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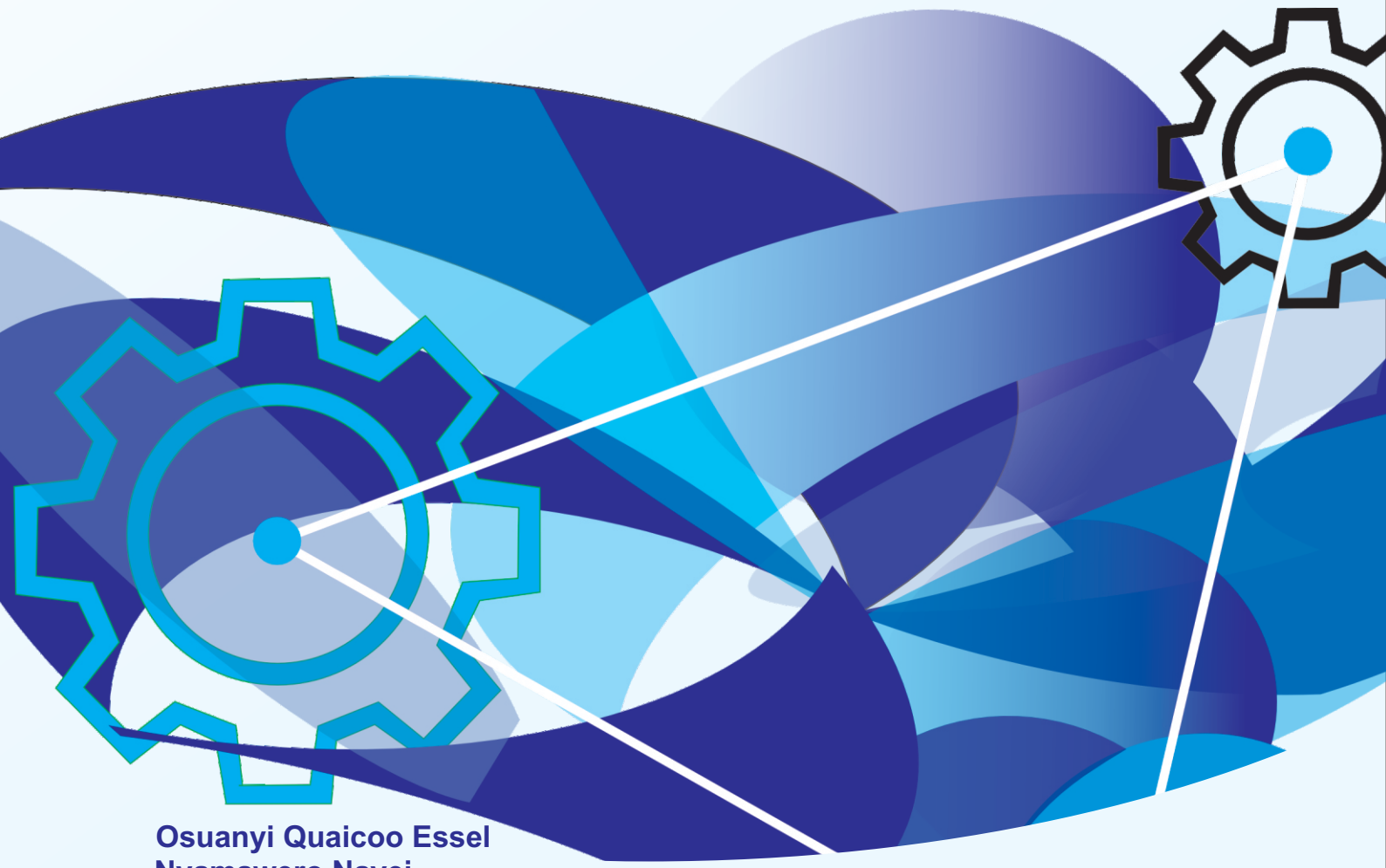
CeRCCA
CENTRE FOR RESEARCH IN CULTURE AND CREATIVE ARTS

TOWARDS A SUSTAINABLE

NATIONAL APPRENTICESHIP PROGRAMME: Proposed Model & Implementation Guidelines for Ghana



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ABOUT US

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CONTENTS

LIST OF FIGURES

ABBREVIATIONS & ACRONYMS

Abbreviation	Full term
AASNs	Australian Apprenticeship Support Network
ASSDC	Agriculture Sector Skills Development Council
CATC-SSDC	Creative Arts, Tourism, & Culture Sector Skills Development Council
CBT	Competency Based Training
CMI	Chartered Management Institute
COTVET	Council for Technical and Vocational Education and Training
CTVET	Commission for Technical and Vocational Education and Training
DAC	District Apprenticeship Council
DACF	District Assemblies Common Fund
EMA-SSC	Electrical, Mechanical, and Automotive Skills Council
GEPA	Ghana Export Promotion Authority
GES	Ghana Education Service
GNCCI	Ghana National Chamber of Commerce and Industry
GTO	Group Training Organisations
GETFund	Ghana Education Trust Fund
ILO	International Labour Organisation
ICT-SSC	ICT and Digital Skills Development Council
IM-SSDC	Industrial & Manufacturing Sector Skills Development Council
KPI	Key Performance Indicators
MIS	Management Information Systems
MoCDTI	Ministry of Communication, Digital technology and Innovation
MoE	Ministry of Education
MoYS	Ministry of Youth and Sports
MoTI	Ministry of Trade and Industry
MoTAC	Ministry of Tourism, Arts and Culture
MELR	Ministry of Employment and Labour Relations
MCPs	Master Craft Persons
MMDAs	Metropolitan, Municipal, and District Chief Executives
NAC	National Apprenticeship Council
NAP	National Apprenticeship Policy
NEET	not in employment, education, or training
NGOs	Non-Governmental Organization
NVTI	National Vocational Training Institute
NYA	National Youth Authority
NTVETQF	National Technical Vocational Education Quality Framework
RAC	Regional Apprenticeship Council
SETAs	Sector Education and Training Authorities
SSDCs	Sector Skills Development Councils
SR-SSC	Service & Retail Skills Council
VPET	Vocational and Professional Education and Training

DEFINITION OF TERMS

Term	Definition
Agripreneurship	It involves wide range of entrepreneurial skills set in the field of agriculture and agribusiness which apprentices could pursue
Informal sector	It includes e conomic activities outside formal regulatory frameworks, as well as artisanal trades.
Master craftperson	Skilled artisan certified by CTVET to train apprentices.

EXECUTIVE SUMMARY

Ghana's persistently high youth unemployment rate (32.8% among 15-24-year-olds), juxtaposed with a 69.8% literacy rate, underscores a critical misalignment between education and labour market demands. This disparity is exacerbated by systemic underutilisation of the informal sector, which has the potential to employ over 80% of the workforce yet remains plagued by fragmented silo apprenticeship systems. Existing informal apprenticeship systems in Ghana lack standardised curricula, quality assurance, and a nationally recognised certification framework. Instead, it rely on non-portable credentials such as master's and association testimonials, stifling economic mobility and perpetuating marginalisation. Compounding these issues are variable trainer competencies, poor workplace conditions, financial barriers, and lack of governmental support to the teeming youth who opt for informal apprenticeship. In an attempt to address these gaps, this qualitative multiple-case study analyses selected global apprenticeship frameworks, from Europe, Asia, and Africa, to propose a culturally attuned National Apprenticeship Programme (NAP) for Ghana.

International case studies reveal successful national apprenticeship programmes hinged on robust legislation, decentralised governance, industry-aligned curricula, and a sustainable funding framework. Inspired by these models, the proposed NAP advocates legislative reforms to amend Ghana's National Vocational Training Act (Act 351) 1970 and the Education Regulatory Bodies Act (Act 1023). Key amendments include restructuring the Commission for Technical and Vocational Education and Training (CTVET) to oversee decentralised apprenticeship councils at national, regional, and district levels, ensuring localised implementation and accountability.

Central to the proposed NAP is a four-tier governance framework: CTVET as the apex body, Sector Skills Development Councils (SSDCs), Regional, and District governing Councils. CTVET, comprising a representative each from 8 ministries, the private sector, and civil society representatives, should harmonise policies and disburse funding from a proposed National Apprenticeship Fund (NAF). This proposed statutory fund is to draw 80 – 90% of its resources domestically, and ensure the sustainability of the National Apprenticeship Programme. Sector Skills Development Councils (SSDCs) under the proposed organisational structure would be responsible for collaborating with industries to design competency-based curricula, while decentralised councils will target the inclusion of marginalised groups (at least 40% for women, rural youth, and persons with disabilities).

The NAP prioritises practice-based training for the informal sector, anchored by a National Proficiency Certification system that validates skills through field practical (hands-on) assessment. To incentivise participation, apprentices should be given monthly stipends (at least GH₵200), and training toolkit during and after the training to enable them ply their acquired trade skills and or setup the small businesses. Master Craft Persons (MCPs) equally need financial and logistical support, alongside capacity-building initiatives, while employers hiring apprentices should benefit from tax rebates. A digital monitoring platform should track enrolment, certification, and employment outcomes, fostering transparency and adaptive policymaking.

Phased implementation of NAP aims to train 800,000 apprentices annually, targeting a reduction in youth unemployment from the current 32.8% to a single-digit rate by 2030. The NAP seeks to enhance productivity, stimulate GDP growth, and reclaim Ghana's “golden apprenticeship” heritage by bridging formal and informal skills ecosystems. Success hinges on bipartisan legislative support, stakeholder collaboration, and rigorous monitoring to evaluate economic impact and employer satisfaction. This integrated approach not only addresses systemic inefficiencies but positions Ghana as a regional leader in leveraging traditional apprenticeship systems for inclusive, innovation-driven development. By decolonising vocational training and aligning it with global best practices, the NAP offers a transformative pathway to reduce poverty, empower marginalised communities, and catalyses sustainable economic transformation. The time for action is now; Ghana's future workforce in the informal sector depends partly on NAP.

1. INTRODUCTION AND CONTEXT

Unemployment, literally, is a stinking, ugly and detrimental phenomenon, and when its notorious head emerges, it must be decapitated by all means. On individual level, Ahn, García and Jimeno (2004), see unemployment as one of the most damaging and devastating human experiences, and many a time leads to brain drain, skills atrophy, hysteresis, discontent (International Labour Organization, 2024), and at worst suicidal tendencies (Amissah & Nyarko, 2017). Nationally, unemployment leads to vulnerabilities, poverty, social unrest, and crime, creating a breeding ground for national insecurity (International Labour Organisation, 2024; Umoh, 2024; Negera, 2024; Niyongabo & Zhong, 2023; Amissah & Nyarko, 2017; Ahn, García & Jimeno, 2004). It undermines sustainable development, destabilises national economies, weakens governance systems, and erodes social cohesion (International Labour Organisation, 2024; Umoh, 2024; Negera, 2024; Niyongabo & Zhong, 2023). Notwithstanding the numerous dangers associated with unemployment, Ghana is among the many developing nations where unemployment is alarming. In Ghana, youth unemployment and underemployment are critical hiccups that are bedevilling national development. Despite sustained investments in education, technical and vocational training, recent 2021 population and housing Census data (Ghana Statistical Service ,2022) indicate a whopping 13.4% national unemployment rate, with higher females (15.5%) than males (11.6%) unemployment rates. However, in the 2023 annual household income and expenditure survey (Labour Statistics 2023 Quarter 3 Bulletin), Ghana Statistical Service (2024a) indicates that the national unemployment rate of Ghana witnessed an upward increase to 14.7%, whereas male and female unemployment rates for 2023 (1^{st}-3^{rd} quarter) averagely stand at 10.9%, and 17% respectively (Ghana Statistical Service (2024b). Another worrying development observed in the 2021 population and housing census conducted by the Ghana Statistical Service is that among the population 15-35 years, the unemployment rate is 19.7 per cent, and is even much higher (32.8%) for young adults 15-24 years (Ghana Statistical Service, 2022).

Meanwhile, Ghana is said to have a formidable educational system ranging from basic schools, senior high schools, technical institutes to colleges, technical, and university levels, with all churning out increasing numbers of graduates with diverse expertise and skills for the job market. The Ghana Statistical Service (2022) pegs the national literacy rate at 69.8% (74.1% Male & 65.6% female). For instance, in a UNESCO report, Salifu, Mark, Abednego and Eric (2022) reveal that the total tertiary student enrolments for public universities; technical universities; public colleges of education; private universities; private colleges of education; public specialised institutions; public nursing, midwifery, and allied health training colleges; private nursing, midwifery, and allied health training colleges; colleges of agriculture, and all tertiary distance and sandwich enrolments increased from 547,045 in 2019/2020 to 580,751 in 2020/2021 academic year, indicating an enrolment increase of 6%. Should this trend continue, Ghana tertiary students' enrolment will hit about a million by 2030. Additionally, Ghana has a formal vocational and training system, managed by institutions such as the National Vocational Training Institute (NVTI) under the auspices of the Commission for Technical and Vocational Education and Training (CTVET). The prioritised competency-based training (CBT) provided by NVTI and CTVET is aligned with industry standards for ease of employment (Ministry of Education, 2020; CTVET, 2011). The paradox, then, is that Ghana,

despite having a robust educational system that continually produces a growing number of graduates yearly, struggles with a soaring unemployment rate that undermines the very development its education aims to foster. Where did the nation get it wrong? What is the way forward in curbing the surging unemployment rate in Ghana?

Strong arguments have been advanced that the national neglect of the informal sector, which shoulders the largest proportion of employment avenues (Baah-Boateng, 2013; Osei-Boateng & Ampratwum, 2011), is the major reason behind the unemployment crisis in Ghana. This sector consists of proprietary micro- and small-scale enterprises such as producers, wholesalers, retailers, and intermediary service providers along the value chain, such as suppliers of raw materials to manufacturers on a contractual basis, as well as consumers. Osei-Boateng and Ampratwum (2011) observe that more than 80 per cent of Ghana's employment avenues readily abound in the informal sector. However, the nation is not adequately exploiting this sector to avert the insurgency of unemployment in Ghana. Baah-Boateng (2013) explains that an increasing number of job seekers with basic and secondary education in Ghana are unwilling to accept the readily available employment vacancies in the informal sector, making them remain unemployed while looking forward to securing white-collar jobs, which they only find acceptable. The issue of skills mismatch is also prevalent in Ghana, contributing to the high unemployment rate in the country (Hardy, Mbiti, McCasland & Salcher, 2019a). Deliberate programming and revitalisation of the nation's golden apprenticeship system are necessary to address the misperception about the informal sector and the issue of skills mismatch. The recent development of a comprehensive national apprenticeship policy in Ghana (Ministry of Education, 2020) affirms the importance of apprenticeships not only in skills development but also as a strategic way to curb the rising unemployment rate in Ghana. The national apprenticeship policy of Ghana aims to create a unified system for apprenticeships that benefits both formal and informal sectors, focussing on improving livelihoods and economic growth while ensuring fairness, inclusivity, gender equality, career guidance, learning, and quality.

The fall for a national apprenticeship policy as a cornerstone to curbing unemployment in Ghana aligns with many empirical studies, which consensually affirm that apprentices have better access to employment than school graduates (Ministry of Education, 2020; Cahuc & Hervelin, 2020; Hardy et al., 2019a; 2019b). Therefore, Hardy et al. (2019a) explain that, by providing on-the-job training to many of the unemployed, apprenticeships could overcome both the skill mismatch and the lack of relevant employment experience that impedes youths in the Ghanaian labour market. Affirming the significance of apprenticeship in addressing the surging unemployment rate in Ghana, various initiatives, including a policy roadmap, have over the years been rolled out by the government of Ghana through National Vocational Training Institutions and the Council for Technical and Vocational Education and Training (CTVET, 2021; Ministry of Education, 2020; CTVET, 2011). Robust legal frameworks underpin these national apprenticeships and vocational and technical training establishments. For instance, the 1961 Apprentices Act of Ghana (Act 45) established an Apprentices Board to coordinate and regulate matters relating to apprentices. Additionally, the National Vocational Training Act, (Act 351 of 1970), and the National Vocational Training Regulations (Executive Instrument 15) not only repealled Act 45 but were also changed to require companies to set up apprenticeship programmes if they have a technical business. This legislation mandates employers to offer competency-based training to their employees, which is essential for job performance and career advancement. Furthermore, the Council for Technical and Vocational Education and Training (COTVET) was established by ACT 718 (2006) with specific objectives of

formulating policies for skills development across the broad spectrum of pre-tertiary and tertiary education and formal, informal, and non-formal sectors (CTVET, 2021; Ministry of Education, 2020). In 2012, a Legislative Instrument 2195 was passed to reinforce COTVET's role as a national body to coordinate and oversee all aspects of technical and vocational education and training in Ghana (CTVET, 2021; Ministry of Education, 2020). To further enhance skills development nationally through apprenticeship, COTVET in 2017, developed a national apprenticeship strategic plan to provide general guidance and direction on apprenticeship and skill development, in which a Competency-Based Training for TVET delivery was adopted (CTVET, 2021; Ministry of Education, 2020). Another progress made by Ghana was the establishment of the Commission for Technical and Vocational Education and Training (CTVET) in 2020 under the Education Regulatory Bodies Act (ACT 1023), which repealed ACT 718 (2006), replacing COTVET with CTVET. CTVET, under ACT 1023, is now in charge of what COTVET used to do, which is to create rules for skills development in all types of education, including schools and colleges, as well as in both formal and informal training sectors, to encourage change and sustainable growth.

A cursory consideration of the aforementioned legal regimes suggests that Ghana has a robust legislation system that provides clear institutional guidelines on apprenticeship for youth employment. Although robustly stated on paper, the national apprenticeship legislation efforts in Ghana appear more directed at formalised technical and vocational training institutions (NVTIs), leaving out the largest population of youth eligible for skills training in informal establishments. This is because the report by CTVET (2021) indicates that only 18,048 master craftspeople and apprentices of the informal sector had been given competency-based training between 2017 and 2021, translating to an average of approximately 3,610 individuals trained annually. This figure is negligible considering the youthful nature of Ghana's population (Ghana Statistical Service, 2022) and the fact that the vast nature of Ghana's informal sector has the potential to provide over 80% ready jobs (Baah-Boateng, 2013; Osei-Boateng & Ampratwum, 2011). Therefore, a well-structured national apprenticeship programme could potentially train hundreds of thousands of individuals annually in the informal sector. The neglect of the informal sector apprenticeship appears to contribute to Ghana's high youth unemployment rate of 32% (Ghana Statistical Service, 2022). There is, therefore, the urgent need for the development of a national apprenticeship programme not only to decisively tackle this age-old marginalised informal sector but also to promote massive youth employment in Ghana.

This is imperative because Ghana’s legal and policy frameworks that outline institutional guidelines for apprenticeship and youth employment predominantly focus on formalised technical and vocational training institutions, such as those under the National Vocational Training Institute (NVTI). Consequently, the majority of young people eligible for skills training in informal settings remain underserved. This suggests that despite the existence of numerous legal and policy frameworks, their practical implementation does not sufficiently address the needs of the informal apprenticeship sector, which constitutes a significant portion of the labour market.

Institutional fragmentation further hinders Ghana's apprenticeship ecosystem. Multiple agencies, including NVTI, CTVET, and the Youth Employment Agency (YEA) among others, operate in silos, leading to duplicated programmes with not many success stories to tell. For instance, on March 13, 2024, the previous government of Ghana, through the vice president, launched the GH¢800 million

Ghana Apprenticeship Programme. This silo governmental initiative, financed by the World Bank and Germany's KfW Development Bank, aimed to equip 50,000 unemployed graduates and craftspeople with practical, industry-relevant skills (Nunoo, 2024). However, concerns persist regarding the programme's reliance on external funding and its narrow scope of coverage. Ultimately, the absence of a comprehensive, holistic, and Ghanaian-centric apprenticeship roadmap undermines its long-term sustainability. Such limitations hinder the initiative's capacity to systematically address Ghana's rapid unemployment challenge. Without a comprehensive apprenticeship framework and its implementation, the nation risks perpetuating cycles of underemployment, stagnant economic growth, and excessive unemployment rates, which have enormous negative consequences for the country.

Therefore, Ghana needs to formulate a comprehensive National Apprenticeship Programme (NAP) to bridge this gap. Such a programme would not only serve as a strategic response to Ghana's rising unemployment crisis but also provide a streamlined and coordinated roadmap that reduces institutional redundancies and optimises funding for a more pragmatic national apprenticeship system to provide diverse opportunities for economic empowerment for the teeming Ghanaian youth. This proposal addresses the lacuna conceived in the national apprenticeship policy of Ghana, which states that “an apprenticeship implementation manual shall be developed to provide a comprehensive mechanism for operationalisation of this policy” (Ministry of Education, 2020, p. 6). Given this context, developing a comprehensive apprenticeship programme is essential for effectively implementing Ghana's national apprenticeship policy, as it will significantly contribute to national development by enhancing the country's GDP and strengthening its overall economic landscape.

1.1 Research Objectives

This study therefore sought to:

i. analyse selected international best apprenticeship programmes globally, focusing on Europe, Asia, Africa, and North America to identify transferable lessons and strategies for Ghana.
ii. propose a comprehensive national apprenticeship programme for Ghana.

2 GLOBAL PERSPECTIVES ON APPRENTICESHIP PROGRAMMES: A THEORETICAL REVIEW

2.1 Theoretical Frameworks

This proposition of a comprehensive National Apprenticeship Programme for Ghana is grounded on the frameworks of Human Capital Theory (HCT) and the system theory (ST).

2.1.1 Human Capital Theory

Human Capital Theory (HCT) has a long history. Teixeira (2014) argues that the general notion of human capital predates the eras of World Wars I and II. However, the deliberate use of metaphors such as human capital or human wealth to portray the economic effects of education and training only crystallised into a research construct by the late 1950s (Teixeira, 2014). Subsequently, the coherent development of human capital into a theoretical framework is generally attributed to the seminal works of Theodore Schultz (Schultz, 1961), and Gary Stanley Becker (Becker, 1964; 1962). Notwithstanding that, the current discourse aligns with Becker's (1964) rigorous theorisation of human capital to mean that individuals and societies strategically invest in education, training, and health to boost productivity, mirroring investments in physical capital. Such theoretical views of Becker hinge on rational cost-benefit analyses, wherein immediate expenditures are weighed against anticipated economic returns, including enhanced employability, higher wages, and broader societal prosperity (Matache, 2023; Becker, 1964). In furtherance, HCT relates to a set of skills that the workforce possesses through deliberate investment in education and training (schooling or on-the-job training), ensuring labour efficiency, individual prosperity, and economic growth (Matache, 2023; Teixeira, 2014; Becker, 1993; 1964; 1962). Therefore, the study draws explicitly on Becker's human capital theoretical framework (Figure 1), to advocate for a National Apprenticeship Programme (NAP) in Ghana, designed to address systemic skills deficits within the informal sector, a critical yet underdeveloped pillar of the nation's economy.

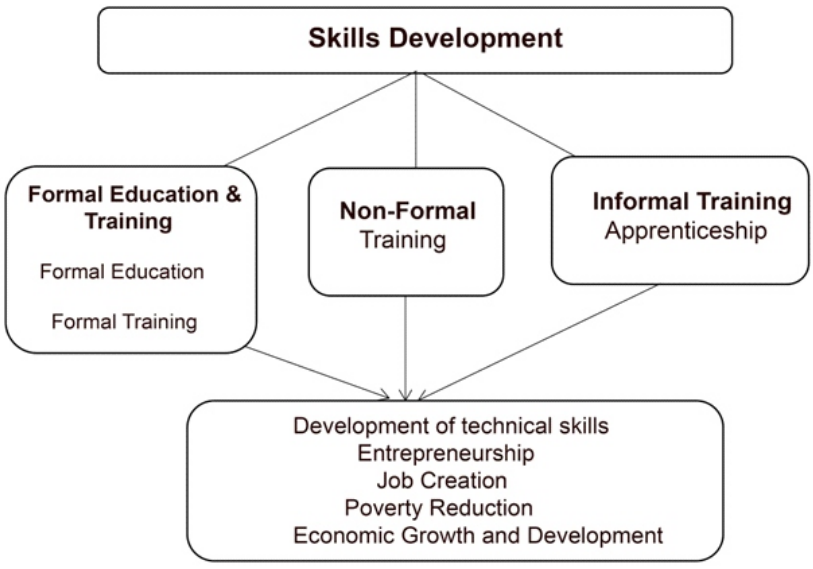

Figure 1: Human Capital Development Theory (Source: Korang, 2021).

In many developing countries, such as Ghana, human capital development (skills development) generally emanates from formal educational training, non-formal training, and informal training, also known as apprenticeship (Korang, 2021). This buttresses the criticality of apprenticeship in developing entrepreneurs with the required skills and expertise for economic growth, job creation, poverty reduction and as depicted in Figure 1 (Korang, 2021). Therefore, the proposed NAP seeks to operationalise the tenets of HCT, which prioritise a structured, industry-aligned apprenticeship system to foster labour efficiency, self-employment avenues, and economic diversification. The envisioned holistic nature of NAP tends to prioritise on-the-job training with targeted skill development, which aligns with HCT's emphasis on deliberate human capital investment as a catalyst for individual advancement and economic growth. Ultimately, the NAP aspires not merely to mitigate youth unemployment through apprenticeship but to stimulate innovation and productivity within Ghana's formal and informal sectors through comprehensive investment and training modalities that ensure labour efficiency, individual prosperity, employment avenues, economic growth, and significantly reduce poverty, translating Becker's theoretical insights into pragmatic, developmental outcomes for Ghana.

2.1.2 Systems Theory

Systems Theory (ST), propounded by Ludwig von Bertalanffy, examines the interrelations among components within a system (Bertalanffy, 1968). Applying ST to National Apprenticeship Programme (NAP) for Ghana ensures coherence among stakeholders, such as the three arms of government (executive, legislative and judiciary) ministries, agencies, key operatives within the various economic sectors of the formal and informal sectors, training providers, apprentices among others which have critical parts to play as clarified by scholars (Arnold, Kleve & Pieper, 2024; Emmanuel, 2023; Chikere & Nwoka, 2015; Friedman & Allen, 2011).

Guided by the system theory observed in Figure 2, the proposition of a comprehensive National

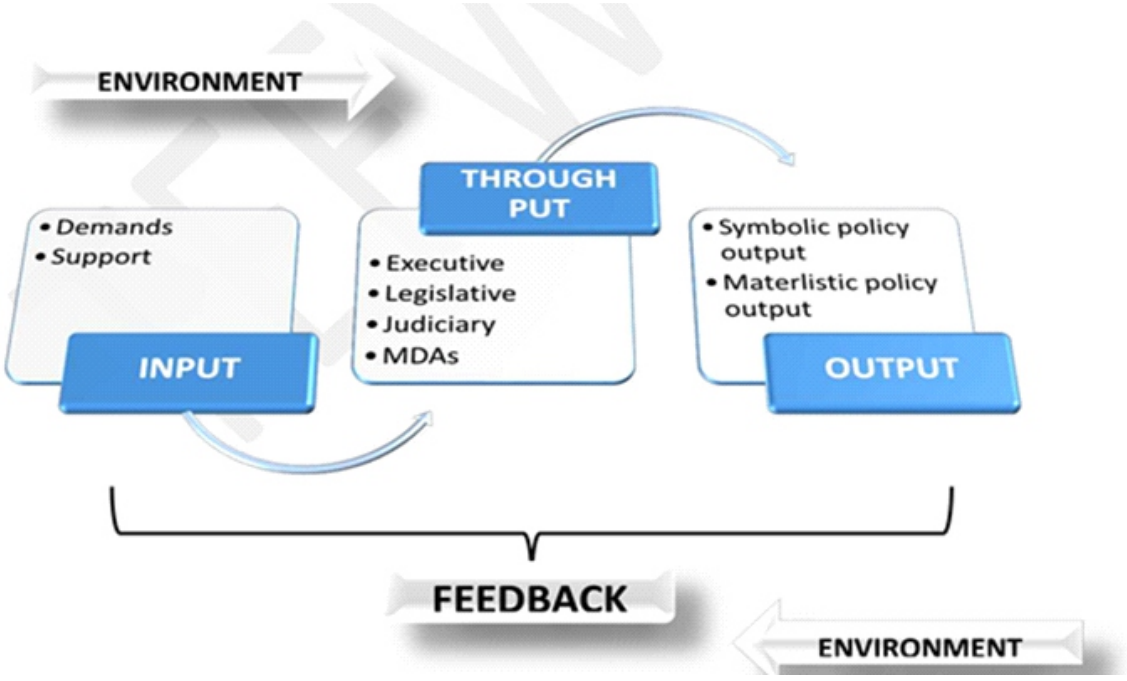

Figure 2: System Theory (Source: Emmanuel, 2023).

Apprenticeship Programme (NAP) for Ghana aims to develop skilled labour (Goal) for Ghana. Inputs component of system theory encompass resources like demands, funding, infrastructure, and stakeholder support. Throughput involves structured training, policy frameworks, and political systems to transform resources into deliverables. This includes the active involvement of key arms of government, such as the executive, legislature, ministries, departments and agencies, from policy implementation, legislative amendment, implementation and enforcement of enacted laws for the actualisation of the national apprenticeship programme in Ghana. The output stage is the fourth section of the system theory (Figure 2). When the necessary laws for NAP are enacted, they become legally binding. This is the stage where policy implementation comes in. The policies formulated will now be implemented or carried out. With Feedback, evaluation mechanisms will have to be proposed to refine the programme through iterative programme improvements (Emmanuel, 2023; Chikere & Nwoka, 2015; Friedman & Allen, 2011). For instance, industry feedback on apprentice performance can refine the programme, ensuring responsiveness to market needs. Also, evaluation measures objective attainment, aligning deliverables with national development targets (Emmanuel, 2023). The environment includes Ghana's socio-economic and labour market dynamics, which are key elements to consider in NAP's proposition. Generally, the system theory addresses sustainability by advocating responsibility and resource-sharing mechanisms (Arnold, Kleve & Pieper, 2024; Emmanuel, 2023; Chikere & Nwoka, 2015; Friedman & Allen, 2011) among all parts of the whole (apprenticeship system in Ghana), such as public-private partnerships, crucial for scaling NAP nationally.

Integrating Human Capital Theory (HCT) and Systems Theory (ST) provides a suitable and robust dual framework for the proposed National Apprenticeship Programme for Ghana. HCT justifies targeted investments in skills development to enhance productivity and economic growth, while ST ensures stakeholder collaboration, adaptive feedback loops, and sustainable responsibility and resource sharing. Together, they provide a holistic framework to address skills deficits, foster employment, and drive inclusive economic transformation in Ghana's informal sector.

2.2. Historical Evolution of the Apprenticeship System in Ghana

Apprenticeship is historically embedded in the Ghanaian sociocultural, economic and occupational systems since time immemorial, empowering livelihoods and preserving ethnic artistic repositories for posterity. This review attempts to synthesise the historical trajectory of apprenticeship in Ghana, touching on its pre-colonial roots through the colonial era and into contemporary practice, highlighting the trends and transitions in practice, societal expectations and policy reforms in the sector.

2.2.1 Ghana's Pre-Colonial Apprenticeship System

In Ghana, apprenticeship predates colonialism, serving the country's indigenous educational needs holistically. A plethora of historical studies affirm that apprenticeship, as a primary mode of education, was deeply embedded in the indigenous Ghanaian cultural framework well before the colonial intrusion (Boadu, 2021; Amrago, Dachniewski & Danquah, 2020; Essel, 2019; Liadi & Olutayo, 2017; Anokye & Afrane, 2014; Ahadzie, 2009). Essel (2019) argues that the Ghanaian apprenticeship system is the people's indigenous formal education. This suggests that apprenticeship is a formal system of indigenous education and training in Ghana and should not be misconstrued as being informal. Through this system, societal knowledge and specialised vocational and economic skills were transmitted from experienced elders and relatives to younger

generations (Boadu, 2021; Essel, 2019; Anokye & Afrane, 2014; Ahadzie, 2009). Ahadzie (2009) further notes that the historical development of apprenticeship in West Africa shows a different trajectory from that of the systems in Europe and other continents, making the indigenous African (Ghanaian) apprenticeship uniquely robust in addressing the local needs of the people. Unlike the Western formal education system in Ghana, the apprenticeship system is typically linked to the informal sector due to its unstructured nature, specifically community-based, and tailored to addressing the specific needs of the society (Boadu, 2021; Amrago, Dachniewski & Danquah, 2020; Anokye & Afrane, 2014; Ahadzie, 2009). The notable trainers of the apprenticeship system in Ghana are primarily parents, family members (kinship), and community members, with the mode of instruction being observation and practice-led. According to Boadu (2021), children regularly accompany their parents to the marketplaces, farms, and other places of work where they directly learn under the instructions of their parents. With the indigenous Ghanaian apprenticeship system, parents are primarily responsible for ensuring that their children learned essential moral behaviours that accord with societal standards and acquire practical vocational skills through observation and learning by doing (Boadu, 2021). Studies further corroborate that training and skills acquisition are largely through observation of the master or experienced person and practising what has been observed (Amrago, Dachniewski & Danquah, 2020; Liadi & Olutayo, 2017). Generally, agreement between the master and apprentice is either formal or verbal and in addition, the payment of a certain amount of money or items, binding the apprentice to the master for two to three years (Amrago, Dachniewski & Danquah, 2020). Local industries underpinned by apprenticeship include but are not limited to carpentry, architecture, carving, metalwork, dressmaking, pottery, beadwork/jewellery, farming, beekeeping, animal rearing, hairdressing, cooking, and hunting. Apprentices learned not only the technical aspects but also the ethical values and social norms associated with the vocation, making the indigenous Ghanaian apprenticeship system an integral part of community identity and social cohesion (Ahadzie, 2009), pivotal in dealing with unemployment in communities across the country. Importantly, the indigenous Ghanaian apprenticeship system, pivoted on a community-centred approach, ensures the preservation of essential skills that promote local economic development for all community members.

2.2.2 Colonial Invasion and its Impact on Ghana's Apprenticeship Systems

The invasion of colonialists in the late 19th and early 20th centuries, and their imperialists' rule reconfigured Ghana's sociocultural, political and economic structures, including its indigenous apprenticeship systems. This was the era when the colonialists “imposed on us an alien and abstract form of education” (Flolu, 2000, p. 25). The time-honoured indigenous Ghanaian apprenticeship systems, which were embedded in familial, kinship and communal networks of transmitting artisanal and vocational skills such as weaving, basketry, carving, bead and jewellery work, metalsmithing, pottery and others were significantly influenced by the colonialists in the purported name of economic modernisation (Boadu, 2021; Wiafe, 2021; Rattray, 1931; Flolu, 2000). Some of the indigenous Ghanaian vocations were demonised by the colonialists, particularly traditional arts (Edusei, 2004; Flolu, 2000). Edusei (2004) elucidates that colonial missionary of the period disapproved of art education, perceiving it as a field inextricably intertwined with indigenous Ghanaian culture, which they deemed paganistic, primitive, and fetishistic. The demonisation and exclusion of vital elements of Ghana's foundational indigenous apprenticeship system from the colonial missionaries' school curricula precipitated a profound decline in this traditional framework.

When the colonial authorities eventually recognised the need to integrate skills training into school curricula to advance their industrialisation agenda in Ghana, the initiative was hastily implemented under the guise of a "hand and eye training" curriculum. The 1908 hand and eye programme, framed as an industrial instruction strategy, included areas such as carpentry, boot and shoe-making, printing, bookbinding, masonry, tailoring, metalwork, coopering, and basket and mat-making (Colonial Office, 1909). Specialised carpentry workshops were established in Wesleyan schools at Tarkwa, Aburi, and Accra, as well as in the Roman Catholic School at Axim (Colonial Office, 1909). However, this approach of training a select few Ghanaians in fields prioritised by colonial interests, coupled with the pervasive influence of colonial activities across the country, which marginalised indigenous Ghanaian traditional sectors, significantly eroded respect for traditional apprenticeship systems. Ghana's colonial-era apprenticeship system prioritised modern industrialised training for a select few Ghanaians, undermining indigenous vocational sectors, to advance the self-seeking colonial industrialisation agenda. This systemic shift precipitated a decline in Ghanaians' traditional indigenous apprenticeship systems.

2.2.2 Ghana's Post-Colonial Apprenticeship System

Following Ghana's independence in 1957, there have been efforts to restore, if not balance, the indigenous Ghanaian authentic vocations in the prevailing colonial modernity to holistically address the needs of the locals in terms of job provision, economic emancipation and cultural identity restoration. Flolu (2000, p. 25) puts it best when he axioms that “since independence, educators in Ghana have been faced with the puzzle of how to break away from the colonial legacy and develop an educational system that will reflect the peculiar characteristics of Ghanaian culture”. Successive governments have attempted to integrate traditional apprenticeship methods with formal education under the technical vocational training (TVET) programme (as observed in Figure 3). Empirical records from the 1970s up to date indicate that while state-sponsored TVET institutions expanded rapidly, traditional apprenticeship remained a significant pathway for many

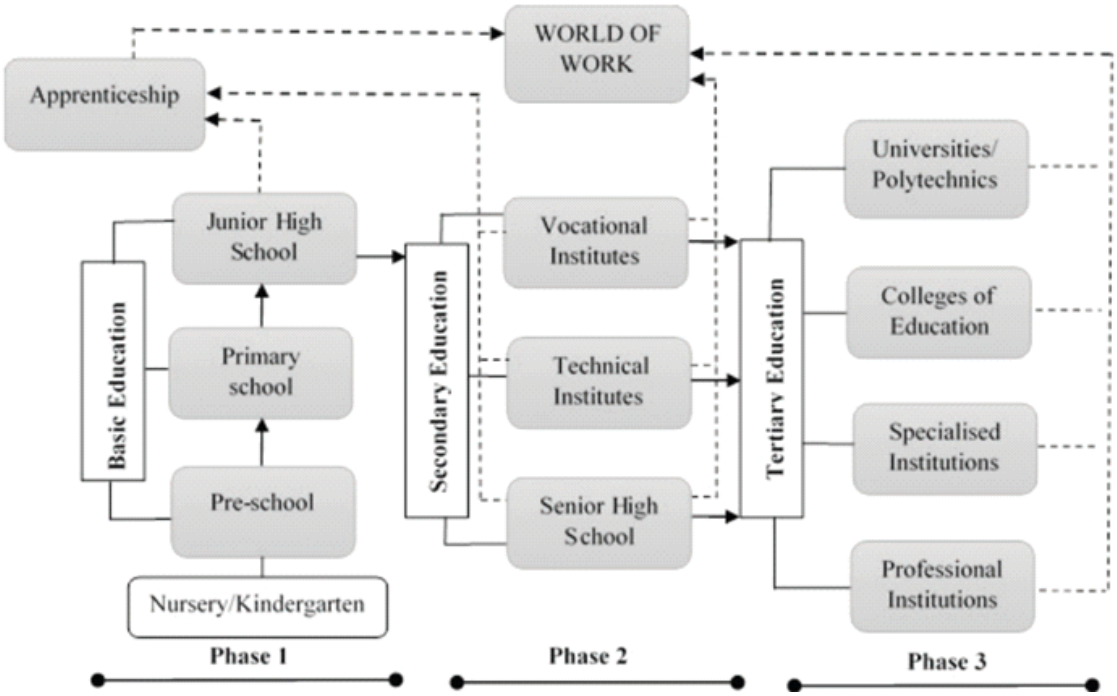

Figure 3: Structure of education in Ghana (Boadu, 2021).

who could not access Western formal education due to financial, geographic and/or other constraints (Ministry of Education, 2017). The integration of apprenticeship into the broader national development framework was characterised by both policy support and structural challenges, as policymakers grappled with the need to standardise skills while preserving indigenous knowledge (UNESCO-UNEVOC, 2013).

The diagram in Figure 3 shows the structure of Ghana's post-colonial education (Boadu, 2021). It is observed that, although Ghana's postcolonial education system (Figure 3) incorporates the apprenticeship system into the formal school framework, it is, however, silent on the informal apprenticeship system. This suggests a marginalisation of the indigenous Ghanaian apprenticeship systems, where Ghanaians who do not attend school are left out of benefiting from national skills training opportunities. A national apprenticeship programme is therefore required to holistically prioritise both formal and informal apprenticeship systems in Ghana to tackle the country's high unemployment rate, alleviating poverty and boosting the GDP of the country.

2.2.2.1 Apprenticeship and TVET Frameworks in Postcolonial Ghana

Ghana's apprenticeship and Technical and Vocational Education and Training (TVET) systems are underpinned by a complex interplay of legislative frameworks, institutional structures, and policy reforms aimed at addressing youth unemployment and skills development. This section examines the existing legislative and policy frameworks, recent TVET reforms, the roles of key institutions, and the challenges facing the National Apprenticeship Policy, contextualising their impact on Ghana's socio-economic landscape.

2.2.2.1.1. Postcolonial Legislative, Policy and Institutional Frameworks for Apprenticeship

Ghana's apprenticeship systems, both formal and informal, have evolved significantly since independence, anchored on a robust legal architecture designed to institutionalise skills training with the primary aim of addressing skills gaps and unemployment. The Apprentices Act of Ghana (Act 45, 1961) established an Apprentices Board to coordinate and regulate matters relating to apprentices. However, it was repealed by the coming into force of the Vocational Training Act (Act 351) of 1970, and its accompanying Executive Instrument 15, which laid the foundation for formal apprenticeship systems in Ghana by mandating employers to establish competency-based training schemes (Ministry of Education, 2020). This legislation emphasised formalised technical training through established institutions like the National Vocational Training Institute (NVTI), which remains pivotal in certifying artisans (CTVET, 2011). Another post-colonial legal reform of Ghana's apprenticeship system was the establishment of the Council for Technical and Vocational Education and Training (COTVET) under Act 718 (2006), tasked with harmonising policies across formal, informal, and non-formal education sectors (CTVET, 2021). Subsequent frameworks, including the Legislative Instrument 2195 (2012), reinforced COTVET's mandate to standardise apprenticeship curricula and accreditation. In 2020, the Commission for Technical and Vocational Education and Training (CTVET) was established under the Education Regulatory Bodies Act (Act 1023), repealing Act 718 (2006) and replacing COTVET with CTVET. CTVET has a broad scope of regulating and innovating TVET for sustainable development (CTVET, 2021).

In furtherance, a comprehensive national apprenticeship policy of Ghana was developed in 2020 (Figure 4) to harmonise apprenticeship practices in Ghana, bridge skills gaps, enhance

employability, and drive socio-economic growth (Ministry of Education, 2020). Its objectives include standardising apprenticeship approaches, aligning skills with labour market needs, fostering stakeholder collaboration, ensuring sustainable funding, and improving coordination (Ministry of Education, 2020). Guided by principles of equity, inclusiveness, gender sensitivity, quality, and accountability, the policy prioritises accessibility for marginalised groups, including persons with disabilities, and promotes career-oriented training tied to decent wages. Another key aspect of the national apprenticeship policy of Ghana is that it emphasises Competency-Based Training (CBT) and industry-responsive curricula to address systemic challenges like weak regulation, funding deficits, and skills mismatches (Ministry of Education, 2020). In terms of scope, Ghana's National Apprenticeship Policy applies universally to learners in formal and informal sectors, employers (public, private, and development sectors), and institutions. It addresses legal-regulatory frameworks, financing, quality assurance, health and safety, capacity building, and contractual arrangements (Ministry of Education, 2020). The policy integrates apprenticeship into all learning systems, mandating alignment with curriculum design, delivery, and certification, as observed in Figure 4.

It complements existing frameworks like the Workplace Experience Learning Policy, with plans for an apprenticeship manual to operationalise guidelines (Ministry of Education, 2020). The institutional arrangement outlined in the national apprenticeship policy of Ghana involves the Ministry of Education (MoE), which oversees policy approval, budgeting, and monitoring, while the Council for Technical and Vocational Education and Training (COTVET) coordinates implementation, quality assurance, and funding mobilisation (Ministry of Education, 2020). Also, the national apprenticeship policy of Ghana further makes provision for the National Apprenticeship

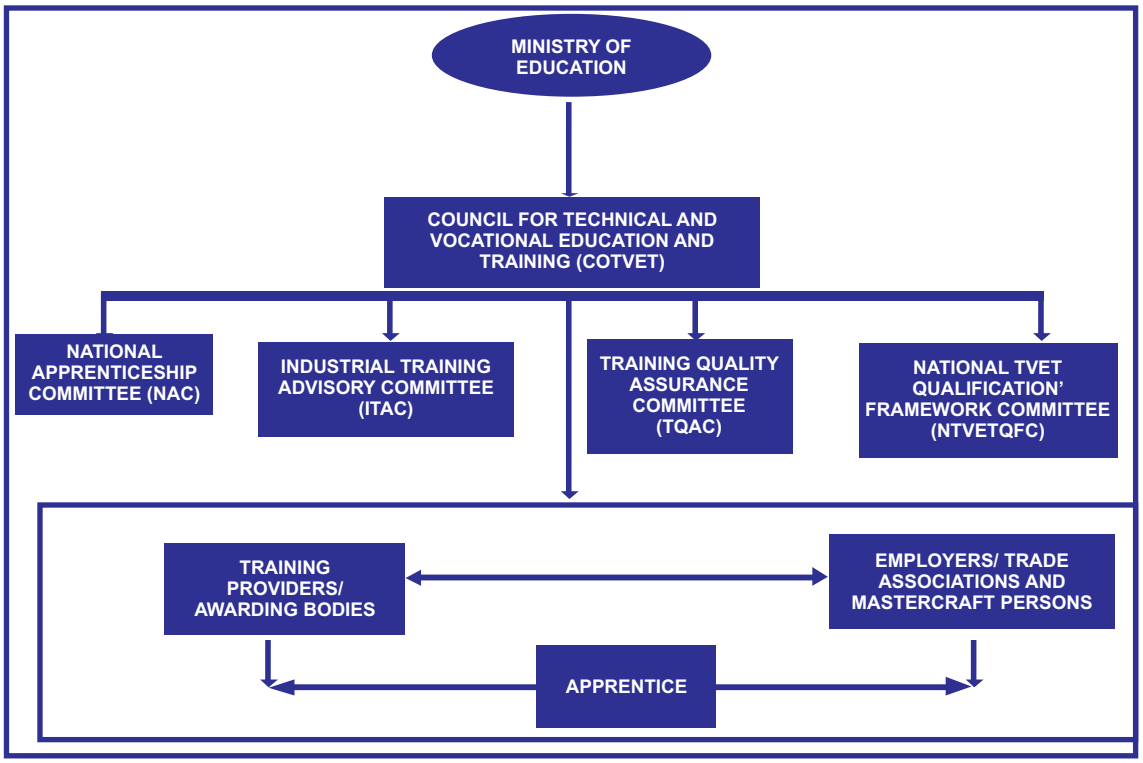

Figure 4: Institutional Arrangement in the National Apprenticeship Policy of Ghana (Ministry of Education, 2020).

Committee under COTVET to enforce standards, promote CBT, and support informal sector integration (Ministry of Education, 2020). Following the coming into force of the Education Regulatory Bodies Act (Act 1023), which repealed Act 718 (2006), replacing COTVET with CTVET, the national apprenticeship policy should be revised accordingly. Employers, Master Craft Persons (MCPs), training providers, and trade associations have defined roles in the national apprenticeship policy of Ghana. For instance, employers must absorb at least 5% of their apprentices into their workforce; provide the apprentice with a contract of employment which stipulates the conditions of engagement; recruit and mentor apprentices to fill vacancies and help them refine innovative ideas in modern practices at the workplace among others (Ministry of Education, 2020). Also, MCPs are to deliver training and monitor progress, while training providers align curricula with industry needs (Ministry of Education, 2020). For funding and other implementation mechanisms, the policy leverages basket funding such as oil revenue (5%), GETFund (5%), and private sector contributions (Ghana Education Service, 2020). Incentives include stipends, start-up kits, tax waivers, and recognition awards for apprentices, people with disabilities, among others (Ghana Education Service, 2020). Quality assurance mandates CBT-aligned curricula, accredited institutions, and standardised assessments via the National TVET Qualification Framework. Health and safety protocols, contractual templates, and capacity-building programmes for stakeholders are instituted in the policy to ensure compliance and inclusivity.

Additionally, to make apprenticeships attractive, the policy is underpinned by a robust public relations strategy, combating stigma through media campaigns, role models, and community engagement, while a monitoring and evaluation framework tracks policy impact via indicators and a Management Information System (GES, 2020). Collectively, the policy's structured governance, inclusive scope, and pragmatic mechanisms aim to transform Ghana's apprenticeship system into a cohesive driver of youth employment and national development. Notwithstanding the novelty and comprehensiveness of the national apprenticeship policy of Ghana, there is a lack of an apprenticeship implementation manual to provide a comprehensive mechanism for its operationalisation as conceived in policies of education ministry (Ministry of Education, 2020).

The cursory analysis of the legal and policy frameworks reflects Ghana's commitment to aligning apprenticeship systems with labour market demands. However, without a comprehensive national apprenticeship programme, all of such efforts do not only remain bookish but a mirage, as the nation continues to lament on the alarming rate of unemployment while truly agreeing that apprenticeship tends to be the magic wand to ameliorate Ghana's unemployment issues, and calibrate industrialisation to realistcally drive Ghana beyond aid.

2.3. Challenges in Existing Apprenticeship Systems in Ghana

Ghana's educational system, encompassing basic schools, senior high schools, technical institutes, colleges and universities, produces an expanding cohort of graduates annually, with tertiary enrolments rising by 6% between 2019 and 2021 (UNESCO, 2022). Despite a literacy rate of 69.8% (Ghana Statistical Service, 2022), and robust vocational frameworks under institutions like the National Vocational Training Institute (NVTI), the Council for Technical and Vocational Education and Training (COTVET), and now Commission for Technical and Vocational Education and Training (CTVET), the nation faces a paradox, thus, soaring unemployment rates persist, undermining socio-economic development (Ghana Statistical Service, 2022; CTVET, 2021; Ministry of Education, 2020; CTVET, 2011). Analyses of the systemic challenges within Ghana's apprenticeship systems to

identify barriers to effective skills-to-employment transitions remain important. The discussion covers historical legacies and colonial disruption**,** policy and legislative gaps, institutional fragmentation and coordination deficits**,** neglect of the informal sector**,** quality assurance and standardisation deficits**,** and funding and sustainability challenges

2.3.1 Historical Legacies and Colonial Disruption

Ghana's indigenous apprenticeship system, rooted in familial and communal knowledge transfer, was disrupted by colonial-era policies that prioritised industrial skills aligned with colonial economies. The time-honoured indigenous Ghanaian apprenticeship systems including technical, artisanal and vocational skills such as weaving, basketry, carving, bead and jewellery work, metalsmithing, pottery and others were sidelined by the colonialists in their purported economic modernisation agenda (Boadu, 2021; Wiafe, 2021; Rattray, 1931; Flolu, 2000; Colonial Office, 1909) to the extent that some of these indigenous apprenticeship systems were demonised by the colonialists (Edusei, 2004; Flolu, 2000). The demonisation and exclusion of vital elements of Ghana's foundational indigenous apprenticeship system from the colonial missionaries' school curricula at the onset of the Western system of education contributed to the decline, if not the regression, of the development of the traditional Ghanaian apprenticeship system. Although post-independence efforts to revive traditional vocations through TVET have struggled to reconcile formal education with indigenous Ghanaian apprenticeships, a dual educational system appears to be created, marginalising non-certified artisans and rendering the informal sector increasingly unappealing. To rectify this, a decolonisation strategy of critical import must be pursued, one that revitalises Ghana's venerable indigenous apprenticeship system to serve as a cornerstone of transformative development. Achieving this necessitates the prioritisation of the sector through the establishment of a meticulously articulated, pragmatic, and comprehensive national apprenticeship programme, thereby reclaiming and advancing its intrinsic value.

2.3.2. Policy and Legislative Gaps

Ghana's apprenticeship frameworks, particularly the application of the existing legal regime like *Act 351 (1970)* and *Act 718 (2006)*, tend to prioritise more formalised Technical and Vocational Education and Training (TVET) institutions, though in principle, the informal sector is a part of it. Focus on apprenticeship in Ghana disproportionately neglects the informal sector, which constitutes over 80% of employment avenues (Osei-Boateng & Ampratwum, 2011). Additionally, even though the National Apprenticeship Policy (2020) advocates for inclusiviness that cannot be practically felt, as CTVET (2021) assessment reveals that the number of informal apprentices trained nationally between 2017–2021 was far below the estimated 50,000 required to meet labour demands of Ghana. It appears that the legislative focus on formal TVET, exemplified by NVTI's competency-based training (CBT) for massive skills training, fails to address the unstructured, community-led nature of the indigenous (informal) apprenticeships in Ghana, leaving a critical gap in scalability and relevance. The National Apprenticeship Policy (2020) of Ghana is yet to be implemented due to a lack of "an apprenticeship implementation manual…to provide a comprehensive mechanism for operationalisation of this policy" (Ministry of Education, 2020, p. 6*).* There is a need to develop a comprehensive national apprenticeship programme (NAP) to drive its workability. Such a NAP should recommend further legislation to make the source of funding statutory as well as establish national and decentralised institutions, agencies, and bodies required for its effective implementation.

2.3.3 Institutional Fragmentation and Coordination Deficits

The apprenticeship sector of Ghana is managed by multiple institutions, bodies and agencies, including NVTI, CTVET, the Youth Employment Agency (YEA), among others (CTVET, 2021; Ministry of Education, 2020; CTVET, 2011) all operating in silos, leading to duplicated programmes and inefficiencies. This fragmentation undermines cohesive policy execution, with no centralised mechanism to harmonise informal sector needs with formal training standards. To address this gap, there is the need to streamline the existing multiple institutions, bodies and agencies into well-coordinated pathways of responsibilities to reduce redundancies, and optimise funding for pragmatic and holistic development of both formal and informal sectors of the apprenticeship system of Ghana to provide diverse employment opportunities for economic empowerment for the teeming Ghanaian youth. The antidote to this is for Ghana to develop a comprehensive national apprenticeship programme, specifying a well-coordinated institutional structure and a pragmatic roadmap of defined skills training, incentivisation, a clear source of funding, evaluation and monitoring that covers all the desirable sectors of the apprenticeship systems of both formal and informal sectors in Ghana.

2.3.4 Neglect of Ghana's Informal Sector

The informal sector, comprising micro-enterprises in retail, agriculture, artisanal trades and technical service delivery, remains Ghana's largest sector of employment (Osei-Boateng & Ampratwum, 2011; Baah-Boateng, 2013). Yet, systemic neglect persists as graduates often reject informal sector jobs, preferring white-collar employment (Baah-Boateng, 2013). Also, training curricula in tertiary education and even formal TVET institutions misalign with informal sector demands, perpetuating unemployment (Hardy et al., 2019a). The 2020 National Apprenticeship Policy's objective to integrate informal apprenticeships remains aspirational, lacking actionable strategies to engage master craftspeople or standardise community-based training, as Ghana currently does not have a comprehensive national apprenticeship programme to drive its deliverability.

2.3.5 Funding and Sustainability Challenges

Apprenticeship initiatives in Ghana remain chronically underfunded, with over-reliance on volatile external donors. Despite its critical role in economic development and social integration in Ghana, TVET remains underfunded (Tanaka, Liang & Angel-Urdinola, 2024; Otchi, 2023). CTVET (2024) reports that TVET receives an average of 1.2% of the entire education budget, with 2% of the total budget from GETFund, where donor contributions constitute approximately 21% of the overall TVET expenditure. This suggests that TVET's funding is less domestic but largely donor-driven, hence, not sustainable. An example of such donor-driven funding of TVET's activities in Ghana is the 2024 World Bank and Germany's Kfw Development Bank-funded programme, amounting to GH¢800 million, aimed to equip 50,000 unemployed graduates and craftspeople with practical, industry-relevant skills (Nunoo, 2024). Its dependence on donor funding raises concerns about its sustainability. This begs the urgency for domestic financing mechanisms. The development of a national apprenticeship programme with tailored domestic funding priority tends to ensure sustainable apprenticeships in Ghana.

2.3.6 Quality Assurance and Standardisation Deficits

Despite adopting Competency-Based Training (CBT) for TVET in Ghana, CTVET reports non-adherence to set standards for training delivery, competency-based training, and quality assurance

practices, pointing to standardisation deficits (CTVET, 2021). The reality is that most informal apprenticeships in Ghana lack standardised accreditation, leaving many artisans uncertified and uncompetitive. As a result of non-existence of a nationally harmonised certification system for informal sector apprenticeship, master craftpersons and or trade associations give apprentices testimonials as evidence of completing a specific training. There is therefore the need for a comprehensive apprenticeship programme that proposes a unified standardised certification system for the informal sector of apprenticeships, including regulating health and safety protocols in informal workshops.

Ghana's apprenticeship challenges stem from colonial ravages, legislative gaps, institutional fragmentation, neglect, underfunding and standardisation of the sector. Addressing these requires a holistic National Apprenticeship Programme that prioritises both formal and informal sectors, enhances coordination, and leverages indigenous knowledge systems. Only through such reforms can Ghana transform its “golden apprenticeship” heritage into sustainable employment and economic avenues to drive massive development for Ghana.

2.4 International Best Practices in the Design and Delivery of Apprenticeship Programmes

Apprenticeship programmes are critical mechanisms for bridging skills gaps between education and employment, while addressing sector-specific labour shortages, thereby enhancing youth employability and national economic growth. This could be done through the combination of informal and workplace skills training alongside formal education. This review examines international best practices in terms of the design and implementation strategies of national apprenticeship programmes to identify structural strengths, challenges, and transferable lessons for Ghana.

2.4.1 Design and Components of a Standardised National Apprenticeship Programme: Global Best Practices

A standardised national apprenticeship programme, which bridges skills gaps and enhances employability by integrating education with industry needs, contains key components such as a legal regime, a well-structured curriculum, stakeholder collaboration among governments, employers, and institutions, and a robust regulatory framework ensuring pragmatic implementation and quality. Effective assessment systems, diversified funding models, and inclusive policies prioritising marginalised groups further define global best practices, as seen in Germany, Switzerland, Singapore, Canada and others.

2.4.1.1 Robust Legal and Regulatory Regime

A robust legal and regulatory regime is indispensable for standardised national apprenticeship programmes, ensuring sustainable funding sources, establishment of required institutional mandates, assignment of responsibilities, implementation structure, regulatory, monitoring and evaluation bodies, alignment with gaps in the labour market, safeguarding apprentice welfare, and fostering sustainable economic development. Globally, numerous frameworks exemplify this principle, blending legislative regimes with adaptive mechanisms to address evolving skills needs. For instance, the Apprenticeship and Trade Testing Act (No. 41 of 1986) of Papua New Guinea (Pacific Islands Legal Information Institute, 1986) establishes structured competency assessments, while Sri Lanka's National Apprenticeship Act (No. 49 of 1971) integrates formal vocational training with workplace learning (Lanka Law, 1971). In the United States, H.R. 447 - National Apprenticeship

Act (2021) prioritises equity and modernised credentialing, reflecting contemporary socio-economic priorities (Authenticated US Government Information, 2021). Similarly, South Africa's Skills Development Act of 1998 (South Africa Government Gazette, 1998*)* and Zambia's Apprenticeship Act of 1965 (Parliament of Zambia, 1965) emphasise public-private partnership, ensuring their apprenticeship programmes remain responsive to industry requirements. The Bahamas' recent Apprenticeship Act (No. 3 of 2024) and India's Apprentices Act (No. 52 of 1961) further illustrate progressive approaches, incorporating digital skills and gender inclusivity (Parliament of the Bahamas, 2024; India Code, 1961). Also, the Punjab region's targeted Apprenticeship Act (XVII of 2021) *(*Punjab Laws, 2021*)* is an example of another well-tailored national apprenticeship legislative regime. The 1969 German Vocational Training Act (BBiG) referred to as the dual system, or the Crafts and Trades Regulation Code (HwO) regulates vocational training preparation, vocational education and training, advanced vocational training and vocational retraining (Haasler, 2020; Deissinger, 2015; Euler, 2013; Franz & Soskice, 1994). Trainees under the German Vocational Training Act receive both school education at special vocational schools and on-the-job training at firms, and is considered one of the best models globally (Haasler, 2020; Deissinger, 2015; Euler, 2013; Franz & Soskice, 1994). Notably, Ghana's Apprentices Act (1961)*,* though repealed by the National Vocational Training Act (No. 351 of 1970), appears not to decisively address the changing and emerging apprenticeship trends as compared to global benchmarks. Drawing from the aforementioned international precedents, Ghana's legislation urgently requires amendment to harmonise with 21st-century imperatives. This could enhance standardisation, incentivise employer participation, and embed mechanisms for continuous review, ensuring apprenticeships drive both individual opportunity and national competitiveness.

2.4.1.2 **Well-Structured Apprenticeship Curriculum**

A well-structured apprenticeship curriculum serves as the cornerstone of a standardised national apprenticeship programme, harmonising educational objectives with industry demands while mitigating tensions between academic priorities and vocational competencies. If the skills demand of the industry and quality training standards are not taken into account in the apprenticeship training curricula, the apprentices are not trained according to the requirements of the labour market (TUS, 2023; Learning and Work Institute, 2019; Cedefop, 2018; UNESCO-UNEVOC, 2015). Insights from the Philippines, Brazil, Botswana, and Nigeria underscore the centrality of occupational standards as guiding frameworks for designing apprenticeship curriculum (UNESCO-UNEVOC, 2015). Standardised national apprenticeship training curriculum, whether termed training standards, professional profiles, or competency benchmarks, should articulate the knowledge, skills, and outcomes apprentices must attain, ensuring that the curriculum aligns with labour market needs of the country (UNESCO-UNEVOC, 2015). For instance, the national apprenticeship programmes of the Philippines, Brazil, Botswana, and Nigeria adopt a competence-based approach, segmenting standards into modular units that emphasise practical proficiency over theoretical abstraction. Specifically, the Brazil and Botswana apprenticeship models illustrate multi-stakeholder (government bodies, educators, employers' associations, and trade unions) engagement during the curriculum design stage, to co-develop standards (UNESCO-UNEVOC, 2015). TUS (2023) affirms that a standard national apprenticeship programme should cater for apprenticeship consortia comprising employer, employee representatives, education and training providers and other key stakeholders who will be directly responsible for the development of the apprenticeship curriculum. Such inclusivity fosters curricula that reflect real-world occupational requirements while balancing pedagogical rigour. In the Philippines, two forms (dual training) of

apprenticeship co-exist with a complementarity between workplace and school training (70-30% ratio), and the “Apprenticeship Programme” which takes place purely in the company (UNESCO-UNEVOC, 2015). Similarly, Nigeria's model highlights the necessity of curricular differentiation where apprenticeship programmes integrate practical workplace training, whereas school-only Technical and Vocational Education and Training (TVET) necessitates embedded hands-on content (UNESCO-UNEVOC, 2015). This distinction addresses a persistent friction between governments advocating academic subjects and industries prioritising technical skills. By delineating curricula to complement on-the-job learning, apprenticeships avoid redundancy and bridge theory-practice divides (UNESCO-UNEVOC, 2015). Ghana's prioritised competency-based training (CBT) provided by National Vocational Training Institutions under the supervision of CTVET (CTVET, 2021; Ministry of Education, 2020; CTVET, 2011) is a structured curriculum but not underpinned by a comprehensive national apprenticeship programme that covers the informal sector in its entirety. Also, other international apprenticeship models such as Germany's dual system (Haasler, 2020; Deissinger, 2015; Euler, 2013; Franz & Soskice, 1994) as well as Indonesia, the US, England, Australia and others exemplify this synergy of blending classroom instruction with corporate training under nationally standardised frameworks (World Bank, 2013). These systems, underpinned by robust industry partnerships and competency benchmarks, consistently yield high youth employment rates (World Bank, 2013).

2.4.1.3 Stakeholder Collaboration

The effective implementation of a national apprenticeship programme largely depends on partnerships between governments, employers, educational institutions and other key stakeholders. In light of that the apprenticeship systems of Brazil and Botswana create room for a multi-stakeholder (government bodies, educators, employers' associations, trade and private sector unions) collaboration from the curriculum design, implementation, monitoring and evaluation among others (TUS, 2023; UNESCO-UNEVOC, 2015; World Bank, 2013). Such inclusive collaboration is pivotal to standardised national apprenticeship programmes, ensuring apprenticeship curricula reflect industry needs, bridge skills gaps, eliminate bureaucratic bottlenecks, leading to acceptance and all hands-on deck implementation of the programme.

2.4.1.4 Governance and Regulatory Framework

The regulatory frameworks governing national apprenticeship programmes are underpinned by diverse legislative and institutional mandates globally. In Papua New Guinea, the Apprenticeship and Trade Testing Act (1986) establishes competency assessments under the oversight of the National Apprenticeship and Trade Testing Board, guided by statutory provisions (Pacific Islands Legal Information Institute, 1986). Sri Lanka's National Apprenticeship Act (1971) integrates vocational training through the Department of Technical Education and Training, aligning workplace learning with formal curricula (Lanka Law, 1971). The United States' National Apprenticeship Act (2021) is administered by the Department of Labour, prioritising equity and credential modernisation (Authenticated US Government Information, 2021), while South Africa's Skills Development Act (1998) delegates implementation to Sector Education and Training Authorities (SETAs), fostering public-private collaboration (South Africa Government Gazette, 1998). Zambia's Apprenticeship Act (1965) and The Bahamas' 2024 Act are regulated by their respective labour ministries (Parliament of Zambia, 1965; Parliament of the Bahamas, 2024), whereas India's Apprentices Act (1961), and Punjab's 2021 National Apprenticeship Act are overseen by regional directorates and the National Council for Vocational Training (India Code,

1961; Punjab Laws, 2021). Germany's dual system, governed by the Vocational Training Act (BBiG) and Crafts Code (HwO), involves chambers (IHK, HWK) and the Federal Institute for Vocational Education and Training (BIBB) to coordinate school-based and workplace training (Haasler, 2020; Deissinger, 2015). Ghana's National Vocational Training Act, of 1970 needs amendments. There is the need for reforms to align Ghana's informal sector apprenticeship training with the 21st century national apprenticeship framework that balances national, regional and district oversight, industry engagement, and institutional monitoring, regulation, evaluation and accountability to address labour market demands. These systems highlight the interplay of legislation, monitoring bodies, and stakeholder collaboration in sustaining effective implementation of national apprenticeship programmes.

2.4.1.5 **Assessment and Certification**

National apprenticeship frameworks globally employ diverse assessment and certification systems tailored to socio-economic and industrial priorities. In Germany, the Vocational Training Act (BBiG) and Crafts and Trades Regulation Code (HwO) mandate a dual system combining vocational school education and workplace training, with standardised competency assessments administered by industry chambers (IHK, Handwerkskammern), culminating in nationally recognised certification framework (Federal Ministry of Education & Research, 2020; Haasler, 2020; Deissinger, 2015). India's Apprentices Act (1961) requires apprentices to pass all India Trade Tests conducted by the National Council of Vocational Training (NCVT), before they are awarded National Apprenticeship Certificates (CTVET) for employment eligibility (India Code, 1961; Agrawal, 2013). The U.S. National Apprenticeship Act (2021) emphasises equity and modernised credentialing, mandating portable, industry-recognised certifications through registered programmes overseen by the Department of Labour, which also enforces anti-discrimination measures (Authenticated U.S. Government Information, 2021). South Africa's Skills Development Act (1998) and Zambia's Apprenticeship Act (1965) integrate public-private partnerships, linking assessments to sectoral skills authorities (South Africa Government Gazette, 1998; Parliament of Zambia, 1965; Kraak, 2004). Papua New Guinea's Trade Testing Act (1986) and Sri Lanka's National Apprenticeship Act (1971) formalise competency-based evaluations through structured vocational examinations under the auspices of national apprenticeship boards (Pacific Islands Legal Information Institute, 1986; Lanka Law, 1971; International Labour Organisation, 2019). Emerging frameworks, such as The Bahamas' Apprenticeship Act (2024) and Punjab's Act (2021), prioritise digital skills and inclusivity (Parliament of the Bahamas, 2024; Punjab Laws, 2021; UNESCO, 2023). Although Ghana's National Vocational Training Act (1970) and other legislations mandate CTVET to be responsible for monitoring, supervision, testing and certification in terms of apprenticeship in the country (CTVET, 2021; Ministry of Education, 2020; CTVET, 2011), its focus appear largely institutional with little concentration on the informal sector, the largest form of apprenticeship in the country. Reforms inspired by global benchmarks, as discussed, could lead to a uniformly standardised testing and certification system that covers both institutional and informal sector forms of apprenticeship.

2.4.1.6 **Financial Incentives and Funding Models**

Apprenticeship systems globally employ financial mechanisms to incentivise employer participation and ensure sustainability. The Apprenticeship and Trade Testing Act (No. 41 of 1986) of Papua New Guinea has an established Trust fund with contributions from employer levies (Pacific Islands Legal Information Institute, 1986). Similarly, South Africa's Skills Development Act (1998) has a levy-grant scheme (South Africa Government Gazette, 1998). It also has a dedicated National

Skills Fund to support national apprenticeship programmes across South Africa (South Africa Government Gazette, 1998). In the U.S., a State apprenticeship agency is the statutory establishment which receives dedicated funding from Federal and non-federal sources to implement the programmes of its National Apprenticeship system in the US. (Authenticated US Government Information, 2021). The agency is mandated to allocate incentives to employers to encourage employer participation in programmes under the national apprenticeship system that target individuals with barriers to employment (Authenticated US Government Information, 2021). This funding arrangement is in contrast with that of Papua New Guinea and South Africa, which levy employers for their apprenticeship trust fund. Germany's dual system, governed by the Vocational Training Act (BBiG) and Crafts Code (HwO), combines public funding for vocational schools with employer-funded on-the-job training, ensuring shared financial responsibility (Haasler, 2020; Deissinger, 2015). Specifically, in Germany, the training companies finance the in-company training with the Federal States funding the vocational schools (mainly teaching staff salaries) and the local authorities' equipment and infrastructures (Federal Institute for Vocational Education and Training, 2025).

Also, the Federal Government of Germany finances measures for the improvement and promotion of the apprenticeship system (Federal Institute for Vocational Education and Training, 2025). While the India Apprentices Act (1961) mandates employers to solely fund or outsource funding support from third parties like the government to train 250 or more apprentices, they are reimbursed by the Indian Government in each case of successful training of the apprentices (India Code, 1961). In Australia, apprenticeship receives substantial funding from the Commonwealth government with massive support from specialist apprenticeship intermediary organisations such as Group Training Organisations (GTOs), Australian Apprenticeship Support Network (AASNs) providers and others (Smith, 2021). The Group Training Organisations (GTOs) employ apprentices and 'lease' them to host employers, and acting as the legal employer of the apprentice, GTOs provide support services to their employers and their apprentices (Smith, 2021). For instance, 8.3% of Australian apprentices and trainees were employed by GTOs in 2018 (Smith, 2021).

Also, tax incentives were abolished in 2008 and replaced by direct grant subsidies for apprenticeships in Australia (Kuczera, 2017), arguing that the tax incentive scheme failed to target companies that would benefit most from additional support for apprenticeships (CEDEFOP, 2011; as cited in Kuczera, 2017). The amount of grant received by the employer depends on the year of apprenticeship, with the subsidy decreasing with each year of apprenticeship. In the first year of apprenticeship, the employer receives the equivalent of three gross apprentice wages per apprentice, in the second year the equivalent of two gross apprentice wages, and in the third year the equivalent of one gross apprentice wage (Kuczera, 2017). Extra support is also available to employers offering apprenticeships for the provision of additional training to apprentices and training of instructors, to employers whose apprentices excel on the final assessment, and to employers whose apprentices face learning difficulties. In addition, grants are available for apprenticeships that support equal access of men and women to traditionally non-male and non-female professions (Federal Ministry of Science, Research and Economy, 2014; as cited in Kuczera, 2017).

Emerging frameworks, like the Bahamas' 2024 Act, prioritise two funding strategies where the employer either enters into an apprenticeship funding agreement with the Board in charge of the

Bahamas' national apprenticeship system or establishes self-funding for its apprentices (Parliament of the Bahamas, 2024). However, Zambia's 1965 National Apprenticeship Act does not have a clearly stated source of funding (Parliament of Zambia, 1965). In the case of Ghana's National Vocational Training Act (1970), it has limited state dedicated funding provisions. It attracts an average of 1.2% of the education budget, with 2% of the total budget from GETFund. Donor contributions constitute approximately 21% of the overall TVET expenditure (CTVET, 2024). Even the proposed domestic financing mechanisms embedded in the national apprenticeship policy of Ghana are still not implemented due to the absence of a national apprenticeship programme (Ministry of Education, 2020). Therefore, private participatory funding is currently left out in Ghana's TVET funding, requiring the need for further legislative reforms in Ghana to widen the scope of TVET funding. Meanwhile, the best global funding arrangements highlight a trend toward public-private funding hybrids, leveraging levies, tax incentives, and grants to balance skill development with economic priorities.

2.4.1.7 **Scope, Inclusivity and Accessibility**

The National apprenticeship legislations globally demonstrate varied scopes, inclusivity measures, and accessibility frameworks, reflecting diverse national priorities. For instance, Papua New Guinea's Apprenticeship and Trade Testing Act 1986 defines an apprentice as a person employed under a registered apprenticeship contract (Pacific Islands Legal Information Institute, 1986), while Zambia's Apprenticeship Act (1965) similarly emphasises contractual registration (Parliament of Zambia, 1965). In contrast, the U.S. H.R. 447 - National Apprenticeship Act *(2021)* sees apprentices as programme participants. The Bahamas' Apprenticeship Act *(2024)* introduces a more holistic model, characterising apprenticeship as structured, remunerated education combining on- and off-the-job training to develop occupation-specific competencies (Parliament of the Bahamas, 2024). India's Apprentices Act (1961) further differentiates between technician (vocational) apprentices, those holding or pursuing vocational certifications post-secondary education, and apprenticeship training as occupation-specific contractual programmes (India Code, 1961). Germany's dual vocational system, governed by the Vocational Training Act (BBiG), integrates vocational schooling with workplace training, balancing theoretical and practical learning (Haasler, 2020; Deissinger, 2015). Also, Ghana's National Vocational Training Act (1970) focuses on institutionalised training but neglects the informal sector, which constitutes over 80% of the workforce, highlighting a critical need for reforms to enhance inclusivity and standardisation (Baah-Boateng, 2013; Osei-Boateng & Ampratwum, 2011). Cross-national insights suggest that harmonising legislative definitions, expanding informal sector inclusion, and embedding quality assurance mechanisms are pivotal to fostering apprenticeship systems that drive individual opportunity and national competitiveness. Therefore, Ghana could thoroughly examine its diverse informal sector and digital innovative economy to come out with an all-inclusive scope of its apprenticeship programme.

2.5 **Economic and Social Impacts of Apprenticeship Programmes**

Apprenticeship programmes, which combine on-the-job training with forms of institutional instruction, have been lauded globally for bridging the gap between education and employment. By equipping individuals with industry-specific skills, these programmes address labour market needs while fostering economic resilience and social equity. From a global perspective, this report examines the multifaceted impacts of apprenticeships across four themes such as youth employment and entrepreneurship, poverty reduction and social mobility, contribution to national economic growth, and the empowerment of marginalised communities.

2.5.1 Youth Employment and Entrepreneurship

Apprenticeships, which integrate practical skills with labour market needs, significantly enhance employability. Particularly, youth employment and entrepreneurship are critically influenced by well-structured apprenticeship programmes, as evidenced in some countries across the globe. For instance, in providing statistics on the youth employment index, Pricewaterhousecoopers (PwC) and Youth Futures Foundations (2022) report that the rate of young people who are not in employment, education, or training (NEET) in Switzerland (2nd, 8.4%) and Germany (3rd, 8.4% 2019 data) is said to be among the lowest of countries under the Organisation for Economic Co-operation and Development (PWC & Youth Futures Foundations, 2022). While Switzerland's low NEET rate is partly due to the high numbers of young people completing apprenticeships in the Vocational and Professional Education and Training (VPET) system, the German's case is largely attributed to its dual apprenticeship system, which produces around 500,000 new apprenticeship contracts each year (PWC, & Youth Futures Foundations, 2022). It is further explained that two-thirds of all young people leaving compulsory education in Switzerland enrol in vocational education and training (VET), where employers invest heavily in apprenticeships to ensure training matches their needs (PWC & Youth Futures Foundations, 2022). As a result, Trading Economics (2025) reports that the Swiss unemployment rate stood at 2.9% in February 2025, a decline from 3.0% in the previous month, which was the highest jobless rate since May 2021. Meanwhile, the youth unemployment rate, measuring job-seekers between 15 and 24 years old, edged down to 2.7% from 2.8% in January, with the number of young unemployed declining by 0.3 thousand to 12.1 thousand (Trading Economics, 2025). In the case of Germany, youth unemployment rate stood at a low rate of 6.30% as of February, 2025 as compared with the Eurozone Youth Unemployment Rate of 14.20% for February, 2025 (Ychart. (2025b). Germany's youth employment of rate of 5.80%) in February 28, 2023 (Ychart, 2025a) is far lower than the global youth unemployment rate of 13.6%, with significantly higher rates in regions such as sub-Saharan Africa (30%) and South Asia (14.6%) as reported by Borgen Project (2025). Borgen Project (2025) reiterates that the German dual apprenticeship model encourages entrepreneurship and strengthens small and medium-sized enterprises (SMEs), leading to approximately 82% of apprentices in Germany receiving their vocational training within SMEs, which are considered the backbone of the German economy. Collectively, these findings suggest that apprenticeship is a key to lowering the unemployment rate. However, in the case of Ghana, the 2021 population and housing census reveals a soaring 19.7 % unemployment rate among the youth population 15-35 years, and is even much higher (32.8%) for young adults 15-24 years (Ghana Statistical Service, 2022). There is, therefore, the urgent need for Ghana to adopt a bold step in not only ensuring policy harmonisation between education, industry demands, but to develop a comprehensive apprenticeship ecosystem to address youth underemployment sustainably, as in the case of Germany, Switzerland, Australia and others.

2.5.2 Poverty Reduction and Social Mobility

Poverty reduction and social mobility are profoundly interconnected, with apprenticeships emerging as a critical mechanism for disrupting cyclical deprivation and fostering economic progression. Good quality apprenticeships have always been associated with social mobility for young people (Fuller & Unwin, 2017). This age-old work-based model of learning for developing expertise continues to be used and valued throughout the world, positioning apprenticeship as a potential silver bullet for improving social mobility (Fuller & Unwin, 2017). Also, research affirms

that vocational education contributes immensely to poverty reduction by providing individuals with the skills necessary to find stable employment and earn a living wage (Dixit & Ravichandran, 2023; Adams, de Silva & Razmara, 2013). According to the World Bank (2019), home-based apprenticeship businesses have both women empowerment and poverty reduction goals, thereby making apprenticeship an inclusive tool for the marginalised group. By reducing poverty, vocational education programmes tend to improve the overall economic well-being of a society (Dixit & Ravichandran, 2023). In a World Bank study on improving skills development in the informal sector strategies for Sub-Saharan Africa, Adams, de Silva and Razmara (2013) report that improving traditional apprenticeships in Sub-Saharan Africa is a strategy that can contribute in a positive way to employment and poverty reduction. For instance, in Nigeria, Onyema and Iwu (2023) affirm that apprenticeship practices have led to significant poverty reduction in Nnewi and other parts of the country (Hadija, 2024; Gerald, Ifeanyi & Phina, 2020). Also, taking cues from England, for instance, there has been a huge growth in the number of people involved in apprenticeships, earning higher income differentials (McIntosh & Morris, 2018). The discussion demonstrates the viability of apprenticeships as a magic wand for poverty reduction and social mobility, presenting transferrable lessons for Ghana, whose apprenticeship system is under-tapped.

2.5.3 Contribution to National Economic Growth

Apprenticeships significantly contribute to national economic growth by enhancing workforce productivity and reducing fiscal burdens. Empirical evidence highlights that apprenticeships bridge skills gaps, thereby boosting macroeconomic performance. According to Ebekozien et al. (2024), Skills development via apprenticeship provides inclusive and sustainable economic growth for people and societies. Brunello (2009) corroborates that an increase in apprenticeship participation leads to human capital development, elevating national productivity and GDP growth. Karmel and Oliver (2011) affirm that the percentage change in national per capita quarterly Gross Domestic Product (GDP) coincides with apprenticeship, and the decline in the latter affects the former. In affirming the impact of apprenticeships on national economic growth, a recent analysis by Oxford Economics (2025) reports that over 12,000 graduates of Chartered Management Institute (CMI) contributed £972.4 million in annual Gross Value Added (GVA) to the UK's GDP during the 2023/2024 period. The fact that apprentices from the Chartered Management Institute (CMI) alone contributed such a significant proportion to the UK's economic output, compared to the broader national apprenticeship system, illustrates that apprenticeships are not merely a route to employment but a critical driver of national economic productivity. Consequently, scaling access to robust, high-quality apprenticeship frameworks nationwide could enhance the UK's GDP growth and global competitiveness. This offers a transferable implication for nations such as Ghana, where similar investments in apprenticeship could yield parallel economic benefits, contributing to the positive growth of the ailing GDP of the country.

2.5.4 Empowerment of the Marginalised Communities

Marginalisation is defined as “the process through which persons are peripheralised based on their identities, associations, experience and environments” (LeBlanc, 1997, p. 260) and therefore having minimal access to resources, association to cultural norms, and representation (Butler & Adamowski, 2015). World Bank equates marginalisation to exclusion, focusing on 4 sensitive areas such as economic, political, cultural and social life of communities, which altogether create a vicious cycle (World Bank, 2013). Studies further concur that marginalisation is closely tied to oppression, and on a societal level can be seen as the product of structural barriers including

spaces, policies, practices, discriminatory and prejudice attitudes that deprive the autonomy and choices available to individuals and communities as a result of their particular identities and experiences leading to homelessness, high unemployment, poverty, poor health conditions, low education (Imsiyah et at., 2023; Lierop, 2016; Butler & Adamowski, 2015; van Wormer & Besthorn, 2010). Some of such disadvantaged people include scavengers, buskers, hawkers, homeless beggars, women, people living with disabilities, among others (Imsiyah et al., 2023; Butler & Adamowski, 2015; World Bank, 2013). In the wake of global discussion on the discrimination and deprivation suffered by the marginalised communities, apprenticeships have emerged as a critical mechanism for fostering inclusive economic growth as a sustainable source of empowerment. For instance, International Labour Organisation report indicates that although there is a general female marginalisation in the informal sector in Africa, research in West Africa, has shown that women are more likely than men to acquire skills in the informal sector through on-the-job-learning, (Hofmann, Zelenka, Savadogo, Akinyi Okolo, 2022). World Bank (2019) adds that apprenticeships (vocational training) have proven particularly transformative for women, and supporting home-based businesses tends to economically empower women, leading to poverty reduction. In India, *Skill India* has celebrated women achievers who have braved odds. The Ministry of Skill Development and Entrepreneurship awarded women for their outstanding contribution to the skilling ecosystem in India (Bansal, 2020). Also, research indicates that nearly 40% of 73 lakh candidates trained under Pradhan Mantri Kaushal Vikas Yojana 2016-2020 were female, while Jan Sikshan Sansthans have 90% women candidates as compared with males (Rao, Bedi & Aparna, 2023). India's apprenticeship programmes continue to expand, offering critical skill pathways for women 35.6% female labour participation though there is the need for an increased women participation to meet International Labour Organization's (ILO) call for a balanced inclusivity and equitable opportunities in apprenticeship schemes for all (ILO, 2024). Significantly, United Nations Development Programme's investigation into Livelihood opportunities for persons with disabilities, affirms that a comprehensive implementation of a national apprenticeship programme will move differently-abled people, and other vulnerable groups away from beggary to be self-reliant (Ghosh, Ghosh & Bahl, 2012). This demonstrates the propensity of apprenticeship to inclusively cater for the economic needs of the marginalised communities for improved livelihood. In light of this, Alajlan (2020) reports that the Saudi Vision 2030 pays special attention to increasing the empowerment of marginalised communities' participation rate in the labour market by 2030 (Imsiyah et al., 2023). Since Ghana's apprenticeship system lacks a comprehensive national implementation programme/manual (Ministry of Education, 2020), the development of an inclusively well-structured NAP tends to empower the marginalised communities in the country.

Apprenticeship programmes are a linchpin for sustainable development, addressing youth unemployment, poverty, and inequality while catalysing economic progress. Empirical evidence from Germany, Switzerland, the UK, India, Australia, and others illustrates their transformative impact across diverse contexts. Therefore, Policymakers of other countries, particularly developing nations like Ghana, must prioritise expanding and diversifying the nation's apprenticeship systems to fully tap their golden economic and job creation benefits.

2.6 Transferable Implications of International Apprenticeship Best Practices for Ghana

Ghana's apprenticeship system, though historically rooted in informal traditions, requires modernisation to align with global best practices, addressing persistent skills mismatches, youth unemployment, and economic inequalities. Drawing insights from successful models in Germany,

Switzerland, India, and some African countries, among others, Ghana can reform its apprenticeship framework to enhance employability, inclusivity, and economic resilience. Below are transferable implications across critical dimensions.

2.6.1. Legal and Regulatory Reforms for Standardisation

Robust legal frameworks underpin effective apprenticeship systems globally. For instance, Germany's Vocational Training Act (BBiG) and India's Apprentices Act (1961) exemplify legislation that mandates stakeholder collaboration, funding mechanisms, and quality assurance (Haasler, 2020; India Code, 1961). Since the long implementation of Ghana's National Vocational Training Act (1970) has not decisively addressed the apprenticeship gaps in the informal sector, there is the need for Ghana to draw lessons from the aforementioned international legislations for appropriate legislative amendments and or enactments that specifically prioritised the development of a comprehensive national apprenticeship programme, detailing key stakeholders, innovative curricula, incentives, source of funding, and oversight bodies. For instance, the Bahamas' 2024 Act integrates digital skills and employer funding agreements (Parliament of the Bahamas, 2024), while South Africa's Skills Development Act (1998) institutionalises sectoral partnerships (South Africa Government Gazette, 1998). Therefore, Ghana's legislative reforms should have a decentralised governance structure; recognise informal apprenticeships, particularly regarding those who have not received a Western form of education, and proactive monitoring bodies to ensure alignment with labour market needs.

2.6.2. Industry-Aligned Curriculum Development

A competency-based curriculum, co-designed with employers, is vital. Germany's dual system balances theoretical and practical training, yielding a youth unemployment rate of 5.6% (Eurostat, 2023). Similarly, Brazil and Botswana engage employers in curriculum design to ensure relevance and effective implementation (UNESCO-UNEVOC, 2015). Ghana's current competency-based training (CBT) under CTVET tends to largely focus on formal institutions with little concentration on the informal sector, where 80% of apprenticeships occur (Baah-Boateng, 2013). To bridge this gap, Ghana should adopt an inclusive modular programme of curriculum covering all sectors of the informal system of apprenticeship, such as dressmaking, pottery, carpentry, weaving, agriculture, construction, ICT and several others, with employer-led competency benchmarks. For example, the Philippines' 70-30 workplace-school training ratio (UNESCO-UNEVOC, 2015) could guide Ghana's integration of informal apprentices into standardised programmes, ensuring graduate skills meet industry demands.

2.6.3. Multi-Stakeholder Collaboration

Effective apprenticeship systems thrive on partnerships. South Africa's Sector Education and Training Authorities (SETAs) and Germany's chambers of commerce (IHK) illustrate how governments, employers, and training institutions collaborate to design and fund national apprenticeship programmes (South Africa Government Gazette, 1998; Haasler, 2020). In Ghana, weak collaboration as a result of existing silo institutions handling national apprenticeship initiatives, hinders alignment between training and labour needs. Establishing sector-specific apprenticeship collaboration, modelled after Brazil, Botswana's multi-stakeholder system encompassing government bodies, educators, employers' associations, trade private sector unions, and other relevant institutions (UNESCO-UNEVOC, 2015), could foster employer buy-in, curriculum relevance, and resource-sharing.

2.6.4. Decentralised Governance and Quality Assurance

Strong regulatory bodies ensure programme quality and adaptability. The U.S. National Apprenticeship Act (2021) delegates oversight to state agencies, emphasising equity and credential portability (Authenticated US Government Information, 2021). Ghana's centralised CTVET struggles to regulate informal apprenticeships. A decentralised structure, with regional and district offices mirroring Papua New Guinea's Trade Testing Board (Pacific Islands Legal Information Institute, 1986), could enhance monitoring. Additionally, adopting Germany's "chamber" model, where industry bodies assess competencies (Federal Ministry of Education & Research, 2020), would standardise certifications across both the formal and informal sectors of apprenticeship.

2.6.5. Sustainable Funding Models

Diversified funding is critical for national apprenticeship sustainability. South Africa's levy-grant system and Germany's public-private cost-sharing illustrate sustainable models (South Africa Government Gazette, 1998; Federal Institute for Vocational Education and Training, 2025). Ghana's overreliance on state budgets (1.2% of Ministry of Education spending) and donors (21%) limits scalability (CTVET, 2024). Introducing a 3% employer levy, as in Papua New Guinea (Pacific Islands Legal Information Institute, 1986), coupled with oil revenue (5%), GETFund (5%), tax incentives for SMEs hiring apprentices, could mobilise resources, as proposed in the unimplemented apprenticeship policy of Ghana (Ministry of Education, 2020). There could be a legislation by Ghana's parliament to provide dedicated National Apprenticeship Fund as in the case of the National Skills Fund of South Africa (South Africa Government Gazette, 1998); the State apprenticeship agency of U. S., the statutory establishment which receives dedicated funding from federal and non-federal sources to implement national apprenticeship programmes in US (Authenticated US Government Information, 2021) as well as Papua New Guinea apprenticeship Trust fund (Pacific Islands Legal Information Institute, 1986). Providing dedicated funding sources is a panacea for the effective implementation of NAP in Ghana.

2.6.6. Inclusivity and Informal Sector Integration

Global apprenticeship frameworks prioritise marginalised groups. The U.S. National Apprenticeship Act (2021) mandates equity measures, while India reserves 30% of apprenticeships for women (Authenticated US Government Information, 2021; NSDC, 2020). Ghana's marginalisation of informal sector apprentices has dire consequences for women, differently abled people, hawkers and others who could strive on informal sector apprenticeship opportunities for economic empowerment if the sector were robust (World Bank, 2019). Research indicates that women and other marginalised groups in West Africa benefit from acquiring informal-sector skills through on-the-job training when provided with opportunities (Hofmann, Zelenka, Savadogo & Akinyi Okolo, 2022). Consequently, Ghana must establish a comprehensive national apprenticeship programme, underpinned by legislation, that prioritises marginalised communities. Such a programme should aim to foster inclusive empowerment by harnessing the informal sector, which is already more accessible to these groups.

2.6.7 Economic and Social Impacts

Internationally, apprenticeships drive youth employment, poverty reduction, and GDP growth. Germany's dual system leads to low youth unemployment of 6.30% as of February 2025, as compared with the Eurozone Youth Unemployment Rate of 14.20% for February 2025 (Ychart. (2025b), while South Africa's National Skills Fund has economically empowered thousands of

beneficiaries through apprenticeship (National Skills Fund, 2024). In Ghana, scaling apprenticeships through comprehensive programming could address the nation's 12.6% youth unemployment (GSS, 2023) and boost the GDP of the country.

3. METHODOLOGY

This study employs a qualitative research approach to synthesise global apprenticeship models and propose a context-specific National Apprenticeship Programme (NAP) for Ghana. The methodology prioritises interpretive inquiry (Creswell & Poth, 2018) to derive nuanced insights from legislative frameworks, policy documents, and international case studies, aligning with the study's objective of addressing Ghana's lack of a cohesive apprenticeship system. By focusing on global dynamics, this multiple case study approach (Yin, 2018) facilitates a comparative analysis of how diverse nations, structure vocational training ecosystems, offering transferable strategies for Ghana's unique context. The multiple case study was underpinned by empirical review methodology (Snyder, 2019), which involved a systematic examination of apprenticeship legislation and policy frameworks across nine (9) jurisdictions renowned for their robust national apprenticeship programmes. These include Germany's dual apprenticeship model (Haasler, 2020; Euler, 2013), Switzerland's vocational education and training (VET) framework (PWC & Youth Futures Foundation, 2022), and Australia's competency-based apprenticeship model (Smith, 2021). The others were South Africa's Skills Development Act (1998), India's Apprentices Act (1961), Zambia's Apprenticeship Act (1965), Punjab's Apprenticeship Act (2021), Bahamas' Apprenticeship Act (2024), and the United States' National Apprenticeship Act (2021). These were studied to contextually sieve their transferrable insights that suit the Ghanaian context.

Through a multi-case study design, the study analysed the apprenticeship models to gather a holistic understanding of apprenticeship governance, policy and legislative frameworks, funding mechanisms, stakeholder collaborative roles among others, to gather transferrable implications for Ghana. Since the study was a purely theoretical review, data collection centred on a systematic document review of apprenticeship models purposively sourced based on continental groupings, success rate, current relevance, and coverage of 21st-century skills set for the world of work. Based on these, three (3) models were heterogenously sampled from Europe (Germany's dual apprenticeship model, Switzerland's vocational education and training (VET) framework, and Australia's competency-based apprenticeship model. Two (2) each were also chosen from Africa (South Africa's Skills Development Act, and Zambia's Apprenticeship Act), Asia (India's Apprentices Act, Punjab's Apprenticeship Act) and North America (Bahamas' Apprenticeship Act, United States' National Apprenticeship Act). These were supplemented with other documents from governments, agencies and institutional reports on national apprenticeship programmes; legislative and policy documents from international organisations such as the World Bank, International Labour Organisation (ILO), UNESCO, national repositories, and other relevant documentations on national apprenticeship models.

Thematic analysis, guided by Braun and Clarke's (2006) six-phase framework, categorises emergent themes, while document and content analysis of the triangulated data sources under the emergent themes ensured rigorous engagement with both macro-level policy structures and micro-level implementation challenges, contextualising findings to Ghana's informal apprenticeship traditions. This methodological strategy aligns with Lincoln and Guba's (1985) criteria (credibility through triangulation of diverse sources; transferability via thick descriptions of policy contexts; and

dependability through an audit trail of analytical decisions), holistically ensuring trustworthiness and authenticity of the research outcomes.

4. PROPOSED NATIONAL APPRENTICESHIP PROGRAMME FOR GHANA

4.1 Overview

Ghana faces youth unemployment crisis of 32.8% among 15–24-year-olds despite the nation's literacy rate of 69.8%. The informal sector, which employs over 80% of Ghanaians is under-tapped due to skills mismatches, fragmented institutional efforts and lack of a national apprenticeship operational manual. Even though a national apprenticeship policy was developed in 2020 (Ministry of Education, 2020), it effectiveness could be strongly felt when there is a national apprenticeship programme that specifically focuses on Ghana's golden informal sector as well as the formal sector. Therefore, this proposal outlines a National Apprenticeship Programme (NAP) to bridge the gaps between education and employment, leveraging global best practices and Ghana's indigenous apprenticeship heritage that largely drives the nation's informal sector in addition to formal apprenticeship.

4.1 Policy Objectives

This proposed NAP seeks to:

- reduce youth unemployment rate in Ghana through a pragmatic strategy on how to train at least 800,000 informal sector apprentices annually.
- align skills with labour market needs of Ghana by providing modalities on how to prioritise apprenticeship in the critical economic drivers of the informal sector.
- empower marginalised groups such as women, people with disability, among others, through equitable and inclusive apprenticeship schemes for all in Ghana.
- contribute to reducing poverty drastically by offering pragmatic apprenticeship guidelines on how to harness the diverse economically viable informal and formal sectors of Ghana, thereby promoting career-oriented training tied to decent wages.
- enhance Ghana's GDP growth by providing mechanisms of how to boost productivity through micro and macro-economic activities across all parts of Ghana through certified skills training schemes.

4.2 Core Components

4.2.1 Legal & Regulatory Framework for Ghana's Apprenticeship Reform

This national apprenticeship programme proposes alignment of existing national legislations and policies into a robust operational framework that facilitates easy implementation of national apprenticeship schemes across the country. With this, we propose harmonisation and amendments of existing legislation and policies into a robust operational framework to facilitate the nationwide implementation of structured apprenticeship schemes. This entails the following legislative and regulatory reforms:

Ghana's current legislation *National Vocational Training Act* (Act 351) of 1970, and the Education Regulatory Bodies Act (Act 1023) of 2020 with reference to CTVET, governing Technical and Vocational Education and Training (TVET) requires urgent revision to address governance gaps, enhance inclusivity, and institutionalise sustainable funding mechanisms, aligning with global benchmarks.

- *Amendments to Existing Legislation*: Under Section 44(1) of Act 1023, the Commission for Technical and Vocational Education and Training (CTVET) operates under a governance board that includes representatives from the Ministry of Education and the Ministry of Employment, among others. To create a holistic apprenticeship system integrating formal and informal sectors, CTVET's governance structure must be expanded to include eight inter-ministerial representatives. These ministries are Employment and Labour Relations; Education; Youth and Sports; Agriculture; Trade and Industry; Creative Arts and Tourism, Communication, Digital Technology and Innovation, and Finance. This expansion is justified by the ministries' respective mandates in both formal and informal economy oversight, youth skills development, job creation, and fiscal policy.

- *Operationalisation of the National Apprenticeship Policy*: The 2020 National Apprenticeship Policy, which remains unimplemented, outlines a governance framework for oversight, coordination, and partnerships. However, the repeal of the Council for Technical and Vocational Education and Training (COTVET) under Act 718 (2006) and its replacement by CTVET under Act 1023 of 2020 necessitate policy revisions. The revised policy must broaden ministerial oversight to include the eight aforementioned ministries, ensuring pragmatic and holistic apprenticeship systems that integrate formal and informal sectors.

- *Establishment of Sector-Specific Apprenticeship Councils:* To address the underdevelopment of Ghana's informal apprenticeship sector, legislative amendments to the National Vocational Training Act (Act 351, 1970) and the Education Regulatory Bodies Act (Act 1023, 2020) are required. These amendments should establish separate councils for formal and informal apprenticeships, decentralising oversight responsibilities across national, regional, and district levels. This bifurcated structure mirrors India's National Council for Vocational Training (1961) and ensures integrated governance of institutionalised and community-based apprenticeships.

- *Creation of a National Apprenticeship Fund:* Legislative harmonisation of Act 351 (1970) and Act 1023 (2020) is critical to address ambiguities in funding provisions, particularly Section 43(g) of Act 1023, which vaguely mandates CTVET to “source funds” for technical and vocational education. A *National Apprenticeship Fund* should be established through statute, prioritising domestic public-private financing. This aligns with international models such as South Africa's National Skills Fund (1998), the U.S. State Apprenticeship Agency (2021), and Papua New Guinea's Apprenticeship Trust Fund (1986).

- *Curriculum and Certification Governance:* Amendments to Section 43(1 - 3) of Act 1023 (2020) should empower an arm of CTVET to oversee curriculum design, competency-based assessments, and certification frameworks to a subsidiary council dubbed *Curriculum Design, Certification and Registry*. This will unify standards for formal (theory-practice

balance) and informal (practice-led) apprenticeships, ensuring a nationally recognised registry of certified skills.

4.2.2 Governance and Institutional Framework

In sync with the legislative propositions and addressing the existing governance gaps, the current NAP offers an innovative and coordinated institutional structure to pragmatically actualise the informal sector apprenticeships of Ghana. It proposes retaining the Commission for Technical and Vocational Education and Training, as the apex oversight body, as illustrated in Figure 5.

It also proposes an eight (8) inter-ministerial oversight framework (Figure 5), including the Ministry of: Employment and Labour Relations; Education; Youth and Sports; Agriculture; Trade and Industry; Creative Arts and Tourism, Finance, and their respective agencies. These ministries remain key in the governance and institutional framework of the National Apprenticeship Policy

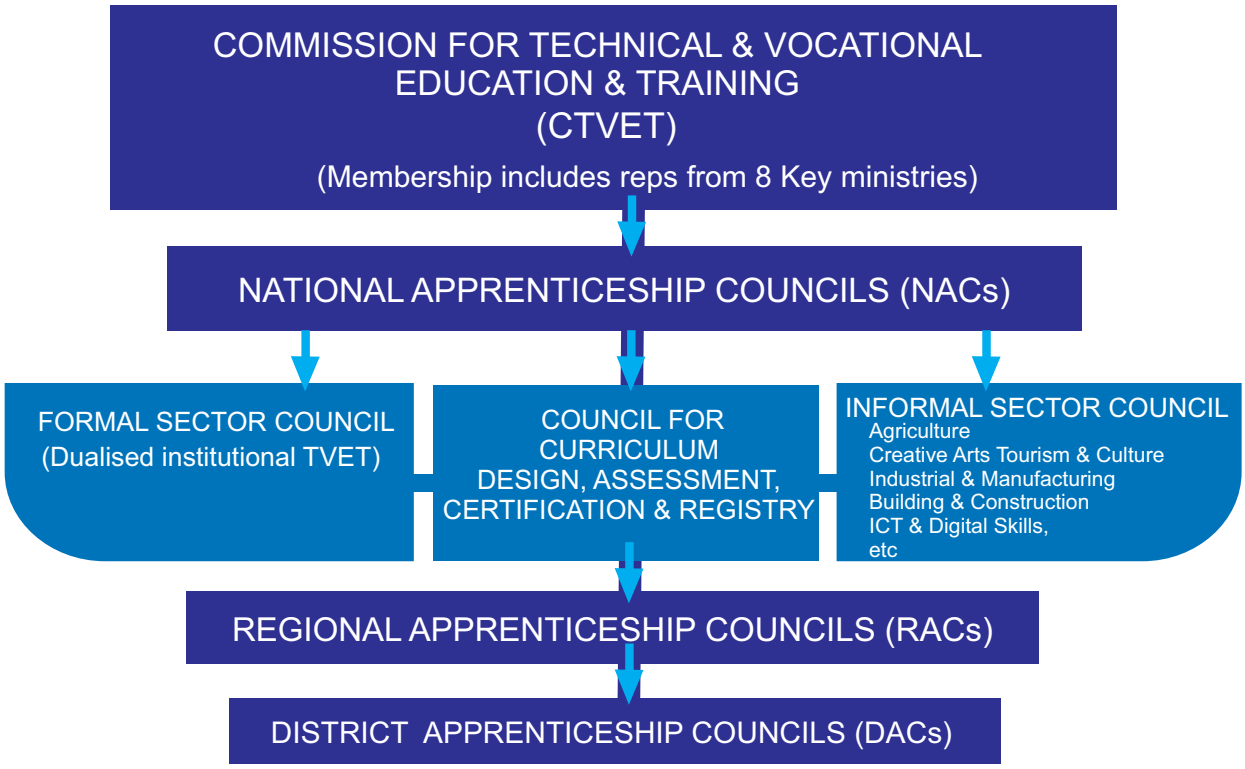

Figure 5: Organogram of NAP (Authors' Construction, 2025).

due to their coverage on the informal economy, youth education and skills development, job creation, or funding mandate, and should perform the following collaborative functions:

1. Ministry of Employment and Labour Relations (MELR)
   - *Lead Role*: The MELR oversees overall policy coordination, ensures labour market alignment, and monitors apprenticeship outcomes, including job placement rates and workplace compliance.

- *Agencies/Commissions*: The Labour Department enforce workplace safety standards and uphold labour (apprentices) rights, ensuring adherence to statutory regulations across apprenticeship schemes.

2. Ministry of Education (MoE)
   - Curriculum Integration: The MoE collaborates in the design of a standardised apprenticeship curriculum, assessment frameworks, and certification modalities to ensure academic rigour and practical relevance.
   - *Formalisation*: It bridges informal apprenticeships with formal education systems by implementing a practical-based National Proficiency Certification framework, enabling recognition of non-formal skills within the national qualifications structure.

3. Ministry of Youth and Sports (MoYS)
   - *Youth Mobilisation*: The MoYS facilitates the engagement of unemployed youth through the National Youth Authority (NYA) and Youth Employment Agency (YEA), prioritising apprenticeship enrolment among 15–35-year-olds.

4. Ministry of Agriculture (MoA)
   - *Agribusiness Focus*: The MoA promotes apprenticeships in agro-processing, agricultural mechanisation, and sustainable practices, leveraging initiatives such as *Planting for Food and Jobs*.
   - *Agencies*: The National Food Buffer Stock Company and the Agricultural Development Bank provide sector-specific training opportunities and financial support for agripreneurship.

5. Ministry of Tourism, Arts, and Culture (MoTAC)
   - *Creative Economy*: MoTAC advances apprenticeships in tourism, arts, and cultural trades (e.g., bead-making, hospitality) through partnerships with the Ghana Tourism Authority.
   - *Heritage Skills*: It revitalises traditional crafts, such as kente weaving, and ahenema sandals production, by collaborating with local artisans and integrating cultural heritage into vocational training programmes.

6. Ministry of Trade and Industry (MoTI)
   - *Industry Linkages*: The MoTI partners with the Association of Ghana Industries (AGI), Ghana Employers Association (GEA), and Ghana National Chamber of Commerce and Industry (GNCCI) to align apprenticeships with industrial demands, particularly in manufacturing and SMEs.
   - *Export Skills*: Through the Ghana Export Promotion Authority (GEPA), it develops export-oriented competencies in sectors such as textiles and handicrafts, enhancing global market competitiveness.

7. Ministry of Communication, Digital Technology, and Innovation
   - *Digital Skills Development*: The ministry integrates digital literacy, ICT skills, and

infrastructure access into apprenticeship curricula across all sectors, ensuring alignment with technological advancements.

- *Data and Technology for Monitoring*: It develops secure digital systems to track apprenticeship progress, design certification frameworks, and monitor employment outcomes. Additionally, it serves as the publicity wing of CTVET assisting the council for Curriculum Design, Certification and Registry to manage data-driven policy evaluation and public engagement.

8. Ministry of Finance (MoF)
   - *Funding and Budgeting*: The MoF allocates national funds, including statutory percentages from the District Assemblies Common Fund, GETFund, and oil revenues, and coordinates international donor support (e.g., World Bank, AfDB).
   - *Fiscal Incentives and Levies*: It designs tax rebates for firms hiring apprentices and oversees employer levies, administered by the Ghana Revenue Authority (GRA), to ensure sustainable financing for the NAP.

4.2.2.1 Commission for Technical and Vocational Education and Training (CTVET)

To enhance coordination and collaboration, the Commission for Technical and Vocational Education and Training (CTVET), which was established under the Education Regulatory Bodies Act (ACT 1023), must function as the apex governing body within the National Apprenticeship Programme's (NAP) governance framework. As the central authority, CTVET shall harmonise the collaborative functions of relevant ministries and agencies, with a mandate encompassing policy formulation, implementation, monitoring, and evaluation. This structure ensures the efficient and effective execution of the NAP while aligning Ghana's apprenticeship systems with national development goals. Legislative amendments to the National Vocational Training Act (Act 351) and the Education Regulatory Bodies Act (Act 1023) are imperative to establish sector-specific apprenticeship councils (e.g., formal, informal) and delineate their mandates. These reforms will enable the pragmatic rollout of robust, integrated apprenticeship systems across community, district, regional, and national levels. Consequently, CTVET will assume overarching responsibility for overseeing school-based apprenticeships at pre-tertiary and tertiary levels, and informal apprenticeship systems managed by sector-specific councils. This dual oversight fosters coherence and ensures the seamless integration of formal and informal apprenticeship pathways, thereby advancing Ghana's developmental objectives.

4.2.2.1.1 Composition of Commission for Technical and Vocational Education and Training (CTVET)

It is proposed that the Commission for Technical and Vocational Education and Training (CTVET) adopt a multi-stakeholder governance structure, comprising government ministries, agencies, employers' associations, trade unions, and private-sector representatives. This inclusive framework, aligned with international best practices in apprenticeship models (TUS, 2023; UNESCO-UNEVOC, 2015; World Bank, 2013), institutionalises collaboration across all stages of the apprenticeship lifecycle, curriculum design, implementation, monitoring, and evaluation, to ensure alignment with labour market demands, industrial priorities, and national socio-economic objectives. By embedding diverse stakeholders into its governance architecture, CTVET harnesses sector-specific expertise to enhance the relevance, inclusivity, and adaptability of apprenticeship

pathways. Employers' associations and private-sector representatives, for instance, directly inform skills prioritisation, while trade unions safeguard apprentices' rights and workplace conditions. Concurrently, government ministries ensure policy coherence, regulatory compliance, and equitable resource allocation.

Pursuant to proposed legislative amendments under section 44(1) of Act 1023 (2020), CTVET's governing council should comprise the following commissioners:

a. *Chairperson:* The Minister of Employment or their designated representative.
b. *Ministerial Representatives:* One delegate each from eight ministries:
    a. Employment and Labour Relations
    b. Education
    c. Youth and Sports
    d. Agriculture
    e. Trade and Industry
    f. Creative Arts , Tourism & Culture
    g. Communication, Digital Technology, and Innovation
    h. Finance

c. *Private-Sector Delegates:* One representative each from:
    a. The Association of Ghana Industries (AGI)
    b. The Ghana National Chamber of Commerce and Industry (GNCCI)
    c. The Ghana Employers Association (GEA)
    d. The Master Craftspersons Association

d. *Institutional Representatives:* One delegate from each of the following bodies:
    a. Formal Sector National Apprenticeship Council (FSNAC)
    b. Informal Sector National Apprenticeship Council (ISNAC)
    c. Curriculum Design, Assessment, Certification, and Advisory Council
    d. National Youth Authority (NYA)

e. *Inclusivity Mandate:* Two additional members, including at least one woman and one person with disability.
    - *Secretary*: FSNAC's Representative.
    - *Secretariat*: CTVET establishment.

4.2.2.1.2 Key Functions

CTVET shall perform its functions as specified under section 43(1-3) of the *Education Regulatory Bodies Act (Act 1023 of 2020) for CTVET* (See appendix 1 for details of its function). In addition to the aforementioned functions, it is proposed that Section 43(1–3) of the Education Regulatory Bodies Act (Act 1023 of 2020) be amended to empower the Commission for Technical and Vocational Education and Training (CTVET) to undertake the following functions:

Section 43(4)

4. (a) The Commission shall implement, and maintain the National Apprenticeship Programme (NAP) as the central governing framework for apprenticeships in Ghana.

(b) The NAP shall be reviewed every five years, or as necessitated by significant shifts in labour market demands or national development priorities, in consultation with Sector Skills Development Councils (SSDCs), and industry stakeholders.

Section 43(5)

5. The commission shall establish decentralised sector-specific National Apprenticeship Councils:

(a) Formal Sector Apprenticeship Council (FSAC):

i. Composition: Representatives from formal TVET institutions, industry regulators, and academia.
ii. Functions: Oversee curriculum accreditation, quality assurance, and governance of apprenticeships from pre-tertiary to tertiary levels.

(b) Informal Sector Apprenticeship Councils (ISACs):

i. Composition: Master Craftspersons, trade associations, and local government representatives.
ii. Functions: Design sector-specific training frameworks for agriculture, construction, creative arts, and other informal sectors.

(c) Council for Curriculum Design and Registry (CCDR):

i. Composition: Technical experts, SSDCs, and Ghana Education Service.
ii. Functions: Standardize curricula, develop assessments, and maintain a National Apprenticeship Registry to track certifications and prior learning recognition.

(d) Regional Apprenticeship Councils (RACs):

i. Composition: Regional Coordinating Council chairs, TVET coordinators, and industry leaders.
ii. Functions: Adapt NAP policies to regional economic priorities and oversee DACs.

(e) District Apprenticeship Councils (DACs):

i. Composition: District Assembly representatives, traditional leaders, and training providers.
ii. Functions: Mobilise trainees, monitor compliance, and implement grassroots apprenticeship programmes.

Section 43(6)

The Commission shall, where applicable, establish Apprenticeship Incubation Hubs in all Metropolitan, Municipal, and District Assemblies (MMDAs), equipped with:

i. Practical training facilities and mentorship programmes.
ii. Partnerships with financial institutions for startup grants and entrepreneurship support.

Section 43(7)

The Commission shall develop a National Apprenticeship database (Digital Platform) to:

(a) track enrollment, certification, and employment outcomes.
(b) host remote learning resources accessible via mobile devices.

(c) integrate with the National Identification Authority for data accuracy.

Section 43(8)
The Commission shall convene quarterly innovation summits with SSDCs, industry, and academia to identify emerging skills gaps and design cross-sectoral programmes (agri-tech, renewable energy, and others).

Section 43(9)
The commission shall provide apprentices and master craftperson with essential resources including monthly stipends and toolkits.

Section 43(10)
The Commission shall host National Apprenticeship Innovation Challenges, awarding grants and patent support for solutions to community challenges such as waste management and digital tools for farmers among others.

Section 43(11)
(a) The commission shall harmonise certification standards between FSAC and ISACs.
(b) Establish bridging programmes for informal apprentices to access formal TVET qualifications.

Section 43(12)
Establish a CTVET independent ombudsman to mediate disputes between apprentices, employers, and training providers, ensuring fair internal resolution mechanisms.

4.2.2.2 National Apprenticeship Councils

NAP makes provision for target Sector Skills Development Councils (SSDCs), serving as the implementation arms of the Commission for Technical and Vocational Education and Training (CTVET). Therefore, SSDCs are various councils under the Commission for Technical and Vocational Education and Training (CTVET) in charge of translating CTVET's national strategies into sector-specific actions. Therefore, the composition of its membership should include experts, the relevant sector ministries, industry players, and regional focal persons for effective coordination. Each SSDC should mirror the mandate of key sector ministries and industries, and be composed of:

- *Chair*: Sector Minister or designee.
- *Members*: Sector Minister or designee, CTVET member, Sector-specific trade associations; Employers/industry experts within the sector, and Regional focal persons. The membership must include a woman and a person with disability. However, this provisional membership of SSDCs should be streamlined by CTVET.

- **Functions:** The SSDCs mandate is to, technically, support CTVET's coordination, sector-specific curriculum design implementation, sector monitoring and evaluation, while operationalising each sector ministry's functions and initiatives. Specifically, SSDCs perform functions such as:

i. ***Sector-Specific Skills Needs Assessment***: SSDCs identify and analyse current and future skill gaps within their respective industries (agriculture, tourism, manufacturing, electrical, lumbering, etc.). They collaborate with employers, trade associations, and training providers to ensure apprenticeships address labour market demands and align with national development goals.

ii. ***Development of Sector-Driven Curricula*****:** SSDCs design and update industry-relevant curricula and training content in partnership with ministries, CTVET, and training institutions. For example, the Agriculture SSC might create modules on agro-processing or sustainable practices, while the Creative Arts SSC could focus on traditional crafts like kente weaving.

iii. ***Industry Engagement and Partnerships*****:** SSDCs foster collaboration between employers, Master Craft Persons, and training providers to ensure apprenticeships offer practical, workplace-based learning. They incentivise private sector participation (for example, through tax rebates) and align training with industrial needs, such as export-oriented skills in textiles or hospitality.

iv. ***Quality Assurance and Certification*****:** SSDCs contribute to the National Proficiency Certification system by developing sector-specific assessment tools and standards. They ensure apprentices meet competency benchmarks, enabling informal apprentices to gain formal recognition (certifying agribusiness apprentices under the Planting for Food and Jobs initiative, etc).

v. ***Monitoring and Reporting Sector Performance***: SSDCs track apprenticeship outcomes (such as completion rates, job placements) within their sectors and report to CTVET. They provide feedback for policy adjustments, ensuring programmes remain responsive to industry trends and challenges (adapting to mechanisation in agriculture or digital tools in creative arts, among others).

The following councils are proposed under CTVET. However, CTVET has the mandate to include other sectoral councils (SSDCs) deemed relevant.

4.2.2.2.1 Formal Sector National Apprenticeship Council (FSNAC)

The Formal Sector National Apprenticeship Council (FSNAC) should be established and operationalised as a distinct Sector Skills Development Council (SSDC) under the proposed National Apprenticeship Council (NAC), with a specialised mandate to oversee institutional (formal) Technical and Vocational Education and Training (TVET). To enable this, the *Education Regulatory Bodies Act (Act 1023) of 2020*, which currently institutes a unitary board system to govern the Commission for Technical and Vocational Education and Training (CTVET), must be amended to create dedicated national apprenticeship councils, including FSNAC. This council will focus exclusively on institutional pre-tertiary and tertiary apprenticeships right from basic school, senior high school, colleges, technical and traditional universities, distinguishing it from other sector-specific councils that target informal or industry-aligned apprenticeships. Specifically, FSNAC should take proactive steps for compulsory incorporation of apprenticeship skills to all educational curricula and programmes run in Ghana at all levels of education (pre-tertiary & tertiary), aligning

graduate skills with both formal and informal job prospects to pragmatically address the increasing graduate unemployment rate in Ghana largely due to skills mismatch and preference for white collar jobs (Ministry of Education, 2020; Hardy et al., 2019a). The establishment of FSNAC is imperative due to the broad scope of CTVET's existing mandate under Act 1023, which requires it to formulate, coordinate, harmonise, and supervise skills development policies across pre-tertiary and tertiary education, as well as formal, informal, and non-formal apprenticeship systems. The operational limitations posed by this expansive remit, particularly the challenge of holistically managing diverse apprenticeship pathways under a unilateral governance board as enshrined in section 44(1) of the Act (Act 1023) of 2020, tend to contribute to systemic underdevelopment in Ghana's apprenticeship ecosystem. By leveraging the structured skills development framework of the NVTI, FSNAC addresses this gap through targeted oversight of formal TVET. It should perform the following key Functions, among others, as may be determined by CTVET:

1. Regulatory Oversight: Ensure formal TVET institutions (NVTIs) align with national skills development goals under CTVET's broader policy framework. This includes taking steps to liaise with pre-tertiary and tertiary education stakeholders to holistically streamline Ghana's education from Basic School through Senior High/Technical School, to colleges, technical and traditional universities, to instil a deep sense of entrepreneurial apprenticeship in graduates, matching skill training with the prevailing job demands in Ghana. This tends to address graduate unemployment since graduates are conscientised to establish themselves first while awaiting other forms of employment, where necessary and available.

2. Curriculum and Assessment Reform: Liaise with the Curriculum Design, Certification and Registry council to redesign and implement competency-based curricula, prioritising a 70% institutional training and 30% on-the-job training ratio to bridge theory-practice divides.

3. Certification Standardisation: Liaise with the Curriculum Design, Certification and Registry council to establish practical, industry-responsive certification frameworks for formal programmes, ensuring coherence between institutional standards and labour market demands.

4. Quality Assurance: Monitor compliance with accreditation benchmarks, fostering parity between formal TVET outcomes and employer expectations.

This specialised focus enables FSNAC to enhance the rigour, relevance, and labour market alignment of formal apprenticeships, counteracting fragmentation and elevating Ghana's TVET system to international standards.

4.2.2.2.2. Informal Sector National Apprenticeship Council (ISNAC)

The Informal Sector National Apprenticeship Council (ISNAC) shall be established as a distinct Sector Skills Development Council (SSDC) under the National Apprenticeship Council (NAC), with a specialised mandate to oversee informal and non-formal technical and vocational apprenticeships in critical sectors of national interest. Its primary objective is to target and leverage community-based apprenticeship systems at district, regional, and national levels, ensuring their integration into Ghana's broader skills development framework. To operationalise this, legislative amendments to the Education Regulatory Bodies Act (Act 1023) are required, thereby empowering

ISNAC to formulate, coordinate, harmonise, and supervise national policies for skills development within the informal sector. This institutional reform aims to catalyse accelerated skills development, fostering self-employment and sustainable livelihoods for Ghana's informal workforce. The following sub-councils are proposed under the Informal Sector National Apprenticeship Council (ISNAC):

4.2.2.2.2.1. Agriculture Sector Skills Development Council (ASSDC)

The membership composition of this council, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministry for this council is the Ministry of Food and Agriculture (MoFA), and its allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills, that should be done under the auspices of both CTVET and SSDCs. Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship schemes therein. Some focal Areas for skills development should include:

- Agro-processing, agritech, mechanisation, sustainable agriculture
- Cash cropping
- Traditional farming and emerging practices (organic, climate-smart agriculture)
- Animal husbandry (poultry, sheep, goats, cattle, rabbits, grass cutters, and other commercial rearing)
- others

4.2.2.2.2.2. Creative Arts, Tourism, & Culture Sector Skills Development Council (CATC-SSDC)

The membership composition of this council, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministry for this council is the Ministry of Tourism, Arts and Culture (MoTAC), and its allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills that should be done under the auspices of both CTVET and SSDCs. Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship schemes therein. Some focal Areas for skills development should include:

- Traditional crafts and their contemporary innovations. These include but are not limited to creative artisanal vocations such as smock weaving, kente weaving, textiles and fashion design, pottery/ceramics, bead-making, basketry, graphic design, leather work, and sculpture.
- Commercial performance arts, and creative media (music, dance, film and theatre arts production).
- Interior and Exterior Design skills.
- Heritage, tourism & hospitality development skills.

4.2.2.2.2.3. Industrial & Manufacturing Sector Skills Development Council (IM-SSDC)

The membership composition of this committee, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministry for this council is the Ministry of Trade and Industry (MoTI), and its allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills that should be done under the auspices of both CTVET and SSDCs. Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship

schemes therein. Some focal Areas for skills development should include:
(a) Manufacturing (woodwork, metalwork, leather, toothpick, footwear, spare parts, fertiliser, breweries, juice, zinc, cement, and others.), (b) Industrial apprenticeship standards, and
(c) Export-ready skills and innovations in SMEs.

4.2.2.2.2.4. Building and Construction Skills Development Council (B&C-SSDC)

The membership composition of this council, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministries for this council are the Ministry of Employment and Labour Relations (MELR) and the Ministry of Trade and Industry (MoTI), and their allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills that should be done under the auspices of both CTVET and SSDCs**.** Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship schemes therein. Some focal Areas for skills development should include:

- Carpentry, masonry, tiling, plumbing, electrical installations, Green building technologies, among others.

4.2.2.2.2.5. ICT and Digital Skills Development Council (ICT-SSDC)

The membership composition of this coucil, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministry for this council is the Ministry of Communication, Digital Technology and Innovation, and the Ministry of Trade and Industry (MoTI), and their allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills that should be done under the auspices of both CTVET and SSDCs. Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship schemes therein. It is noteworthy that this sector may not apply to people with literacy skills, however, school dropouts and interested individuals should be allowed to access ICT and digital skills. Also, reforms under the formal sector national apprenticeship should compulsorily include this sector. Some focal Areas for skills development should include:

- Coding, digital marketing, software and Apps development; electronics repairs (TVs, computers, mobile phones, and others).

4.2.2.2.2.6. Service & Retail Skills Development Council (SR-SSDC)

The membership composition of this council, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministry for this council is the Ministry of Communication, Digital Technology and Innovation, and the Ministry of Trade and Industry (MoTI), and their allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills that should be done under the auspices of both CTVET and SSDCs**.** Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship schemes therein. Some focal Areas for skills development should include:

- Sales, beauty and cosmetics, catering, tailoring, barbering, fashion design and others

4.2.2.2.2.7. Electrical, Mechanical, and Automotive Skills Council (EMA-SSC)

The membership composition of this committee, as proposed under the Sector Skills Development Council, shall be constituted by CTVET. The lead ministry for this council is the Ministry of Communication, Digital Technology and Innovation, and the Ministry of Trade and Industry (MoTI), and their allied agencies. If there is a need for further formation of sectoral sub-councils due to the vastness of the scope of skills that should be done under the auspices of both CTVET and SSDCs**.** Skills development under this sector should be underpinned by the sector's programmes on job creation, including other novel apprenticeship schemes therein. Some focal Areas for skills development should include:

- Auto-mechanics, refrigeration repairs, welding, electrical installation and others.

4.2.2.2.3. Council for Curriculum Design, Assessment, Certification and Registry

The membership composition of this council shall be constituted by CTVET based on critical expertise. Some focal Areas include:

- Promote competency-based formal sector apprenticeship (dualised 70% training and 30% on-the-job-training for all pre-tertiary and tertiary curricula and programmes in Ghana.
- Promote competency-based informal sector apprenticeship (100% practice-led, on-the-job training). This is premised on the fact that the Ghanaian informal sector, largely, has people with less or no literacy skills.
- Harmonised standardised national assessment for both formal and informal apprenticeships that meets international standards.
- Develop a standardised national certification regime.
- Serves as a national apprenticeship registry that keeps track of up-to-date data on all apprenticeship activities across all sectors, providing CTVET with data for effective monitoring and evaluation as well as policy reforms.

4.2.2.2.4. Regional Apprenticeship Council

4.2.2.2.4. 1. Membership Composition

- *Chair***:** Regional Minister.
- *Members*: Metropolitan, Municipal, and District Chief Executives (MMDCEs); focal persons for key Sectors based on regional dynamics (agriculture, tourism); Regional representative, representatives of key trade associations and NGOs at the regional level; representative of the regional house of chiefs; National Youth Authority (NYA) representatives. The membership must include a woman and a person with disability.
- *Secretariat:* Embedded within regional coordinating Council structures.

4.2.2.2.4.2 Functions:

- *Policy Adaptation and Implementation*: Translate CTVET directives into region-specific strategies based on the region's dynamics, and implement them accordingly.
- *Sector Coordination:* Collaborate with SSDCs to align regional apprenticeships with sectoral needs.
- *Resource Allocation:* Manage funds from CTVET, District Assemblies Common Fund, and private partnerships.
- *Monitoring & Evaluation (M&E):* Track KPIs (enrollment, completion, job placement) and report to CTVET.

4.2.2.2.5 District Apprenticeship Council (DAC)

4.2.2.2.5.1 Composition:

- *Chair:* District Chief Executive
- *Members:* Presiding Member, District Coordinator, one representative from local trade associations (carpenters, tailors, hairdressers, plumbers etc.); one representative of MCPs, Apprentice representative; District Director of Education, representative from Youth Employment Agency (YEA) and NGO representative, Paramount Chief; women representative, one person with disability.
- *Secretariat:* Embedded within District Assembly structures.

4.2.2.2.5.2 Key Functions

- *NAP Implementation:* Using expert training providers; Master craft persons to implement NAP according to the district dynamics.
- *Grassroots Mobilisation:* Identify unemployed youth and marginalised groups (rural women, PWDs, street hawkers and others) for apprenticeship enrollment.
- *Local Curriculum Customisation:* Adapt SSC-developed curricula to district needs.
- *Community Partnerships:* Leverage festivals and cultural events to promote traditional apprenticeships.
- *Compliance Oversight:* Ensure workplaces meet safety standards and fair wages policies (via Labour Department collaboration).
- Data collection and management for effective policy monitoring.
- *Feedback Loop:* Report challenges (funding gaps) to the Regional Apprenticeship Council (RAC) for resolution. Also, track Key Performance Indicators (enrollment, completion, job placement) and report to RAC for onward transmission to CTVET for policy decision and revision.

4.3 FUNDING AND INCENTIVES

4.3.0 Financial Architecture

In light of the precarious existing funding structure for Ghana's apprenticeship sector, which currently relies on an unsustainable unilateral funding of 1.2% from the Ministry of Education's annual budgetary allocation to Technical and Vocational Education and Training (TVET), 2% from the Ghana Education Trust Fund (GETFund), and 21% donor contributions (CTVET, 2024), we propose a multi-layered funding model with legislative backing, and pragmatic solution to ensure NAP's sustainability. This model, anchored on strategic collaboration between government, private sector actor, and domestic revenue streams, is designed to align with the National Apprenticeship Programme's (NAP) objectives while mitigating over-reliance on volatile international funding. Central to this framework is the Commission for Technical and Vocational Education and Training (CTVET), which assumes oversight responsibility for consolidating inter-ministerial apprenticeship budgets into a composite annual proposal, ratified by the Ministry of Finance. Crucially, the model prioritises domestic resource mobilisation, targeting a minimum of 80% (and optimally 90%) of NAP's funding from local mechanisms, thereby insulating the sector from donor dependency and fostering long-term funding sustainability. To institutionalise this approach, the establishment of a National Apprenticeship Fund is imperative, ensuring ring-fenced financing, and accountability to NAP's goals, and adherence to parliamentary oversight. Such a fund would not only address the systemic underfunding highlighted by the current fragmented

allocations but also operationalise Ghana's commitment to sustainable human capital development, as envisaged under national policy frameworks. This transition to a domestically anchored funding architecture is both a fiscal necessity and a strategic imperative, aligning with global best practices for TVET sustainability as in the case of Germany, America, Australia and others (Authenticated US Government Information, 2021; Haasler, 2020; Deissinger, 2015; Smith, 2021) while addressing historical inefficiencies that have constrained apprenticeship growth in Ghana.

4.3.1. Funding Sources

4.3.1.1 Public Funding

Under the public funding, it is proposed that the Government makes the following Allocations:

- **District Assemblies Common Fund (DACF)**: Per Section 82(1) of the Local Governance Act, 2016 (Act 936), as amended, which mandates Metropolitan, Municipal, and District Assemblies (MMDAs) to actively participate in national economic planning and development, it is proposed that 5% of the District Assemblies Common Fund (DACF) allocated to each MMDA be deducted at source by the Ministry of Finance and channelled into the National Apprenticeship Fund. This allocation is statutorily justified, as apprenticeship programmes directly advance economic empowerment and skills development, critical pillars of inclusive national development. By centralising deductions at source, the mechanism ensures uniformity, compliance, and alignment with the legislative intent of Act 936, which binds MMDAs to contribute to broader socio-economic objectives beyond localised priorities. The allocation further operationalises the Act's directive to harmonise local governance with national development strategies, ensuring equitable access to vocational training opportunities for marginalised populations. Such ring-fenced funding not only fulfils the statutory obligation of MMDAs under Act 936 but also transforms the DACF into a strategic instrument for sustainable human capital investment, fostering productivity and reducing disparities, a core tenet of Ghana's medium-term and long-term development frameworks. This approach guarantees that apprenticeship funding remains a non-discretionary, legally anchored priority, thereby safeguarding its continuity and impact.

- **GETFund**: Under the Ghana Education Trust Fund Act (Act 581) of 2000, as amended in 2018, GETFund is to "provide finance to supplement the provision of education at all levels by the Government" (Section 2(1). To fulfil this mandate, Section 2(2) of Act 581 prescribes permissible expenditure categories, including the development of academic infrastructure in public institutions; scholarships for gifted but needy students; support for student loan schemes; grants for faculty training, research, and academic programmes; and funding for other educational activities and programmes for the promotion of education, as determined by the Minister in consultation with the Board. Given that the National Apprenticeship Programme (NAP) delivers vocational education and skills training to both formal and informal sectors, allocating 5% of the GETFund's annual budgetary allocation to NAP aligns directly with the Act's objectives. This allocation would enable access to apprenticeship opportunities for all Ghanaians outside Western formal education systems, thereby operationalising Section 2(2)(e), which empowers GETFund to fund initiatives that broaden educational equity. Such a disbursement would not only uphold the Act's focus on inclusive resource distribution

2(2-b, c) but also advance national development through sector-specific skills training and research, consistent with the prioritisation of academic research and faculty development under Section 2(2)(d) the Act**.** By channelling 5% of GETFund resources to NAP, Ghana would ensure statutory alignment with Act 581's overarching aim to democratise educational access, while addressing the unmet needs of non-traditional learners, a demographic integral to achieving equitable socio-economic progress.

- **Petroleum Revenue**: It is proposed that 5% of Ghana's total Petroleum revenue be allocated to fund the National Apprenticeship Programme. This allocation will ensure sustainable funding for high-cost, sector-specific apprenticeship initiatives, such as automobile engineering and agricultural technology, alongside the operational activities of CTVET, national apprenticeship councils, regional and district apprenticeship councils. This proposal aligns with Section 21(3) of the Petroleum Revenue Management Act (Act 815) of 2011, which mandates prioritising petroleum revenue expenditures on programmes related to agriculture, industry, education, and science, even in the absence of a ratified long-term national development plan. Furthermore, Section 21(4) of Act 815 stipulates that a minimum of 70% of the Annual Budget Funding Amount (ABFA) must be directed toward public investments consistent with subsection (3) or Parliament-approved development frameworks. By channelling 5% of petroleum revenues into NAP, Ghana adheres to this statutory requirement, ensuring these funds contribute to public investment in skills development, a critical enabler of economic diversification, regional equity, and inclusive growth. This approach not only complies with the Act's objective to “maximise the rate of economic development” (Section 21(1)) but also operationalises the legislative intent to bridge skills gaps in priority sectors, thereby advancing citizens' well-being and balanced regional progress as envisioned under Ghana's medium- to long-term aspirations.

- **Sector Ministries**: In alignment with the proposed inter-ministerial oversight framework for the National Apprenticeship Programme (NAP), it is recommended that each of the eight designated Sector Ministries, Employment and Labour Relations; Education; Youth and Sports; Agriculture; Trade and Industry; Creative Arts and Tourism; Communication; and Finance, allocate 2% of their annual budgetary allocations to support sector-specific Skills Development Councils (SSDCs). This proposal addresses the current inadequacy of funding for Technical and Vocational Education and Training (TVET), evidenced by the Ministry of Education's allocation of only 1.2% of its annual budget to such activities (CTVET, 2024), which has constrained the sector's capacity to address skills gaps. By mandating proportional contributions from all relevant ministries, this model ensures a multi-sectoral financing mechanism, distributing fiscal responsibility while leveraging sectoral expertise to align apprenticeship initiatives with industry demands. The allocation would empower Sector Skills Development Councils (SSDCs) to execute NAP efficiently, fostering harmonised skills development across priority sectors such as agriculture, industry, and tourism, as outlined in Ghana's national development agendas. This approach not only remedies the historical underfunding of TVET but also institutionalises inter-ministerial collaboration, ensuring that skills training is directly tied to labour market needs and economic diversification goals. Furthermore, it operationalises the principle of shared accountability under the NAP framework, transforming fragmented budgetary practices into a cohesive, sustainable funding architecture. By anchoring contributions at 2% per

ministry, the proposal balances fiscal feasibility with strategic impact, ensuring that SSDCs are resourced to deliver targeted, high-quality training programmes, a critical step towards reducing youth unemployment and enhancing productivity in line with Ghana's medium and long term development objectives.

4.3.1.2 Private Sector Contributions

- **Levies**: In alignment with the National Apprenticeship Programme's (NAP) objective to establish a sustainable, multi-stakeholder funding architecture, it is proposed that private sector entities contribute 2% of their annual statutory registration fees, and renewal charges as a levy, administered through the Registrar General's Department and Metropolitan, Municipal, and District Assemblies (MMDAs). The Ghana Revenue Authority (GRA) shall deduct these levies at source and channel them into the NAP Consolidated Account, ensuring efficient collection and ring-fenced allocation. This mechanism guarantees a predictable revenue stream from domestic private sector actors, directly linking their operational compliance to national skills development priorities, while mitigating over-reliance on volatile donor funding.

4.3.1.3 International Donor Funding

- **Funds from Development Partners**: Although not a sustainable funding source, grants from the World Bank, African Development Bank (AfDB), European Union (EU), UNESCO, International Labour Organisation (ILG) and others must be consolidated through the Ministry of Finance, disbursed in consultation with the Commission for Technical and Vocational Education and Training (CTVET) to ensure alignment with NAP's strategic objectives. CTVET should proactively engage bilateral partners such as Germany's GIZ, South Korea's KOICA and many others by formalising technical cooperation agreements, sharing detailed programme frameworks of NAP, and advocating for apprenticeship funding as a priority intervention area. This approach leverages Ghana's existing partnerships while securing technical expertise and financial support tailored to sector-specific needs. Also, it harmonises international apprenticeship funding inflows under CTVET oversight, ensuring accountability, reducing funding fragmentation, and aligning all contributions with Ghana's broader goals of sustainable skills development, youth employability, and industrial competitiveness, core tenets of the national economic transformation agenda of Ghana.

4.3.1.4. Innovative Financing

In pursuit of sustainable and diversified financing for Ghana's National Apprenticeship Programme (NAP), innovative funding mechanisms must be prioritised to address infrastructure deficits and sector-specific demands. To this end, the Commission for Technical and Vocational Education and Training (CTVET) should issue government-backed apprenticeship bonds, designed to mobilise capital for the nationwide establishment of sector-specific skills training centres. These hubs would provide critical infrastructure and routine technical support to master craft trainers, enhancing the quality and scalability of apprenticeship delivery in alignment with NAP's objectives. Concurrently, CTVET must actively secure impact investment funds by engaging social investors, particularly for high-demand sectors such as renewable energy, agro-processing, and digital technologies, under terms that balance investor returns with national developmental priorities. This approach leverages private capital for public good, ensuring apprenticeship initiatives are both commercially

viable and socially impactful. By combining bond financing with targeted impact investments, Ghana can reduce dependency on traditional funding streams while fostering public-private synergies. These mechanisms align with NAP's strategic focus on sustainability, equipping the programme with a resilient financial architecture to meet current skills gaps and future labour market demands. Such innovation not only adheres to global best practices in vocational funding but also operationalises Ghana's commitment to inclusive, industry-responsive skills development as a cornerstone of economic transformation.

In summary, NAP proposes a multi-layered domestic apprenticeship funding model for Ghana, targeting 80-90% local funding through statutory sources such as 5% deductions each from the District Assemblies Common Fund, GETFund, and petroleum revenues. Also, 2% contributions from sector ministries; 2% of registration fees , and permits granted establishments of the Private sector and envisaging international grants managed by CTVET. A legislated National Apprenticeship Fund ensures accountability, while innovative financing (government-backed bonds, impact investments) addresses infrastructure gaps. Overseen by CTVET, this approach reduces donor dependency, aligning with national development goals to foster sustainable Ghanaian human capital growth through coordinated public-private collaboration, adhering to statutory frameworks and global vocational funding best practices.

4.3.1.5. Fund Allocation, Management and Monitoring

a. **National Level (CTVET)**: To ensure rigorous governance and strategic deployment of resources under the National Apprenticeship Programme (NAP), a centralised funding architecture is proposed, anchored on transparency, accountability, and equity. At the national level, the Commission for Technical and Vocational Education and Training (CTVET) shall consolidate all government allocations, private sector levies, and international donor contributions into a ring-fenced National Apprenticeship Fund, enabling systematic oversight of inflows, allocations, and expenditures. CTVET will allocate *2*5% of the funds to Sector Skills Development Councils (SSDCs), proportionate to sector-specific labour market demands, ensuring targeted skills development in priority industries. A further 15% will be retained for CTVET's operational costs, Monitoring and Evaluation (M&E) frameworks, and nationwide campaigns to promote apprenticeship uptake.

b. **At regional and district levels**: The remaining *60% of the fund* will be disbursed to Regional/District Councils to finance localised implementation, including provision of apprentices' transportation stipends, toolkits for trainers, and incentives for Master Craft Persons (MCPs) and employers, measures critical to enhancing participation and quality in underserved communities.

c. **Monitoring and Accountability:** For monitoring and accountability, the Ministry of Communications shall develop a digital tracking platform to be used for monitoring real-time fund utilisation, enrolment metrics, and certification outcomes, complemented by quarterly internal audits and annual reviews by the Auditor-General to enforce compliance with fiscal guidelines. CTVET will further track Key Performance Indicators (KPIs), including a 70% post-certification job placement target and sectoral fund absorption rates, ensuring alignment with NAP's objectives of reducing youth unemployment and bridging skills gaps. This structured model balances centralised oversight with decentralised execution,

embedding fiscal discipline while prioritising adaptive, locally responsive interventions, a framework indispensable for sustainable human capital development under Ghana's national economic development agenda.

4.3.2. Incentive Schemes

To ensure the effective nationwide implementation of the National Apprenticeship Programme (NAP), a structured incentive framework is proposed, combining financial and non-financial mechanisms to enhance participation, quality, and sustainability. The incentive schemes include:

a. **Financial Incentives:** Provide a *10% corporate tax rebate* for firms employing over 10 apprentices annually. Per Ghana's fiscal policy objectives, which prioritise private sector engagement and human capital development, the introduction of a 10% corporate tax rebate for firms employing over 10 apprentices annually is both strategic and justified. This targeted incentive aligns with the state's commitment to fostering skills acquisition while mitigating fiscal burdens on businesses, thereby stimulating apprenticeship uptake within both formal and informal economy of Ghana. By linking tax relief to quantifiable participation, specifically, the employment threshold of 10 apprentices, the measure ensures that incentives are directed towards enterprises making substantive contributions to apprentice workforce development, avoiding dilution of public resources through indiscriminate disbursements. Furthermore, conditioning the rebate on compliance with nationally accredited training standards, verified through periodic audits by the Ghana Revenue Authority (GRA) in collaboration with Sector Skills Development Councils (SSDCs), guarantees that apprentices receive quality, standardised training. Such a mechanism not only incentivises private sector involvement but also harmonises corporate fiscal obligations with broader socio-economic goals, ensuring equitable access to skill-building opportunities and reinforcing Ghana's trajectory towards sustainable, inclusive growth.

b. **Training Cost**: In alignment with the Government of Ghana's provision of free education, encompassing infrastructure, resources, and tuition fees, across public basic schools, Senior High Schools/National Vocational Training Institutes (SHS/NVTIs), and tertiary institutions, it is imperative that the Commission for Technical and Vocational Education and Training (CTVET) assumes full responsibility for apprentices' training costs within the informal sector. To uphold equity in the distribution of national resources, CTVET must disburse funds directly to Master Craft Persons (MCPs) and employers through Sector Skills Development Councils (SSDCs) and regional or district oversight bodies. Such disbursements should be conditional upon the submission of verified progress reports, ensuring accountability and adherence to predefined training benchmarks. This approach mirrors the state's commitment to accessible education, extending comparable support to informal apprenticeships, which constitute a critical pillar of Ghana's skills development framework. By institutionalising this mechanism, the government guarantees that all citizens, irrespective of their educational pathway, benefit equitably from national investments in human capital development, thereby fostering inclusive socio-economic progress.

c. **Financial Support:** In alignment with the Government of Ghana's commitment to equitable resource distribution, and addressing systemic inequities, a monthly stipend of at least

GH₵200.00 should be instituted for informal sector apprentices, administered through Sector Skills Development Councils (SSDCs) via regional and district authorities, to offset transportation and incidental expenses. This measure ensures parity with the GH₵400.00 monthly allowances allocated to teachers and nursing trainees over four years, as explicitly affirmed in the 2025 Budget (Ministry of Finance, 2025). This calibrated support reflects the informal sector's critical role in Ghana's economy, which studies indicate has the potential to generate up to 80% of national employment (Baah-Boateng, 2013; Osei-Boateng & Ampratwum, 2011). By extending financial provisions to informal sector apprentices, a demographic historically excluded from formal training subsidies, the government operationalises its pledge to inclusive development, ensuring equitable access to national resources while strengthening a sector vital to poverty reduction and economic resilience. The stipend framework not only aligns with fiscal precedents set for teacher and nursing trainees but also underscores a strategic investment in human capital development, bridging the gap between formal education pathways and informal vocational training, as envisaged under Ghana's broader socio-economic transformation agenda.

d. **Non-financial incentives**: To harmonise Ghana's skills development strategy with labour market demands and ensure equitable economic participation, non-financial incentives under the National Apprenticeship Programme (NAP) are structured to formalise informal training pathways while addressing systemic barriers to workforce entry. These include the provision of basic training toolkits to all apprentices, enabling seamless training processes. District-level apprentice resource centres will further supplement core training with region-specific technical modules, aligning skills training with local industry needs. Crucially, nationally recognised certification should be issued by the Commission for Technical and Vocational Education and Training (CTVET), standardising competency accreditation, elevating apprenticeships to parity with formal qualifications and improving labour market mobility, as employers increasingly prioritise CTVET-endorsed credentials. This eliminates the existing downgrading testimonials offered to apprentices after training. Complementing these measures, toolkit acquisition loans, administered by Sector Skills Development Councils (SSDCs), should be granted to certified graduates of formal and informal sectors of apprenticeship, with repayment compliance enforced through structured SSDC oversight. This initiative ensures equitable access to essential resources while aligning loan disbursements with verified competencies, mitigating default risks. Concurrently, CTVET's digital platform will integrate with the Ghana Employers' Association (GEA) to streamline job matching, directly linking graduates to sector-specific opportunities. By coupling financial support with employment linkage, the model addresses both tooling barriers and labour market inefficiencies, catalysing youth employability and reducing underemployment. Collectively, these incentives operationalise Ghana's commitment to inclusive growth, bridging the formal-informal sector divide through quality-assured training, equitable resource distribution, and responsive labour market integration, core pillars of NAP's mandate to transform apprenticeships into a driver of economic resilience and socio-economic equity in Ghana.

4.4 PROGRAMME DESIGN AND DELIVERY

4.4.1 Programme Duration:

In alignment with the National Apprenticeship Programme's (NAP) objective to harmonise skills development with sector-specific demands, programme durations shall be differentiated to reflect the structural realities of formal and informal sectors.

- **For formal sector apprenticeships**: The existing duration of formal education should be retained, preserving continuity with proposed apprenticeship-driven reforms integrated into pre-tertiary and tertiary curricula. This ensures coherence with established educational pathways while embedding vocational training into Ghana's academic structures.
- **For the informal sector**: A flexible duration model is proposed, spanning a minimum of six months to a maximum of one year of intensive skills training, calibrated to accommodate the sector's fluidity, diverse trade requirements, and apprentices' varied capacities. Additionally, short-term skills top-up training (2–4 weeks) should be available to all graduates, addressing the surging skills and job mismatches in Ghana and enhancing employability in high-demand niches. This tiered approach acknowledges the informal sector's heterogeneity while prioritising agility in skills delivery, a critical measure to reduce youth unemployment by rapidly equipping learners with market-relevant competencies. By balancing structured timelines with adaptive upskilling opportunities, the framework ensures inclusivity, responsiveness to labour market dynamics, and alignment with NAP's overarching goal of bridging Ghana's skills gap through targeted, equitable interventions.

4.4.2 Eligibility

- **Apprentices**: Informal sector apprenticeship eligibility should extend to Ghanaian nationals aged 15–35 years, irrespective of Western educational attainment, provided they demonstrate a genuine interest in pursuing an informal trade of their choice. Also, the existing eligibility criteria for formal apprenticeships must remain unaltered to preserve the sector standards. However, certified graduates of the informal apprenticeship system may, subject to special consideration, access advanced skills training programmes at National Vocational Training Institutes (NVTIs) or through tertiary technical and traditional university apprenticeship pathways. This dual approach ensures inclusivity for non-formally educated individuals while incentivising skill progression through structured accreditation routes, thereby aligning with national objectives to enhance artisanal competency and expand access to technical education.

- **Training Models**: To address Ghana's dual demands for formal and informal skills development, a hybrid apprenticeship framework is proposed, integrating structured formal apprenticeships with community-based informal sector training.
    1. **Model One**, overseen by the Formal Sector National Apprenticeship Council (FSNAC), would institutionalise apprenticeships across pre-tertiary (basic and second-cycle schools, including SHS/NVTIs) and tertiary levels (colleges, technical universities and traditional universities), systematically cultivating apprenticeship-mindedness from early education. This model mandates a dualised curricular structure: 70% school-based theoretical instruction and 30% compulsory on-the-job training delivered through partnerships with accredited employers and industries. Such

integration embeds practical application into certification criteria, ensuring alignment with labour market needs, as exemplified by globally recognised dual systems in Germany (Haasler, 2020) and the Philippines (UNESCO-UNEVOC, 2015). By institutionalising workplace learning, FSNAC bridges academia-industry gaps, enhancing graduates' labour market readiness while adhering to evidence-based standards outlined by Deissinger (2015) and Euler (2013), who validate the efficacy of combined institutional and enterprise-based training. This approach not only addresses Ghana's skills mismatch but also fosters a sustainable talent pipeline, ensuring theoretical rigour and industry relevance converge to meet national economic priorities.

2. **Model Two**: Designed to formalise and enhance the informal sector through a Master Craft Persons (MCP)-led apprenticeship framework, administered by sector-specific Skills Development Councils (SSDCs) in priority fields such as Agriculture, Creative Arts and Tourism, Building and Construction, among others. Under this model, apprentices may select an MCP within their locality or the nearest available practitioner, ensuring geographical accessibility and alignment with local socioeconomic needs. To standardise training quality and capacity, the government shall establish sector-specific workshops at strategic locations across all Metropolitan, Municipal, and District Assemblies (MMDAs), serving as hubs for skills transmission and technical upskilling. CTVET's oversight, funding training costs, training toolkits supply, and offering of apprentices' monthly stipends, ensures equitable access to skills training and quality assurance, mitigating disparities in resource distribution in Ghana. This decentralised structure preserves the informal sector's inherent agility while embedding formal accountability mechanisms, a balance critical to fostering economic resilience through adaptable, locally relevant skills development. As posited by Franz and Soskice (1994), such sector-specific adaptability strengthens systemic responsiveness to labour market shifts, making this model a pragmatic vehicle for reducing skills mismatches and youth unemployment. By integrating grassroots expertise with structured public investment, the framework operationalises Ghana's commitment to inclusive growth, transforming informal apprenticeships into a nationally recognised pathway for sustainable livelihoods and productivity.

Collectively, this hybrid national apprenticeship framework (Figure 5) balances theoretical rigour with pragmatic skill acquisition, fostering employability and productivity. By mandating workplace integration in formal TVET and legitimising informal apprenticeships through structured support, the proposed bi-focal model aligns with Human Capital Theory (Becker, 1962; Matache, 2023), which underscores targeted skills investment as a catalyst for individual prosperity and national economic growth. Emulating Germany's dual system and the Philippines' community-based models ensures apprentices attain competencies responsive to both local industry needs and global benchmarks (Teixeira, 2014). Ultimately, this strategy sustains the informal sector's economic contributions while elevating Ghana's workforce through inclusive, internationally validated pathways to certification.

4.5 PROPOSED IMPLEMENTATION ROADMAP

4.5.1 Phase 1: Pilot (2026–2027)

- **Key Activities**:
- **Legal & Regulatory Framework:** The year 2025 should be used for all proposed legislation reforms. A successful legislation reform will lead to the establishment of the National Apprenticeship Fund as herein proposed, with the recommended budgetary allocations for the 2026 financial year, ensuring NAP's implementation readiness.
- **Constituting the Governance Structures and launching of NAP:** The CTVET governing commissiosn should be constituted. It should thereafter form the various necessary Sector Skills Development Councils (SSDCs) to kick-start NAP implementation.
- **Capacity Building:** Train 1,000 MCPs per region in competency-based training (CBT) and safety standards, using a nationally approved manual for expansive community-based rollout of the informal sector apprenticeship.
- **Pilot:** Train 5,000 apprentices annually per region (80,000 nationally) between 2026–2027, prioritising sectors with regionally unique demands, as identified by SSDCs in collaboration with regional/district councils.
- **Incentives:** Pilot a GH₵200 monthly stipend, toolkit provisions, and CTVET certification for graduates, alongside tax rebates and logistical support for Master Craft Persons (MCPs) and employers engaging more than 5 apprentices.
- **Monitoring & Evaluation:** Deploy a digital tracking system (developed by the Ministry of Communications, Digital Technology, and Innovation) to monitor enrolment, completion, and job placements. Conduct quarterly audits and stakeholder feedback sessions to refine implementation.
- **Responsible Entities:** Ensure all proposed government structures under NAP fulfil mandated roles to guarantee accountability.

4.5.2 Phase 2: Scale-Up (2027–2030)

Key Activities:

a. Strengthened Governance: Decentralise CTVET operations to regional and district councils, ensuring localised oversight and responsiveness.

b. Infrastructure: Establish Apprenticeship Resource Centres in all districts to provide toolkits, mentorship, and supplementary training.

c. Nationwide Rollout: Expand annual targets to 50,000 apprentices per region (800,000 nationally), focusing on equitable geographic and sectoral distribution.

d. Certification & Quality Assurance: Integrate informal apprenticeships into a national standardised system for practice-led training, assessment, and certification.

e. Digital Integration: Scale the CTVET digital platform to track apprenticeships nationwide, facilitate job matching via the Ghana Employers' Association (GEA), and monitor fund utilisation.

f. Private Sector and donor Engagements: Launch apprenticeship bonds to attract impact investors for high-demand skills and service sectors, diversifying funding sources. CTVET regularly lobbies for international donor funding support.

5. CONCLUSIONS

Ghana's escalating youth unemployment problem necessitates urgent systemic reform. Despite sustained investments in education and a 69.8% literacy rate, structural inefficiencies, including skills mismatches, institutional fragmentation, and the marginalisation of the informal sector, which has the potential to employ over 80% of Ghanaians, have perpetuated underemployment and stifled socio-economic progress of the youth. Based on critical analysis of existing apprenticeship models in selected countries of good standing in apprenticeship education and training, we propose a National Apprentice Programme that strongly support the informal sector as well. The proposed National Apprenticeship Programme (NAP) emerges as a culturally attuned intervention, synthesising Ghana's indigenous apprenticeship heritage with global best practices to address these systemic challenges. The proposed NAP prioritises multi-stakeholder collaboration and strategic skills development.

By restructuring Ghana's informal sector apprenticeship, spanning agriculture, creative arts, and digital trades, among others, through competency-based certification frameworks, the programme seeks to rectify labour market misalignments. Legislative reforms, such as the introduction of a National Apprenticeship Act and the establishment of a National Apprenticeship Fund financed by 5% of petroleum revenue, 5% of GETFund annual allocations, 5% of the District Assemblies Common Fund (DACF), 2% of private sector companies annual statutory registration fees, and renewal charges as a levy, and a 2% employer levy, aim to institutionalise sustainable financing mechanisms. Central to the NAP's governance framework is the Commission for Technical and Vocational Education and Training (CTVET), which harmonises inter-ministerial efforts across eight key ministries (Employment & Labour Relations; Education; Youth and Sports; Agriculture; Trade and Industry; Creative Arts, Tourism & Culture; Communication; and Finance), industry partnerships, and decentralised implementation through Regional and District Councils. This is aimed at a multi-layered domestic apprenticeship funding model for Ghana, targeting 80-90% local funding for sustainability purposes.

Sector Skills Development Councils (SSDCs) are tasked with tailoring curricula to regional economic priorities such as agri-tech in Northern Ghana and tourism in coastal regions, ensuring alignment with labour market demands. Financial incentives, including monthly stipends (at least GH₵200), employer tax rebates, and post-certification toolkit grants, are designed to bolster participation, while digital platforms facilitate streamlined monitoring and job-matching processes. A cornerstone of the NAP is its commitment to inclusivity, proposing 40% of apprenticeship slots to be reserved for women, persons with disabilities (PWDs), and rural youth. Mobile training units, sign-language interpreters, and flexible scheduling address accessibility barriers, while partnerships with the Ministry of Gender aim to dismantle occupational stereotypes. By integrating ICT and digital skills into traditional apprenticeship models, the programme modernises Ghana's informal economy, catalysing productivity gains and GDP growth.

However, the programme's success hinges on overcoming persistent challenges, including institutional silos, donor dependency risks, and the need for bipartisan legislative consensus. A

phased rollout, targeting 80,000 apprentices by 2027 and scaling to 800,000 by 2030, requires rigorous accountability mechanisms, with key performance indicators (KPIs) tracking enrolment, certification rates (at least 80%), and post-training employment (at least 70%) to inform adaptive refinements. In essence, the NAP aims at a pragmatic, culturally resonant strategy to decolonise Ghana's skills ecosystem, transforming unemployment into economic empowerment. By leveraging the informal sector's untapped potential, Ghana can catalyse inclusive growth, reduce poverty, and reclaim its *golden apprenticeship* legacy as a cornerstone for national development. The programme's holistic, youth-centric approach not only addresses immediate unemployment but also lays the groundwork for a resilient, innovation-driven economy, positioning Ghana as a regional exemplar in sustainable vocational reform. Therefore, it is suggested that the proposed organogram featuring decentralised Natonal Apprenticeship Programme be adapted or adopted and implemented with the identified eight inter-ministerial CTVET framework for the benefit of Ghana, thereby prioritising both informal and formal sectors of apprenticeship education and training.

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APPENDIX

Appendix 1 Functions of CTVET

Section 43(1-3) of the Education Regulatory Bodies Act (Act 1023 of 2020) spells out the function of CTVET as follows:

1. To achieve the objects of the Commission, the Commission shall
    a) formulate national policies for skills development across the broad spectrum of pre-tertiary and tertiary education, formal, informal and alternative education;
    b) co-ordinate, harmonise and supervise the activities of technical and vocational education and training institutions to meet the requirements of both the formal and informal sectors;
    c) develop and implement a national assessment and certification system in the technical and vocational education and training sector;
    d) take measures to ensure quality, equitable and inclusive access in the provision of technical and vocational education and training;
    e) develop and maintain a national database on the technical and vocational education and training sector;
    f) facilitate research and development in the technical and vocational education and training system;
    g) source for funds to support technical and vocational education and training activities;
    h) facilitate collaboration between training institutions and industry to promote
        i. industry-led and demand-driven curriculum development and placement;
        ii. Workplace Experience Learning; and
        iii. Recognition of Prior Learning;
    i) promote co-operation with international agencies and development partners;
    j) issue annual reports on the state of skills development in the country;
    k) advise the Minister on all matters related to the management and improvement of the technical and vocational education and training system;
    l) coordinate and promote industry-led occupational standards generation for demand-driven curriculum development and delivery;
    m) accredit programmes, institutions, centres, facilitators, assessors and verifiers at the formal, informal, non-formal, technical and vocational education and training institutions to ensure quality delivery;
    n) collaborate with tertiary institutions and relevant agencies to implement competency based training programmes on the National Technical and Vocational Education and Training Qualifications Framework; and
    o) perform any other functions that are ancillary to the objects of the Commission.
2. The Commission, in conjunction with the Ghana Tertiary Education Commission shall accredit technical and vocational education and training programmes and institutions at the tertiary level.
3. The Commission may delegate any of the functions of the Commission to a person that the Commission may determine.

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