Vocational Education and Training (VET) Development & Social Dialogue in Egypt: A Historical Institutional Perspective

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ABSTRACT

The policy problem of Vocational Education and Training (VET) development is an ongoing challenge for many developing countries. International organisations and donor agencies conceptualize the problem as one of skill supply and demand mismatch. Such market-based perspective offers important insights into the problem; however, it does not sufficiently emphasise the influence of the historically institutionalised systems in which key VET actors; the state, employers and workers, are embedded. In this article, we use evidence from the Egyptian context to explore some of the key institutional features that have historically influenced VET and its trajectory to development. We use a process tracing approach to analyse documents on VET development in Egypt from 1955 until 2011. The analysis shows the persistence of weak VET and weakly-articulated state-employer-worker relations across three temporal phases identified by critical junctures during this period. The study calls for a broader conceptualization of the VET development problem to account for the historically rooted institutional relationships between the state, capital and labour in Egypt.

Keywords: Vocational education and training (VET); skill supply and demand mismatch; social dialogue; state-employer-worker relations; Egypt.

INTRODUCTION

The development of VET is a persistent policy problem that challenges the industrial growth of various developing countries. International organizations and donor agencies have supported VET development in these contexts through policy transfers of good practices from developed countries (Maurer & Gonon, 2014; Barabasch, Bohlinger & Wolf, 2021; Li & Pilz, 2021). A neo-liberal approach to the problem has guided much of the policy transfers and the development work on VET and, as in the Egyptian case, resulted in some improvements (e.g. Heyneman, 1997; 2003; Abrahart, 2003; Agénor et al., 2003; Yousef, 2004; Bardak, 2006; ETF & World Bank, 2006; Amer, 2007). Nevertheless, results are limited in effectiveness and are criticised for not being representative on a national level (e.g. Grunwald et al., 2009; ILO, 2015). We argue that a broader conceptualization of the VET problem that effectively accounts for the role of historical institutionalism, is essential for guiding future VET development efforts. The market-based approach does not sufficiently account for the influence of the historically rooted state-employer-worker relations on VET development. The state, workers and employers are key VET actors and their tripartite relationship develops historically in a path dependent manner—where current relationships are shaped by earlier historical events—and influences the trajectory of VET development (Ashton, 2004; Lucio & Stuart, 2004; Thelen, 2004; Stuart, 2019). The outcomes of policy interventions are shaped by the prevalent and the historically embedded institutional arrangements in individual economies (Wailes, Ramia & Lansbury, 2003). Thus, a deep apprehension of VET development problem necessitates a historical analysis of key institutional interactions supporting, or otherwise, VET design, delivery and growth.

In this manuscript, we aim to capture the historical influence of ineffective social dialogue on VET in the Egyptian context. We started our enquiry with the research question: what are the reasons for the persistent problem of ineffective VET in Egypt? As our enquiry progressed, we funnelled down this research question to explore the influence of the historically embedded social dialogue on Egyptian VET. Social dialogue is defined here as 'all types of negotiation, consultation or simply exchange of information between or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy' (Kuruvilla, 2006:178). Henceforth, we use the terms social dialogue and state-employer-worker relationships interchangeably. We adopt a historical institutionalist perspective in an attempt 'to estimate the impact of variations in institutional forms and configurations on a particular outcome or set of outcomes' (Lieberman, 2001). A

process tracing approach is used to collect data on VET development projects supported by international organisations in Egypt since the 1950s. Our sample includes text coding and analysis of more than 2,500 pages of documents on VET development (as opposed to education development in general) by international organisations, in the Egyptian context (as opposed to the wider Middle East or South Mediterranean regions) between 1952 to 2011. We identify seven key themes that challenged VET development since the 1950s. Our analysis demonstrates the ways in which these problems are rooted in the ineffective levels of state-employer-worker cooperation on VET development that persisted over this time period. Across VET development initiatives, the Mubarak-Kohl initiative for Dual System (MKI-DS)—the German VET model in Egypt—which rests on social dialogue and tripartite cooperation, has been the most sustainable model for VET development with consistently positive results. Thus, we argue for the need to bring the historically rooted state-employer-worker relations to the forefront of the conceptualization of the VET development problem in Egypt.

The article is organised as follows. First, we discuss the theoretical framework. This is followed by a discussion of our methodology, analysis and findings. Finally, a discussion of findings is offered followed by conclusions.

SOCIAL DIALOGUE AND VET

The relationship between VET systems and social dialogue between the state, employers and workers is well documented in the literature on the political economy of skill formation (e.g. Finegold & Soskice, 1988; Hall & Soskice, 2001; Ashton, 2004; Lucio & Stuart, 2004; Thelen, 2004; Crouch, 2005; Stuart, 2019). It is argued that this relationship co-evolves with the development of institutional structures of individual economies and in turn becomes a determining feature of the 'Varieties of Capitalism' (Hall & Soskice, 2001). This is because the interactions between the key VET institutional actors develop historically on the basis of particular levels and means of institutional coordination and complementarities (Culpepper, 2003). An ideal example is found in *Coordinated Market Economies* (Hall & Soskice, 2001). In these contexts, the state plays an active role in mediating between the relatively strong unions and employers' associations. Hence, VET decisions are determined collectively by VET social actors: the state, employers and workers and VET development follows a *corporatist model* (Ashton, 2004).

For instance, the German VET system is based on close coordination between the state, employers and workers through effective collective bargaining that commits all parties to VET development (Hall & Soskice, 2001). This tripartite relationship enables the system to benefit from reliable labour market information necessary for designing inclusive and effective VET policies (Clarke & Winch, 2007). Collective bargaining also supports the alignment of wages on a sectoral level which contributes to the reduction of poaching externalities and encourages employers to commit to long-term investments in workers' skill development and training which reinforces a culture of high employer-employee interdependence (Culpepper, 2003; Whitley, 1999). The German co-ordinated system of VET is historically embedded in the country's institutional development and is supported by a culture of continuous skill development and maintenance of high quality of production; features that distinguish German high value-added production systems, that co-evolved with the welfare state (Hollingsworth & Boyer, 1997; Croucher & Brookes, 2009). State coordination and support proved effective in maintaining a relatively strong VET system despite reduced levels of membership in employers' association and trade unionism in recent years (Thelen, 2004; Croucher, Tyson & Wild, 2006; Croucher & Brookes, 2009).

This is not the case in *Liberal Market Economies* (Hall & Soskice, 2001) such as the UK and USA, where the state's intervention in business is limited. Business activities and related institutional coordination, including VET decisions, are left to the market. In such an institutional environment, the system of VET follows the *free market model* (Ashton, 2004) in which VET investment decisions depend on market forces with little involvement of unions and little, if any, pressure on employers to invest in VET. For instance, the institutional environment in the UK has not been supportive of tripartite cooperation. The state does not oblige employers to engage in VET development and workers cannot pressurise employers to invest in VET due to the relatively weak levels of collective bargaining. VET investment decisions are thus left to employers who tend to be reluctant to lock up their capital in long-term VET investments. Such investments are not profitable in an economy that has a short-term orientation to investments and profits. Additionally, the problem of poaching externalities reinforces employers' unwillingness to invest in VET.

Individuals also tend to be reluctant to invest in their own skill development. Investments in firm specific skills are risky in a context dominated by employee replacement rather than retention. Investments in general skills are relatively high especially without guarantees for a good return on investment given the absence of sectoral wages partially due

to the relatively week levels of collective bargaining. These arrangements are historically embedded in the institutional development of Britain (Thelen, 2004). Unlike the German system that included VET actors throughout its industrialisation, this was not the case in Britain which contributed to the development of a low skill-equilibrium (e.g. Finegold and Soskice, 1988). There is evidence of the enhanced value of VET development as a result of the effective integration of workers through, for instance, trade union learning representatives (e.g. Hoque & Bacon, 2008). However, these efforts are not institutionally entrenched and hence the effectiveness of VET continue to be limited in comparison to the German model.

Weak involvement of employers in VET investments is also common in the *developmental states* of Southeast Asia. However, unlike the state in liberal market economies, developmental states exercise relatively high levels of control on the economy. These economies follow a *developmental skill formation model* (Green et al., 1999; Ashton, 2004) which is based on the state's central role in determining the path to industrial development and economic growth, including the development of VET policies. For instance, the South Korean state established close links between investment and planning policies for economic growth and for VET development. This was achieved through a highly centralised system of VET development to ensure the economy receives the required supply of effective VET skills necessary to support the state's aspirations for high value-added production. VET has been mainly provided by the state with little investment from the private sector. This highly centralised system of VET development helped South Korea and other Southeast Asian countries to upgrade VET skills in the economy which supported industrialisation ambitions in the 1950s and the 1960s (Kwon & Yi, 2009). However, it was unsustainable beyond the 1970s and the state gradually increased the involvement of workers in VET planning on sectoral and firm levels (Lansbury & Wailes, 2005; Croucher & Miles, 2009). Yet, tripartite cooperation in VET policies remains limited in comparison to the corporatist model for VET.

The distinguishing feature across the various models is the extent of cooperation and coordination between the state, employers and workers (Ashton, 2004; Stuart, 2019). An understanding of the underlying state-employer-worker dynamics offers insights into the potential effectiveness of VET models in each context. This social dialogue is historically embedded in the wider institutional environment. For the purpose of this study, we adopt a historical institutional perspective to explore the ways in which VET co-evolved with state-employer-relations in the Egyptian context. This can offer insights into the problem that go beyond the current neoliberal conceptualization.

HISTORICAL INSTITUTIONALISM

Historical institutionalism (HI) is an analytical approach that aims to explain policy outcomes through an analysis of the ways in which national institutions have historically structured the roles and powers of institutional actors participating in the development of these policies (Lieberman, 2001). Unlike rational choice institutionalism, HI is not only concerned about institutional actors' rational choices that maximise self-interest whilst operating within structured rules to maintain equilibria, but it aims to arrive at detailed understandings of the origins of such choices by analysing historical developments. HI also combines insights from sociological institutionalism, which emphasises the role of culture and norms on shaping actors' behaviours. Simply put, historical institutionalists are 'interested in explaining real-world outcomes, using history as an analytic tool' (Steinmo, 2008: 122). For the purpose of our study, we are interested in understanding the persistence of a certain policy outcome: limited VET development. To address this matter, we need to extend beyond the rational choices of institutional actors and/or an analysis of social norms governing VET, to a deeper and more detailed analysis of the socio-political histories that influenced the development of key institutional VET actors; the state, employers and workers, and their relationship over time.

Influential studies that follow a HI approach include, for example, Kathlen Thelen's (2004) work on the evolution of skill development systems in Germany, Britain, Japan and the United States. Thelen (2004) offers a detailed historical analysis to explain how institutions and institutional actors have evolved over time in ways supportive, or otherwise, of the coordination of effective skill development and training systems across these different developed economies. Another influential example is the work of Ellen Immergut (1992) in her study of health care policies in France, Switzerland and Sweden. Immergut's work shows how it is insufficient to understand policy outcomes without a prior understanding of the historical origins of national institutions that influence the development of rules and determine the choice of institutional actors who then become in charge of implementing these rules. Immergut also discusses how Second World War, as an exogenous event, affected healthcare policies in the four countries studied and the ways in which these changes were influenced by national institutions in individual contexts. Accounting for key exogenous events that shape institutional change and development is a central dimension of HI analysis which is based on HI core concepts: critical junctures and path dependence.

A critical juncture can be defined as 'a relatively short period in time during which an event or set of events occurs that has a large and enduring subsequent impact' (Mahoney, Mohamedali & Nguyen, 2016: 77). These junctures 'are 'critical' because they place institutional arrangements on paths or trajectories, which are then very difficult to alter' (Pierson, 2004:135). In other words, a critical juncture is the starting point of a process of path-dependent institutional change. Path dependency involves 'tracing a given outcome back to a particular set of historical events' (Mahoney, 2000: 507). In this sense, path-dependent outcomes can be understood by analysing past sequences of events in a retrospective manner; however, these outcomes could not have been predicted when the original events took place. The sequence of past events can be either self-reinforcing or reactive which influence the development of paths differently. Self-reinforcing sequences result in the reproduction of previous events due to the persistence of social, economic and/or political mechanisms such as increased economic returns and/or political interests. On the contrary, reactive sequences include temporary events that spark a reaction that usually transforms current events into new and unpredictable directions. Hence, events occur at a particular time and in a particular sequence leading to incremental and/or abrupt change and ultimately result in self-preserving or transformative institutional changes (Streeck & Thelen, 2005) that influence policy outcomes.

A key to understanding path depency is the ability 'to specify precisely the *unit of analysis* with respect to which the "juncture" is argued to be "critical"' (Capoccia, 2016: 91). In this study, the unit of analysis is the VET social dialogue. Changes in state coalitions with VET key institutional actors are attributed to changes in political agendas that had occurred in both self-preserving and reactive/transformative sequences over time. These changes directly influenced VET development which was unsupported by key institutional relations necessary to maintain high levels of efficiency and effectiveness. We identify three critical junctures and identify each period of time as a 'phase'. Phase 1 covers the period from 1952 until 1969 and it commences with the revolution that granted Egypt its independence. The new state under President Nasser strengthened its relationships with workers at the expense of its relationship with the private sector which enjoyed close coalitions with the government prior to 1952. In this sense, the 1952 revolution and the end of the monarchy is a critical juncture for a quasi-socialist state (Ayubi, 1990). The second critical juncture started in 1970 with the advent of President Sadat's policies that promoted economic liberalisation as a part of a wider shift by the state away from the Eastern bloc to the Western bloc. This is Phase 2 of our analysis and it

witnessed changes in state coalitions with employers and workers. These changes were self-reinforced in the third critical juncture; the commencement of the Economic Reform and Structural Adjustment Programme in 1990/91 by the IMF/World Bank, which reproduced close state-employer relations and weak state-worker relations. Our analysis does not extend beyond 2011 and the Arab Spring, as the influences of this critical juncture, which is full of abrupt changes and uncertainties, on VET development is yet to unfold. Also, sometimes documents on development projects become publicly available a decade or more after project completion which supports our decision not to go beyond 2011.

METHODS

We follow a process tracing approach (Pettigrew, 1997) to sequentially explore historical projects and documents on VET development. The process tracing approach refers to 'attempts to identify the intervening causal process—the causal chain and causal mechanism— between an independent variable (or variables) and the outcome of the dependent variable' (George & Bennett 2005: 206–7). In other words, this involves the exploration of the causal mechanisms that can explain the phenomenon in hand (Beach & Pedersen, 2019); i.e. the persistence of ineffective VET development over time. We analysed these in light of continuities and discontinuities in state-employer-worker relations over time to assess the influence of social dialogue on VET development throughout the three phases identified earlier. Our definition of 'projects' includes both projects undertaken as part of wider development programmes and standalone projects. Initially, we broadly defined VET development projects as all international development projects that are part of a programme that includes as *at least one* of its objectives the development of the VET system as a whole or any of its components, such as training centres, curriculum development, stakeholder relations and so forth. This initial definition was too broad so we focused on projects which entirely aim at the development of vocational education and/or training instead of being only one of the objectives of a wider programme. We explore 'VET development' as defined by projects' aims and objectives and how these are perceived to lead to development of the system. Throughout the analysis, we explore the roles ascribed to key institutional actors; state, employers and workers, in VET development as well as the recommendations suggested by individual projects.

Purposeful sampling was used to allow for a systematic analysis of all projects by individual international organisations across the three temporal phases. This criterion was met

by the UNDP, UNESCO and the ILO, with the latter acting as the technical arm for all UN related VET projects. Other donors and development agencies were interested in VET development later in the 1970s (e.g. World Bank, 1983) and hence projects from other agencies, such as the World Bank, the German Agency for Technical Cooperation (Gtz) and the European Training Foundation (ETF), were also included.

Data collection and analysis

We used the digital repositories of the UNDP, UNESCO/UNEVOC, ILO, World Bank, Gtz and the ETF to access project reports and complemented these with visits to library archives when necessary. Keywords used in the research included six varieties of VET that are commonly used in the literature which are: 1- "technical and vocational education and training", 2- "vocational training", 3- "vocational education", 4- "technical education", 5- "technical training" and 6- "vocational education and training". Then, we filtered out results based on the following steps. First, duplicate reports, i.e. when more than one agency collaborates on a single project, were removed. The ILO, as the UN technical assistance arm, delivered many projects for UNESCO, UNDP and other donor agencies such as the German government. Hence, there were many duplicate reports available across the various databases searched. Second, reports that discuss VET development on a regional level such as the Arab world, the Middle East and North Africa or the South Mediterranean regions, as opposed to a national level in Egypt, were discarded. Third, reports on employment and/or other labour market topics were excluded and only reports that specifically address VET development in Egypt were included. The final sample of more than 2,500 pages of documents were analysed which included publicly available reports and project evaluations (see Table 1).

Table 1 about here

Documents were coded using open coding and this resulted in 20 first-order codes. First-order codes were refined using axial coding to develop categories of data and themes (Strauss & Corbin, 1998). Some of these were refined throughout the longitudinal analysis, for instance, "shortage of VET instructors" was prevalent in reports until the end of the 1990s but in the 2000s this was refined into "shortage of *quality* VET instructors". We arrived at seven themes that persistently characterised VET development problem since the 1950s. These are: state centralisation of VET; employers' reluctance to cooperate in VET development; ineffective representation of workers on VET; poor VET planning and quality monitoring; VET fragmentation; shortage of quality instructors and poor quality of VET graduates/trainees.

We then engaged in another iteration of analysis to distil second-order themes into an aggregate dimension (Gioia, D., Kevin, C., & Hamilton. A. 2013: 20), which is 'Historically-rooted low levels of Social Dialogue', as depicted in the data structure in figure 1.

Figure 1 about here

Although our analysis covers the period from 1952 to 2011, we realise that a historical contextualisation of VET in the period leading up to the 1952 revolution, is necessary to deepen our understanding of historical institutional influences. Thus, the findings section commences with a brief discussion of VET before the 1950s and proceeds to the discussion of the three temporal phases identified earlier.

FINDINGS

At the beginning of the 1900s, the economy was dominated by small-scale craftsmen and artisans who did not possess high skills and/or training required to deliver quality VET instruction. Informal apprenticeships were the dominant form of VET with the exception of a limited number of large enterprises that offered formal apprenticeships. These large enterprises were concentrated in a few industries guarded by the country's natural advantage, such as cotton and sugar, and heavy industries, such as mining and transport. However, technical jobs in these enterprises were dominated by skilled foreign workers who possessed the required knowledge and skills (Chalcraft, 2004). Deficiencies in the Egyptian VET system were highlighted in a report by a special committee to the government in 1916, yet there was no urge or interest to develop Egyptian VET. Later in 1926, a continuous, albeit limited, apprentice supply was available from the Italian VET school in Egypt; the Don Bosco schools of the Salesian Order, which was sufficient to meet the demand at the time (ILO, 1967). Experienced Egyptian craftsmen were rarely appointed at the same level of foreign workers which reduced Egyptian workers' willingness to invest in their own skill development given labour market imperfections (Mabro & Radwan, 1976; Beinin & Lockman, 1998). The state and employers were also uninterested in investing in Egyptians' VET development as demand for high quality skills was met by foreign workers. Local charities offered vocational training programmes but these were limited in scope and reach (Pollard, 2014).

The 1930s witnessed a spurt of growth in industrial development supported by protective tariffs enactment and a policy of import-substitution both of which encouraged local

industrial growth. Reduced foreign trade as a result of the Great Depression and later the Second World War provided an incubatory period for the Egyptian industry to flourish and demand for trained Egyptian workers started to increase (Mabro & Radwan, 1976; Chalcraft, 2004). However, it was not until 1952 when the new Egyptian state committed itself to achieve high levels of industrialisation and reduced reliance on foreign industries and labour (Beinin & Lockman, 1998). The new government was interested in VET development to be able to support its ambitious plans for industrial growth with a sufficient supply of skilled Egyptian workers and technicians (Ghoneim, 2003). The 1952 was a critical juncture that changed the institutional structure of the economy but in a direction unsupportive of the effective development of state-employer-worker relations. Hence, the VET system continued to suffer from deficiencies and inefficiencies as discussed in phases 1, 2 and 3. The findings are supported by quoted evidence from the documents analysed (see Table 2 for a list of illustrative quotes across the seven themes, for phases 1,2 and 3) .

Table 2 about here

Social dialogue and VET from 1952 to 1969 (phase 1)

In 1952 the Egyptian government requested assistance from the ILO, through the United Nations Expanded Programme of Technical assistance (EPTA), to develop a national VET scheme (ILO, 1967: 5). At the time, it was estimated that industrial activities attracted less than five percent of Egyptians (ibid). Industrial workers, estimated to be less than 500,000 workers, were mainly employed by small enterprises employing ten or less workers. The state aspired to increase the industrial labour force and attract more applicants to its formal Industrial Training schools and to other potential VET schemes developed through the EPTA. In 1952, an ILO expert for VET examined the situation in Egypt and made recommendations on the scope and length of proposed ILO assistance. The ILO commenced the first project in August 1954 which was a 'survey of the present and future manpower and training needs of industry with a view of determining how far existing vocational training schemes meet those needs, and to make proposals for meeting any deficiencies' (ILO, 1955: ii). The survey identified technical challenges to VET, such as labs and machinery, and more importantly some manpower deficiencies. These included, for instance, workers' deteriorated health standards, high illiteracy levels and the inadequate quality of foremen and supervisors. The latter issue was perceived to be particularly problematic as '(i)lliteracy, ignorance and physical deficiencies (of

Egyptian workers) make close supervision of operatives necessary and call for a greater effort to establish satisfactory relations between management and labour' (ILO, 1955: 3). In Industrial Training schools, low levels of knowledge and skills were also prevalent across instructors who 'lack systematic training and instruction in the techniques of teaching' (ibid: 4) and it was reported that in some instances 'faulty instruction in the performance of elementary but fundamental operations and faulty methods of setting out work' (ibid: 4) were advised by instructors.

Recommendations urged the Egyptian government to (i) provide quality training for foremen, supervisors and instructors which is 'one of the most pressing manpower needs, and one recognised by both industrialists and workers' (ILO, 1955: 20); (ii) enhance technical facilities in schools and training centres; and (iii) improve the skills of workers in the industry. An early course of action was the establishment of a Productivity and Vocational Training Centre in 1954 by the government with ILO technical support. The Centre was intended to be a tripartite body with effective representation of the state, employers and workers but it was soon dominated by state representatives and it became part of the Ministry of Industry known as the Productivity and Vocational Training Department (PVTD) (ILO, 1957; Harbison & Ibrahim, 1958). The PVTD offered vocational training courses and programmes for workers and senior management following modern management and industrial techniques, as advised by ILO experts.

The ILO 1955 report offered detailed recommendations for the Egyptian government which formed the basis for subsequent VET development projects throughout this phase. Additional training centres were established and by the end of the 1960s there were 41 training centres. Apprenticeship schemes were piloted first in two large companies then gradually expanded. By 1965 to a total of 4,360 apprentices were trained. By the end of the 1960s, the new Vocational Training scheme in Egypt successfully supplied the industrial sector with more than 13,000 trained workers. This expansion was supported by the establishment of the Vocational Instructor Institute in 1962 using the UN Special Fund and ILO technical assistance (ILO, 1967). The Instructor Institute addressed, to some extent, the problem of instructors' shortages which constrained VET development in the 1950s. The project ended in 1966 and the Institute was handed over to the PVTD. Phase 1 marked an important milestone for VET development in Egypt in terms of the scale of VET but not the quality of instruction.

The ILO offered technical assistance in which the 'ultimate objective of the initial project was to establish a training scheme and suitably prepare an all-Egyptian staff to operate the system, eventually dispensing with I.L.O. assistance' (ILO, 1967:9). In other words, the prime objective of the ILO 'is to organise matters in such a way that it works itself out of a job' (ibid: 10). Hence, the ILO has consistently recommended the inclusion of key VET institutional actors in the scheme. This recommendation came as early as the first project in which the ILO recognised the need for 'sharing of responsibilities between government, employers and workers' (ILO, 1955: 7). At the end of phase 1, emphasis was put on the need to preserve achievements in VET development through the engagement of employers and workers to exchange experiences and ideas. One recommendation involved the establishment of 'special committees set up for various trades and industries… (which) should include directors of Training Centres, trade supervisors, training officers from industry and other groups with common interests' (ILO, 1967: 41). Nevertheless, the institutional environment was not supportive of any kind of effective tripartite cooperation between the state, employers and workers.

The Nasserist state's intolerance to collective action was evident from its violent reactions to the first strike after the revolution in August 1952 in which the strike's leaders were executed and many workers were arrested (Posusney, 1993; Beinin & Lockman, 1998). The state then issued a number of laws that curtailed workers' freedoms, including the right to strike. At the same time, the state gave extra social and economic benefits to workers as an implicit agreement to be co-opted by the state in return for further benefits in what has been known as the 1954 'historic compromise' (Beinin & Lockman, 1998:455). For instance, fifty percent of the National Assembly seats were dedicated to workers, better health and social benefits were offered to public sector workers, and the state offered public sector employment to all university graduates (Ayubi, 1990; Kassem, 2004; Ikram, 2006). Meanwhile, the Egyptian Trade Union Federation (ETUF) was established by the state, its leadership were appointed by the state and public sector workers were automatically registered as ETUF members. In other words, ETUF was a means to end union pluralism and overregulate workers (Bianchi, 1986; El-Mikkawy & Handoussa, 2002; El-Mahdi, 2003). This 'social contract' ensured that repressive measures against workers' freedoms by the state were not challenged by workers' resistance (Posusney, 1993; Hinnebusch, 2001; Kassem, 2004; Yousef, 2004).

The establishment of ETUF in 1957 coincided with a wave of nationalisation of the private sector which represented a new era for state dominance of the economy. From 1952

until then, the private sector accounted 76 per cent of investments in Egypt. Employers did not see the benefits of their engagement in VET development. They were also concerned that workers/trainees 'would either leave already after basic training, thinking that they had learned quite enough to earn their living, or they would be drafted for military service' (ILO, 1957: 29). A culture of employers' reluctance to engage in VET was deeply rooted in the Egyptian private sector. Subsequent changes in the ownership structures of Egyptian economy did not change this culture. By the 1960s, the state's share of investments in the economy rose to 74 per cent (Ghoneim, 2003). In 1967, it was assumed that 'the recognition of these benefits (for engaging in VET) on the part of employers helped to overcome many of their earlier indifference—mainly psychological in nature — towards organised vocational training' (ILO, 1967:12). However, subsequent reports prove this statement wrong as employers' reluctance to engage in VET has continued (e.g. Grunwald et al., 2009; Grunwald & Becker, 2013).

State efforts to develop the system of VET in phase 1 resulted in quantitative rather than qualitative developments. On the one hand, the state was able to expand the number of training centres by ten folds towards the end of the 1960s (ILO, 1967). These new training centres were equipped with modern equipment and machinery. Apprenticeship schemes were introduced into large, medium and small enterprises, offering new opportunities for individuals interested in VET. The shortage of instructors, a problem that has faced the system since 1955, was addressed through the establishment of the Vocational Instructor Institute in the 1960s using the UN Special Fund (ibid). As a result, from 1952 until 1969 (the end of phase 1) the number of instructors, trainees and graduates trained increased to almost 25,000 trained individuals who joined the industrial workforce (ILO, 1967).

On the other hand, throughout phase 1, the state assumed a central role in VET design, organisation, planning, delivery and certification with minimal inputs from both employers and workers. The whole system operated under close scrutiny of the state (Harbison & Ibrahim, 1958). This was indicated by the ILO which had to accommodate state requests. For instance, it was stated that '(a)lthough the I.L.O. would nominate the first Director of the Centre, it was assumed that at an early stage a nominee of the Government would take over the post… According to the Agreement, the Egyptian Government would supply the necessary administrative and financial staff' (1967: 9). Reference was made to consultations with some social actors, for instance: 'In the light of consultations with people from governmental authorities, universities and schools, job descriptions for the four Egyptian officers were worked out in compliance with the requirements of the Plan of Work' (ILO, 1957: 20) but there

was no clear reference to the role of worker representatives and unions in the process. The engagement of workers always came as a recommendation by the ILO to the Egyptian government. However, the underlying institutional structure was not supportive of ILO recommendations. The qualitative ineffectiveness of VET centralisation started to crystalize in phase 2 due to the weak representation of workers and employers in the system's development.

Social dialogue and VET from 1970 to 1989 (Phase 2)

Ineffective representation of employers and workers in VET continued in phase 2 despite consistent calls by international organisations for their effective involvement in VET development. For instance, in 1971 the ILO reported that it 'stresses the importance of employers and workers being represented upon the bodies established. Experience has shown the value of having such a supervisory body acting somewhat as a board of directors and responsible for the over-all policy guidance of such projects' (ILO, 1971: 18). With ineffective social dialogue, VET development continued to be limited in its effectiveness. The state maintained its control over VET development and at this point quantitative rather than qualitative VET development was the key goal. By 1979 there were 218 VET training centres adding to the problem of VET fragmentation. The ILO called for 'increased efforts be made to identify the precise role of each of the concerned ministries in the planning, co-ordination, execution and evaluation of vocational training programmes' (ILO, 1979: 9). This was preceded by a call to establish 'National Vocational Training Council… to advise the Government on such matters as legislation required for vocational training, standards, approval of new programmes, certification, coordination of the contributions of all concerned ministries and industrial sectors, etc.' (ILO, 1974: 9). In 1982 there was an attempt to respond to this problem by the establishment of a National Vocational Training Council to act as the key point of reference to any issues related to VET development but the council was perceived to be ceremonial. Recommendations for effective involvement of workers continued to be made with little, if any, improvements. This is mainly due to state relations with employers and workers at the time which were not collaborative in nature.

Towards the end of the Nasserist regime, the economy accumulated different operational weaknesses including, but not limited to, a largely insufficient productive capacity, ineffective and constraining bureaucracy, an inability to support the state's social welfare programs and other inefficiencies. The *socialist experiment* proved ineffective and with the

beginning of his term in 1970, President Sadat adopted radical political and economic changes that gradually detached Egypt from coalitions with the Eastern bloc and strengthened cooperation with neighbouring countries on a regional level and with the Western bloc on an international level. The state was committed to economic liberalisation through *Infitah*—Open-Door policies—which had favourable influences on the state's relationships with employers and unfavourable ones with workers.

In phase 2, the private sector was encouraged to play a bigger role in economic development. Several measures were taken to attract private investments, for example, the state abolished private property confiscation without legal order in 1971, favourable taxation policies and facilitations were provided to private employers, employers were able to form an independent employers' association; the Egyptian Businessmen Association (EBA) for the first time post-independence (Kienle, 2003; Alissa, 2007).

This period of increased investment did not, however, contribute to enhancing productive capacity as the majority of investments were in the service sector, especially in import activities. The relatively low levels of industrial development were also coupled with a continuation of the repression of workers and industrial planning continued to be deprived from workers' inputs. Since *Infitah* the state had worked on reducing the social and economic benefits that workers enjoyed under the Nasserist regime. Social discontent mounted especially with increased rates of inflation which resulted in a series of protests. The state violently responded to these but towards the end of the 1970s it started to loosen its grip by offering more benefits, such as wage increases, but it did not compromise on its dominance of ETUF and its leadership to ensure strict controls over workers.

Ineffective state-employer-worker relations that prevailed at the time extended to the VET system and characterised VET development throughout phase 2. Recommendations for state-employer-worker collaboration were constantly made by ILO experts. For instance, in 1982 ILO experts advised that 'labour and enterprises would probably have to be represented in the negotiations leading up to such revisions (of VET). The present arrangements with labour participation and representation in boards of directors in individual enterprises do not provide such mechanisms. Tripartite industry boards might be one solution…' (Hansen & Radwan, 1982: 231). However, ineffective state-employer-worker cooperation in VET continued into phase 3.

Social dialogue and VET from 1990 to 2011 (Phase 3)

Phase 3 witnessed an ebb and flow in VET investments by international donors and organisations. The 1990s were characterised by relatively low VET investments as education budgets were increasingly allocated to basic education. Opponents of VET investments echoed the concerns of Philip Foster in *'The Vocational School Fallacy'* (Foster, 1987; Psacharopoulos, 1991) and challenged VET contributions to employment, poverty reduction and economic development. By the new millennium, investments made in basic education successfully yielded high enrolments. However, the quality education was poor which contributed to the shortage of skills in developing countries (Heyneman, 1997). As a result, international organisations took a detour on VET investments and interest in VET development was revived in 2000s (e.g. Gill et al., 2000). Since then, VET development has assumed a market-driven approach with the conceptualization of VET development problem as one of skill supply and demand mismatches and Egypt received increased support from international organisation to address the problem (Middleton & Ziderman, 1997; ETF & World Bank, 2006; King et al., 2007; Oketch, 2007; OECD, 2010).

This coincided with a series of economic reforms as part of the Economic Reform and Structural Adjustment Programme (ERSAP) supported by the IMF/World Bank. The system of VET development continued to face the challenges encountered in phases 1 and 2. These were reinforced by continuous weakening of worker organisation and collective bargaining and stronger state-employer coalitions in the new era of economic liberalisation under the ERSAP (Abdelrahman, 2013). The Egyptian economy has since witnessed unprecedented levels of privatisation of the public sector. Privatisation policies further empowered business elites who dominate the Egyptian Federation of Industries; the only employer's association with the capacity to formally participate in the development of socio-economic policies (Kassem, 2004; Kienle, 2003; Kolb, 2010). The Egyptian Federation of Industries operates under the tutelage of the Ministry of Trade and Industry which questions its representative capacity of the business community as a whole. The EFI expressed interest in VET development. However, it was noted that the 'relevant industry associations have expressed their willingness to participate in TVET reforms but the basis for this remains uncertain' (Abrahart, 2003: 21).

It was also recognised that the 'potential for trade unions to be involved in training reforms is also important. Naturally, they have specific interests related to the needs of their members but, as yet, the scope for cooperation with the unions is undeveloped' (Abrahart,

2003: 21). Low levels of worker representation on VET continued in phase 3 and, as in the previous phases, was unsupported by strong state-worker relations. In phase 3, state-workers relations were heated as a resulted of the privatisation programme, as part of the ERSAP, and the massive employment retrenchments that occurred as a result. Workers' freedoms, including the right to collective bargaining, were abolished and the levels of ETUF representativeness of workers' needs was relatively low (Barrie & Ketchley, 2018). Workers' accumulated discontent with repressive measures erupted in December 2006 with the largest wave of strikes and labour movement witnessed in Egypt since its independence that involved about 1.7 million workers (Beinin, 2009; El-Mahdi, 2009). A series of unsupported demands by ETUF prompted 24,000 of textile Mahalla workers to go on strike to call for increased pay (El-Mahdi, 2009). This movement resulted in the establishment of the first independent union; the real estate tax collectors. Unlike previous incidents, the state did not respond violently to the workers' movement. Furthermore, the state recognised the demands of the real east tax collector's union with the Minister of Finance agreeing to negotiate with representatives of the union (El-Mahdi, 2009; Barrie & Ketchley, 2018). ETUF was critical of this reaction which is considered to be an important milestone in state-worker relations after 1952 revolution.

The strike action of 2006 resulted in several gains for workers but it did little to their representation on VET development. The VET system continued to suffer from poor quality as a result of being detached from industry requirements. VET planning and budgeting were undertaken 'on a mechanical basis, with no respect to the quality, market-relevance, or efficiency of the training being provided. Training programs fail to adjust to the type and quality of skills that employers need' (Amer, 2007: 13). Social dialogue continued to be ineffective in Phase3 and it was recognised that VET still 'suffers from structural deficiencies, such as… a lack of social dialogue between government, employers and workers on TVET' (ILO, 2015: 9).

In phase 3, a number of international organisations developed 'flagship' projects for VET development and achieved positive results albeit ones that remained unrepresentative on a national level. For instance, the World Bank initiated the Skill Development Project in 2003 and it succeeded in providing quality VET to more than 34,000 trainees and increased the involvement of the private sector in VET (World Bank, 2011). The ETF developed the TVET project of 66 million Euros match-funded with the Egyptian government in its first phase, training a total of 37,000 individuals between 2005 and 2009. Although it was unclear 'whether the results (of the TVET project) are commensurate to the amount of resources invested by the

EC' (European Commission, 2013:36), the ETF embarked on the second phase of the project in 2016. Canadian, French, Danish, Japanese and other international donors supported VET development through various projects; nevertheless, development results continue to be limited on a national level which is acknowledged by donors themselves. For instance, the World Bank acknowledged the satisfactory performance of the Bank's VET development projects but it added that 'these projects had limited impact on the sector and affected only the project institutions. Previous efforts to introduce curriculum reform were less comprehensive in scale and sometimes took the form of isolated projects with no lasting impact on the system' (World Bank, 1999: 13). Different factors contribute to the isolation of projects including the 'complexity of the VET system in Egypt (which) results partly from the fact that several ministries and agencies are involved' (ETF, 2008: 17). It is acknowledged that 'the quality of vocational training differs substantially across the various providers' (Amer, 2007: 13). All of which constrain VET development efforts. However, it is noticed that as an outlier the Mubarak-Kohl initiative for Dual System (MKI-DS) survived for a relatively long period of time during which it has continuously succeeded in deriving positive results for VET development.

The MKI-DS: an outlier in VET development

MKI-DS is an exemplary project for VET development in Egypt. Established in 1993 as a bilateral Egyptian-German agreement for technical cooperation, MKI-DS aimed at establishing a dual system of education in Egypt along the German model, with the support of Gtz. MKI-DS started as a pilot scheme that offered its first training in 1995 and in 10 years the initiative realised 85 per cent employability of its graduates (Grunwald, 2009; Adams, 2010). MKI-DS graduates enjoy a relatively good reputation for quality VET amongst employers, and the initiative itself is perceived in the industry to be one of the few successful attempts to offer quality VET in Egypt. MKI-DS attempts to instil a culture of social dialogue and tripartite cooperation between the state, employers and workers (Grunwald & Becker, 2013). It works closely with the state, workers and a set of employers to realise this objective. In other words, the secret to MKI-DS success is the development of supportive and collaborative tripartite relationships.

MKI-DS was only formally recognised as part of the Egyptian system of education in 2008. The successful experience of MKI-DS was not free from challenges. The programme

faces various socio-cultural constraints that are embedded in the institutional environment in Egypt. For instance, weak enforcement of rules and regulations were evident in discrepancies between the agreed upon and real working conditions offered by employers. Some employers do not adhere to the standards promised in their contracts with trainees and Gtz (Lotz, 2008). Another challenge is trust building between employers and trainees which is necessary for successful cooperation especially given instances of weak contract enforcement (ibid, 2008). Despite these and other challenges, the programme succeeded in achieving relatively sustainable results though these continue to be limited on a national level (Grunwald & Becker, 2013). The case of MKI-DS is a good example to illustrate the positive impact of collaborative institutional structures on VET development as well as the difficulties encountered to change the historically embedded institutions which hinder effective state-employer-worker cooperation for representative VET developments.

DISCUSSION

The historical institutional analysis undertaken in this manuscript demonstrates the influence of the institutionalised inefficiencies in social dialogue on VET and its development across the three temporal phases. The state in Egypt has played a central role in the system of VET since the 1950s. Such a centralised approach is similar to the developmental skill formation model adopted in the developmental states of Southeast Asia in its early stages of industrialisation (Wade, 1990; Woo-Cumings, 1999). However, the developmental skill formation model is not only based on tight state control of VET but also on close coordination between economic planning and skill development, on a national level (Wade, 1990; Ashton, 2004). In other words, the state closely monitors the current and potential demand of VET skills in the economy and plans for the provision of these skills on the short, medium and long terms (Ashton et al., 1999; Green, Sung & Ashton, 1999). Unlike developmental states, economic planning in Egypt was not closely tied to VET development. Despite the state's aspirations to align VET development with its import-substitute industrialisation plans in the newly independent state in the 1950s, this was not effectively realised in practice. The gap between VET development and the needs of the industry continued to widen by time. This gap was also increased by the ineffective engagement of workers and employers in VET development. The state co-option of ETUF and its close ties to the Egyptian Federation of Industries, reduced the effective representation of workers and employers on a national level. This, in turn, resulted in

their ineffective representation on VET development. As a result, the design, delivery and certification of VET were dominated by the state. This rendered a VET system disconnected from reality being deprived of workers' and employers' inputs.

The experiences of developed and developing countries demonstrate that employers are unlikely to be interested and/or engaged in VET development without pressures from the state and/or workers (e.g. Wade, 1990; Green, Sung & Ashton, 1999; Ashton, 2004; Thelen, 2004; Lansbury & Wailes, 2005). This is particularly the case when employers manage to secure the required labour skills through, e.g. in-firm training programmes or poaching of competitors' workers, which is not unusual in imperfect labour markets. The state can put pressures on employers to engage in VET and/or offer incentives but without the effective representation of workers, the latter's interests and VET effectiveness are at risk. For instance, there is a risk of exploiting trainees engaging in apprenticeships as a sort of cheap labour for employers and/or not providing them with quality training (Thelen, 2004; Crouch et al., 2005). Thus, ideally, the design, delivery and certification of VET should involve key institutional actors; the state, employers and workers, to ensure the conflicting interests of key actor are observed through collective bargaining (Sehnbruch et al., 2015). This cooperative process offers opportunities for sharing reliable labour market information which supports the state in arriving at effective and sustainable policies for VET development that account for the interests of VET institutional actors. The successful example of MKI-DS showcases the value of effective social dialogue for VET. MKI-DS in Egypt is, nevertheless, applied in an incubatory environment designed to ensure effective cooperation between VET actors. The limited scope of MKI-DS on a national level, despite its relatively long presence in Egypt, demonstrates the persistence of the historically embedded institutional structures that characterised the Egyptian context since the 1950s.

This analysis has both practical and theoretical implications. On a theoretical level, it aligns with calls in the literature to extend beyond VET theories used in developed countries (e.g. Maurer & Gonon, 2014; Barabasch, Bohlinger, & Wolf, 2021; Li & Pilz, 2021). There is evidence on the ineffectiveness of policy transfers that do not account for contextual features of the receiving countries. In this study, we investigate some of the key historical and institutional reasons for the ineffective engagement with VET development policies. This necessitates the creation of new theories that account for the institutional complementarities, complexities and inefficiencies in developing countries aiming to develop its VET systems. Recently, the literature has offered some effective contributions to the development of new

VET theories, such as the critical capabilities approach (McGrath et al., 2023). It is acknowledged that there is a 'need to develop a stronger postcolonial account of VET, but this too has not yet emerged and must be a priority' (McGrath et al., 2023: 592). This article contributes to this gap in the literature as it highlights VET developments in the newly independent Egyptian state of 1952. The analysis offers a deeper historically informed institutional conceptualisation of the VET development policy problem that extends beyond the neoliberal perspective. The latter defines the problem as one of skills supply and demand mismatch and it designs programmes to *fix* this mismatch. However, it does not extend beyond the terrains of this conceptualisation to the underlying institutional factors that influence this mismatch. A clear understanding of these underlying institutional structures is necessary for the development of relevant and effective VET development policies. This historical institutional analysis is highly contextual and thus we do not envisage to arrive at a 'one-size fit-all' model but rather we argue for an essential analytical perspective necessary for the development of customised and context-specific VET development models.

On a practical level, the article calls for further customisation of the VET system to arrive at a VET development approach that suits the Egyptian institutional environment. The current levels of social dialogue have proved to be unsupportive to VET development. Yet, tripartite cooperation is essential to the success of the VET system. This dilemma can be resolved by arriving at a model that considers the historically institutionalised relationships between VET key actors as well as the requirements of an effective VET system. All of which can eventually enhance the national representation of development results. The first step towards the identification of such an approach is revisiting the conceptualization of the problem which is the key aim of this article.

CONCLUSION

In this manuscript, we aim to explain the persistence of the policy problem of VET development from a historical institutional perspective. The analysis undertaken herein demonstrates that the policy problem of VET development is an institutional problem of historically ineffective social dialogue, *symptomized* by VET supply and demand mismatch. The paper supports calls in the literature on the ineffectiveness of policy transfers of VET models from developed contexts to developing contexts (e.g. Maurer & Gonon, 2014; Barabasch, Bohlinger, & Wolf, 2021; Li & Pilz, 2021). The latter have unique institutional

features shaped by their histories and thus the mere transfer of VET models cannot sufficiently account for all of the underlying institutional characteristics of these contexts. The article also provides an account of the post-colonial VET system in the Egyptian context responding to calls in the literature to enrich such post-colonial accounts (e.g. McGrath et al., 2023). The article also argues that policy interventions should extend beyond merely addressing VET supply and/or demand into addressing the underlying institutional inefficiencies. In the case of Egypt, ineffective social dialogue and state dominance of VET design and delivery has deprived VET development from the effective and collective engagement of employers' and workers' inputs. Further research is needed to explore effective ways of strengthening the tripartite relationships in ways that can be supportive of VET development. The discussion of the various alternative solutions extends beyond the scope of this manuscript. However, we recommend holding the historical institutional relationships of key VET actors at the core of further research into VET development in the future.

REFERENCES

Abdelrahman, M. (2013). In praise of organization: Egypt between activism and revolution. *Development and Change*, *44*(3), 569-585.

Abrahart, A. (2003). *Review of technical and vocational education and training.* Washington, D.C.: The World Bank.

Adams, A. (2010) The Mubarak Kohl Initiative-Dual System in Egypt: An assessment of its impact on the school to work transition. Cairo: Gtz.

Agénor, P.R., Nabil, M., Youssef, T. & Jensen, H. (2003). *Labor Market Reforms, Growth, and Unemployment in Labor-Exporting MENA Countries.* Washington, D.C.: The World Bank.

Alissa, S. (2007). *The Political economy of reform in Egypt: Understanding the Role of Institutions.* Carnegie Papers Number 5. Beirut: The Carnegie Middle East Center.

Amer, M. (2007). *Transition from education to work: Egypt country report.* ETF working document: ETF.

Ashton, D. N. (2004). *The political economy of workplace learning*. In H. Rainbird, A. Fuller, & A. Munro (Eds.), Workplace learning in context (pp. 21–37). London, UK: Routledge.

Ashton, D., Green, F., James, D. & Sung, J. (1999). *Education and Training for Development in East Asia: The Political economy of skill formation in East Asian industrialised economies*. London: Routledge.

Ayubi, N. (1995). *Over-stating the Arab state: politics and society in the Middle East.* London: I.B. Tauris.

Barabasch, A., Bohlinger, S. & Wolf, S., 2021. Reconstructing policy transfer in adult and vocational education and training. *Research in Comparative and International Education*, *16*(4), pp.339-360.

Bardak, U. (2006). An overview of educational systems and labour markets in the Mediterranean region. *Mediterranean Journal of Educational Studies,* **11**(1), pp. 103-125.

Barrie, C. & Ketchley, N. (2018). Opportunity without organization: Labor mobilization in Egypt after the 25th January revolution. *Mobilization*, *23*(2), pp.181-202.

Beach, D. and Pedersen, R.B., 2019. *Process-tracing methods: Foundations and guidelines*. University of Michigan Press.

Beinin, J. & Lockman, Z. (1998) *Workers on the Nile: Nationalism, Communism, Islam, and the Egyptian Working Class, 1882-1954.* Cairo: American Univ in Cairo Press.

Beinin, J. (2009). Workers' struggle under 'socialism' and neoliberalism. In: R. El-Mahdi and P. Marfleet, eds, *Egypt: The Moment of Change.* London: Zed Books Ltd, pp. 68-86.

Capoccia G. & Kelemen R.D. (2007). The study of critical junctures: Theory, narrative, and counterfactuals in historical institutionalism. *World Politics* 59(03): 341-369.

Capoccia, G. (2016). Critical junctures. In O. Fioretos, T. Falleti, & A. Sheingate (Eds.), The Oxford handbook of historical institutionalism (pp. 89–106). Oxford: Oxford University Press.

Chalcraft JT (2012) *Striking Cabbies of Cairo and Other Stories, the: Crafts and Guilds in Egypt, 1863-1914.* New York: State University of New York Press.

Chalcraft, J. (2004) *The Striking Cabbies of Cairo and Other Stories: Crafts and Guilds in Egypt, 1863–1914*. Albany: State University of New York Press.

Clarke, L. & Winch, C. (2007). *Vocational education: international approaches, developments and systems.* London: Routledge.

Cooke-Davies T (2002) The "real" success factors on projects. *International Journal of Project Management* 20(3): 185-190.

Crouch, C. (2005). Models of capitalism. *New Political Economy,* **10**(4), pp. 439-456.

Crouch, C., Streeck, W., Boyer, R., Amable, B., Hall, P. & Jackson, G. (2005). Dialogue on 'Institutional complementarity and political economy'. *Socio-Economic Review,* **3**(2), pp. 359-382.

Croucher, R. & Brookes, M. (2009) German employers' inputs to employee skills development. *Industrial Relations. A Journal of Economy and Society,* **48**(2), pp. 231-236.

Croucher, R. & Miles, L. (2009) The legal structuring of women's collective voice in the South Korean workplace. *Journal of contemporary Asia,* **39**(2), pp. 231-246.

Culpepper, P.D. (2003). *Creating cooperation: How states develop human capital in Europe.* New York: Cronell University.

Diallo A and Thuillier D (2004) The success dimensions of international development projects: the perceptions of African project coordinators. *International Journal of Project Management* 22(1): 19-31.

El-Mahdi, R. & Marfleet, P. (2009). *Egypt: The Moment of Change.* London: Zed Books Ltd.

Engwall M (2003) No project is an island: linking projects to history and context. *Research Policy* 32(5): 789-808.

ETF & World Bank (2006). *Reforming TVET in the Middle East and North Africa: Experiences and Challenges.* Belgium: European communities.

ETF (2008) *Evaluation of ETF Activities in Egypt*. Cairo: ETF.

Finegold, D. & Soskice, D. (1988). The failure of training in Britain: analysis and prescription. *Oxford Review of Economic Policy,* **4**(3), pp. 21-53.

Foster, P. (1992). Vocational education and training: A major shift in World Bank Policy. *Prospects quarterly review of education,* **22**(2), pp. 149-155.

George, A. & Bennett, A. 2005. *Case Studies and Theory Development in the Social Sciences*. Cambridge: MIT Press.

Ghoneim, A. (2005). *Promoting competitive markets in developing economies: The case of Egypt.* Cairo: The International Development Research Centre.

Gill, I., Fluitman, F. & Dar, A. (2000). *Vocational Education and Training Reform: Matching Skills to Markets and Budgets.* New York: Oxford University Press.

Gioia, D.A., Patvardhan, S.D., Hamilton, A.L. and Corley, K.G (2013). Organizational identity formation and change. *Academy of Management Annals*, *7*(1), pp.123-193.

Green, F., James, D., Ashton, D. & Sung, J. (1999). Post-school education and training policy in developmental states: the cases of Taiwan and South Korea. *Journal of Education Policy*, *14*(3), pp.301-315.

Grunwald, E. & Becker, B. (2013). *Successful in Reforming the TVET System and Shaping the Society: The Example of the Mubarak-Kohl Initiative*. In L. Deitmer, U. Hauschildt, F. Rauner & H. Zelloth (Eds) The Architecture of Innovative Apprenticeship (pp. 295-306). Bremen: Springer, Dordrecht.

Grunwald, E., Lotz, G., Nitschke, K. and Sakr, N. (2009). *Vocational education and training in the context of labour mobility – country report "Egypt"*. Online: Vocational Education, Training and Employment Programme Mubarak-Kohl-Initiative and Programme Management Unit supported by Gtz

Hall, P. & Soskice, D. (2001). *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage.* Oxford: Oxford University Press.

Hansen, B. & Radwan, S. (1982). Employment opportunities and equity in a changing economy: Egypt in the 1980s A labour market approach. Geneva: ILO.

Heyneman, S. (1997). The quality of education in the Middle East and North Africa (MENA) *International Journal of Educational Development,* **17**(4), pp. 449-466.

Heyneman, S. (2003). The history and problems in the making of education policy at the World Bank 1960–2000. *International Journal of Educational Development,* **3**(315), pp. 337.

Hinnebusch, R. (2001). The politics of economic liberalization: Comparing Egypt and Syria. In: H. Hakimian & Z. Moshaver, eds, *The state and global change: The political economy of transition in the Middle East and North Africa.* Surrey: Curzon Press, pp. 111-134.

Hollingsworth, J.R. & Boyer, R. (1997). *Contemporary Capitalism: The Embeddedness of Institutions.* Cambridge: Cambridge University Press.

Hoque, K. & Bacon, N. (2008). Trade Unions, Union Learning Representatives and Employer-provided training in Britain. *British Journal of Industrial Relations,* **46**(4), pp. 702-731.

Ika LA and Donnelly J (2017) Success conditions for international development capacity building projects. *International Journal of Project Management* 35(1): 44-63.

Ika LA and Hodgson D (2014) Learning from international development projects: blending critical project studies and critical development studies. *International Journal of Project Management* 32(7): 1182-1196.

ILO (1955) *Expanded Programme for Technical Assistance.* Geneva: ILO.

ILO (1967). *Vocational Instructor Training Institute: Arab Republic of Egypt*. ILO: Geneva.

ILO (1971). *United Arab Republic: Electric power training institute*. ILO: Geneva.

ILO (1974) *Vocational Training Planning.* Geneva: UNDP and ILO.

ILO (1979). *Arab Republic of Egypt: introduction of modern training techniques for vocational training applying modules of employable skill.* ILO: Geneva.

ILO (1986) *Industrial Vocational Training Centre - Phase II.* Geneva: UNDP and ILO.

ILO (2014) *Promoting Fundamental principles and rights at Work and Social Dialogue – Final external evaluation*. ILO: Geneva.

ILO (2015) *Skills Mismatch and Underemployment: How to Boost Employability of Young Women and Men in Egypt.* Egypt: ILO.

Immergut EM (1998) The theoretical core of the new institutionalism. *Politics & Society* 26(1): 5-34.

Immergut, E.M. (1992). The rules of the game: The logic of health policy-making in France, Switzerland, and Sweden. *Structuring politics: Historical institutionalism in comparative analysis*, *4*(4), pp.57-89.

Kassem, M. (2004). *Egyptian politics: the dynamics of authoritarian rule.* London: Lynne Reinner Publishers.

Khang DB and Moe TL (2008) Success criteria and factors for international development projects: A life-cycle-based framework. *Project Management Journal* 39(1): 72-84.

Kienle, E. (2003). *Politics from above, Politics from Below: The Middle East in the Age of Economic Reform.* London: Taurus.

King, K., McGrath, S. & Rose, P. (2007). Beyond the basics: Educating and training out of poverty. *International Journal of Educational Development,* **27**(4), pp. 349-357.

Kolb, J. (201)0. *Regulatory change in peripheral authoritarianism: the case of Egypt*, University of London, School of Oriental and African Studies.

Kuruvilla, S. (2006). Social Dialogue for Decent Work. In: D. Ghai, ed, Decent work: objectives and strategies. Geneva: International Institute for Labour Studies, ILO, pp. 175-212.

Kwon, H.J. & Yi, I. (2009). Economic development and poverty reduction in Korea: Governing multifunctional institutions. *Development and Change* 40(4): 769–792

Lansbury, R. & Wailes, N. (2005) Current trends in Korean industrial relations: towards social partnership. *Pacific Economic Papers*, 348, pp. 3.1-3.18.

Li, J. & Pilz, M., 2021. International transfer of vocational education and training: A literature review. *Journal of Vocational Education & Training*, pp.1-34.

Lieberman ES (2001) Causal inference in historical institutional analysis: A specification of periodization strategies. *Comparative Political Studies* 34(9): 1011-1035.

Lotz, G. (2008). Standards with regard to Vocational Education, Training and Labour Market in Egypt. *Draft Mission Report to MKI-vetEP commissioned by GTZ*. Hannover: Gtz.

Lucio, M.M.N. & Stuart, M. (2004) Swimming against the tide: social partnership, mutual gains and the revival of 'tired'HRM. *The International Journal of Human Resource Management*, *15*(2), pp.410-424.

Mabro, R. & Radwan, S. (1976) The Industrialization of Egypt, 1939±1973. Clarendon Press, Oxford.

Mahoney, J. & Rueschemeyer, D. (2003) *Comparative Historical Analysis in the Social Sciences.* Cambridge: Cambridge University Press.

Mahoney, J. & Thelen, K. (2009) *Explaining Institutional Change: Ambiguity, Agency, and Power.* Cambridge: Cambridge University Press.

Mahoney, J. & Thelen, K. (2010) A theory of gradual institutional change. In: Mahoney J and Thelen K (eds) *Explaining Institutional Change: Ambiguity, Agency, and Power.* New York: Cambridge University Press, 1-37.

Mahoney, J. & Thelen, K. (2015) *Advances in Comparative-Historical Analysis.* Cambridge: Cambridge University Press.

Mahoney, J. (2000). Path dependence in historical sociology. *Theory and society*, *29*(4), pp.507-548.

Mahoney, J., Mohamedali, K., & Nguyen, C. (2016). Causality and time in historical institutionalism. In O. Fioretos, T. G. Falleti, & A. Sheingate (Eds.), Oxford handbook of historical institutionalism (pp. 71–88). Oxford University Press.

Mahoney, P.P., Remmer, K., Skocpol, T., Steinmo, S. & Thelen, K. (2019). Historical Institutionalism: Origins and Developments. *The Handbook of Political, Social, and Economic Transformation*, p.95.

Maurer, M. & P. Gonon, 2014. *The Challenges of Policy Transfer in Vocational Skills Development: National Qualification Frameworks and the Dual Model of Vocational Training in International Cooperation*. Eds. Bern: Peter Lang.

Middleton, J. & Ziderman, A. (1997). Overview: World Bank policy research on vocational education and training. *International Journal of Manpower,* **18**(1/2), pp. 6-28.

Morris, P.W. & Geraldi, J. (2011) Managing the institutional context for projects. *Project Management Journal* 42(6): 20-32.

Morrison, C., Croucher R. & Cretu, O. (2012) Legacies, conflict and 'path dependence' in the former Soviet Union. *British Journal of Industrial Relations* 50(2): 329-351.

OECD, 2010. *Competitiveness and private sector development Egypt 2010: Business Climate Development Strategy.* Paris: OECD.

Oketch, M.O. (2007). To vocationalise or not to vocationalise? Perspectives on current trends and issues in technical and vocational education and training (TVET) in Africa. *International Journal of Educational Development,* **27**(2), pp. 220-234.

Pettigrew, A. M. (1997). What is a processual analysis. Scandinavian journal of management, 13(4), pp.337-348.

Pierson, P. (2004). *Politics in time: history, institutions, and social analysis*. Princeton, N.J.: Princeton University Press.

Pollard, L. (2014). Egyptian by Association: Charitable States and Service Societies, Circa 1850–1945. *International Journal of Middle East Studies*, *46*(2), 239-257.

Posusney, M. P. (1993). Irrational workers: The moral economy of labor protest in Egypt. *World Politics*, *46*(1), 83-120.

Psacharopoulos, G. (1991). From manpower planning to labor market analysis. *International Labor Review,* **130**(4), pp. 459-474.

Said M. (2015). *Policies and Interventions on Youth Employment in Egypt.* Cairo: The European Training Foundation.

Sehnbruch, K., Burchell, B., Agloni, N. & Piasna, A. (2015). Human development and decent work: why some concepts succeed and others fail to make an impact. *Development and Change*, *46*(2), pp.197-224.

Steinmo, S. (2008). *Historical institutionalism*. In: Donatella, D.P., Keating, M. (Eds.), Approaches and Methodologies in Social Sciences: A Pluralistic Perspective. Cambridge University Press, Cambridge, UK, pp. 118–138.

Strauss, A., & Corbin, J. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.). Newbury Park, CA: Sage.

Streeck, W. & Thelen, K.A. (2005) *Beyond Continuity: Institutional Change in Advanced Political Economies.* Oxford: Oxford University Press.

Stuart, M. (2019). The industrial relations of training and development, pp.165-185. *The Wiley Handbook of Vocational Education and Training*, Ed. Guile, D. & Unwin, L., Hoboken: USA.

Thelen, K. (2004.) *How Institutions Evolve: The Political Economy of Skills in Germany, Britain, the United States, and Japan.* Cambridge: Cambridge University Press.

Wade, R., 1990. *Governing the Market: Economic Theory and the Role of Governance in East Asian Industrialization.* New Jersey: Princeton University Press.

Wailes, N., Ramia, G. & Lansbury, R.D. (2003) Interests, institutions and industrial relations. *British Journal of Industrial Relations*, *41*(4), pp.617-637.

Whitley, R. (1999). *Divergent Capitalisms: The social structuring and change of business systems.* New York: Oxford University Press.

Woo-Cumings, M. (1999). *The Developmental State*. New York: Cronell University Press.

World Bank (1983). *Egypt - Vocational Training Project*. Washington, D.C.: World Bank.

World Bank (1993). *The East Asia Miracle.* New York: OUP.

World Bank (2011). *Egypt - Skills Development Project.* Washington, D.C.: World Bank.

Yousef, T., 2004. Development, Growth and Policy Reform in the Middle East and North Africa since 1950. *Journal of Economic Perspectives,* **18**(3), pp. 91-116.

Table 1. Sample of VET reports

Organisation	Date	Report Title
ILO	1955	Report to the government of Egypt on the organisation of vocational training.
ILO	1957	Interim report to the government of Egypt on the productivity and vocational training mission July 1954-October 1956.
ILO	1962	Second interim report to the government of the United Arab Republic on the productivity and vocational training project in U.A.R.
UNDP & ILO,	1967	Vocational Instructor Training Institute: Arab Republic of Egypt
ILO	1970	United Arab Republic Vocational Training for the Egyptian railway
ILO	1971	United Arab Republic: Electric power training institute
ILO & UNDP	1973	Arab Republic of Egypt: vocational training for the Egyptian railways; report on project results, conclusions and recommendations.
ILO	1974	Egypt: vocational training planning; project findings and recommendations.
ILO & Germany	1979	Arab Republic of Egypt: introduction of modern training techniques for vocational training applying modules of employable skill.
ILO	1979	Arab Republic of Egypt: vocational training for the Egyptian railways; project findings and recommendations.
UNDP; UNIDO; ILO; UNESCO	1980	Evaluation of industrial training programmes
ILO	1980	Study on the general educational requirements for access to vocational education in the Arab Republic of Egypt.
ILO	1981	Participation of workers in decision making
ILO	1981	Supervisors in vocational training centers in Egypt = mushrifun bi marakiz al tadrib al mihani fi misr (dirasa asasiyya).
ILO	1981	Structural characteristics of vocational training centers in Egypt
ILO & Germany	1983	Introduction of modern training methodology for new building construction techniques
World Bank	1983	Egypt - Vocational Training Project
ILO	1984	A study of industrial training in Egypt
ILO	1986	Arab Republic of Egypt: industrial vocational training centre (phase ii); project findings and recommendations.
ILO & UNDP	1987	Manpower Training and Management Development for Hotel Occupations Project findings and recommendations
ILO	1991	Further technical assistance in the practical implementation and the validation of modular employable skills (MES) training programmes in egypt; evaluation mission report.
ILO	1992	Arab Republic of Egypt: provision of technical assistance services to develop training programmes in the productivity and vocational training department of the ministry of industry of egypt; project findings and recommendations.
World Bank	1995	Egypt - Vocational Training (Electricity) Project
ILO	1995	Further technical assistance in the practical implementation and validation of m.e.s. Training programmes in egypt; final evaluation.
World Bank	1999	Egypt - Engineering and Technical Education Project
Gtz	2000	Promotion of technical and vocational education and training by introducing a dual-system as an integral part of the Nationl System of Education in Egypt
World Bank	2003	Egypt - Skills Development Project (project appraisal)
Gtz	2008	Vocational Education, Training and Employment Programme, Mubarak-Kohl Initiative (MKI-vetEP): Culture and the Perception of Work and Work Ethics in Urban Egypt/Cairo
ETF	2008	Evaluation of ETF Activities in Egypt
Gtz	2008	Vocational Education, Training and Employment Programme, Mubarak-Kohl Initiative (MKI-vetEP): Standards with regard to Vocational Education, Training and Labour Market in Egypt
Gtz	2009	Mubarak-Kohl Initiative for dual system (MKI-DS) – The case of Egypt: Success in reforming the Technical and Vocational Education and Training(TVET)-system and shaping the society: Reflecting more than 15 years of experience with an innovative apprenticeship approach in Egypt
Gtz	2009	Making work work for us: Brochure to facilitate six short films on useful behaviour in the workplace
Gtz	2009	Vocational education and training in the context of labour mobility Country report: Egypt
Gtz	2010	The Mubarak Kohl Initiative-Dual System in Egypt: An assessment of its impact on the school to work transition
World Bank	2011	Egypt - Skills Development Project

Table 2: Illustrative quotes from documentary analysis in Phases 1, 2 and 3:

2nd order Themes	Phase	Illustrative quotations
1. State centralisation of VET	**Phase 1**	• "A programme of action along these lines will require the support and understanding of top management and of workers' representatives, and short courses or seminars for top management and for trade union leaders, with a view of creating a climate of opinion favourable to productivity-improvement work, should not be neglected" (1957: 55) • "Officials of the Department, with their over-all view of apprentice training, were able to forecast with some accuracy the long-term demand for instructors in each particular trade field." (ILO, 1967: 30)
	Phase 2	• "The ILO Vocational Training Recommendation, 1962, devotes several paragraphs (e.g. paragraphs 5, 6) to this topic and paragraph 11(3) stresses the importance of employers and workers being represented upon the bodies established. Experience has shown the value of having such a supervisory body acting somewhat as a board of directors and responsible for the over-all policy guidance of such projects." (ILO, 1971: 18) • "Both labour and enterprises would probably have to be represented in the negotiations leading up to such revisions. The present arrangements with labour participation and representation in boards of directors in individual enterprises do not provide such mechanisms. Tripartite industry boards might be one solution, but other solutions are conceivable". (Hansen and Radwan, 1982: 231)
	Phase 3	• "it still suffers from structural deficiencies, such as: (i) a lack of social dialogue between government, employers and workers on TVET; (ii) fragmented roles and responsibilities of key stakeholders… " (ILO, 2015, p.9) • "The new PVTD policy of an industry-oriented vocational training programme will require the regular dissemination of information on industry's needs. It is therefore recommended that a feedback system be established so that these needs and requirements are known by all concerned and will therefore be taken into consideration when training courses and programmes are being planned." (ILO, 1992: 9) • "One of the objectives of implementing the dual system of vocational education and training in Egypt was to create co-operation between the state and the private sector to improve technical secondary education by offering learners the opportunity for practical, enterprise based learning while still in school". (Grunwald and Becker, 2008: 13)
2. Employers' reluctance to	**Phase 1**	• "Management was, however, afraid that the people trained under the new scheme would not stay with their employers; they would either leave already after basic training, thinking that they had learned quite

cooperate in VET development		enough to earn their living, or they would be drafted for military service shortly after having completed the apprenticeship". (ILO, 1957, P.29) • "Few employers had any confidence in organised apprentice training. To instil confidence in the value of a formal system, and to neutralise the wide opposition, careful planning had to precede the introduction of the system". (1967: 11)
	Phase 2	**"**Institution-based training, whether in technical schools or in vocational training centres, is the most common pattern in Egypt. Enterprise-based training is very limited, in particular as regards initial training (except for the apprenticeship scheme of the Ministry of Industry), but more common when it comes to upgrading, updating or retraining. As has been mentioned earlier, this shifts the responsibility for training, which traditionally was an employer's responsibility, to the Government**" (Radwan, 1982: 275)**
	Phase 3	**"**The success of the direct involvement of the private sector (on MKI)… suggests that in (the) future someone should look for ways to make this connection and ensure that the private sector is involved in recruitment, curricula, training, monitoring and, through providing state of the art equipment in the workplace, sharing the financial burden involved in technical education.**"** (2008: 15) **"** The relevant industry associations have expressed their willingness to participate in TVET reforms but the basis for this remains uncertain.**"** (Abrahart, 2003: 21)
3. Ineffective representation of workers on VET	**Phase 1**	• "In Egypt the failure of the State system of primary and industrial schools to supply industry with suitably qualified recruits suggests the need for close collaboration between these schools and industry…" (1955: 8)
	Phase 2	• **"** Only a small proportion of the employees in the private sector are unionised**"** (ILO, 1982: 147)
	Phase 3	• "The potential for trade unions to be involved in training reforms is also important. Naturally, they have specific interests related to the needs of their members but, as yet, the scope for cooperation with the unions is undeveloped". (Abrahart, 2003: 21)
4. Poor VET planning and quality monitoring	**Phase 1**	• "The planning of the safety work coincided with the coming into force of a law which defined the responsibilities of management with regard to safety. This law also made mandatory, joint committees of management and labour for handling safety matters in companies with more than 100 workers." (ILO, 1962: 18) • "The apprentice system had only partially succeeded in the building trades because the labour market was not ready to take apprentices and to guarantee them continuous employment." (ILO, 1962: 51)

		• "If more work could be put into analysing the present production processes and practices, it would be possible, in many cases, to reach the planned increase of production with much less capital investment." (ILO, 1962: 66)
	Phase 2	• **"**Since reliable central manpower planning with detailed occupational breakdowns is unrealistic for the time being and, on the other hand, specific vocational education and training are an absolute necessity, the solution lies in decentralisation with vocational education and training placed as close as possible to, perhaps even inside, industries and enterprises. Industries and enterprises are in the best position to judge their own needs and to specify and control quality requirements" (ILO, 1982: 18) • "In the total institution building effort which has taken place in industrial training in Egypt over the past 25-30 years, UNDP-supported programmes and projects have, on the whole, not been pace-setting... In particular the training needs and systems of smaller scale industry was left without attention - such industry employs about the half of Egyptts industrial work force". 107
	Phase 3	• "Ministries allocate their vocational training budgets to their providers on a mechanical basis, with no respect to the quality, market-relevance, or efficiency of the training being provided. Training programs fail to adjust to the type and quality of skills that employers need". (Amer, 2007: 13)
5. VET fragmentation	**Phase 1**	• "During the period under review the Vocational Training Division in particular has grown in size and in the course of this development divided into various sections making changes in organisation necessary from time to time" (ILO, 1962: 6) • "The Five-Year Plan called for building a network of 18 Vocational Training Centres and expanding the Department's other activities at an estimated cost of £E 2.5 million… Later in 1958… A National Apprenticeship Council was also formed and given its own budget". (ILO, 1967:13) • "As responsibility for vocational training is currently shared by several different ministries in Egypt, it is recommended that increased efforts be made to identify the precise role of each o± the concerned ministries in the planning, co-ordination, execution and evaluation of vocational training programmes." (ILO, 1979: 7)
	Phase 2	• " A National Vocational Training Council should be formed to advise the Government on such matters as legislation required for vocational training, standards, approval of new programmes, certification,

		coordination of the contributions of all concerned ministries and industrial sectors, etc. This could be included in the functions of the Higher Council for Training. This Council should be tripartite in composition, including representatives of government, employers and workers, and all concerned ministries should be represented to ensure co-ordination. It may also be necessary to set up a co-ordinating committee to advise the National Council on the best means of achieving this." (ILO, 1974: 9)
	Phase 3	• "The complexity of the VET system in Egypt results partly from the fact that several ministries and agencies are involved". (ETF, 2008: 17) • "There are many initiatives108 of various players addressing issues which could be important building blocks towards the development and implementation of an NQF (National Qualification Framework)… However, so far there has been a lack of co-ordination and coherence of the disparate initiatives. There is a tendency for the different ministries and stakeholders to focus on approaches and the development of solutions restricted to and within their own domain". (Grunwald, 2009:36) • "On the political level, difficulties typically arise from the fact that the responsibility for an NQF is never easily located within one government department, and that the involved Ministries are all likely to have different agendas and interests concerning an NQF and its development. Therefore, the lack of co-operation and coherence of the various initiatives in Egypt is not surprising." (Grunwald, 2009:37) • " The main problem related to this fragmentation is the absence of a national agency responsible for the enhancement and implementation of vocational training and thus the lack of coordination among the various providers of training. Each centre decides its own program content, conditions, duration (from a few weeks to 4 years), curricula and examinations standards. "Indeed, the quality of vocational training differs substantially across the various providers". (Amer, 2007: 13) • "Mechanisms to coordinate the activities of donors do exist but they may not be working to give the best result". (Abrahart, 2003: 24)
6. Shortage of quality instructors	**Phase 1**	• "Besides the shortage of suitably qualified instructors, men with the necessary skills and who were capable of becoming instructors quite naturally preferred the higher salaries paid by industry". (ILO, 1967: 15) • "It soon became evident that the growing shortage of instructors was holding back the project at a time when steady growth of vocational training was anticipated" (ILO, 1967: 15) • "There are two quality factors that need attention in the future. Firstly a good part of the teaching of theoretical subject matter can be given by work instructors... Secondly, the instructors of the accelerated and upgrading courses need further training. This applies particularly to the instructors of upgrading courses who should he of high quality so as to enable them to keep up with technological developments." ((ILO, 1967: 53-54)

	Phase 2	• "It is not infrequent that trainees receive only a minimum of practical training, if any, and many are therefore **unable** to perform adequately in their jobs once they have graduated. These complaints, which are mainly due to the shortage of teaching staff, their inadequate preparation and lack of practical experience, are not limited to graduates from out-of school training institutions but are also extended to graduates from technical secondary schools, universities and management training institutions" (ILO, 1982: 261) • "the quality and relevance of the instruction provided by the secondary technical schools is severely affected by their poor physical state, outmoded and inadequate practical equipment, outdated curricula and the poor qualifications of the technical instructors". (World Bank, 1983: 1)
	Phase 3	• "The efficiency and quality of the training are low due to the separation of theory from practice which is the norm in VTCs providing pre-employment training. According to a CAPMAS survey, few instructors acquired an acceptable training: only" (Amer, 2007: 13)
7. Poor quality of VET graduates/trainees	**Phase 1**	• "In Egypt the failure of the State system of primary and industrial schools to supply industry with suitably qualified recruits suggests the need for close collaboration between these schools and industry during the training period of the recruit" (ILO, 1955: p.8) • "Egyptian industry had a gigantic reserve of uneducated, unskilled labour at its disposal, more than ample for any foreseeable demands. Unfortunately, however, this potential industrial labour force was not providing the raw material for training the skilled craftsmen that modernising and expanding industry require." (ILO, 1967:8)
	Phase 2	• "Despite efforts by the Government to ensure that all young people entering industry received systematic basic training, in 1970 almost 70 per cent were only receiving a haphazard training on the job." (ILO, 1974: 1) • "…a surplus of poorly trained labor, have beset the Egyptian economy since the early 1970's…" (World bank, 1983: 4)
	Phase 3	• "One of the key problems facing the Egyptian industry is the thousands of technical labour force members graduating every year from secondary technical school who cannot be accepted by industry because of their poor technical skills and poor work ethics and attitude". (Grunwald, 2009: 3)

Figure 1. Data Structure