing	Using		Learning		Tutoring	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
1. During the three years 2012 to 2014, did you engage in using, learning or tutoring any <i>performance tracking and reviewing practices</i> in your work?	<input type="checkbox"/>					

How do you (or the learner in the case of tutoring) track and review performance?	Learning		Tutoring	
	Yes (1)	No (0)	Yes (1)	No (0)
2a. Your performance is tracked and reviewed based on Key Performance Indicators (KPI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2b. Please list the KPIs you have used to track and review your performance (or the learner's performance in the case of tutoring)	_____			
2c. Your performance is continually tracked and frequently reviewed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2d. How frequently is your performance reviewed? 1-Daily; 2-Weekly; 3-Monthly; 4-Quarterly; 5-Yearly	_____			

## C. Information and Technology

(Including internal, computer, mobile phone technologies, printers, terminals, optical and magnetic reader, operating system and software etc.)

	2012	2014
<b>3a. What percentage of your daily work regularly involves use of computer?</b>	%	%
<b>3b. What percentage of your daily work regularly involve use of mobile phones?</b>	%	%
<b>3c. What percentage of your daily work regularly involve use of internet?</b>	%	%
<b>4. Do you use the institutional email address?</b>	Yes (1)	No (0)
<b>5. Do you use the intra-net regularly in your job?</b>	Yes (1)	No (0)

<b>6. Please indicate what the purpose of using the above ICT technology is</b>	Yes (1)	No (0)
A. Make purchases for production	<input type="checkbox"/>	<input type="checkbox"/>
B. Market and brand promotion	<input type="checkbox"/>	<input type="checkbox"/>
C. Communication with staff, customers, and public	<input type="checkbox"/>	<input type="checkbox"/>
D. Do research and development on new products and services	<input type="checkbox"/>	<input type="checkbox"/>
E. Intra organization management and administrative tasks (incl. HRM)	<input type="checkbox"/>	<input type="checkbox"/>

F. Other please specify: _____		
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	Yes (1)	Examples	No (0)
<b>7. During the three years 2012 to 2014, did you engage in learning or using any new ICT in your job?</b>	<input type="checkbox"/>		<input type="checkbox"/>
<b>8. During the three years 2012 to 2014, did you engage in tutoring or teaching other colleagues on the use of ICT in your job?</b>	<input type="checkbox"/>		<input type="checkbox"/>

9. Please indicate which specific ICT practices	Using		Learning		Tutoring	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
I. Basic computer using including windows, Ms word, excel etc	<input type="checkbox"/>					
J. Specific or professional software e.g. preparation of accounts, inventory of supplies and products	<input type="checkbox"/>					
K. Purchases for the production	<input type="checkbox"/>					
L. Production and operations	<input type="checkbox"/>					
M. Marketing, sell and finding customers	<input type="checkbox"/>					
N. Intra organizational communication	<input type="checkbox"/>					
O. Management information systems e.g. human resource database, customers databases	<input type="checkbox"/>					
P. Other please specify:						

## D. Channels of knowledge transfer

1. What are the channels through which you learn (tutor)?	Learning	Tutoring
K. Telephone	<input type="checkbox"/>	<input type="checkbox"/>
L. Email	<input type="checkbox"/>	<input type="checkbox"/>
M. Manuals	<input type="checkbox"/>	<input type="checkbox"/>
N. Training sessions incl. mentoring, workshops, seminars.	<input type="checkbox"/>	<input type="checkbox"/>
O. Expert advice	<input type="checkbox"/>	<input type="checkbox"/>
P. Technical advice sent by MNE	<input type="checkbox"/>	<input type="checkbox"/>
Q. Joint work at the MNE's site	<input type="checkbox"/>	<input type="checkbox"/>
R. Industry association	<input type="checkbox"/>	<input type="checkbox"/>
S. Social events incl. church, weddings, clubs, outdoor activities and family occasions	<input type="checkbox"/>	<input type="checkbox"/>
T. Other. Please specify _____	<input type="checkbox"/>	<input type="checkbox"/>

2. Who have you transferred your personal knowledge to? Or	Transfer to your	Learning from your
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whom have you learned from?	colleagues	colleagues
F. Production workers	<input type="checkbox"/>	<input type="checkbox"/>
G. Managerial staffs incl. department managers	<input type="checkbox"/>	<input type="checkbox"/>
H. Clerks	<input type="checkbox"/>	<input type="checkbox"/>
I. Engineers	<input type="checkbox"/>	<input type="checkbox"/>
J. Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>

	Yes (1)	Hours	No (0)
<b>3. Do you receive pre-employment training from your enterprise? If yes, how many hours per month on average?</b>	<input type="checkbox"/>	/month	<input type="checkbox"/>

<b>4. Do you receive on-the-job training?</b>	Yes <input type="checkbox"/>	/month	No <input type="checkbox"/>
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<b>5. Do you receive on-the-job training from other department?</b>	Yes <input type="checkbox"/>	/month	No <input type="checkbox"/>
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<b>6. During the three years 2012 to 2014, did you receive any of the following rewards and incentives?</b>	Yes (1)	No (0)
A. Reward packages (monetary) e.g. bonuses, cash award for high performing workers	<input type="checkbox"/>	<input type="checkbox"/>
B. Non-monetary rewards e.g. some of the products of the enterprise, coupons to shop, stocks of the enterprise, ticket to travel, parcels given out at the annual end of year parties.		

C. Incentives that motivate you to improve performance e.g. promotion	<input type="checkbox"/>	<input type="checkbox"/>
D. Praising and encouraging good performance (e.g. letter or certificate of appreciation, verbal praise by superiors)	<input type="checkbox"/>	<input type="checkbox"/>
E. Clear targets	<input type="checkbox"/>	<input type="checkbox"/>
F. Feedback to your performance from manager	<input type="checkbox"/>	<input type="checkbox"/>
G. Empowering to take responsibility	<input type="checkbox"/>	<input type="checkbox"/>
H. Other please specify: _____		

7. Training: Have you ever participated in the following programs?	2012		2014		Domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
A. Mentoring relationship	<input type="checkbox"/>					
C. Leadership training	<input type="checkbox"/>					
D. Training workshops (of max. one week duration)	<input type="checkbox"/>					
E. Informal social gathering in the firm	<input type="checkbox"/>					
F. Certificate courses (of couple of weeks or months in academic or professional institutions)	<input type="checkbox"/>					
G. Other, please specify _____	<input type="checkbox"/>					

8. In order to upgrade the above indicated capability: how often have you participated in these courses on mentoring, leadership, career planning, training and certificate courses in a month on average?	_____
A, less than once      B, 2-4 times      C, 5-8 times      D, more than 8 times	



D. Reduced environmental impacts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Improved working conditions on health and safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Met governmental regulatory requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. Corporate social responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## F. The Achievement of Socio-Economic Development Goals in Ghana

	Yes (1)	No (0)	Domestic enterprises?
<b>1. Does your enterprise have a career plan for you? How does this compare to the domestic firm sector?</b>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>2. What is the length of your contract? If you have sufficient knowledge on this, how does it compare to what happens in domestic enterprises?</b>	No. Years		No. Years

<b>3. After you became an employee in this MNE, do you think you and/or your families have improved your family living standard, your future perspectives, or social status? Examples?</b>	Yes (1)	No (0)
3a. Your family's living standard	<input type="checkbox"/>	<input type="checkbox"/>
3b. Your children's education	<input type="checkbox"/>	<input type="checkbox"/>
3c. Your social status	<input type="checkbox"/>	<input type="checkbox"/>
3d. Your personal career future	<input type="checkbox"/>	<input type="checkbox"/>
3e. Built or bought a house or houses	<input type="checkbox"/>	<input type="checkbox"/>

<b>4. Mobility of workforce: during the years 2012-2014, did any of the following colleagues leave your enterprise?</b>	Yes (1)	No (0)
A. Managerial workers		
B. Skilled production workers		
C. Unskilled production workers		

**5. What are the main reasons for employees leaving your enterprise? (Tick all as applicable)**

A. They leave for more competitive salaries or wages or remuneration packages generally	
B. They leave for more flexible work hours	
C. We have more stringent promotion criteria (which is a disincentive to employees)	
D. They leave to get better opportunities for career development	
E. They leave because of their poor work attitude and low output (and knowing they would be fired.)	

<b>6. Where do the employees leaving the enterprise go?</b>	Yes (1)	No (0)
A. Private sector enterprises	<input type="checkbox"/>	<input type="checkbox"/>
B. Public Sector	<input type="checkbox"/>	<input type="checkbox"/>

C. International Organisation	<input type="checkbox"/>	<input type="checkbox"/>
D. NGO	<input type="checkbox"/>	<input type="checkbox"/>
E. Self-employed	<input type="checkbox"/>	<input type="checkbox"/>

7. Does your enterprise provide any of the following support to you? And how does this compare to employees in domestic enterprises?	2012		2014		Domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)	Yes (1)	No (0)
A. Cost of Living Allowance (COLA, equivalent of Hardship fund)	<input type="checkbox"/>					
B. House allowance	<input type="checkbox"/>					
C. Transportation allowance	<input type="checkbox"/>					
D. Education allowance	<input type="checkbox"/>					
E. Medical insurance	<input type="checkbox"/>					
G. Pension scheme	<input type="checkbox"/>					
H. Maternity leave	<input type="checkbox"/>					
E. Other, please specify _____	<input type="checkbox"/>					

8. Do you think that your skills have improved during the years 2012-2014? And are these skills higher than employees of domestic enterprises?	Improved compared to three years ago, 2012		Skills are significantly higher than employees of domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)
A. Production capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

B. Leadership skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Internal communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Problem solving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E. Decision-making capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Customer relation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G. ICT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>9. Aspirations: do you think working for this company has provided you with knowledge, skills, and information that you are going to be able to use even after employment with the company terminates?</b>	Yes (1)	No (0)	Examples	If not, why?
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<b>10. when your contract for the MNE terminates, would you prefer to</b>	Yes (1)	No (0)
A. renew the contract with the current MNE	<input type="checkbox"/>	<input type="checkbox"/>
B. work for another MNE	<input type="checkbox"/>	<input type="checkbox"/>
C. work for domestic enterprises	<input type="checkbox"/>	<input type="checkbox"/>
D. start your own business	<input type="checkbox"/>	<input type="checkbox"/>

<b>11. Was there an increase in your salary during the years 2012-2014? Is your salary significantly higher than that of employees of domestic enterprises?</b>	Increased compared to three years ago, 2012		Significantly higher than employees of domestic enterprises	
	Yes (1)	No (0)	Yes (1)	No (0)
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salary range:.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>12. Did your department, during the past years 2012-2014, experience the following</b>	Never (0)	Seldom (1)	Often (2)
A. Insufficient power for production?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Insufficient water supply for production?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
C. Unstable Internet connection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>