
Chinese businesses and transnational knowledge transfer under constrained environment: results from the field in Ghana

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Abstract: China's recent economic success has deepened its engagement with Africa offering a platform for its experience of development and achievement to be transferred to or copied by Africans. What exactly are Chinese businesses teaching Ghanaian workers? What constraints impede the knowledge transfer and the learning process? This article's findings are based primarily on the results of a field study conducted in Ghana between March and July 2019 on 26 Chinese firms, involving 360 Ghanaian workers. It employed a mixed research method of questionnaires and informal interviews to collect data. Using content analysis and IBM SPSS Statistics Version 23, the study found that although grievances exist on salary, job security, safety concerns and others, Ghanaian workers generally acknowledge significant transfer and knowledge learning from Chinese firms and employers which they believe would not only enhance their personal development but a source of impetus for Ghana's development.

Keywords: Chinese businesses; Ghanaian workers; transnational knowledge transfer; work constraints; Ghana-China cooperation; foreign direct investment; Accra; Tema; Ghana; China; South-South cooperation; national development.

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1 Introduction

Foreign Direct Investment (FDI) drives the economic growth of many developing countries through the inflow of foreign capital, job creation and its associated employment of local population and income generation as well as knowledge transfer to local workers and firms (Glass and Saggi, 2002; Moran, 2006; Meyer and Sinani, 2009). The discussion on FDI as a driver of economic growth and development is mostly seen from the context of developed and developing countries where firms from developed countries establish new branches in developing countries or private businessmen from developed countries open brand new firms in developing countries (Borensztein et al., 1998; Ray, 2012). The economic growth of China in recent era has encouraged discussion of FDI from a developing country¹, to other developing countries giving an opportunity to see China's activities in other developing countries from the lenses of South-South Cooperation (SSC) (Fu and Gong, 2011). In this paper, we focus on the latter: FDI from China to Ghana – two developing countries – under the framework of Transnational Knowledge Transfer (TKT) through a field study in Ghana. The main purpose was to investigate the impact of Chinese companies in Ghana in the context of knowledge transfer under the situation of generally strained and unfavourable working relations between Chinese employers and Ghanaian workers.

As the aim of firms is to make profit, the decision by a firm to move abroad or for a private entrepreneur to establish new firm abroad could be motivated by cheaper access to raw materials, labour or capital; to be the first mover in a less competitive economy or a particular sector; or possessing a competitive advantage in an advanced technology or

improved management skills (Tang, 2018). Firm's advanced technology, marketing and improved management skills do not always remain internally as they could spill over to the local workers as well as domestic firms either in the same sector or different sectors (Crespo and Fontoura, 2007; Zhang et al., 2010).

Transnational knowledge transfer is referred to here as knowledge transfer and absorption across national boundaries where individuals or domestic firms in one country consciously or unconsciously adopt foreign practices, skills, technology and ideas as a consequence of a presence of foreign direct investment. In this way, one unit in one country is affected by the experiences of another unit from another country. In Ghana, there are records of local workers demonstrations against Chinese employers; several incidences of disrespect, insult and maltreatment of local workers in the hands of Chinese employers including employers dog attacks on workers, spitting on workers, slapping, perambulating premises with gun, etc. have been reported; salary issues relating to delayed or lower wages; etc. have all compounded a negative general perception among Ghanaians against Chinese companies (Ghana Web, 2004).

However, with the emergence of the Belt and Road Initiative, Chinese activities and companies are likely to increase in Ghana despite the general unfavourable perception. This research aimed to find out what kind of knowledge is being transferred to Ghanaian workers if any, under this situation of generally strained and unfavourable working relations between Chinese employers and Ghanaian workers. The paper breaks away from the usual hard line argument of whether or not knowledge or technology transfer exists within the China – Africa cooperation and adopts a position that TKT is at the heart of the China-Africa relationship as reflected in The Forum on China-Africa Cooperation Johannesburg Action Plan (2016–2018) that “the two sides attach importance to knowledge sharing and technology transfer, and will carry out exchanges in technological innovation policies and the building of science and technology parks and encourage research institutions and enterprises to have intensive cooperation” (MOFA PRC, 2015).

The low-level absorptive capacity of African workers and firms as a result of a relative technological backwardness makes China – another developing country – an appropriate partner for knowledge transfer due to a not-so-wide technological gap (Borensztein et al., 1998; Kokko, 1994). What exactly are Ghanaian workers learning from Chinese firms? What challenges or constraints impede the successful transfer and absorption of the knowledge? This article's findings are based primarily on the results of a field study conducted in Ghana – Accra and Tema – between March and July 2019 on 26 Chinese firms, involving 360 Ghanaian workers through questionnaires and informal interviews. Using content analysis and IBM SPSS statistics version 23, the study found that although grievances exist on salary, job security, safety concerns, inadequate local management, culture and trust issues; contrary to the popular perception, Ghanaian workers generally acknowledge significant transfer and learning of knowledge from Chinese firms and employers such as managerial skills – although in limited quantity, technology application, new methods of business practices, development of interpersonal relationship, and formation of new business ideas, which they believe would not only enhance their personal development but a source of impetus for Ghana's development.

The research findings are consistent with an earlier test that found that FDI is a vehicle for transfer of knowledge and a contributing factor for economic growth (Borensztein et al., 1998). It also supports an argument that technology transfer has existed in China-Africa cooperation since 1964, albeit needs improvement (Li, 2016). It

is also consistent with the findings of a larger research program – the DEGRP project – ‘Chinese FDI and Structural Transformation in Africa’ which investigated the potential for Chinese investment to enhance development in Africa through knowledge transfer and found evidence of knowledge transfer and spill over in countries such as Kenya, Malawi, Zambia and Madagascar (Calabrese, 2017). The main importance of this research finding is its ability to aid understanding to ease the uncertainties that an increased Chinese presence and firms as a result of the strides of Belt and Road Initiative are likely to bring in Ghana.

The next section looks at some existing literature on the Chinese FDI-Africa knowledge transfer discourse. Next, we present the methodology and a description of the study area. This is followed by an overview of China-Ghana transnational knowledge transfer from a historical perspective to present. The research findings of specific knowledge transfer and constraints are then presented and discussed. The final section presents the conclusion.

2 China-Africa transnational knowledge transfer: the discourse

Knowledge could be transferred and absorbed through a conscious direct contagion as well as unconscious indirect contagion. From the conscious direct perspective, workers and other firms would learn from and emulate new practices and techniques of the foreign firm in a form of demonstrating effect (Blomstrom and Kokko, 1998). Practices and new techniques would serve as a guide to local workers and firms to model their own practices and behaviour on such lines. Observing events and situations of successes and failures would be useful a guide to local workers and firms to achieve personal development.

From the unconscious indirect contagion of knowledge, workers trained in a firm that employed improved technology and skills could move on to other local firms or set up their own firms to implement what they learned from the previous firm (Fosfuri et al., 2001). That is “technological spillovers arise when the trained worker is hired by the local firm. Pecuniary spillovers arise when the MNE pays the worker a higher wage to prevent her from moving to the local competitor” [Fosfuri et al., 2001, p.207]. Moreover, knowledge could be transferred indirectly through word of mouth by clients or customers and suppliers as a result of their interaction with the foreign firms (Fu, 2012).

Glass and Saggi (2002) made a quantitative examination of labour mobility as a channel of technological knowledge transfer across a FDI and domestic firms and found that the choices of foreign firms clash with the interests of host governments and welfare. Fosfuri et al. (2001) also analysed the conditions under which knowledge spill over from foreign firms occur due to mobility of local workers who are trained by foreign firms and found that foreign firm might find it appropriate to export instead of investing abroad or increase wages and conditions instead of allowing trained workers to be poached by local competitors to avoid knowledge transfer.

China’s current experience of development coupled with its Global South nature puts it at both ends of the knowledge transfer spectrum. Owing the possibility that the Chinese experience of development, achievement and knowledge being transferred to or copied by Africans cannot be underestimated. Opinions differ on the discussion of China-Africa transnational knowledge transfer. One argument postulates that through various ways, Chinese companies significantly transfer knowledge to their African counterparts and

workers (Munemo, 2013; Tang, 2018). According to Zhao (2014), Chinese companies responded to the call to set up manufacturing factories in Africa in sectors such as textiles, rubber and plastics. The other argument asserts that technology transfer seldom exists between China and Africa cooperation beyond widening trade asymmetry (Elu and Price, 2010; Youngman, 2013). For example, Kaplinsky (2008, p.20) argued that “there is no evidence that Chinese firms will begin to use sub-Saharan Africa as a manufacturing base.”

One reason associated with the stance that Chinese FDI does not encourage enough transnational knowledge is the level of local content of Chinese firms in Africa. It is often argued that Chinese companies, for example in the construction and manufacturing sectors come along with their huge amount of Chinese workers whom they train to work and consequently repatriate their incomes back to China (Alden and Davies, 2006). This limited use of local labour is seen to limit transnational knowledge transfer and absorption. This argument sharply contrasts with those who assert that Chinese firms in Africa are local labour intensive, engendering significant amount of job creation as well as TKT (Auffray and Fu, 2015).

3 Methodology and study area

3.1 Research design

The main goal of the study was to find out what exactly Ghanaians are learning from Chinese firms and employers and the benefit of that to Ghana’s development under the situation of generally tense and unfavourable working relations between Chinese employers and Ghanaian workers. The finding of this paper is based primarily on a field study conducted on 26 Chinese owned companies and businesses in Accra and Tema, Ghana between March and July 2019. The study adopted a mixed research method where a limited quantitative method was combined with qualitative research method to achieve triangulation because “qualitative and quantitative methods give us different, complementary pictures of the things we observe” (Lune and Berg, 2017, p.2). The specific design took a form of a QUAL + quan design where the quantitative component had less weight and only involved analysing data with IBM SPSS Statistics version 23. The data collection process administered both questionnaire and interviews.

3.2 Data collection processes

A total data of 360 respondents – all Ghanaians workers – were collected. 340 responses were collected through questionnaires while 20 responses were collected with informal or unstructured interview. The interviews took short unstructured, open ended questions through conversations that lasted between 15 and 20 minutes each. Respondents were selected randomly from the 26 companies based on availability and willingness to participate. The study defined a Ghanaian worker as any Ghanaian who was found at the premise or a site doing something related to the company on the day of data collection. The 26 Chinese companies’ encompassed construction, restaurants, manufacturing, wholesale and retail shops and heavy-duty equipment companies. Data collection process was mostly conducted in Pidgin English which is popular among the youth for easy communication.

3.3 *Data analysis*

Data was analysed through content analysis to find patterns and themes. According to Lune and Berg (2017, p.182), content analysis is “a careful, detailed, systematic examination and interpretation of a particular body of material in an effort to identify patterns, themes, assumptions, and meanings.” Many respondents reported similar opinions in different ways. Thus, we grouped the various themes of knowledge transfer and challenges that were identified from the responses. Moreover, the various themes of knowledge transfer and working problems were ranked in accordance with the opinion of the respondents to determine their degree of importance. To avoid identification of specific firms and individuals through names, the firms were grouped and analysed in terms of their type – construction, manufacturing, etc. and people assigned codes. These data were entered and analysed with IBM SPSS Statistics version 23.

3.4 *Ethics and limitations*

To observe ethics, we briefly explained the reason for the short study to participants to obtain consent. Ten people refused to participate and the 360 workers who participated were assured of their safety, non-responsibility and anonymity. As a limitation, studying TKT under specific sectors might be effective than a wholesale lump study of different Chinese businesses and sectors. This would allow for an in-depth study of for example the specific examples and evidences of various knowledge learning and why learning takes place. Moreover, the mode of collecting the responses might also affect the study. Some responses were collected at site and some at canteen during lunch breaks. In some cases, respondents felt apathetic to write and preferred been asked. This could be due to their low level education or trying to finish and go. Despite these limitations, the study provides a path that future researches into Ghana or African-China transnational knowledge transfer could be studied.

4 **The study area**

Accra and Tema are the main cities of the Greater Accra Metropolitan Area (GAMA). The area consists of 15 connected local government districts but does not have a central administrative authority. Accra is the country’s capital and the most populous city while Tema, 20 km away is the main industrial city of the country and hosts the country’s main harbour. Together, GAMA covers an area of 3000 sq km and the most populated urban area in Ghana with a population of 4010 in 2010 (Arup, 2016, p.17]. GAMA is the economic engine of Ghana and receives about 83% of all FDI in the country and generates about 25% of the country’s GDP. Accra and Tema are interconnected and in fact both dominate Ghana economically as they host most industries including manufacturing, marketing, finance and banking, insurance, etc. They dominate in terms of urban employment in both formal and informal sectors and 70–80% of workers are employed in the informal sector (Arup, 2016, p.19). Accra and Tema are characterised by high rural to urban migration as well as internal movement of people.

5 Accessing channels of Chinese investments and knowledge transfer in Ghana

When Ghana attained a republican status, the country established good relations with China. Since then, Ghana and China have rendered enviable support to each other. For example, more recently in 2002, China agreed to write off 85% of debt owed by Ghana equivalent to US\$53.5-million and followed up in 2003 with another cancellation of US\$66-million; while in 2007, a series of agreements resulted in the cancellation of US\$126-million debt owed by Ghana (Hurley et al., 2018, pp.28–30) while Ghana's support has been more diplomatic.

The roadmap for TKT between China, Ghana and Africa as a whole was established in 1964 with the announcement of the Eight Principles for Economic Aid and Technical Assistance to Other Countries which among others included:

- (4) The purpose of aid is to help recipient countries develop independently;
- (6) China would provide the best equipment and materials for the recipient countries, and promise to change them if the quality is not good as the agreement permits;
- (7) To guarantee the recipient countries to master the relevant technology when technical assistance is provided (Li, 2016, p.187).

Although foreign aid and loans take significant parts of the Eight Principles, points six and seven are particularly striking in the realm of transnational knowledge transfer. The principles clearly set the guidelines for China's engagement with Ghana and Africa as a whole. They clearly stated the purpose of engagement and cooperation which was meant to ensure mutual development and state capacity building. The Eight Principles automatically put China forward as the leader of the developing world hoping to unite the whole of the Global South to fight against an oppressed, unequal world system.

Chinese FDI and its associated knowledge transfer into Ghana also benefited from the Chinese "go out" policy. Between 1992 and 1993, Chinese president – Jiang Zemin – mooted the idea of "go out" policy where Chinese firms were encouraged to go abroad to invest, acquire skills, technology and experience and most importantly establish international presence when he authoritatively indicated "we should grant to enterprises and to science and technology research institutes the power to engage in foreign trade, and we should encourage enterprises to expand their investments abroad and their transnational operations." In effect, the 'go out' policy was to encourage Chinese firms to take advantage of both domestic and foreign markets especially after returning from a state visit to Africa, and to "form large internationally competitive companies and enterprise groups through market forces and policy guidance" (Shambaugh, 2013, pp.138–139).

Although Jiang's objective was to help Chinese economy, these calls encouraged investment in Ghana and Africa as a whole. Figures indicate that from 2003 to 2017, Chinese FDI to Ghana has never reduced but rather seen a consistent year-by-year increment. It rose from US\$6.6million in 2003 and a little above that in the following years to US\$41.87million in 2007, hitting US\$185.04million and US\$202million in 2009 and 2010 respectively. By 2012 and 2013, the figures had risen to US\$505.27million and US\$834.84million, respectively. The figures rose from US\$1056.69million in 2014 to US\$1575.36million in 2017 (Johns Hopkins University, 2019).

President Xi Jinping announced his infrastructure financing project – the Belt and Road Initiative (BRI) – in 2013 which aims to utilise both the land (Silk Road Economic

Belt) and the sea (21st Century Maritime Silk Road) to connect China with the world to achieve closer economic connectivity (Xi, 2014, pp.315–322; 2017, pp.543–565). BRI mentions manufacturing investment in developing countries to enhance industrialisation, manufacturing, technologies, management and finances and thus embodies transfer of knowledge through FDI which would be a good source of Ghana and African's development.

In December 2015, China and Africa affirmed the need for technology cooperation and knowledge transfer. Preamble 4.5 of the Forum on China-Africa Cooperation Johannesburg Action Plan (2016–2018) was dedicated to technology cooperation and knowledge sharing where the two sides among others will “continue to promote the implementation of the ‘China-Africa Science and Technology Partnership Plan,’ build joint laboratories, implement joint research and technology demonstration projects, carry out exchanges in technological innovation policies and the building of science and technology parks” (MOFA PRC, 2015). The Forum on China-Africa Cooperation Beijing Action Plan (2019–2021) in September 2018 also affirmed knowledge sharing in Preamble 4.5 and an expanded sub-sections aimed to “help advance Africa's capacity-building in S&T and innovation, ‘encourage and support technology transfer to Africa, carry out cooperation in conducting scientific research and training professionals” (FoCAC, 2018).

6 Results from the field in Ghana

The finding of this paper is based primarily on a field study conducted on 26 Chinese owned companies and businesses in Accra and Tema, Ghana between March and July 2019. A descriptive statistics of the IBM SPSS Statistics version 23 showed that of the 340 questionnaire respondents, male and female represented 217 (63.8%) and 123 (36.2%), respectively. Respondents with ages 31+ years were the majority representing 140 (41.2%). Those with ages ranging between 26 and 30 years represented 121 (35.6%) while ages 21–25 years and 18–20 years represented 66 (19.4%) and 13 (3.8%), respectively. Moreover, workers who had attained tertiary education were the majority accounting for 128 (37.6%). Workers with vocational and technical training background accounted for 124 (36.5%). Workers with senior high and junior high educational background respectively accounted for 65 (19.1%) and 17 (5%). The least – 6 (1.8%) – were those with primary school background.

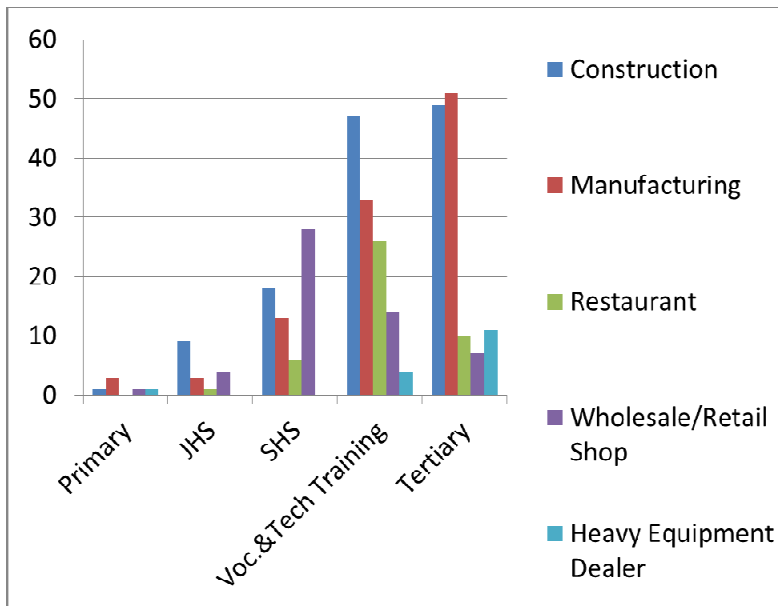
From Table 1 and Figure 1, workers with tertiary and vocational and technical educational background dominated the construction and manufacturing firms while wholesale/retail businesses were dominated by high school workers. The result is contrary to the popular notion that Chinese firms' use low-skilled labour. It could be understood that the shops preferred workers with low educational background as their roles were limited to sales, attendance, packaging, and other manual labour. Therefore, the shops benefit from cheap labour as the salaries of these workers are very low as would be explained later below. The construction and manufacturing firms used appreciable number of such workers for the same reason.

Table 1 Type of Chinese firms with educational background of participants

		Type of firm participant currently works with					Total
		Construction	Manufacturing	Restaurant	Wholesale/ retail shop	Equipment dealer	
Educational background of participants	Primary	1	3	0	1	1	6
	JHS	9	3	1	4	0	17
	SHS	18	13	6	28	0	65
	Voc. & Tech. training	47	33	26	14	4	124
	Tertiary	49	51	10	7	11	128
Total		124	103	43	54	16	340

Source: Author’s results of data analysis obtained with IBM SPSS statistics

Figure 1 Chart representing respondents’ educational background and type of firm



Source: Author’s results derived from IBM SPSS version 23.

The results also revealed large number of casual or contract workers as Table 2 shows. Labour regulations in Ghana empower casual workers to be enlisted as permanent after six months with the associated. Large number of casual workers is found but the number of years worked for 1–6 months is very low while 1–2 and 3–4 years are high across the various educational levels as Figure 2 shows. What this tells us is that workers are usually laid off when approaching six months to be reemployed to restart their contract. This frequently came up in the areas of salary concerns and job security. However, considering that a large number of respondents with tertiary, vocational and technical education background were found in the manufacturing and construction sectors gives a

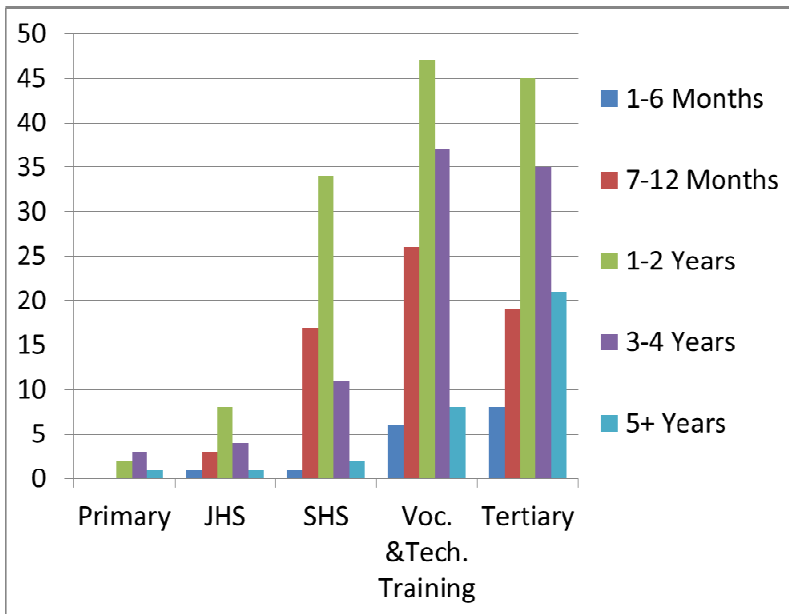
good indication of a likelihood of knowledge transfer as discussed in the next section. This also gives a contrary indication that Chinese FDI usually hires low-skilled and workers with low educational background to maximise profit.

Table 2 Respondents educational background and appointment status

		<i>Participant appointment status</i>				<i>Total</i>
		<i>Permanent</i>	<i>Contract(Casual)</i>	<i>Earnner (Part-time)</i>	<i>Internship</i>	
Educational Background of Participants	Primary	5	0	1	0	6
	JHS	5	11	1	0	17
	SHS	16	46	3	0	65
	Voc & Tech training	62	44	12	6	124
	Tertiary	77	32	11	8	128
Total		165	133	28	14	340

Source: Author’s results of data analysis obtained with IBM SPSS statistics version 23.

Figure 2 Respondents educational background and years worked



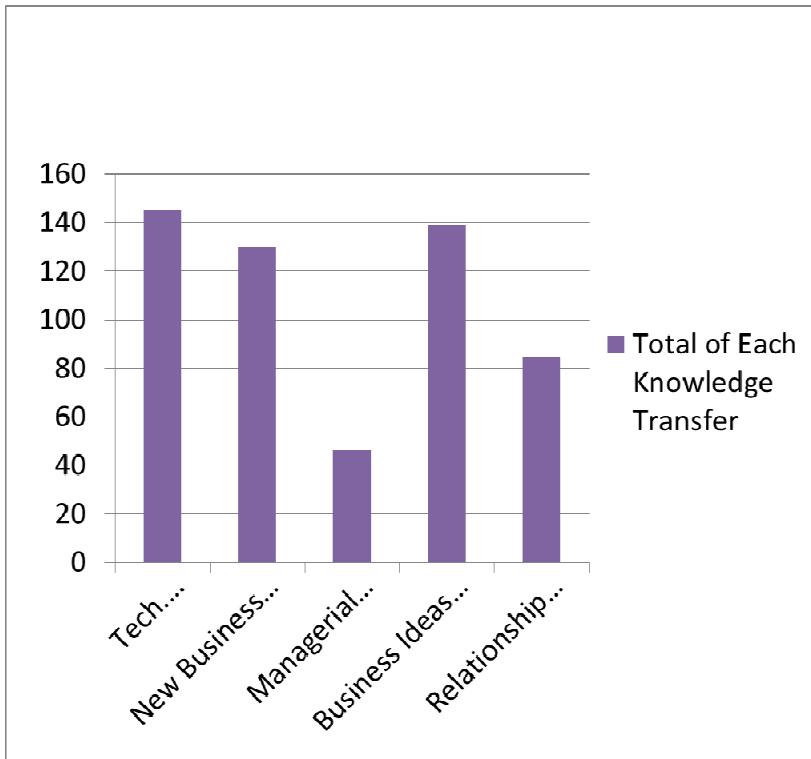
Source: Author’s calculation IBM SPSS.

7 Chinese businesses and knowledge transfer in Ghana

Through content analysis of the data, patterns or themes of knowledge transfer that frequently came out were application of technology, acquisition of new business methods, formation of new business ideas, development of interpersonal relationship, and

acquisition of managerial skills although the statistical result showed that this is in a limited quantity as shown in Figure 3. A total of 145 respondents indicated some form of learning to apply technology that they had theoretically acquired; while 130 mentioned learning new business methods. 139 respondents indicated that different business ideas are running through their heads as they work in the Chinese firms. The high scores of the business related knowledge transfer reflect the impacts Chinese attitudes towards businesses are having on Ghanaian workers. A total of 85 and 46 workers respectively mentioned acquiring the skill of social networking or interpersonal relationship development and managerial skills as presented in Figure 3. IBM SPSS Statistics version 23 revealed further characteristics on these themes.

Figure 3 Chart showing the total respondents of each knowledge transfer



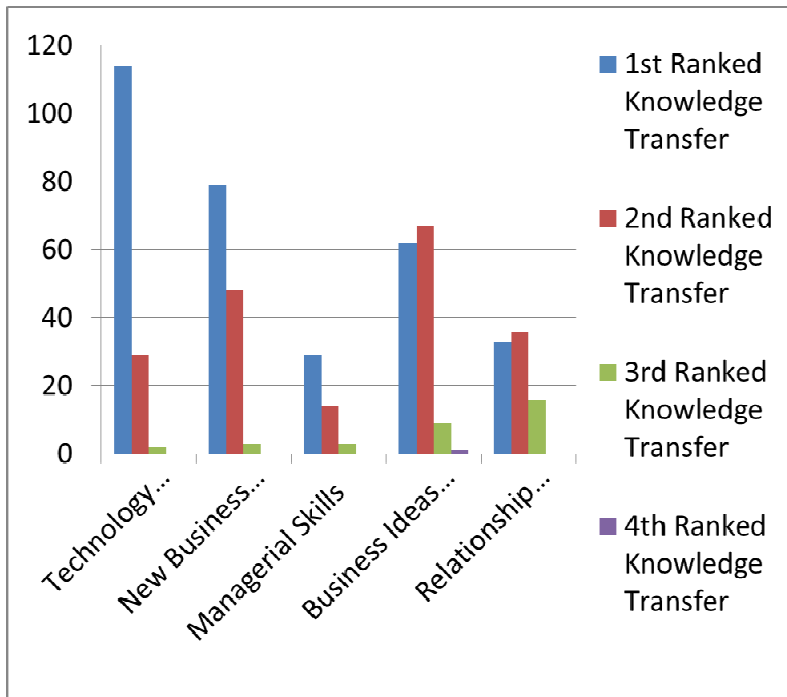
Source: Author’s calculation.

7.1 Technology application

Application of technology ranked the highest knowledge transfer. This is no surprise because as indicated above, construction and manufacturing workers accounted 124 and 103, respectively and would learn some form of technology application since these workers are most often with machines. This perhaps highlights the limitation mentioned above that the need to undertake knowledge transfer research under specific sectors rather than lumping up various sectors is imperative. As could be seen from Figure 4, technology application enjoyed the most first ranked knowledge transfer. One

interviewee corroborated “I went to Tema-Tech [Tema Technical Institute] but I learned about machines from books. We don’t use them and it is not me alone, everyone. Although the machine models are a bit old here, it will help us learn because what we have in the schools are even older” (Interview with an anonymous casual worker at a construction firm, Tema, Ghana, 16 April 2019). Transfer of technological application comes in the form of on the job training. What is important to mention is that workers with higher educational background – tertiary, vocational and technical training – especially from the construction and manufacturing firms indicated significant levels of technology application.

Figure 4 Respondents rank of knowledge transfer/acquisition

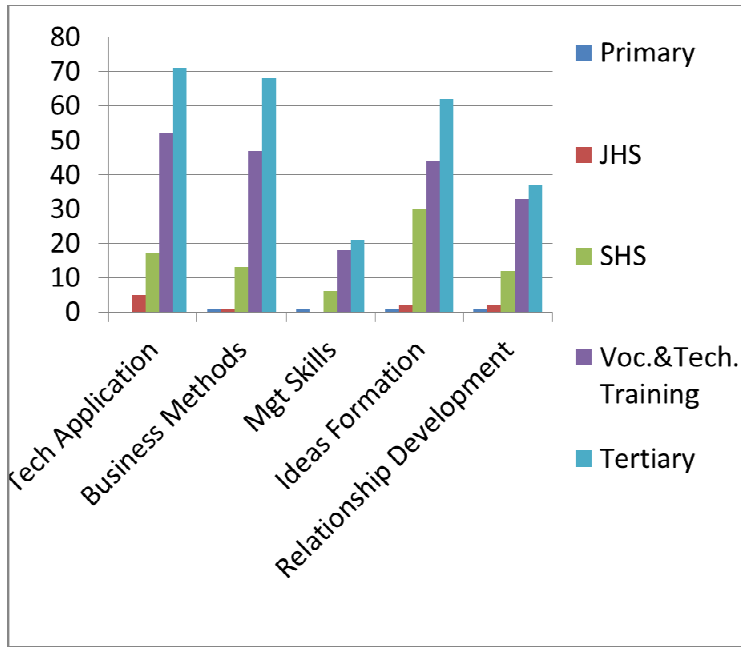


Source: Author’s calculation with IBM SPSS version 23.

Some 71 respondents with tertiary education and 52 with vocational and technical indicated acquisition of technology application with 52 and 43, respectively of these numbers ranked technology application as the first knowledge acquisition shown in Figure 5. If this is indeed the case, it is a positive development that would help in the local industrialisation especially as these categories of workers have worked between one to at least five years shown in Figure 2. One participant in the construction firm noted:

We need to be able to build our facilities.... we rely so much on the Whiteman [foreigners]. We should have local content. Students come from Tech [Kwame Nkrumah University of Science and Technology] and they only know what is in the books (Interview with Mr. Adjei, a senior construction worker, Tema, Ghana, 16 April 2019).

Figure 5 Knowledge acquisitions in relation to educational background



Source: Author’s calculation from the data.

7.2 Managerial skills

How firms and employees are managed are of importance to Chinese firms as indicated by respondents. Respondents indicated strategies and tactics their bosses undertake to get them working – some accounting for disrespect and ill-treatment. Although workers might be learning some form of human management whether good or bad, the acquisition of management skills was very limited as shown in Figure 3 and do not go beyond supervision and monitoring. This is because there are limited local employments at the managerial level. Chinese prefer to have their own Chinese at the management levels. The limited or lack of local workers at the management level is strongly linked with the difficult working environment alluded to in the next section of this paper. The lack of trust for local workers and other associated problems such as disrespect for local workers and most especially cultural differences impacts on companies’ decisions regarding using local workers at the top management level and in turn affects other sectors and knowledge learning.

7.3 New business methods

Chinese ways of business are gathering momentum among Ghanaian workers. A total of 130 respondents ranging across different educational backgrounds indicated admiring Chinese business methods as reflected on Figure 3. A total of 79 workers indicated learning new business methods as their first rank knowledge transfer. It must be noted that not only workers in the service industry especially restaurants and wholesale/retail shops are particularly gathering tips on Chinese ways of doing business but as Figure 5

shows, workers with higher educational backgrounds consciously recognise the acquisition of new business methods. One restaurant worker indicated that “how to attract customers and maintain them is important to business and these Chinese know it. My boss can make something free for someone today but we will make more money on the same thing on the same person tomorrow” (conversation with David Ofei, a restaurant worker, Tema, Ghana, 19 March 2019).

Chinese business ethics might be having influence on the business culture of local workers as Chinese hard work and seriousness attach to work came in, in most of the conversations. For example, lady mentioned that “you will be sacked for being late twice because the first one will be a warning (interview with an anonymous worker in a construction firm, Accra, Ghana, 14 June 2019). Different workers at different locations mentioned Chinese lack of giving tips. Although workers expect tips and this is not the practices of their bosses, this could over a long run change the working mentality of local workers. Another restaurant worker indicated the need to separate business from friends and relatives: “they know each other and some are related – in-laws, former bosses, former colleagues, uncles, suppliers – but anytime they come here, everybody pays the exact amount” (interview with David Ofei, a restaurant worker, Tema, Ghana, 19 March 2019).

7.4 Business ideas formation

China, in recent times has become the business destination for many Ghanaian traders and businesses. Anybody who wants to import any kind of goods looks first at China. It is no surprise that thinking of new business ideas and how to recognise a potential business was the second most mentioned knowledge transfer as Figure 3 shows. It also received a relatively equal first and second rank score from respondent, shown in Figure 4. For example, workers in the construction sector are watching the housing industry. Those in the manufacturing sector are eyeing businesses in processing. One result noticeable is that almost half of the total respondents with a senior high school education indicated forming new business ideas and had the highest first rank knowledge transfer score on business ideas formation. An attendant in China mall, Tema revealed watching what Ghanaians like to buy from the mall and why they buy them. She said “I heard all these things here are cheap there [China]. I want to do my own business, go there and bring the goods (conversation with sister Akos, a sale attendance in a wholesale/retail shop, Accra, Ghana, 14 July 2019). It is one thing saying you are gathering business ideas, tips or methods and another thing been able to put into practice what you are actually learning. What this paper did not stress on discussing, is the exact or specific evidences of the claimed learning. What specific business ideas or methods workers were acquiring and at least some evidences of some workers’ start-ups for example, if any, could have given strong indication into the idea of transnational knowledge transfer. It is a research gap that further researches into China-Ghana TKT could help fill.

7.5 Development of interpersonal relationship

Interpersonal relationship is a major aspect of Chinese social and economic system and has become a central part of China’s model of development (Wright, 1988). Chinese have adopted a practice whereby entrepreneurs, business ventures, social and political networks are intertwined whereby kin or associates are tapped for favours with an understanding of future reciprocity known as ‘guanxi’ (Crawford, 2000). An individual’s business may rests with the personal networks around him starting with the

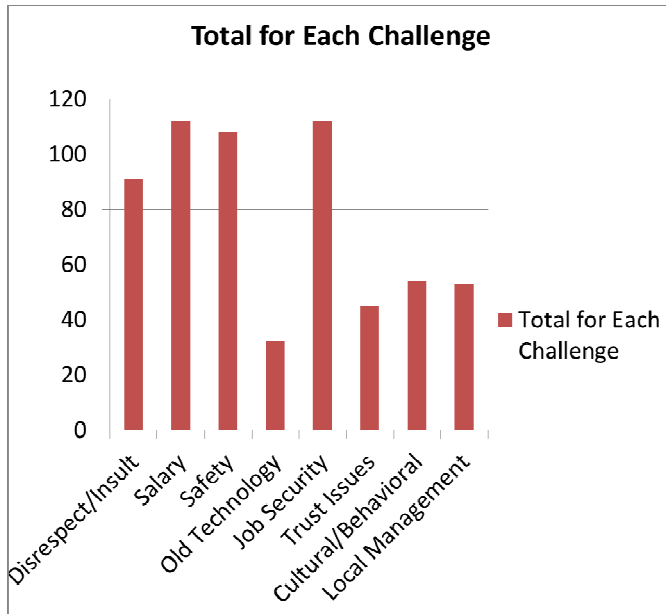
family and then clans, cliques and the most important guanxi are government officials including even the police. Although the influence of interpersonal relationship is not as high as the business related knowledge transfer or technology as the various charts reveal, Ghanaian workers showed signs of learning relationship building and network development as one indicated that “they don’t let go their customers and whom they know.” A worker in the Distribution Department of a plastic manufacturing company had notice the behaviour of his boss when they go out to deliver goods to clients.

He keeps the contact of everybody, we, for one reason or the other come into contact with. One time we had an issue with police because there was an issue with the insurance of the truck. They became friends and until today anytime we meet him [policeman], he goes to talk with him. Business moves when you know someone (interview with an anonymous distributor of a plastic manufacturing company, Tema, Ghana, 27 April 2019).

8 Acquiring knowledge under challenging environments

The field result from Ghana indicated that although there are significant amount of knowledge transfer, not all is rosy. Ghanaian workers demonstrated their dissatisfaction to the challenges they go through in assimilating the aforementioned knowledge. Through content analysis and analysis through IBM SPSS Statistics version 23, this section discussed the outcome. We found eight themes of challenges. Salary concerns and job security were most mentioned receiving 112 respondents each while old technology was least mentioned by 32 respondents. The rest are as follows: employer disrespect and insult (91); safety concerns (108); trust issues (45); cultural and behavioural constraints (54) and less local management (53). These are presented in Figure 6.

Figure 6 A chart representing the total scores of each working challenge



Source: Author’s calculation from the acquired data.

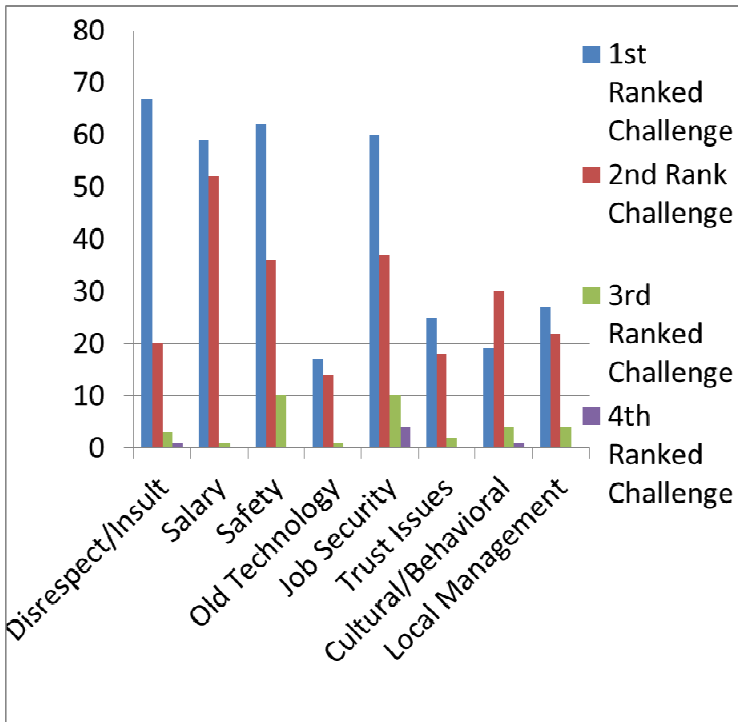
8.1 Employer disrespect and insult

Reports of Chinese firms’ ill-treatments of local workers ranging from frequent rants of insults or slaps to spitting on employees are not new in the Ghanaian society. As indicated on the above chart, employers disrespect and insult ranked high among many of the workers we conversed with. Indications were that lower qualified and contract workers are usually abused than higher educated workers. However, workers with higher educational background showed much concerned with the verbal and physical abuses of some Chinese bosses as shown in Figure 8. From Figure 7, employer disrespect/insult gained the highest first ranked score. One respondent expressed displeasure.

By virtue that you can employ me does not give you right over me. You cannot just tell someone who has his children and wife at home... head of a family that you are stupid, my dog thinks well than you (a conversation with an anonymous worker in a manufacturing firm, Tema, Ghana, 3 May 2019).

Working under an atmosphere of disrespect and abuse would undoubtedly affect output and any form of knowledge acquisition. The previous section looked at the kind of knowledge learning. It is worth mentioning that, although those knowledge were claimed to have been learned, a respectable and insult-free atmosphere could enhance the various knowledge acquired. It will not be incorrect to mention that, it was largely due to this disrespect and associated insult, and lack of trust as would be discussed below that for example, hindered local managerial skills portrayed in Figure 3.

Figure 7 Respondents rank of working challenges



Source: Author’s calculation with IBM SPSS version 23.

8.2 *Salary concerns*

This was the most expressed concern as well as the highest first ranked challenge. Both permanent as well as the huge casual workers complained about their salaries. Salary concerns included meagre amount, delayed salaries, deductions for some offences including lateness. A lady who had worked with an Indian firm but was affected by lay-off averred “they [Chinese] are stingy in terms of giving money out. They really use us but what they give us never matches the work. They never give tip unless they want something like a favour” (interview with an anonymous sale attendant at a wholesale shop, Accra, Ghana, 10 July 2019). She would prefer working with Indians than the Chinese because of their money issues. A security man expressed such concern with a comparison with a Lebanese company he once worked with.

I am here because I have not had a better option. I would like to go back to the Lebanese. I have a friend who works with a Lebanese firm and I have asked him to give me a head-up of any vacancy (conversation with an anonymous security man at a Chinese wholesale shop, Accra, Ghana 10 July 2019).

It must however be noted that salary was more of a concern to workers with lower educational background than those with tertiary education. For example, 33 respondents of the total 65 for senior high school indicated salary concerns as shown in the figure 8. It would be difficult to pinpoint whether low salary directly affected employers’ acquisition of knowledge or not as workers relatively expressed mixed feelings. While poor remuneration usually negatively influence workers’ productivity, some individual workers expressed the opinion that, working hard despite low salary to acquire the necessary machinery operational skills, personal business ideas and methods, was a necessary condition or ticket to acquire employment independence or bargaining power through personal career or professional development for either self-business or higher organisations. One respondent corroborated, “learning and experience are key for now and the money will come later either through my own firm or a higher position in a bigger firm” (Interview with Mr. Adjei, a senior construction worker, Tema, Ghana, 16 April 2019). Thus, despite salary concerns been a major challenge, it positively challenged workers to acquire valuable skills and business ideas to improve future prospects.

8.3 *Safety concerns*

This field study also confirmed a popular opinion that Chinese firms usually compromise on employees’ safety. Although the security man indicated that “the Chinese are very particular about their security and every day we receive briefings on how to handle traffic here and monitor the cameras especially when approaching festive periods,” workers in the construction and manufacturing firms where machines are handled and operated expressed that “they don’t care about what happens to us. You could be injured or killed by a machine and he would say it is because you are stupid and couldn’t handle the machine well” (conversation with an anonymous worker in a manufacturing firm, Tema, Ghana, 23 June 2019). From Figure 6, safety concerns ranked second behind the salary concerns and job security. Workers in the construction and manufacturing firms expressed utterly disgust about how most often their security is neglected. Thus since construction and manufacturing accounted for 124 and 103 respondents respectively, safety concerns recorded a high first ranked challenge behind employer disrespect as

Figure 7 suggests. It is interesting how although safety at work places were compromised but workers braved through to acquire the needed skills. This is also associated with the point made above that, workers saw learning and experience acquisition as the condition for future breakthroughs. This means that although working conditions were poor, it did not impact negatively on the learning of technology. Thus, even under conditions of death and injury, Ghanaian construction and manufacturing workers in Accra and Tema continued to acquire the necessary technological skills, while hoping for brighter days. This reflected in the number of respondents (145) who claimed learning technology application.

8.4 Old technology

Old technology did not come out often as only few senior construction or manufacturing workers hinted it. The technology is not much of an issue due to the technological backwardness of the country. Workers who hinted either had prior experience with other foreign firms or monitor global technology from the media. It is therefore no surprise that only workers with tertiary or vocational and technical education background mentioned it. It was seen as better than none and a way to slowly learn. It must be noted that the challenge of old technology did not really impact on knowledge learning. Since the local technical school system lacked the necessary machineries, Chinese companies provided the platform to fill the gap the schools had created.

8.5 Job security

Job security shared the highest number of respondents with salary concerns. This is undoubtedly a major concern since a large number of workers were casual or contract workers shown in Table 2. These workers as well as part-time workers could not guarantee their job. Some casual workers have worked in the same company for more than two years although labour regulations in Ghana instruct firms to give casual workers permanent appointments after six months. However, employers find a smart way to fraught this rule by laying them off and reemploying them to restart their contract. One part-time worker said:

My work is not assured. I can work today and not tomorrow or tomorrow next. Every morning, we come and stand behind this gate in queue and if they need an extra worker for the day, they will call one or two of us in based on the queue (interview with Kycee, a part-time worker at a Chinese construction firm, Tema, Ghana, 9 June 2019).

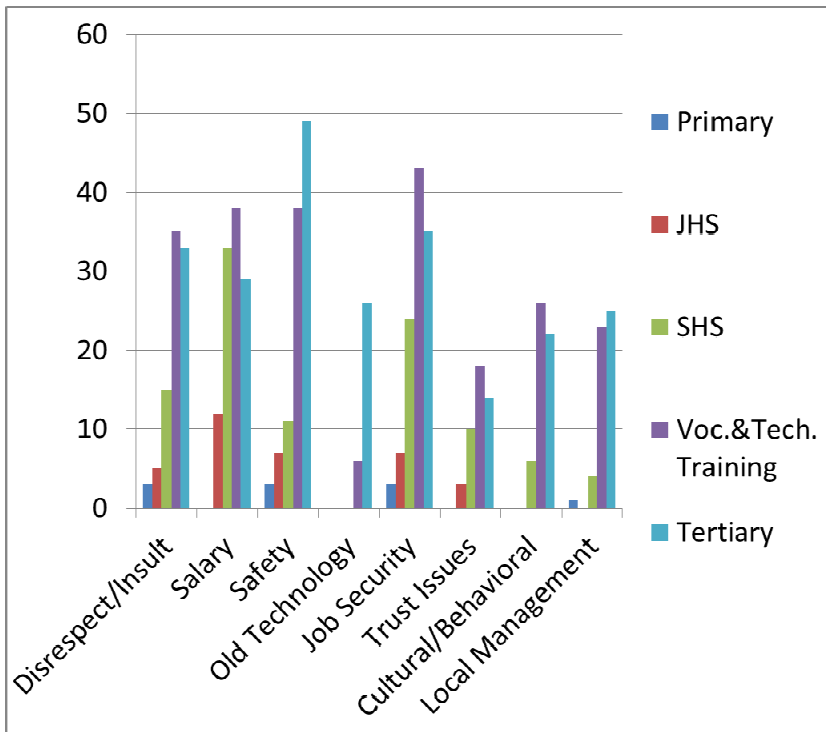
A situation where a worker did not know when he or she would be asked to go home or come to work in fact affected some aspects of the knowledge transfer process. For example, the lack of continuity meant that there was always a break in either learning the operation of a machine or putting business ideas together based on the current operations of the firm or observing some specific characteristics. In other cases, it slowed down the various learning processes. It must be noted that, employee job insecurity partly accounted for the mistrust employers had for workers because they believe that workers could steal from them to make up for the poor payment or their insecurity as one worker attested “they think we will steal from them because they know they use us but do not pay us well and can as well send us home anytime” (interview with an anonymous worker at a Chinese wholesale shop, Accra, Ghana, 10 July 2019).

8.6 Trust issues

Working under someone who might not wholeheartedly trust you could be a major challenge, as respondents indicated. The data collection process and analysis showed that Chinese employers would not always want local workers to know how they run some things. In some cases, Chinese firms do not even trust the working capabilities of local workers and wouldn't want to entrust certain activities in their hands. One major concern involving trust is that some workers believe that their employers think they would want to steal from them. A sale attendant put it this way.

They think we will steal from them because they know they use us but do not pay us well.... Sometimes they would invite one of us for dinner just to try and get some information about the other local colleagues. They would tempt you into telling stories to see whether other workers are doing some deals behind them, like stealing (interview with an anonymous worker at a Chinese wholesale shop, Accra, Ghana, 10 July 2019).

Figure 8 Working challenges in relation to educational background



Source: Author's calculation based on the acquired data.

8.7 Cultural/behavioural constraints

Ghanaian workers assimilate knowledge from Chinese firms and employers while dealing with an appreciable amount of cultural constraints. What needs to be identified here is that the various challenges enumerated are significantly rooted in the cultural

differences between Chinese employers and Ghanaian employees. From the various conversations, the issue of tip giving took a central theme. A sale attendant mentioned lamented:

These people [Chinese], you cannot be sure of what they want. He will be happy about something you did today. Do the same thing tomorrow and he would be angry. He would never give you any tip unless he needs something. If your salary is GhC250 [US\$45] per month, he gives you this and nothing else. There is no free gift unless there is something behind it (interview with an anonymous worker at a Chinese wholesale shop, Tema, Ghana, 20 March 2019).

A security man also mentioned “they are stingy. They won’t ever give you tip apart from your salary unlike the Lebanese company where a boss could just call you after parking and say take this GHC5 [US\$1] for lunch. It is just nice” (a conversation with an anonymous security man at a Chinese wholesale shop, Accra, Ghana, 10 July 2019). This is just a clash of culture and it must be noted that the many challenges discussed in this paper could be attributed to this single challenge. Giving tips is not part of the Chinese social system. Chinese believe that one must earn based on his work and not by giving him free money. There were concerns of being branded lazy and indisciplined by Chinese bosses. This might stem from the differences in working ethics. Undoubtedly, Chinese are known to have hardworking ethics who can work through any condition to produce results but local workers branded being pushed to work hard as being “use” as the sale attendant would put it. A lady could not understand why she should be sacked for lateness: “they would sack you for been late twice but the Indians were quite lenient on lateness” (interview with an anonymous worker at a wholesale shop, Accra, Ghana, 10 July 2019). Chinese concept of time is different from Ghanaian public. While Chinese might express strict commitment to time, Ghanaians don’t. Ironically, GMT (Greenwich Mean Time) is popularly joked to refer to as Ghana Man Time where if you want an event to start at a certain period, you must call a time 30 minutes or an hour before the exact commencement of the event.

A Ghanaian worker will not want to work on Saturday because he would like to go for a family or friend’s wedding or funeral. He will also not like to work on Sunday because he would like to go to Church because these are important ceremonies in the Ghanaian cultural system and every Saturday has its event as a respondent in a manufacturing firm insisted: “how can I not attend an uncle’s funeral and call the family in the village on the phone that I have to go to work? They even want us to leave Church and come and work on Sunday” (interview with Charles Ankrah, a manufacturing worker, Accra, Ghana, 11 April 2019). These however run contrary to Chinese cultural system.

8.8 *Less local management*

Underneath knowledge transfer is the challenge of less local workers in the management level of Chinese firms. The findings in this research show that Chinese FDIs, contrary to argument that they are characterised by low local content and labour, provide significant opportunities to local labour. However, what needs to be established is that there is limited local content at the management level resulting in lower acquisition of managerial skills. An attendant in a wholesale shop in Accra noted “it is all about them. They [Chinese] do not listen to us [workers]. Sometimes they would blame you for

something you know that you are innocent.” What might be the problem? “It is because we don’t have anybody [Ghanaian] in the office [management position] to speak to in our own language for him to defend us when there is a problem,” she said (interview with a sales attendant in a Chinese wholesale shop, Tema, Ghana, 20 March 2019). It can be noted that a direct connection between the difficulties encountered such as job insecurity, safety and salary concerns and trust issues, etc. on one hand while acquiring various knowledge such as technology application, management skills, interpersonal development, business ideas and method formation on the other hand is less local management (“because we don’t have anybody in the office to speak to in our own language”). If this gap is bridged, TKT between China and Ghana would be greatly enhanced.

9 Conclusions

The general perceptions nurtured by Ghanaian public on Chinese firms are on the various challenges Ghanaian workers go through at work in Chinese firms. However, this field study in Accra and Tema demonstrates that although these challenges exist, knowledge transfers to local workers are at a very important level. Knowledge transfer has existed in the relationship between China and Ghana since 1964 and current interstate and regional policies have further strengthened it. Undoubtedly, such knowledge transfers are what developing countries need to enhance development towards the realisation of the Agenda 2030 and its associated SDG. Although much is contributed in other areas of knowledge transfer, this research recommends that local content and labour at the management level be increased to strengthen local managerial skills.

The study provides a platform for future studies on Chinese engagement in Africa, FDI and TKT from a two-way perspective rather than a one-way approach as well as sector specific approach rather than studying different sectors at the same time as we adopted in this study. Further questions need to be asked and to a more extent, further researches need to be conducted to ascertain or examine the specific knowledge that workers claimed to have acquired or acquiring and evidences of such learning. If it is technological application, what is the evidence of learning? If new business methods or ideas, what specifically or any evidence of start-ups? And similarly for other learning including management skills and interpersonal development. This research has been limited to whether Chinese companies impact knowledge or not from workers perspective, what type of knowledge the workers learn and to an extent, how the conditions under which they learn affect their learning. Moreover, limiting the research to specific sectors or companies would help to better understand which companies provide effective knowledge transfer platforms and why. This could overcome the limitations pointed out in this research. This work contributes to the broader quest of finding a better understanding of Chinese engagement in Africa and highlights the trouble areas of this engagement to enhance future cooperation. This would go a long way to foster effective cooperation between the two countries.

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Note

- 1 Although China is fast developing or developed and even rivalling the USA on many indicators, it still considers itself as a developing country. See for example, Xi (2014) or Xi (2017).