

Working Paper

Ghana's construction sector and youth employment

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About Youth Forward

The Youth Forward initiative is a partnership led by The MasterCard Foundation, Overseas Development Institute, Global Communities, Solidaridad, NCBA-CLUSA and GOAL. Its focus is to link young people to quality employment or to start their own businesses in the agriculture and construction sectors in Ghana and Uganda. The Youth Forward Learning Partnership works across the initiative to develop an evidence-informed understanding of the needs of young people in Ghana and Uganda and how the programme can best meet those needs. The Learning Partnership is led by the Overseas Development Institute in the UK, in partnership with Development Research and Training in Uganda and Participatory Development Associates in Ghana.

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Contents

About the authors	5
Acknowledgements	5
Abbreviations	6
Executive summary	7
1 Introduction	9
2 Construction in Ghana	11
2.1 Ghana's economy	11
2.2 Importance of the construction sector	11
2.3 Policy context	13
3 Sector trends and potential for youth employment	15
3.1 Housing and urban development	15
3.2 Infrastructure	16
3.3 Transport infrastructure	17
3.4 Recent discovery of oil	17
3.5 Sustainable materials and construction	17
3.6 Trainee and apprentice-level employment in construction	18
4 Entry points into construction for youth	20
4.1 Informal apprenticeships	20
4.2 Vocational training institutions	22
4.3 Migration	22
5 Barriers to young people's participation	23
5.1 Access to finance	23
5.2 Policy environment	26
5.3 Perceptions of the construction sector	29
6 Implications for Youth Forward	28

List of tables and figures

Tables

Table 1. Electricity supply in Ghana	16
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Figures

Figure 1. Trends in cement production (metric tonnes)	12
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Abbreviations

AAG	Artisans Association of Ghana
AfDB	African Development Bank
BRRl	Building and Road Research Institute
CBMWU	Construction and Building Materials Workers' Union
CEPA	Cambridge Economic Policy Associates
COTVET	Council for Technical and Vocational Education and Training
DTU	Danish Trade Union Council for International Development
EIU	Economist Intelligence Unit
FDI	foreign direct investment
GDP	gross domestic product
GIPC	Ghana Investment Promotion Centre
GLSS	Ghana Living Standards Survey
GREDA	Ghana Real Estate Development Association
GSS	Ghana Statistical Service
GYEEDA	Ghana Youth Employment and Entrepreneurial Development Agency
HFC	Home Finance Company
ILO	International Labour Organization
IMF	International Monetary Fund
MIC	middle-income country
MWRWH	Ministry of Water Resources, Housing and Public Works
NAO	National Audit Office
NVTI	National Vocational Training Institute
NYEP	National Youth Employment Programme
PPP	public–private partnership
SSNIT	Social Security and National Insurance Trust
UN	United Nations
UN-Habitat	UN Human Settlements Programme
TVET	Technical and Vocational Education and Training
USAID	United States Agency for International Development
YIEDIE	Youth-Inclusive Entrepreneurial Development Initiative for Employment

Executive summary

Ghana's economy has grown rapidly in the past 20 years, and the construction sector has both contributed to and benefited from this. The sector itself has registered impressive growth, increasing its contribution to gross domestic product (GDP) and employing 320,000 people. It employs 2% of young people in Ghana and provides more training and apprenticeship opportunities to young people than any other sector (Owusu, 2012; GSS, 2013).¹

Despite this, the construction sector has a large skills gap, due in part to training quality, and there is significant unmet demand for skilled artisans. The number of skilled artisans in Ghana almost halved between 1960 and 1984, from 70,571 to 37,258 (Offei-Nyako et al., 2014). More recently, the World Bank estimated there was a shortfall of 60,000 artisans and tradespeople in construction, and that a further 250,000 skilled artisans would be required by 2020 (Darvas and Palmer, 2014). These characteristics make construction an ideal sector through which to address Ghana's youth development and unemployment challenges.

This paper provides an overview of the sector, with a focus on identifying its opportunities and challenges, and their implications for young people – specifically those without access to tertiary education. In doing so, it aims to inform Youth Forward, an initiative of four consortia working in the construction and agriculture sectors in Ghana and Uganda, in partnership with The MasterCard Foundation. In particular, it provides the background information for the Youth-Inclusive Entrepreneurial Development Initiative for Employment consortium (YIEDIE), which works in youth development in Ghana's construction sector. Beyond this, it provides an overview of Ghana's construction sector from a youth development perspective, making it relevant to a wider range of actors.

This paper identifies a number of trends in the construction sector that will affect young people's ability to participate in the sector. As a demographic, young people are better placed to access certain opportunities than others. Their age means they have less experience, but they are able to compensate for this through their additional mobility. They also own, or have access to, less capital – financial, physical and social – which means that opportunities requiring any or all of these are beyond their reach. In Ghana's construction sector, young people's opportunities are particularly constrained by their ability

to afford and access high-quality training and the tools necessary for their chosen trade (GSS, 2013).

Demand for low-cost housing as an entry point for young people

This paper finds that the most important sub-sector in construction for young people is low-cost housing. Urban Ghanaians live in housing that is of poor quality and frequently overcrowded and, while the majority aspire to own their own homes, only 8% of Ghanaians are able to afford to do so (Awuvafoge, 2013). According to UN estimates, four new dwellings would need to be built every minute of the working day over the next decade in order for this situation to be rectified (UN-Habitat, 2011). If the need for improved housing could be translated into effective demand, this sector could employ a large number of skilled and semi-skilled young people.

The construction of low-cost housing represents an ideal entry point for young people as these dwellings tend to be built by artisans. Artisans also provide the majority of apprenticeships in the sector. Entry is also comparably easy as the sub-sector does not require large quantities of financial capital, while the necessary social capital can be acquired through collaboration with a master craftsman (according to a senior artisan). The provision of sustainable, locally sourced and low-cost building materials could also provide an opportunity for young people, provided that reliable quality certification processes are in place. This would allow for a shift away from imported materials.

Municipal building construction also forms an important source of business for small and medium-sized construction firms in Ghana. Funding for schools, hospitals and religious institutions comes from a range of public, non-profit and private (including private individuals) sources and generates a significant amount of work in the sector. In rural areas in particular, there is often explicit focus on using local labour, so municipal buildings can offer an important area of employment generation for young artisans.

Supporting policies to encourage youth participation in the sector

Construction of housing for wealthier middle-class Ghanaians is also likely to increase in the coming years, provided economic growth and political stability are maintained. However, the construction of these homes is

¹ Of young people working in construction in Ghana, less than 3% are women. Nevertheless, this report refers to young people of both genders when discussing young people or youth, even though the majority may be male. Difficulties faced by female youth are discussed in a separate section.

more frequently conducted by enterprises large enough to have access to considerable capital and financing opportunities, which train far fewer artisans. Similarly, as Ghana's economy continues to expand into the middle-income bracket, there is increasing demand for improved transport infrastructure. But, again, most contracts for these types of projects go to larger, often international, firms with limited or no explicit requirements in terms of local job creation and are particularly unlikely to hire young people who lack social capital to access any jobs.

There is therefore room for Youth Forward to work with government to improve how it engages contractors and artisans for publicly funded construction projects. This is particularly important as competition is expected to intensify for specialist construction services as the economy continues to expand. The discovery of commercial quantities of oil in 2007 will continue to have significant consequences for the construction sector in south-western Ghana. Of particular importance here are the secondary construction projects stimulated by the oil industry, such as accommodation for labour.

The regulatory environment of the sector also affects young people. There is no single government agency in Ghana that oversees construction. Instead, responsibility

for the built environment is shared between three ministries: the Ministry of Water Resources, Housing and Public Works, the Ministry of Transport and the Ministry of Road and Highways. The Ministry of Employment and Labour Relations covers labour and employment aspects of the sector, while the Ministry of Education covers research and development and vocational training.

Thus, to maximise the impact of YIEDIE's work, the consortium will need to focus on building good relationships with government in order to have an impact on the policy-making process. With regard to the regulatory environment, questions of land ownership, access and security of tenure on the one hand and the standard of young people's skills on the other, are of utmost importance, as these will all, directly and indirectly, affect demand for their services.

Finally, the review finds that the sector does not enjoy a positive image. This deters young people from pursuing careers in construction. This negative image results from the construction sector's poor health and safety record, which requires both health and safety regulation as well as training for artisans. The sector's image acts as an even stronger deterrent to women, who make up less than 3% of employees in the sector, as construction is considered 'men's work'.

1 Introduction

Ghana's construction sector has registered impressive growth in the past two decades and been a significant contributor to the economic transformation that has seen Ghana become a middle-income country (MIC). In addition, it employs 320,000 people and approximately 2% of young people, as well as providing more training and apprenticeship opportunities to young people than any other sector (Owusu, 2012; GSS, 2014). According to the World Bank, there is likely to be a skills gap of 250,000 artisans and tradesmen by 2020 (Darvas and Palmer, 2014). Simultaneously, Ghana's infrastructure and housing stock is in relatively poor condition for a country of its level of development. The sector is therefore expected to register further growth as the housing stock and national infrastructure is upgraded.

This paper provides an overview of the construction sector, with particular focus on identifying the economic and employment opportunities and challenges, and their implications specifically for young people. The paper was written with the dual purpose of informing the Youth Forward initiative – particularly the work of YIEDIE – and providing a youth-focused overview of the sector. This latter will be of relevance to youth development initiatives in the construction sector, both in Ghana and in other countries.

Much of Youth Forward's operational context is beyond the control of the initiative but we nevertheless discuss it in detail as it has the potential to affect the success of the programme. It also serves to highlight where lobbying and advocacy energies might yield the most results – not just for beneficiaries of the initiative but for all young Ghanaians in the sector. We provide a general overview of the sector and its relevance to young people, and an analysis of implications for Youth Forward in the final section (see Box 1 for a brief description of YIEDIE's work).²

The review begins in Section 2 by introducing Ghana's economy and the role of the construction sector within it, before outlining the policy context and anticipated trends. Section 3 turns its attention to the opportunities available to young people, with a focus on those aspects of the sector that are both growth areas and accessible to young people who are looking for training and have limited financial capital. Section 4 describes the entry points through which the majority of youth enter the construction sector – namely, informal apprenticeships or vocational schooling. Section 5 considers obstacles to youth participation, their implications for the Youth Forward initiative and what might be done to facilitate young people's access to construction sector opportunities.

This report is based on fieldwork conducted in Ghana with construction sector stakeholders in October and November 2015. A total of 26 interviews were conducted with representatives from construction companies, training providers and academic institutions. A focus group discussion was also conducted with artisans. Each interview lasted approximately one hour and was conducted in person, in the interviewees' offices, by two interviewers, from Ghana and the UK, following a standardised interview guide (adapted as necessary). This was complemented by a desk review of industry, academic and media publications on the construction sector in Ghana. Publications on Ghana's construction sector are, however, very limited and usually cover only very specific aspects; there is a real shortage of data on the sector. And much of the data that do exist have been collected by private sector companies and are therefore not publicly available. Where data are available, they are often inconsistent and frequently contradictory.

² The political context within which the initiative operates in Ghana is described in further detail in Agbe et al. (forthcoming 2016) *Understanding the context of the Youth Forward initiative in Ghana: A political economy analysis*. London: Overseas Development Institute.

Box 1. Youth Forward and Youth-Inclusive Entrepreneurial Development Initiative for Employment

Youth Forward

The Youth Forward initiative is a partnership led by The MasterCard Foundation, Overseas Development Institute, Global Communities, Solidaridad, NCBA-CLUSA and GOAL. Its focus is to link young people to quality employment or to start their own businesses in the agriculture and construction sectors in Ghana and Uganda. This five-year, US\$74 million initiative will reach more than 200,000 economically disadvantaged youth aged 15-24. The Youth Forward Initiative uses a holistic approach that combines market-relevant skills training, mentorship, internships and access to financial services to help young people transition out of poverty and into sustainable livelihoods.

YIEDIE

YIEDIE is a five-year project, in partnership with The MasterCard Foundation and under the Youth Forward initiative that aims to create employment and entrepreneurship opportunities in the construction sector for disadvantaged young people. In the local Twi language, *yiedie* means progress. The consortium aims to provide technical construction-relevant training or entrepreneurship training to 23,700 young people, as well as life skills. The programme will consider the entirety of the construction value chain, so young people are qualified to participate in all its aspects.

The project has two primary aims: the first is to increase the employment of economically disadvantaged youth in the construction sector, with an increased income, new or better employment and increased savings for 90% of these young people. The second is to create an improved enabling environment for all construction sector stakeholders.

YIEDIE's core activities

Prepare young people for employment and entrepreneurship opportunities through training in business and life skills, facilitating apprenticeships and offering mentorship and networking opportunities. Beneficiaries can choose from one of two pathways. The first is for those who would like to acquire technical skills, who will receive six months of training through vocational training centres. The second is for those who already have technical skills and wish to complement these with three months of entrepreneurship training at YES-Ghana. High-performing trainees will be referred for business development services, but all participants will have the opportunity to take a technical certification exam. This training will include financial literacy and young people will have the option of signing up for savings services. Alumni will be encouraged to join the Artisans Association of Ghana (AAG) to take advantage of the innovative job matching system for the construction workforce.

Improve the capacity of vocational training centres. The consortium will support the development of the Improved Apprenticeship model, which is the apprenticeship curriculum approved by the National Vocational Training Institute (NVTI) for its proficiency Level 1 certification. Master craftspeople will be trained to use the Improved Apprenticeship model in their training delivery.

Increase access to financial service providers. The consortium will work with financial institutions to provide financial education and refine a range of financial services and products for youth.

2 Construction in Ghana

2.1 Ghana's economy

Ghana has benefited from a stable and democratic political system and high economic growth rates over the last 20 years. The discovery of oil in commercial quantities in 2007 helped fuel this growth. Ghana became an MIC in 2010, ahead of schedule, due to a technical statistical adjustment (Moss and Majerowicz, 2012).³ The structure of Ghana's economy is that of a country in transition: the drivers of economic growth continue to be the services sector, which constitutes 51.1% of the economy, followed by agriculture and industry, which make up 30% and 19%, respectively (Jerven and Duncan, 2012).

Economic growth has slowed in the past few years; *The Economist* wrote of Ghana in 2015, 'How do you spot an economic crisis from afar? Abandoned building projects are one red flag. So are relentless power cuts. Ghana has plenty of both' (2015). While this assessment may be pessimistic, Ghana has experienced a sharp reduction in growth rates from 2009 onwards, when growth dipped below 4% for the first time since the turn of the millennium. Growth rates recovered to 14% in 2011, but this proved short lived: they again slowed to 4% in 2014 and 2015 (World Bank, 2015). Analysts have put this down to a severe energy crisis as well as unsustainable domestic and external debt burdens, meaning Ghana required assistance from the International Monetary Fund (IMF) in February 2015 (African Economic Outlook, 2015). Equally, inflation has been creeping up since 2012, reaching levels of almost 17% in 2015 and rising further in 2016 (World Bank, 2016). This has led to interest rates of as high as 26% in 2016 and a depreciation of the currency, which has increased the price of borrowing for housing as well as the cost of imports (Bank of Ghana, 2016).

The economy is expected to recover in 2016, with a return to 6% growth. This assumes an increase in oil and gas production, further private sector and infrastructure investments and, all importantly, on-going political stability in the run-up to the elections of November 2016 (African Economic Outlook, 2015).

2.2 Importance of the construction sector

The construction sector is critical to Ghana's economic health, both by virtue of its size and as a driver of growth. The share of GDP associated with construction increased from 5% in 1975 to 9% in 2000 and then to 15% by 2007 (Sutton and Kpentey, 2012). In 2006, construction was the fastest-growing sector in the economy, with a growth rate of 8% against the national average of 6% (Ministry of Education, 2010). Even when Ghana's economy registered its lowest growth rates in 2013, the construction sector still experienced growth higher than the national average. The sector's growth rate was 8.4% while the national economy grew only at 5.4% in 2013 (Institute of Statistical, Social and Economic Research, 2015). Demand for cement in Ghana has been growing, further demonstrating the health of the sector: 4.8 million metric tonnes of cement were used in 2010 and this rose to 5.5 million by 2012 (Sutton and Kpentey, 2012). More and more of this cement is also being produced domestically (Figure 1).

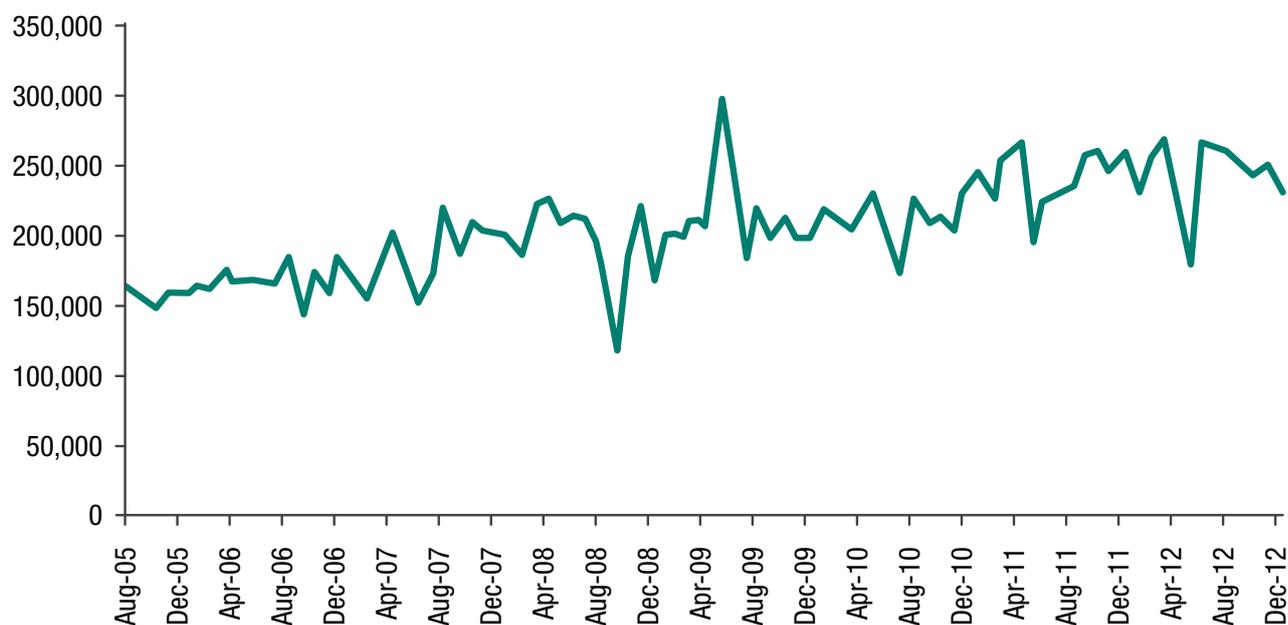
Construction is labour-intensive, and the sector is an important employer of Ghana's workforce, with around 23,000 registered contractors (Ministry of Education, 2010). According to the Ghana Living Standards Survey (GLSS), 2% of young people who had worked in the previous week had worked in construction. For out-of-school youth this was higher, at 2.5% (GSS, 2013). Construction also has a catalytic effect on economic development: good infrastructure and housing is one of the foundations of higher growth rates. Given its strong backward and forward linkages,⁴ construction also has one of the highest multiplier effects (Osei, 2013).

The most recent estimates of growth rates in construction are 14% for 2014, and projections suggest these high growth rates will continue over the medium term to 2017. These growth rates have been the result of investments in real estate, improved public infrastructure and an expansion of the mining sector. Real estate investments have, in large part, served Ghana's growing middle class, its diaspora and expatriates and speculators, but there are also significant opportunities in the low-cost housing sector if the growing urban population is to be accommodated (Ministry of Education, 2010; UN-Habitat, 2011). Infrastructure developments contributed just over

3 For an analysis of this process and its implications see also Jerven and Duncan (2012).

4 Backward linkages are a firm's connections with its input suppliers and forward linkages are those between a firm and its customers.

Figure 1. Trends in cement production (metric tonnes)



Source: Osei (2013).

one percentage point to Ghana's annual per capita GDP growth during the 2000s. However, raising the national infrastructure endowment to that enjoyed by the region's MICs could boost annual growth rates by three percentage points (Foster and Pushak, 2011).

Stakeholders interviewed for this paper agreed that construction had slowed in response to the weakened economy and that some actors may have gone out of business as a result. Nevertheless, they felt it remained a strong growth sector overall, particularly the informal part. The formal sector, meanwhile, is expected to benefit from additional short-term spending in 2016 in the run-up to the elections. Strong foreign direct investment (FDI) in the sector has also helped insulate it from the slowdown in economic growth: for the period from January 2008 to December 2010, 34% of Ghana's FDI went to the construction sector. This took the form of 75 projects with a total value of \$2.3 billion (Boakye-Gyasi and Li, 2015).

The government of Ghana and a number of state-owned enterprises (with loans from development partners) are the largest investors in the built environment (Osei, 2013). This is not surprising for a country at Ghana's level of socioeconomic development, and is likely to change

only gradually as the country becomes wealthier, despite privatisation efforts. However, this also means Ghana's recent negotiations with the IMF may have a negative impact on the large-scale infrastructure construction sector, as IMF assistance came with a number of conditionalities, including a budget ceiling for infrastructure projects (African Economic Outlook, 2015).

Yet the informal sector appears to be of most relevance to young people: the vast majority of youth in the construction sector are employed informally. According to the GLSS 6, 91% of young people working in construction work in the informal sector.⁵ Of those working in the sector, just under 29% are employees; 27% are apprentices and another 21% are casual workers. This is reflected in the wage level reported by young people in the sector, which in 2013 was approximately \$100 per month (GSS, 2014). This is somewhat below monthly earnings in mining (\$210), health and social work (\$152), transport and storage (\$110) and agriculture (\$144). Given the nature of apprenticeship structures, this is not surprising, and may simply reflect that young people in construction are still in training rather than having reached their full earning potential (Section 4 discusses apprenticeships in detail).

⁵ According to World Bank research from 2010, the overall number of people, of all ages, working in the informal construction sector is 70-80% (World Bank, 2010). It is unclear whether this means that young people are over-represented in the informal sector or whether the proportion of employees in the informal sector has increased since 2010.

2.3 Policy context

There is no single government agency in Ghana that oversees the construction sector. Responsibility for and jurisdiction over the built environment is shared mainly between three government ministries: the Ministry of Water Resources, Works and Housing (MWRWH), the Ministry of Transport and the Ministry of Roads and Highways. In addition, the Ministry of Employment and Labour Relations covers labour and employment aspects of the sector, while the Ministry of Education partially covers research and development and vocational training. The somewhat inconsistent and *ad hoc* nature of construction policies reflects the manner in which responsibility for the sector is divided across these ministries.

Housing and planning policy

In 1986 the then Ministry of Works and Housing formed a national Housing Policy Committee. The Committee's report culminated in a National Housing Policy and Action Plan for 1987-1990, which sought to improve strategies for rural and urban shelter. The Action Plan covered rationalising land tenure and title regulations, improving the delivery of finance to promote a cost-effective construction industry and increasing the use of local building materials, as well as the involvement of women in the sector (Bank of Ghana, 2007). The policy represented a move away from state-led construction towards greater private sector involvement (Arku, 2009).

Ghana's Vision 2020 document targeted the provision of low cost-housing units between 1997 and 2000, but lack of funds and political will meant the strategy was not implemented (Bank of Ghana, 2007). Ghana's first Poverty Reduction Strategy subsequently focused on attracting foreign capital to fund housing development and benefited under Ghana's debt relief programme (Bank of Ghana, 2007).

A revised Housing Policy was published in 2015. This focuses on increasing private sector participation in housing construction, maximising land use and housing for rental purposes, promoting social housing and slum upgrading and involving communities to ensure improved design and orderly human settlement growth with appropriate infrastructure. The policy aims to support the informal private sector to access land through land banks and ownership confirmation and guarantees provided by municipal authorities (MWRWH, 2015). MWRWH is also working with the World Bank to improve urban infrastructure, in order to reduce the cost of housing construction for individuals, as the lack of municipal planning remains a major problem for developers. The policy makes provision for a National Housing Fund, which will finance low-income housing and infrastructure development (MWRWH, 2015). However, interviewees still expressed scepticism about the ability of the policy to deliver the required housing and to generate greater employment in the construction sector.

Past legislation on state provision of low-cost housing has under-performed. This may be because the low-cost housing sector is both over- and under-regulated, which significantly increases the cost of dwellings. Regulations that reduce incentives for investments in rental property include rent controls, stipulations for minimum plot sizes and the requirement that all dwellings must be self-contained (UN-Habitat, 2011). Cumbersome permit processes in housing construction also slow down the rate at which dwellings are built (UN-Habitat, 2011). On the other hand, there is also a lack of quality control of construction inputs and artisans qualifications, which can considerably increase costs for those attempting to build their own houses (UN-Habitat, 2011).

Youth policy

Government has a number of youth programmes that focus on skills creation and employment, including several aimed at the construction sector, which come under the Ministry of Employment and Labour Relations. The Youth Employment Agency coordinates and facilitates youth development activities in the country and oversees the National Youth Employment Programme (NYEP), which sits in this ministry (Ministry of Youth and Sports, 2013). NYEP was established in 2006 under the Kufuor administration with the aim of creating employment, work experience opportunities and skills training. It came about as the result of a recommendation from the National Security Council to reduce youth un- and under-employment (Ministry of Youth and Sports, 2013). NYEP became the Ghana Youth Employment and Entrepreneurial Development Agency (GYEEDA) in 2012 and was intended to coordinate all youth employment and entrepreneurial programmes. It has been plagued with governance issues and by allegations of corruption, so interviewees did not consider it particularly effective.

Parliament has promulgated a Youth Employment Act, which aims to restructure and address problems associated with GYEEDA and improve policy-making in the youth sector. The Council for Technical and Vocational Education and Training (COTVET) is also involved in an Industrial Attachment Policy and a national Technical and Vocational Education Training Strategic Plan, which is designed to encourage skills development and on-the-job learning.

Construction and safety

Construction is one of Ghana's most hazardous industries, measured by the number of fatalities, and the number of accidents continues to increase (Akomah et al., 2010). While a number of Acts of Parliament seek to improve the sector's health and safety record, this has not been translated into a coherent health and safety policy. The lack of training of artisans in occupational health and safety has aggravated the situation further (Fugar et al., 2013).

Evidence from other countries suggests regulation alone is insufficient. In the UK, for example, the National Audit

Office (NAO) attributes the reduction in construction accidents to an increase in unannounced site inspections (NAO, 2004). As this is a relatively resource-intensive approach to health and safety, persuading construction trainees of the importance of safety in the workplace and providing them with the training necessary to make changes is perhaps the more fruitful approach for Ghana.

Political risk in the construction sector

There is a small risk that the elections in November 2016 will cause disruptions to the economy, particularly considering current concerns about the credibility of the electoral register. Most recently, the Supreme Court

ordered the Electoral Commission to clean the electoral register, after two plaintiffs convincingly argued that it included the names of people ineligible to vote (minors, deceased individuals and people who had registered without the correct paperwork) (The Africa Report, 2016). However, the risk of instability is minimal, and so the impact of elections is likely to be limited to an increase in government expenditure on the construction of schools and other public buildings. Ghana's economic and political stability is also at risk from neighbouring countries, which have experienced conflict in recent years and are a source of large numbers of immigrants (Adepoju, 2005).⁶

⁶ For further analysis of political context and risk see Agbe et al. (forthcoming 2016).

3 Sector trends and potential for youth employment

The construction sector, like any other, is subject to domestic and internal pressures and trends. This section considers the important construction sub-sectors, identifying growth areas as well as those coming under pressure from international competition. Based on this analysis, we then consider where there are opportunities for young people.

3.1 Housing and urban development

Residential buildings

Urban Ghana is experiencing a housing crisis, with extreme overcrowding and poor-quality housing that falls short of minimum standards as defined by the UN. Housing quality is poor by comparison with other African countries of similar, or even lower, levels of development (UN-Habitat, 2011). For example, only 37% of Accra's households had access to piped water in 2008, compared with 68% in Addis Ababa, 70% in Bujumbura and 67% in Cotonou (UN-Habitat, 2016). Around 90% of housing in urban Ghana is built by informal small-scale contractors, from sandcrete blocks, outside of local authority control, and is financed through individual savings and family support. Land for these houses is acquired through local chieftaincy institutions and construction occurs over long periods of time, and only incrementally, when finances allow for further construction (UN-Habitat, 2011; Awuvafofe, 2013). While the majority of Ghanaians prefer to own their own homes, only about 8% can afford to do so (Awuvafofe 2013).

The majority of households in urban Ghana rent rooms in compounds or other types of multi-occupied residential buildings. Overcrowding is a problem: 60% of households occupy a single room, even though the average household comprises five people (UN-Habitat, 2011; Awuvafofe, 2013). If overcrowding – which the UN defines as more than two occupants per room – is to be eliminated then 5.7 million new homes will need to be built in urban Ghana between 2011 and 2020. This translates into four new rooms per minute of the working day for the

decade from 2012 until 2021. In order to simply maintain current housing standards, as many as 2 million new dwellings would be needed, which means building just under 1.5 new rooms per minute. If this housing shortage is translated into effective demand for new dwellings, then this would create between 150,000 and 200,000 new jobs in construction. Further, existing housing stock is in need of upgrading: households frequently share water and sanitation facilities with those living in the same compound (UN-Habitat, 2011).

Despite the acute shortage of housing, the market in second-hand homes remains unusually small, as houses are not considered investments for resale:

'The feelings house owners have towards their houses are more like feelings for a grandmother than the tools of a trade or a car. One might sell one's tools when they are no longer needed, or in a case of extreme need, one might sell one's car... but one would not sell one's grandmother under any circumstances and, anyway, no-one would buy her!'

UN-Habitat, 2011: 160.

There is another significant constituency driving urban development, particularly in Accra: Ghana's domestic and diaspora middle-class. It is estimated that Ghanaians living abroad own about half of the new housing stock in Accra (UN-Habitat, 2011) and an even higher proportion own land with the intention of building on it (Bank of Ghana, 2007). This has fuelled a boom in real estate construction. However, while sometimes marketed as affordable, these homes are too expensive and too few in number to contribute to alleviating the housing shortage.

Municipal and commercial buildings

In addition to residential buildings, there are two other significant categories of building: public buildings, typically financed and maintained by the state, and commercial buildings, which are privately financed for a range of purposes, from offices to factories and retail spaces. Of these, retail space construction seems to be thriving in

Ghana, as its growing middle class attracts international retail brands and shopping mall development has grown fast (KPMG, 2014).

3.2 Infrastructure

If the quality and quantity of urban housing is to be effectively addressed, this also means that new water and sanitation infrastructure is needed. When building new homes, developers often have to put this basic infrastructure in place themselves, which increases costs. According to interviewees, some developers have established residents' associations to maintain privately constructed infrastructure.

Water and sanitation

Ghana is one of only five African countries that have achieved their Millennium Development Goal target for water supply ahead of time. By 2008, around 84% of households had access to improved drinking water sources (Foster and Pushak, 2011). Nevertheless, water infrastructure remains problematic: it is frequently old and run-down, with rusting pipelines spoiling water. Further, in urban Ghana there is room for improving existing infrastructure by ensuring dwellings are connected to running water and each household has its own toilets.

Around 70% of households in urban Ghana have access to pipe-borne water; a third of these are public standpipes (UN-Habitat, 2011). Ghana has a relatively large share of the population relying on utility water (private or public taps) than elsewhere in Africa, although far behind that of other MICs (Foster and Pushak, 2011), and there is very little investment. There is also large-scale commercial theft from the network, sometimes for the purpose of secondary retailing of water sachets. This means that distribution losses are high, demand is not met and supply is highly intermittent (Foster and Pushak, 2011).

Ghana has significant water resources but makes little use of them (Foster and Pushak, 2011). There is limited use of multi-purpose infrastructure for irrigation, flood control, water supply and possibly hydropower – especially

in rural areas – and lack of assessment and management for groundwater systems (Foster and Pushak, 2011). Foster and Pushak estimate that Ghana may have as much as 315,000 ha of land that is economically viable for irrigation – more than ten times the area currently irrigated. This represents an opportunity not only for agriculture but also for job creation in the construction sector, particularly for small and non-urban based artisans and construction businesses.

Energy

Ghana is currently facing an acute energy crisis, as existing electricity generation capacity is insufficient to meet expanding demand (in part because of low water levels in Ghana's three major hydroelectric dams at Akosombo, Bui and Kpong), and much of the infrastructure is in need of upgrading. Despite the focus on alternatives to hydropower reliance, for example the development of liquefied natural gas terminals and plants as well as the West African Gas pipeline, Ghana continues to suffer frequent power outages. In turn, the cost of the major construction materials, cement and steel reinforcement has increased (Ahiaga-Dagbui et al., 2013).

Steps are being taken to improve Ghana's electricity supply. The Agence Française de Développement is investing in upgrading and building new energy infrastructure, and the government also plans to spend \$4.5 billion to double power capacity. Construction activity is also being ramped up in the gas sector in Ghana (KPMG, 2014). Gas supply via the West African Gas pipeline, from Nigeria, is due to come on stream soon, and further supplies are expected as Ghana develops its own hydrocarbon potential (Foster and Pushak, 2011).

However, as with other major infrastructure projects, engagement of domestic firms is likely to be modest. Artisans may be able to secure more employment opportunities at the micro-provision end of the energy sector – for example in the installation and servicing of solar power and development of mini-grid systems, typically part of village electrification schemes. The

Table 1. Electricity supply in Ghana

Indicator	Ghana	Region	All countries
Number of power outages in a typical month	9.7	10.61	9.01
Value lost due to power outages (% of sales)	6.03	6.14	4.94
Delay in obtaining and electrical connection (days)	24.39	33.16	37.2

Source: Ahiaga-Dagbui et al. (2013).

number of jobs and apprenticeship schemes this sub-sector generates is therefore likely to be fairly limited.

3.3 Transport infrastructure

Roads

The predominant activity in transport infrastructure is road construction, as transport in Ghana is mainly by road. Road transport accounts for 98% of freight ton-miles and about 97% of passenger miles in the country (GIPC, 2016; Ahiaga-Dagbui et al., 2013). There are 39,409 km of road network in Ghana, although the network needs upgrading if it is to keep up with demand. Rural road quality is fairly good, but the physical extension of the rural network is inadequate and only 24% of the rural population lives within 2 km of an all-season road. An additional 13,000 km of all-season road would be needed to bring this up to 50%. Around 30% of existing rural roads are under-engineered, with insufficient paving for the volume of traffic. Maintenance is also a considerable undertaking, with large backlogs having accumulated over the years (Foster and Pushak, 2011).

Most of the road construction in Ghana is internationally financed and carried out by foreign contractor firms, sometimes tied to the source of financing. While the World Bank, one of the major investors in urban, feeder and trunk roads, provides a 7.5% price preference for domestic contractors, this is insufficient to allow domestic firms to compete. Additionally, many local firms do not have the turnover to access the necessary finance and equipment and struggle to find staff with adequate engineering capacity.

As a result, many of the World Bank's contracts are awarded to more competitive Chinese firms (Ofori, 2012). The most recent review of who wins World Bank contracts demonstrates that, as a result of China's growth, the contracts awarded to Chinese firms increased at the expense of African companies between 1995 and 2003. The same report recommends a restructuring of Bank procurement processes with a view to furthering local construction development as existing 'domestic preference' policies have proven ineffective (Zhang and Gutman, 2015). The Association of Road Contractors suggested that the government oblige foreign contractors to sublet 25% of work to local firms with known capability. However, this has not happened (Laryea, 2010). The state also plays a major role in financing minor road development, but domestic contractors face significant problems caused by arrears and late payments (Ofori, 2012).

Ports and harbours

As Ghana's economy continues to expand into the middle-income bracket, there is increasing demand for improved transport infrastructure. Also, Ghana's port is one of the more cost-effective entry points for goods into West Africa,

but internal infrastructure to neighbouring countries, such as Burkina Faso, is in poor condition. There is therefore demand for Ghana to invest in rail or alternative goods transportation infrastructure (Deloitte, 2013).

Airports

The Brazilian government has provided \$100 million to upgrade and expand Tamale Airport, and the work is being conducted by Brazilian contractor Queiroz Galvao (Construction Review, 2015). Accra's Kotoka Airport is also being expanded to increase its ability to serve the sub-region. The \$400 million necessary for this project is being financed by a number of institutions, including the African Development Bank (AfDB) and a number of commercial banks (AfDB, 2015; EIU, 2016).

3.4 Recent discovery of oil

The discovery of oil in 2007 has had significant consequences for the construction sector in south-western Ghana. Within a few years, the Jubilee Oilfield was producing 105,000 barrels of crude oil a day, which fuelled a number of large-scale construction projects as well as new investments in real estate. For example, the port in Takoradi is being expanded to facilitate the export of oil. However, these large-scale construction projects tend to be carried out by large multinational companies, with limited benefit for local labour markets. The new port in Atuabo, for example, is being built by China Harbours Engineering (China Daily, 2015).

The discovery of the oilfields has had an indirect impact on the construction sector: real estate companies are building accommodation for migrant labourers and expatriates who have settled in Takoradi. This real estate construction boom spans from high-end residential estates and shopping centres to low-cost housing and provides employment opportunities along the whole construction value chain, in both the formal and the informal sectors (Owusuaa, 2012).

Finally, the oil finds in south-western Ghana have boosted construction nationally, owing to the Government of Ghana's investment of oil revenues in strategic projects. Oil revenues have been allocated to investment expenditures in the national budget, including construction and infrastructure projects throughout Ghana (Armah-Attoh, 2015). Contractors are therefore optimistic about there being a positive impact on construction from oil and gas production (Laryea, 2010).

3.5 Sustainable materials and construction

Sustainable construction is in its infancy in Ghana. Interviewees for this paper stressed that, while there is growing interest in sustainable construction materials, price and cost-effectiveness are the primary concern. Some stakeholders also suggested there was interest among artisans in using local materials more, not least for cost

reasons, and that some already did so – more so in rural areas, where construction relies on traditional methods.

Government has sought to increase production of locally made building materials, for example by strengthening institutions such as the Building and Road Research Institute (BRRI), but this has had limited effects (Arku, 2009). One of the outcomes of this is the development of a blended cement that can be used instead of costly imported cement, which is frequently in short supply in Ghana. In general, there remains a preference for imported building materials over proven alternative local materials, and the inadequate utilisation of local raw material resources remains a key challenge facing the sector. Cement alternatives, for example, have not been widely adopted. This may owe in part to inadequate existence of and compliance with government standards that would allow contractors and artisans to trust new, locally produced materials (Ahmed et al., 2014).

Given that older master craftspeople may be more set in their ways in terms of materials and techniques, there is a role for young artisans in pioneering sustainable construction techniques and use of materials. The most critical barrier to sustainable construction is the lack of capacity of the construction sector to actually implement sustainable practices (Djokoto et al., 2014).

3.6 Trainee and apprentice-level employment in construction

Young people, as a demographic, have a particular profile that means they will be better placed to access certain opportunities over others. As a result of their age, they have less experience, but also smaller social networks and fewer political connections. However, they not only have less social capital, but also usually have lower levels of financial and physical capital, which means a number of opportunities available to others are beyond their reach. Young people's access to opportunities is particularly constrained by their inability to pay for training and the tools needed for artisanal work (GSS, 2013). However, as they are more mobile and able to work for lower wages than their more established competition, they may benefit from other types of opportunities.

Apprentice-level wages

There is significant unmet demand for skilled artisans, which translates into a wide range of meaningful employment opportunities for young people. Given the frequently cited preference for white-collar jobs among Ghana's youth, the question of which groups of young people might be attracted to construction needs to be considered. Earnings in the sector – as reported by skilled tradesmen – are respectable, but the incomes of apprentices are below those young people can expect in other sectors (such as mining, health and social work, agriculture, etc.). As such, construction is likely to appeal to a sub-group

of young people. In particular, it is likely to appeal to those who cannot afford to postpone income-generating activities completely, but who are able to delay realising their full earning potential so as to increase their future income. In other words, it may not be the best option for those who can afford further secondary or tertiary education. It may be more suited to young people who need to earn some money but can afford a reduced income in order to further their education.

Local firms and artisans in residential and municipal sub-sectors

The acute shortage of urban housing offers a potentially sizeable employment opportunity for young people and certainly the biggest foreseeable growth area in construction. If this opportunity is to be fully realised, however, a number of policy changes are required (see Section 5 for more details). Residential construction is not only promising for the sheer scale of demand, but also an important source of jobs for Ghanaian youth. This is because a large proportion of residential and even some municipal and commercial building construction happens in the informal sector and is small-scale and accessible to artisans and smaller domestic firms. These are also the enterprises that offer the most employment and training opportunities to young people. Opportunities for employment and training in formal sector construction are much more limited.

The building of affordable housing is conducted entirely by local firms, and inputs are also produced and supplied by local artisans. This means linkages into the rest of the construction sector and domestic economy are much stronger, particularly to those parts of the economy that are most likely to offer opportunities for young people. Affordable housing construction, therefore, has exceptional potential in terms of providing young artisans with meaningful employment.

Municipal building construction also forms an important part of business for small and medium-sized construction firms in Ghana, and these businesses are an essential training provider for young artisans. Funding for schools, hospitals and religious institutions comes from a range of public, non-profit and private (including individuals) sources and generates an important amount of work in the sector. In rural areas in particular, there is often explicit focus on using local labour, so municipal buildings can offer an important area of employment generation for young artisans.

Large foreign contractors in state-funded infrastructure projects

In those sub-sectors that are dominated by large domestic and particularly international firms, opportunities for young people are far fewer. This is the case for many state-funded infrastructure projects. In road construction, rural and non-tarmac construction is generally managed at the municipal level, and this is the area in which domestic

construction firms and unskilled labourers are most likely to win contracts. Occasionally, young people also engage in informal road construction, for example by repairing holes in the road and seeking compensation for their efforts from passing drivers.

However, the involvement of domestic construction firms in large-scale infrastructure projects is limited. As a result, the opportunities for local artisans are also modest, and generally confined to those with a great deal more experience and skills than younger artisans tend to have. These construction projects also tend to provide fewer opportunities for the training of artisans, unlike smaller

domestic construction projects. The pattern of large foreign contractors delivering work and domestic firms receiving short-term and more menial sources of employment is common across the transport infrastructure sub-sector, and increases with the level of complexity of the construction project concerned. So, for example, this is a particular issue with the construction of ports, oil refineries or airports. In addition, access to opportunities on large-scale projects tends to require political connections as well as access to finance, which excludes many local contractors, but especially young people.

4 Entry points into construction for youth

Unlike in other sectors, such as agriculture, the knowledge and skills necessary to work in construction are usually not taught in the family. As a result, the majority of young people who transition into construction employment do so through some form of training – whether formal or informal, theoretical or practical. This section outlines the different entry points available to young people in Ghana and how these shape their opportunities in the construction sector.

4.1 Informal apprenticeships

The precise nature of the skills gap in Ghana's construction sector is unknown. However, that there is significant unmet demand for skilled artisans is beyond doubt: according to an International Labour Organization (ILO) study, the number of skilled artisans in Ghana almost halved between 1960 and 1984, from 70,571 to 37,258 (Offei-Nyako et al., 2014). More recent trends appear to have compounded this with a reduction in the number of young people enrolling in vocational training centres: between 2006 and 2008 alone, 4,000 fewer people enrolled in construction-related vocational courses. Young people are choosing other sectors, as construction is perceived as badly paid and unsafe work (Offei-Nyako et al., 2014).

The implications of these figures are confirmed by constructors, who complain of the difficulty of finding adequately skilled artisans for their firms (Fugar et al., 2013). As construction is a labour-intensive industry, low skill levels have resulted in low productivity and poor-quality infrastructure and buildings, while inadequate technical or managerial competences mean projects are comparatively slow and expensive (Fugar et al., 2013).

Apprenticeships and training

There are two main ways in which Ghanaian artisans gain experience to allow them to work in the construction industry: through formal training at technical colleges, schools and polytechnics and through formal or informal apprenticeship schemes.

Apprenticeships

According to interviewees, the most important form of training is the informal apprenticeship. There is a long tradition of apprenticeships in the construction sector,

and one in four Ghanaian apprentices is to be found in construction. Apprenticeships are arranged individually by young people and their guardians, who go to see the artisan they wish to be apprenticed to with a gift of schnapps and a training fee, usually in the range of GHC 200-400 (between \$50 and \$100). Most commonly, the apprentice will then be trained for three years and will work for an additional year as payment to the master craftsman. Particularly talented apprentices might be taken on by their master as a salaried employee, where the master has the capacity to do so (UN-Habitat, 2011). Apprentices are also responsible for purchasing the tools and protective clothing they will need (Owusuaa, 2012). Once training and payment are deemed completed, the apprentice is expected to pay another small sum to his teacher (around GHC 50 or \$12) and to organise a graduation ceremony. Only then is the apprentice deemed fully qualified (UN-Habitat, 2011).

Throughout the training, the apprentice's pay will vary depending on the master craftsman's financial position. Sometimes, this takes the form of a daily payment; other times, apprentices are paid in kind, usually in the form of food and board. According to the focus group discussion, apprentices are occasionally engaged on an informal basis only, working and learning only when there is work on hand. Apprentices are not granted any formal certification. Workers are, therefore, limited in their search for employment if they have only informal training. COTVET is currently exploring options to issue certificates that take into account skills acquired on the job to address this issue.

In the artisan focus group discussion, several artisans indicated that they took on apprentices, but with varying degrees of ease and success. One said his apprentice had completed technical school and wanted to get hands-on experience. Others said they found both the teaching and the financial responsibility for an apprentice difficult, as they needed to be taught and fed whether there was work or not. Young people, on the other hand, are often not willing to spend years as apprentices, as they want to start earning money. The artisans interviewed indicated that, more and more, young people had less interest in learning their trades and were sometimes more focused on earning money as quickly as possible. For master craftspeople, it can be a sacrifice to take on an apprentice and it can be a risk because of the costs incurred.

Likewise, embarking upon an apprenticeship is not without its risks for young people, as they have only imperfect information on the quality of training they will receive from their master artisan. If they are lucky, their master may have attended technical school and can teach them the theoretical as well as the practical components of their trade. If they are unlucky, their master may be less skilled or concerned with the quality of the training they are imparting. Interviewees indicated that younger artisans may be stifled by the limitations of their master if that person has had limited practical or theoretical training, or is unwilling to learn. Furthermore, given the informal nature of apprenticeships and the lack of contracts and legal recourse, young people face the risk of exploitation in the form of long apprenticeships or working hours (ILO, 2008).

Changes to the apprenticeship system

A number of factors have led to changes in the apprenticeship system. First, artisans are increasingly able to secure work without having validation from a master craftsman, so they do not necessarily see an apprenticeship as a prerequisite to a construction sector career. This is particularly the case in urban centres, where there is growing demand for labour in construction. Similarly, as social norms have shifted, particularly in urban areas, the formalities of apprenticeships – whereby a young artisan's family took on the burden of establishing the relationship and paying for a graduation ceremony – have become less necessary. Where there is no external requisite for apprenticeships, master craftspeople have been less willing to take on cost and responsibility for the apprentice; instead, they can treat a young artisan like an employee or contractor (rather than providing them with lodgings, food and training).

Second, young people are increasingly going straight into employment as they need to earn money to support themselves and their dependants as quickly as possible. According to interviewees, young people opt to work as unskilled labourers rather than obtaining professional skills, because this does not entail upfront costs.

Finally, because of the increasing interest in and status of formal, particularly academic, education, fewer young Ghanaians are choosing to pursue vocational training. There is a growing preference for polytechnic or university rather than vocational courses, and some tertiary education graduates do not want to work in the field. Artisans said they preferred to work in white-collar jobs because of the perceived status and lack of physical labour.

Professional associations

The construction sector has a large number of industry associations and membership bodies through which individuals and small (often unregistered) firms build a collective identity and voice, as well as sharing information and best practice. Some associations are strong and well established, with national presence and a significant role in

lobbying and direct engagement with government. Others are much smaller. There is a great deal of fragmentation of artisans' associations, which means they have not scaled up and their impact is limited as a result. The study noted no associations with a particular focus on young people, mostly because they are organised according to components of the construction sector.

The Ghana Real Estate Developers Association (GREDA) was formed in 1988 with World Bank and UN Development Programme sponsorship as a result of reforms to privatise the housing sector and was intended to take the place of public housing development agencies, which were in financial distress at the time (UN-Habitat, 2011). It aims to promote the development of residential estates and increase the stock of housing units, to ensure adequate provision of affordable housing (Awuvafofe, 2013). GREDA membership has grown considerably since its beginnings, fuelled by the growth in private sector real estate construction firms. It now includes a number of international real estate companies from the UK, the US, South Korea, Saudi Arabia and India and has expanded operations from Accra and Kumasi to Takoradi, following the discovery of oil (Awuvafofe, 2013).

AAG was established in 2011 and initially aimed to create a job matching system (like an employment agency) in addition to training young people and members in a range of basic skills for the workplace, such as information and communication technology, maths, English, cost estimation, worksite health and safety. It has also informed its members of the benefits of formalising their businesses and provided information on how to do this, for example on the process of registering with the Social Security and National Insurance Trust (SSNIT) and setting up bank accounts. AAG has around 300 members, mostly in Greater Accra and the Volta region, where it undertook its initial outreach work. It is expanding the geographic reach of its membership base and is looking to set up an investment pool of micro-lending through the association, in recognition of the financing constraints its members face.

It is worth noting here that the construction sector is poorly unionised: the largest union is the Construction and Building Materials Workers' Union (CBMWU). The CBMWU has been around since before independence, having been formed in 1954, but its membership has been decreasing since the privatisation of state-owned construction companies, as the majority of construction workers became informal sector workers (Rosa Luxemburg Foundation, n.d.). However, levels of unionisation in construction are comparative to the national average: approximately 7% of the workforce belongs to a union whereas the figure is 6.6% for construction (DTU, n.d.). More recently, the CBMWU has attempted to provide union services to the informal sector, for example by signing a Collective Bargaining Agreement for both formal and informal construction employees. This could potentially increase the union's influence in the sector.

4.2 Vocational training institutions

Ghana has a diverse range of vocational training institutions, run by a number of training providers, which makes the standardisation of technical qualifications and quality control difficult. COTVET was established in 2006 to formulate national policies on skills development across pre-tertiary and tertiary education in formal and informal sectors of the economy. It is also mandated to coordinate and supervise the activities of public and private vocational training and education providers, including informal sector apprenticeships. COTVET is responsible for issuing reports on the state of skills development in the country as well as advising government on all matters relating to the management and improvement of technical and vocational education and training (TVET) in Ghana (COTVET, 2015).

COTVET has recently made competency-based teaching compulsory for all TVET training providers. Certification has to be through a national TVET framework, which COTVET has created. COTVET engages with a wide range of private sector actors, from small and medium enterprises to large industry, seen as fundamental to ensuring employment post-training. However, these links are still in their infancy (COTVET, 2015). Nevertheless, COTVET oversees private as well as public vocational training provision.

There are any number of training models overseen by COTVET: BRR and a number of other research institutions provide training in addition to research, although they struggle to raise the funds necessary to provide it at acceptable price levels (which often means for free). Some colleges, such as the YMCA, generate funds internally by using the students from their construction training courses to deliver contracts. These then cover the cost of their training and simultaneously provide them with practical work experience.

Despite the presence of vocational training centres across the country, artisans most commonly train in the informal sector, through apprenticeships. Regardless of whether they have had access to vocational training, most young construction sector workers spend a period of time working with someone who is already established in the profession (a master craftsperson) before finding employment elsewhere or setting up by themselves. The formal technical and vocational training system has also, in some cases, been accused of being far too theoretical, meaning students do not have the practical experience necessary to find paid employment straight after their training (interview). In some parts of the country, formal vocational training options in the construction trades are very limited: the northern regions (Upper East, Upper

West and Northern) have only six vocational training institutions that offer construction-related courses and are registered with NVTI. As one might expect, Accra has the largest number (26), followed by Volta (19) and Brong Ahafo (10) (NVTI, n.d. a).

The artisans interviewed for this study felt that technical school curricula neglected certain practical aspects of the construction profession, such as, for example, operating cranes. COTVET is aware that some of its training courses are too theoretical and is attempting to address this by assessing whether it is appropriate for attachments to happen during or after training. The institution is also supporting legislation that will recognise prior learning, so that people can be accredited for skills they have acquired on the job, irrespective of their formal training. Both of these initiatives are the result of an effort to stem the declining number of young people enrolling in vocational training courses (Evanto, 2015).

NVTI offers skills certification, as well as training, for a wide range of trades, including 18 related to construction. These allow those trained in the informal sector to have their acquired skills tested and certified (NVTI, n.d. b). However, given the importance of social networks to finding work in the construction sector, uptake of these services is limited.

4.3 Migration

Given the nature of Ghana's economic growth and urbanisation patterns, there is much higher demand for artisanal skills in urban than in rural Ghana and in southern than in northern Ghana. Artisans in the construction sector are therefore migrating from villages in the north of the country to urban areas of the south for employment. During the focus group discussion with artisans from AAG, participants said they had moved to the Greater Accra region because there were no jobs in their villages. Wages are also higher in Accra, though the cost of living is too.

This does, however, create significant barriers to construction employment for young people born in the north. Additionally, this means rural areas are covering the costs of training young people but do not necessarily benefit from their skills, even if they do benefit from their remittances. According to interviewees, so many artisans have migrated to find work that it is very hard to find skilled artisans for construction projects in the north. Some firms said that, when they had contracts in the north, they take skilled workers from Accra with them.

5 Barriers to young people's participation

Beyond the difficulty of obtaining the necessary skills for artisanal work, young people face a number of other barriers to their entry into and their career progression within the sector. The main difficulties young people experience fall into three categories: access to finance, the policy environment and the sector's image.

5.1 Access to finance

The biggest single barrier to young people's participation in the construction sector is the lack of adequate financing for the sector in general and young people in particular. Finance is a major challenge for all actors within Ghana's construction sector: domestic construction firms struggle to access the finance necessary to benefit from larger construction projects; artisans lack the financing necessary to purchase tools and equipment; and urban Ghanaians cannot access the loans and mortgages necessary to translate the housing crisis into effective demand for new dwellings. While private investment in construction has been on the rise, this has gone primarily to the large-scale enterprises that have the skills and assets to access formal finance. The impact of this expansion in finance has not been felt by small and medium-sized domestic firms (Osei, 2013). Finally, the government's ability to borrow for infrastructure projects is also limited by the recent economic crisis and the conditionalities imposed by the IMF.

Finance for housing construction

To date, the shortage of housing and sanitation infrastructure, which is large even by urban African standards, has not translated into effective demand. Arguably the most important reason for this is the absence of financing, which means housing cannot be built as quickly and efficiently as necessary. Where mortgage products are available at Ghanaian banks, these are aimed at the few who can afford luxury properties. And mortgages are also very expensive, charging interest rates of around approximately 30%. The levels of financing needed to build small urban family homes – in the range of \$10,000 to \$18,000 – are too large for informal or microfinance providers (UN-Habitat, 2011).

Formal financial institutions, on the other hand, consider the majority of Ghanaians who rely heavily on informal sector jobs and have irregular or low incomes as

too high risk (Obeng-Odoom, 2011). This is aggravated by the fact that many Ghanaians do not hold formal titles over the land they own and so cannot use it as collateral (Awuvafoge, 2013). The recent proliferation of banks and other financial institutions in Ghana has, therefore, had minimal impact on housing sector investment, and the building of homes continues to be based largely on informal financing, mostly savings, remittances and finance from family members.

While there is a long history of borrowing for business ventures, this does not extend to borrowing for housing construction and land. The potential mortgage market in Ghana is perceived to be large, based on increases in housing demand. The fast-growing insurance industry in Ghana offers huge potential demand for mortgage-backed securities, and there is a natural demand for long-dated assets by domestic institutions with long-dated liabilities (Boamah, 2010). GREDA estimates that only 5% of those who want to own a house can do so only through their own savings, indicating huge potential for mortgage markets in Ghana (Tandon-Offin et al., 2013)

Consecutive governments have made various efforts to address this problem: starting in 1987, the Ghana Investment Promotion Centre (GIPC) introduced a number of measures to increase private investments in housing. This included a five-year tax moratorium, exemptions from import duties and the ability to transfer profits overseas. These were abandoned when it became clear they only benefited developers building luxury property for wealthy Ghanaians (UN-Habitat, 2011).

The Home Finance Company (HFC) was established in 1990 with a World Bank contribution of \$10 million and an SSNIT assistance fund of \$16.4 million, with the aim of providing long-term funds for a sustainable housing financing system (Arku, 2009). Initially, it was financed by the Government of Ghana, Merchant Bank and SSNIT and operated in the secondary market to provide liquidity to participating financial institutions. HFC subsequently moved to the primary financing market as a universal bank as well as mortgage provider (Bank of Ghana, 2007).

Until 2006, HFC was the only mortgage provider in the country. HFC Bank was mandated by the government in 2007 to set up an affordable home ownership scheme for public sector employees. It allowed recipients to first buy land, then build on it and finally to own it on repayment

of the loan (Awuvafofe, 2013). The Bank for Housing Construction, established by the Government of Ghana in the 1980s to provide mortgage facilities to the working class, was liquidated in 2000 as a result of major fraud that wiped out its entire capital base (Awuvafofe, 2013).

More recently, the government introduced the Home Mortgage Finance Act of 2008, which created the legal framework for lenders to foreclose on defaulting loans, with the aim of encouraging the development of mortgage markets (Boamah, 2010). It seems this has had some effect, at least at the higher end of the market, with an increase in the number of mortgage products available, some developed through real estate companies partnering with mortgage providers to facilitate the sale of properties (Awuvafofe, 2013).

There are also now mortgage schemes that explicitly target the diaspora. Stanbic Bank, for example, has launched a new product in London to enable Ghanaians living abroad to buy properties in Ghana while making payments from the UK (*Ghanaian Times*, 2014). Microfinance for housing is limited in Ghana but the concept is increasingly being recognised as relevant. Currently three institutions provide microfinance for housing – HFC Bofofo, Global Access and Sinapi Aba; Ghana Union Assurance provides a collateral replacement insurance (Ghana Housing Finance, 2016). Credit unions have always encouraged their clients to borrow as a means of incrementally building houses, and ProCredit plans to introduce a micro loan for housing (Tomlinson, 2007). However, initiatives intended to foster a mortgage and housing finance market have struggled to achieve their aims due to macroeconomic instability. Ghana's high interest rates have been particularly detrimental, as they deter borrowers and increase the risk for lenders (Tomlinson, 2007).

Finance for artisans

The lack of a well-functioning mortgage market for these types of dwellings has an indirect impact on artisans in the construction sector in the form of reduced demand for their services. For example, the UN estimates that constructing the homes needed to improve living standards in urban Ghana would result in the creation of another 150,000 to 200,000 jobs, many of which would be for artisans (UN-Habitat, 2011). Artisans are also affected directly by the lack of finance, as they cannot easily borrow money with which to purchase tools or to be able to complete dwellings for sale to individuals.

Banks and other lenders typically require collateral, which many small and micro-firms and individual artisans do not have. There are few innovative products to enable lenders to provide loans in the absence of assets and credit ratings. A further constraint is on the side of small firms themselves: artisans lack the financial skills required to

keep accounts and to apply for formal sector financing. Microfinance for the construction sector is minimal but nevertheless an important lifeline: some trade associations provide micro-lending to their members, recognising how difficult it is for artisans to secure finance from formal sources (Tomlinson, 2007).

Finance for small domestic firms

Several stakeholders interviewed pointed to the lack of available finance as a fundamental constraint on the growth of Ghanaian construction companies and the major reason why large construction contracts are often awarded to foreign construction firms. Ghanaian firms are unable to secure adequate resources to build a portfolio of large-scale work that would allow them to bid for larger projects. This problem is exacerbated by the extensive payment delays experienced on government projects. Domestic firms therefore struggle not just to grow, but also often to survive, while foreign firms benefit from the majority of publicly funded infrastructure projects.

Finance for infrastructure

The recent decline in public resources for infrastructure projects and IMF conditionalities has led to increasing interest from the government in public-private partnerships (PPPs) to deliver infrastructure projects. However, given that government lacks the capacity to deliver PPPs, this is likely to limit their attractiveness to private investors. In the transport and water sectors, for example, cost recovery has been unreliable. Further, PPPs can be unappealing to politicians who want to retain control of public assets for use as patronage (CEPA, 2015).

Despite these difficulties, eight PPPs have been created since 2005 in the energy, transport and water sectors in Ghana, worth a total of \$2.98 billion. Bank loans, on the other hand, account for a very small proportion of the financing provided in the energy and water sector recently (CEPA, 2015).

5.2 Policy environment

There is a widespread perception among actors in construction that government does not recognise the importance or the needs of the sector (e.g. Ofori, 2012) and that this is evidenced by the absence of a ministry responsible and the lack of a sector-wide development policy or strategy. Where government is involved in construction, it subjects contractors to such delays in payment that domestic firms often cannot afford to bid for public contracts. Furthermore, stakeholders interviewed for this study indicated that corruption and nepotism affected the construction sector more than others. This prevents the participation of young people who do not have the necessary connections or funds.

Formal and informal education and training

Unreliable quality of construction training

The unreliable quality of training is a well-known problem in the sector, and one that lies with both formal training institutions and informal apprenticeships. A more general problem exists within the education system at primary and secondary level, which does not equip young people with the critical thinking skills that allow them to problem-solve on the job. Thus, productivity in the sector remains low, as does the level of workmanship and technical and managerial competence (Fugar et al., 2013). Given the extensive forward and backward linkages of the construction sector, this skills gap has the potential to hold back Ghana's economic development.

There has also been an increase in migrants arriving in Ghana from surrounding Francophone countries with superior artisanal skills and a willingness to work for lower wages than their Ghanaian counterparts. Finishing was cited as a skill that Ghanaian artisans lack, while their Togolese counterparts, for example, are known for having superior finishing skills. One stakeholder indicated that skills gaps were particularly severe in key growth areas, such as high-rise building construction.

Artisans also spoke of the need for continued professional development and training that could be combined with work. There is currently no such training for artisans after they have completed their initial vocational training or apprenticeship, meaning older artisans have limited or no access to new techniques and equipment. One artisan suggested people be compelled to go for training and professional development every three years.

Most construction firm owners are said to be more interested in immediate benefits than long-term returns. Thus, such enterprises are not normally inclined to invest in human capital development. Insufficient and erratic workflow coupled with irregular payment for work completed has exacerbated the reluctance of construction firms in Ghana to invest in human capital development (Fugar et al., 2013). The high mobility of construction sector employees is a further disincentive for training and development, as it is easy for other companies to poach trained employees (Fugar et al., 2013).

Paradoxically, a number of studies have concluded that one of the ways for employers to reduce mobility is by training their employees, as this engenders commitment. However, this also means firms have to be in a position to offer permanent contracts and to pay competitive wages, or there is an element of compulsion to the duration apprentices have to work in exchange for their training (Fugar et al., 2013). One stakeholder suggested making it compulsory for firms to provide on-the-job training in order to reduce the risk of some firms free-riding and poaching trained employees.

An area of skills training that has not received sufficient attention is that of management and oversight of

construction sites. This includes not only overseeing the work in general but also ensuring artisans stick to their area of professional competence and do not informally conduct work in other areas. Better oversight would ensure construction projects are carried out by an integrated team made up of all relevant professionals and artisans (Djokoto et al., 2014).

Lack of government oversight and coordination

Interviewees felt government could do more to look at certification (such that graduates of vocational training are awarded recognised certificates, and that these certificates are required in the workplace) and ensure standards of practice are met during training and required by employers. Further, vocational training stakeholders indicated there was a lack of innovation in the skills and courses being delivered by vocational training providers.

There are also considerable problems in coordination between government departments, which affects the quality of training available to young people. A report prepared by the Ministry of Youth and Sports in 2013 states that the Ghana Youth Employment and Entrepreneurial Development Agency has 'inadequate capacity for vocational and entrepreneurial schemes' and is concerned about the 'apparent duplication of the efforts of COTVET and Skills Development Fund, Local Enterprises and Skills Development Programme, NVTI and the Department of Social Welfare'. The lack of clarity with regard to who is responsible for certification has important implications for artisans' training.

Land tenure issues

One of the principal difficulties facing the construction industry in Ghana is the problem of ensuring land supply. This is the result not so much of an absolute shortage of land as it is of issues of access and tenure. Approximately 80% of Ghana's land is communal land vested in chieftaincies, and communities hold land through allodial titles. Individuals may acquire the right to use this land, but tenure is neither secure nor usually documented (USAID, n.d.). This is further complicated by the fact that land in Ghana is managed through overlapping legal systems – a formal, modern system that operates alongside a system in which chiefs allocate land. The implications for the construction sector are that investments in property are likely to be lower where land tenure is insecure.

It is not uncommon for land to have been subject of litigation on more than one occasion, particularly in Accra where land is most valuable (Tomlinson, 2007). In addition, a variety of overlapping administrative arrangements for land mapping, management, titling, conveyancing and deed registration complicate matters further (Tomlinson, 2007). Banks consistently raise land ownership and titling problems as a major barrier to mortgage lending (Tomlinson, 2007).

While the state owns or otherwise administers a significant proportion of rural land in many African

countries, the Ghanaian government owns only about 20% of land; the remaining 80% is held by customary authorities for the benefit of their communities (USAID, 2016). Customary land is managed through a diverse tenure system. In broad terms, however, tenure systems in the three northern regions of Ghana (Northern, Upper East and Upper West) differ considerably from in the rest of the country: lower levels of urbanisation mean traditional practices continue to dominate and land is less frequently sold. In contrast, landowners in the south are more likely to register their land with the state to improve their tenure security. Most large-scale investors are outsiders and must therefore acquire land from the relevant customary authority before they can use it (Tomlinson, 2007).

Young people face particular difficulties in securing land, partly because they lack capital but also because the inheritance traditions for customary land mean they are unlikely to have access to land, as it is still under ownership of their parents or uncles (in matrilineal inheritance systems). This is significant for construction artisans' capacity to initiate projects in their villages, and means they lack collateral to raise finance for other activities.

Lack of transparency in government contracting

There was virtually unanimous agreement among interviewees that problems with government construction contracts limit the sector's growth and young people's opportunities within it. Government contracts are known for lacking transparency in terms of how they are awarded and, once awarded, government does not pay for services rendered in a timely fashion. Both of these factors limit the development of the domestic construction sector and the ability of domestic firms to upskill, grow and compete. According to one interviewee, government contracts have become less transparent and payment delays have gotten worse in recent years. It is not unusual for a company to wait 18 months or longer for payment.

As it is well known that government payments are rarely timely, domestic firms are reluctant to bid for government contracts and only very large, usually international, enterprises can afford to bid for and benefit from the large-scale construction projects funded by government. These firms, as discussed, are also the ones least likely to train apprentices and provide opportunities to young people, beyond casual and/or manual labour contracts. Government funds are therefore not providing the maximum benefits in terms of linkages into the local economy or training provision.

Beyond the question of timely payments, there is much government could do to facilitate Ghanaian firms winning construction bids. One does not need to look far for possible policy solutions: the government has implemented a national mining policy with the aim of ensuring small Ghanaian enterprises are not sidelined. This distinguishes between small and larger operations; those deemed small operations are reserved for Ghanaian companies.

In addition, training programmes are being designed and rolled out for small-scale enterprises in the sector. Government also stipulates that, where possible, preference must be given to Ghanaian goods and service providers. The government also supports the provision of skills training and the development of financial products for the small-scale sector (Government of Ghana, 2010).

Enforcement of quality standards

Ghana does have a Standards Authority, but construction standards are not reliably enforced. This has resulted in slower development of the local manufacturing sector, which has led to a large percentage of building materials being imported, even where local resources are available and frequently cheaper (Osei, 2013). The construction sector in Ghana relies heavily on the use of blocks and reinforced concrete rather than alternative building materials that can be produced locally and are more environmentally sustainable (Djokoto et al., 2014). Such materials would not only be produced locally, thus encouraging the development of the local construction sector, but also come from small-scale local firms, which use labour-intensive technologies. These firms provide a disproportionate percentage of employment and training to young people.

5.3 Perceptions of the construction sector

Interviewees felt that work in the construction sector was not associated with high social status, which deters young people. Such negative perceptions about construction jobs as a career choice cut across gender but are considerably more pronounced for women. Contrary to actual earning potential, the perception is that construction is less lucrative than other professions. Several of the artisans interviewed said they would not have chosen construction as their preferred profession, but their families decided this for them. These same artisans said they would have preferred to continue to tertiary level education but could not afford to do so. As one said:

'Our attitudes towards construction workers should change. A country cannot develop without construction. People should learn to value artisans in this country'.

Women in construction

For women, working on a construction site means risking sexual harassment as well as having to fight the perception that women are simply not physically strong enough for the work (Owusuaa, 2012). One artisan confirmed that women faced difficulties breaking into construction professions: 'When I was at school, we had two ladies in my class, but they exchanged courses to social science because they were teased.' The gender disparity among construction workers is therefore not surprising: in 2012, just under 320,000 people were employed in the sector.

Of these, only 8,998, or just under 3%, were female. Where women work in the construction sector, they tend to work in less prestigious and less well-paid positions: in the formal construction sector they are employed as secretaries; in the semi-formal sector they work as caterers; and on informal construction sites they are employed to carry water (Owusu, 2012). Box 2 highlights that this situation is not unique to Ghana's construction sector.

Anecdotally, there is some evidence of women participating in higher-profile and higher-skilled construction professions, such as surveying and architecture. As the only female professional interviewed for this study, a representative of the Young Surveyors Organisation of Ghana said she thought a lack of female role models contributed to the problem, as did the perception that women work on interiors, not out in the open on construction sites. This is evidenced by YIEDIE's difficulties in recruiting young women for courses other than interior design.

Box 2. Women in construction in the UK

The dominance of men in the construction sector is by no means a Ghanaian phenomenon. In the UK, women account for just 11% of the construction workforce and only 1% of workers on site. In some construction professions, the number of women is so low that the NSO has declared them 'unmeasurable'. In fact, women's participation in the construction sector in the UK has been declining since the 1980s.

However, there are some interesting lessons from the projects and programmes that have been implemented in the UK:

- Women need to be made aware of the range of opportunities available in construction long before they make their career decisions or begin their apprenticeships. Speaking to young girls in schools is one way of doing this.
- Providing training programmes to young women without additional support is insufficient. Without further mentorship programmes, young women tend to leave the sector.
- Simply increasing the number of women in construction will not lead to a change in culture: those women who work in the sector assimilate into the culture and do not encourage more women to join them.
- The most successful programmes focus on transforming the culture of the sector and its approach to women. Where the sector's culture is not transformed, the number of women working in the sector will decline once programmes come to an end, as has happened in the UK.

Source: Munn (2014).

6 Implications for Youth Forward

This review of Ghana's construction sector has provided an overview of the context within which Youth Forward, specifically YIEDIE, operates in the country. From this follow a number of implications for the initiative.

Ghana's construction sector is a growth industry with employment potential. First and foremost, Ghana's construction sector is a growth industry that has the potential to employ a large number of young people and, most importantly, to offer skilled work and a decent living standard to those who are able to access training. The urban housing sector, comprising both the construction of new dwellings and the upgrading of existing houses, has the potential to provide work for a very large number of young people. However, the large but unmet need for urban housing in this sub-sector has not been translated into effective demand, given the absence of finance for housing construction and problems with both the access to land and the security of its tenure. Beyond training young people and providing them with the finance they may need, Youth Forward has an important opportunity to bring about indirect change by working with government and finance institutions to ensure better access to finance as well as secure land tenure.

Relationship building between government and local business is key to sector growth. Ghanaian firms, particularly small and medium enterprises that are responsible for training the majority of artisans are similarly constrained through their access to finance and government contracts. Even where they are able to access finance, they frequently cannot compete for government contracts, given the very long payment delays experienced by all contractors. An important aspect of Youth Forward and its implementing partners' work is therefore to build relationships with government on its collaboration with local firms to foster the growth of the domestic construction sector.

Entry of young people into the sector relies on skills certification and access to finance. Construction differs from the agriculture sector – which traditionally employed most young people – in that skills are not passed down generations within families. Instead, young people and their guardians need to find entry points, usually through formal or informal education, into the sector. This means questions of skills certification and quality standards in education become central to their success in a way they are not in agriculture,

for example. Similarly, families are not able to pass on the capital necessary to start a construction or artisanal business in the way that might happen in agriculture through the inheritance of land. In both cases, there is a role for government to play in ensuring the least disruptive transitions for young people. This involves not only certifying their educational qualifications but also facilitating their access to finance. Youth Forward can fill this gap to some extent, but government collaboration will be essential.

Design of training should take into account the kinds of young people who will be attracted to construction. The unique characteristics of the construction sector also determine the kinds of young people who will be attracted to construction and to investing in an apprenticeship. As discussed in Section 3.5, young people who cannot afford to remain in school, but are able to forego some of their income-earning potential in order to invest in their education, would be well suited to an apprenticeship. Young people who choose apprenticeships may not be able to afford unpaid employment or training opportunities. This should be considered in the design of training opportunities in order to minimise attrition rates.

YIEDIE should collaborate with government to influence policy. To maximise the impact of Youth Forward's work in the construction sector, there are a number of other areas in which YIEDIE will need to collaborate with government to influence the policy environment. Of particular importance is collaboration with COTVET and the Ministry of Education to facilitate the certification and standardisation of qualifications for artisans. Equally, quality control and reliable standards for building materials and inputs are poorly developed, which holds back innovation (e.g. through increased use of low-cost, environmentally friendly local materials) and prevents small-scale input producers from accessing markets.

Training should inform and incentivise young people on safety at work. Construction remains a risky business throughout the world, but particularly so in Ghana, where the regulatory framework is inadequate and there are no mechanisms to enforce health and safety guidelines. In the absence of such government regulation, the emphasis needs to be on persuading artisans and construction workers to ensure building sites are safe. Training courses should therefore provide both the incentive and the information needed for young people to improve their safety at work.

Different approaches that persuade young people of the value of health and safety should be developed and trialled in a rigorous way.

Construction trainees should undertake gender-sensitivity training. As the UK's experience has shown, persuading women to take up opportunities in the construction sector is not as simple as providing training opportunities and reducing barriers to entry. If they are

to stay, mentorship programmes are required throughout their careers with a focus on career progression. Ensuring young women have networks that encompass other women they can turn to for advice and support has also been helpful. Most importantly, however, has been transforming the culture of the sector as a whole. One way of doing this would be to include gender-sensitivity training for all of YIEDIE's trainees.

References

- Adepoju, A. (2005) 'Migration in West Africa', paper prepared for the Policy Analysis and Research Programme of the Global Commission on International Migration, Global Commission on International Migration.
- AfDB (African Development Bank) (2015) 'AfDB approves US \$120-million corporate loan to Ghana Airports Company – first private sector investment in Ghana's transport sector'. www.afdb.org/en/news-and-events/article/afdb-approves-us-120-million-corporate-loan-to-ghana-airports-company-first-private-sector-investment-in-ghanas-transport-sector-14766.
- African Economic Outlook (2015) *Ghana 2015*. www.africaneconomicoutlook.org.
- Agbe, E., Löwe, A., Tembo, F., with Buffardi, A. (forthcoming 2016) *Understanding the context of the Youth Forward initiative in Ghana: A political economy analysis*. London: Overseas Development Institute.
- Ahiaga-Dagbui, D.D., Fugar, F.D.K., McCarter, J.W. and Adinyira, E. (2011) 'Potential risk to international joint ventures in developing economics: The Ghanaian construction industry experience', in Uwakweh, B.O. (ed.), *Proceedings of the CIBW 107 Conference on Innovation and Sustainable Construction in Developing Countries*. Hanoi, Vietnam, 1-3 November, 191-196. Accessed at https://pureapps2.hw.ac.uk/portal/files/497937/Final_Paper_Conference_Potential_risks_to_International_Joint_Ventures_in_Ghana.pdf on 15 July 2016.
- Ahmed, K., Hatira, L. and Valva, P. (2014) 'The construction industry in Ghana, West Africa – how can the construction industry in Ghana become sustainable?' Master's Thesis, Blekinge Institute of Technology.
- Akomah, B.B., Nimo-Boakye, A. and Fugar, F.D.K. (2010) 'Safety on Ghanaian construction sites: The role of the employer and the employee', in S. Laryea, Leiringer, R. and Hughes, W. (eds) *Proceedings: West Africa Built Environment Research (WABER) Conference*, Accra, Ghana, 27-28 July 2010.
- Arku, G. (2009) 'Housing policy changes in Ghana in the 1990s', *Housing Studies* 24(2): 261-72.
- Armah-Attoh, D. (2015), 'Ghana's Oil Revenue Management : Convergence of Popular Opinion, the Law and Practice', *Afrobarometer Policy Paper No. 19*, May 2015.
- Awuwafoye, S.A. (2013) 'Affordable housing in urban areas in Ghana: Issues and recommendations'. Research paper submitted to the Graduate School, Ball State University.
- Bank of Ghana (2007) 'The housing market in Ghana'. Accra: Bank of Ghana, Research Department.
- Bank of Ghana (2016) 'Daily interest rates'. Accra: Bank of Ghana. www.bog.gov.gh/index.php?option=com_wrapper&view=wrapper&Itemid=255.
- Boakye-Gyasi, K. and Li, Y. (2015) 'The impact of Chinese FDI on employment generation in the building and construction sector of Ghana', *Eurasian Journal of Social Sciences* 3(2): 1-15.
- Boamah, N.A. (2010) 'Mortgage market in Ghana: The past and the future', *Housing Finance International: The Quarterly Journal of the International Union for Housing Finance*, Spring.
- CEPA (Cambridge Economic Policy Associates) (2015) 'Mobilising finance for infrastructure – Ghana case study'. London: CEPA.
- China Daily (2015), 'Chinese Firm Wins \$600m Port Construction Contract in Ghana', accessed at www.chinadaily.com.cn/world/2015-04/09/content_20037004.htm on 15 July 2016.
- Construction Review (2015) 'Ghana: Tamale Airport project to need more funding'. <http://constructionreviewonline.com/2015/03/ghana-gacl-says-tamale-airport-upgrade-and-expansion-will-need-more-funding>.
- COTVET (Council for Technical and Vocational Education and Training) (2015) 'Organizational profile'. Accra: COTVET.
- Darvas, P. and Palmer, R. (2014) *Demand and supply of skills in Ghana: How can training programs improve employment and productivity?* Washington, DC: World Bank. <http://dx.doi.org/10.1596/978-1-4648-0280-5>.
- Deloitte (2013) *Deloitte on Africa*. African Construction Trends Report 2013.
- Djokoto, S.D., Dadzie, J. and Ohemeng-Ababio, E. (2014) 'Barriers to sustainable construction in the Ghanaian construction industry: Consultants perspectives', *Journal of Sustainable Development* 7(1).
- DTU (Danish Trade Union Council for International Development) (n.d.) *Ghana labour market Profile 2014*. Copenhagen: Ulandssekretariatet.
- EIU (Economist Intelligence Unit) (EIU) (2016), 'Accra airport expansion goes ahead', accessed at <http://country.eiu.com/article.aspx?articleid=1004016084> on 8 June 2016.
- Evanto (2015), 'Youth Inclusive Value Chain Analysis and Workforce Gap Assessment for the Construction Sector in Ghana', Evanto Resource Limited, Accra, Ghana.
- Foster, V. and Pushak, N. (2011) *Ghana's infrastructure: A continental perspective*. Policy Research Working Paper 5600. Washington, DC: World Bank.
- Fugar, F.D.K, Ashiboe-Mensah, N.A. and Adinyira, E. (2013) 'Human capital theory: Implications for the Ghanaian construction industry development', *Journal of Construction Project Management and Innovation* 3(1): 464-79.

- Ghana Housing Finance (2016) 'Understanding Ghana's housing finance market', accessed at www.housingfinanceafrica.org/wp-content/uploads/2016/06/CAHF_-Ghana-Housing-Finance-Newsletter-2016.06.06.pdf on 15 July 2016.
- Ghanaian Times* (2014) 'Stanbic launches diaspora mortgage product', <http://www.ghanaiantimes.com.gh/stanbic-launches-diaspora-mortgage-product>.
- GIPC (Ghana Investment Promotion Council) (2016) 'Infrastructure - Transportation'. Accra: GIPC accessed at www.gipcghana.com/invest-in-ghana/why-ghana/infrastructure/transportation-infrastructure.html on 15 July 2016.
- Government of Ghana (2010) 'National mining policy of Ghana'. Accra: Government of Ghana.
- GSS (Ghana Statistical Service) (2013) *Ghana Living Standards Survey 6 with Labour Force Module 2012/13*. Accra: GSS.
- GSS (Ghana Statistical Service) (2014) *Ghana Living Standards Survey 6*. Accra: GSS.
- ILO (International Labour Organization) (2008) 'Apprenticeship in the informal economy in Africa'. Workshop Report, Geneva, 3-4 May. www.ilo.org/public/english/employment/download/report/report1.pdf
- Institute of Statistical, Social and Economic Research (2015) *The State of the Ghanaian Economy Report 2014*, University of Ghana, Legon, Ghana.
- Jerven, M. and Duncan, M. (2012) 'Revising GDP estimates in Sub-Saharan Africa: Lessons from Ghana', *The African Statistical Journal* 25: 1-17.
- KPMG (2014) 'Sector report: Construction in Africa' accessed at www.kpmg.com/Africa/en/IssuesAndInsights/Articles-Publications/General-Industries-Publications/Documents/Construction%20in%20Africa.pdf on 15 July 2016.
- Laryea, S.A. (2010) 'Challenges and opportunities facing contractors in Ghana', in S.A. Laryea, R. Leiringer and W. Hughes (eds) *Procs West Africa Built Environment Research (WABER) Conference*, Accra, 27-28 July.
- Ministry of Education (2010) 'Assessment report of the construction industry skills demand and supply in Ghana'. Accra: COTVET.
- Ministry of Youth and Sports (2013) Ministerial impact assessment & review committee on Ghana Youth Employment and Entrepreneurial Agency (GYEEDA). Accra: Ministry of Youth and Sports. <http://datablog.peacefmonline.com/pages/blog/32/read.php>
- Moss, T. and Majerowicz, S. (2012) *No longer poor: Ghana's new income status and implications of graduation from IDA*. Washington, DC: CGD. www.cgdev.org/files/1426321_file_Moss_Majerowicz_Ghana_FINAL.pdf
- Munn, M. (2014) *Building the future: Women in construction*. London: The Smith Institute.
- MWRWH (Ministry of Water Resources, Works and Housing) (2015) 'National housing policy'. Accra: MWRWH.
- NAO (2004), *Improving Health and Safety in the Construction Industry*, Report by the Controller and Auditor General, HC 531 Session 2003-2004: 12 May 2004. NVTI (National Vocational Training Institute) (n.d.a.) 'Examinations/test'. <http://www.nvtighana.org/examinations.aspx>
- NVTI (n.d. a) 'Vocational institutions registered under NVTI'. http://www.nvtighana.org/pdf/Vocational_Centres_Registered_by_NVTI.pdf
- NVTI (n.d. b) 'Examinations / Test'. <http://www.nvtighana.org/examinations.aspx>
- Obeng-Odoom, F. (2011) 'Reforming housing management in Ghana: The role of education', *International Public Management Review* 12(1): 112-23.
- Offei-Nyako, K., Osei-Tutu, E., Fugar, F., Adinyira, E. (2014) 'Skilled Artisanal Availability in the Ghanaian Construction Industry', *Covenant Journal of Research in the Built Environment*, 1(1).
- Ofori, G. (2012) 'Developing the construction industry in Ghana: The case for a central agency'. Singapore: National University of Singapore.
- Osei, V. (2013) 'The construction industry and its linkages to the Ghanaian economy: Policies to improve the sector's performance', *International Journal of Development and Economic Sustainability* 1(1): 56-72.
- Owusuaa, D. (2012) 'Gender and informality in the construction industry in Ghana's oil city Takoradi', Master's Thesis, University of Bergen. <http://bora.uib.no/bitstream/handle/1956/6296/94830275.pdf?sequence=1>.
- Rosa Luxemburg Foundation (n.d) 'Trade unions and industrial relations in Ghana'. www.ghanatuc.org/publication.html
- Sutton, J. and Kpentey, B. (2012) 'An enterprise map of Ghana'. London: International Growth Centre.
- Tandon-Offin, P., Owusu-Ansah, A., Amewu, G., Afful, K. and Boakye, C. (2013) 'Impact investing in Ghana: Opportunities, prospects and challenges'. Accra: GIMPA.
- The Economist (2015) 'How the mighty have fallen', 20 June. www.economist.com/news/middle-east-and-africa/21654648-africas-former-jewel-struggles-regain-its-gleam-mighty-fallen.
- The Africa Report (2016) 'Ghana: Supreme Court orders voters' register cleanup'. www.theafricareport.com/West-Africa/ghana-supreme-court-orders-voters-register-cleanup.html.
- Tomlinson, M.R. (2007) 'A literature review on housing finance development in Sub-Saharan Africa'. FinMark Trust, May.
- UN-Habitat (UN Human Settlements Programme) (2011) 'Ghana housing profile'. Nairobi: UN-Habitat.
- UN-Habitat (2016), *Urbanization and development: Emerging futures*. World Cities Report 2016. Nairobi: UN-Habitat.

-
- USAID (United States Agency for International Development) (n.d.) 'USAID country profile: Property rights and resource governance: Ghana'. www.usaidlandtenure.net/sites/default/files/country-profiles/full-reports/USAID_Land_Tenure_Ghana_Profile_0.pdf on 8 June 2016.
- World Bank (2015) 'Ghana'. www.worldbank.org/en/country/ghana.
- World Bank (2016), 'World Bank Open Data', accessed at <http://data.worldbank.org/>, on 15 July 2016.
- Zhang, C. and Gutman, J. (2015) *Aid procurement and the development of local industry: A question for Africa*. Global Economy and Development and Working Paper 88. Washington, DC: Brookings Institute.

Appendix 1. List of interviewees

Organisation	Interview date
African Concrete Products	15 October 2015
Artisans Association of Ghana	2 November 2015
Association of Building and Civil Engineer Contractors of Ghana	2 November 2015
Association of Road Contractors	14 October 2015
Batimat Gh. Ltd	5 November 2015
Building and Road Research Institute	30 October 2015
Comet Properties Ltd	6 November 2015
Consar Ltd	16 November 2015
Council for Technical and Vocational Education and Training	3 November 2015
Federation of Associations of Ghanaian Exporters	12 November 2015
Ghacem	16 October 2015
Ghana Business and Finance Magazine	19 October 2015
Ghana National Association of Vocational and Technical Institutes	2 November 2015
Gibson Construction	3 November 2015
Ghana Real Estate Development Association	12 November 2015
Helmet News	6 November 2015
Lakeside Estates	5 November 2015
Ministry of Employment and Labour Relations	4 November 2015
Ministry of Water Resources, Works and Housing	4 November 2015
National Vocational Training Institute	2 November 2015
Opportunity Industrialization Centre	6 November 2015
Proko Ghana Ltd.	14 October 2015
Saitama Enterprise	6 November 2015
Taysec Ltd.	15 October 2015
Young Surveyor's Organisations	12 October 2015

Appendix 2. Artisans Association of Ghana: focus group discussion participants

Name	Gender	Job
Nicholas	Male	Electrical Engineer
Has	Male	Fabricator
Kojo	Male	Mason
Alfred	Male	Electrical Technician
Abednego	Male	Electrician
George	Male	Mason
Gameli	Male	Electrician
Paul	Male	Carpenter
Ofori	Male	Plumber



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