

An Institutional Dilemma in China's Skills-development System: Evidence from Two Apprenticeship Reforms

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Abstract

The Chinese government has placed workforce upskilling at the core of its reform agenda to sustain the Chinese “economic miracle.” As such, the Ministry of Human Resources and Social Security (MOHRSS) and Ministry of Education (MOE) have each launched separate apprenticeship reforms geared towards enhancing China’s oft-criticized vocational education and training system. Using a self-constructed theoretical framework, this article examines the two reforms and ascribes their divergent outcomes to the two ministries’ distinct approaches to institutionalizing their central initiatives (i.e. the top-down model followed by the MOHRSS versus the collaborative model of the MOE). However, given the absence of industry-level civil society governance in China, neither of these models has delivered ideal training outcomes, although the collaborative model has satisfied more employers and apprentices. China’s skills-development reforms have thus become trapped in an institutional dilemma which is likely to impede the long-term economic restructuring efforts of the central state.

Keywords: vocational education and training; apprenticeship; skills development; state; China

China’s “economic miracle” of the past four decades has been largely based on the low-skilled, labour-intensive manufacturing sector boosting export revenues. This developmental strategy has been challenged in recent years, however, owing to slowing economic growth, rising labour costs and conflicts, and a shortage of skilled workers. The World Bank has encouraged the Chinese government to restructure and upgrade its industries to avoid a middle-income trap.¹ Global post-war developmental experiences have indicated that vocational workforce skills are crucial for sustainable economic growth and international competitiveness in both developed² and emerging market economies.³ Upskilling the

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1 World Bank 2013.

2 Streeck 1992.

3 Ashton et al. 1999.

workforce has thus become a crucial aspect of China's recent economic restructuring efforts.

Against this background, this study focuses on the state's endeavours to establish national apprenticeship systems in imitation of the much-admired German dualistic vocational education and training (VET) model. These reforms aim to generate a supply-side boost to industrial upgrading by leveraging the skills-development process. Two state agencies have broad authority over skills development in China: the Ministry of Human Resources and Social Security (*renshebu* 人社部, MOHRSS hereafter) and the Ministry of Education (*jiaoyubu* 教育部, MOE hereafter). In recent years, both ministries have independently launched apprenticeship reforms. However, while the MOHRSS has employed a state-led, top-down approach to deliver apprenticeship training programmes, the MOE has adopted a collaborative model involving non-state actors including firms, vocational schools and industrial associations. These vastly different approaches have led to considerable variations in their outcomes. For example, by mid-2016 the MOE had established ten times as many apprenticeship programmes in Guangdong province as had the MOHRSS. Moreover, the MOE programmes have typically been welcomed by employers, whereas the MOHRSS schemes have triggered complaints from both employers and vocational schools.

To examine and account for this variation, I first review the literature and present a theoretical framework for evaluating the success of skills-formation systems. I contend that successful VET reforms should overcome three crucial obstacles in skills development: underinvestment in training, mismatches between curricula and industrial needs, and the imbalance of skills formation – that is, a focus on either general skills or firm-specific skills which have limited industrial transferability. Using these criteria, I systematically compare the two models of apprenticeship reforms in China. I find that the MOE's collaborative approach successfully engages firms to invest in the skills-formation process and better accommodates industry needs by tailoring curricula and training processes according to employers' specific needs. In contrast, the top-down approach of the MOHRSS fails to resolve these problems. However, both reform models fail to address the third issue – the imbalance between general and firm-specific skills – owing to the absence of effective civil society governance in China. The MOHRSS centralized apprenticeship system imposes standardized training based on the National Vocational Certificate System (NVCS), creating training programmes that are overly focused on general skills. The MOE, on the other hand, has granted individual programmes full autonomy to develop their own curricula and training processes, resulting in training that is dominated by the skills-development agendas of individual collaborating firms and which lacks effective coordination across the industry.

I contend that the MOE approach is the more successful one as it involves collaboration with non-state actors in ways that address the underinvestment and skills-mismatch problems. This model, however, is far from ideal, as it may not meet society's need for a sustainable vocational training system that

can balance general and firm-specific skills to achieve skills transferability. In the absence of effective civil society governance mechanisms to coordinate the interests of industry, China's skills-development system is trapped in an institutional dilemma, with training reforms that are either overly centralized and fail to accommodate regional and industrial specificities or else are overly decentralized and only cater to the immediate needs of individual firms. This institutional dilemma poses a major challenge to the Chinese state's long-term agenda for industrial restructuring through the upskilling of its workforce.

China's VET System and Prior Reforms

Figure 1 illustrates the structure of China's education system by age of enrolment. At the pre-employment, skills-development phase, the VET system comprises two types of schools: vocational schools and colleges administered by the MOE, and technical schools and colleges provided by the MOHRSS.⁴ Thus, 15–17-year-old students who wish to pursue vocational education can either attend a vocational school (*zhongzhi* 中职) or a technical school (*zhongji* 中技). The qualification earned at these schools is equivalent to that received at a high school. After graduating from this level, students can either enter the labour market or pursue further vocational training at a vocational college (*gaozhi* 高职) or a technical college (*jishi xueyuan* 技师学院, or *gaoji* 高技). Vocational college graduates can then choose to enrol in a two-year programme (*zhuan sheng ben* 专升本) to upgrade to a bachelor's (university) degree. These schools and pre-employment training programmes form the main body of China's VET system.⁵

The curricula and training pathways offered by China's VET system have long been criticized for their failure to align with the needs of industry.⁶ To resolve the problem of insufficient workplace-based training, China has implemented major reforms to decentralize the VET system in recent decades.⁷ The state has largely withdrawn from the daily operation of schools, granting them the autonomy to devise and implement their own training agendas, and it has encouraged employers to contribute to the pre-employment training stage via knowledge and technology transfer. At the beginning of the 2000s, however, the Chinese VET system was still largely disconnected from industry, and skill mismatches persisted.⁸ Some programmes were criticized for not equipping students with the actual skills they needed,⁹ others for functioning merely as labour agencies for dispatching student interns to mass-production assembly lines for unjustified commissions.¹⁰ Some school–firm collaborative programmes did emerge, but these tended to be based

4 In this paper, I use the term “vocational schools” for both types of schools.

5 Cooke 2005.

6 Ibid.; Durden and Yang 2006.

7 Lai and Lo 2006.

8 Cooke 2005.

9 Durden and Yang 2006.

10 Chan, Pun and Selden 2015; Smith and Chan 2015.

Figure 1: **Chinese Education System**

Age of enrolment	Education institutions			
3–4	Kindergarten			
5–6	Pre-elementary school			
7–11	Elementary school			
12–14	Middle school			
15–17	<table border="0" style="width: 100%; text-align: center;"> <tr> <td style="border: 1px solid black; background-color: #cccccc;">Vocational school</td> <td>High school</td> <td style="border: 1px solid black; background-color: #cccccc;">Technical school</td> </tr> </table>	Vocational school	High school	Technical school
Vocational school	High school	Technical school		
18–21	<table border="0" style="width: 100%; text-align: center;"> <tr> <td style="border: 1px solid black; background-color: #cccccc;">Vocational college</td> <td>Bachelor's programme</td> <td style="border: 1px solid black; background-color: #cccccc;">Technical college</td> </tr> </table>	Vocational college	Bachelor's programme	Technical college
Vocational college	Bachelor's programme	Technical college		
22–24	Master's programme			
25–27	PhD programme			
≥28	Adult education			

Notes:
The highlighted blocks represent the vocational education system.

on personal connections and lacked institutionalization.¹¹ Following this unsuccessful decentralization reform, the Chinese state launched the apprenticeship reforms examined in this article, which imitate the German model, in a bid to restructure the VET system and better accommodate the workforce upskilling agenda.

Gauging the Success of National Skills-development Efforts

Theoretically, a VET system must address three key problems to deliver desirable skills-development outcomes: underinvestment, skill mismatches and imbalanced skills training. Table 1 summarizes these problems, and the potential institutional resolutions for tackling them, by drawing on the experience of exemplar national VET models in other countries.

Problem 1: underinvestment in skills development

According to institutional theory, the investment of relevant parties in skills development based on their own rational choice tends to fall below the socially optimal level for three major reasons. First, skills are inherently public goods: self-interested, utilitarian market players do not have sufficient incentive to contribute, given the potential presence of free-riders. That is, human capital investment is a sunk cost for firms because other firms can potentially benefit

11 Lai and Lo 2006.

Table 1: Key Problems in Skills Development and Performance Assessment of Apprenticeship Reforms in China

Key problems in skills development	Institutional resolutions	Assessment criteria	Indicators	MOHRSS <i>Top-down model</i>	MOE <i>Collaborative model</i>
Underinvestment in skills development: skills are essentially public goods and have positive externalities	State intervention and subsidy, to oblige and/or incentivize cost-sharing among firms and individuals	Employer participation	Number of schools	4	19
			Number of programmes	5	51
			Number of firms	5	51
			Number of students/apprentices	N/A*	2,350
Skills mismatches: skills-formation processes must be compatible with industrial development	School-firm collaboration, to engage and motivate firm participation	Employer satisfaction	Number of cycles	<1*	2
			Employer feedback	Wide complaints	Welcomed by employers
Imbalanced skills training: to avoid overly focusing on either general or individual firms' specific skill needs	Corporatist civil society governance, to coordinate firms' interests	Balanced skills training	Curricula consistency	Overly focused on general skills	Overly focused on firm-specific skills

Notes:
* Apprentice admission not completed by mid-2016.

from that investment by poaching their skilled labour by offering higher wages. As a result, rational individual firms are trapped in a prisoner's dilemma. Since workers can quit whenever they choose under a free employee termination regime, there is underinvestment in skills at the societal level.¹²

Second, the skills-formation process has positive externalities: individuals and firms benefit from each other's human capital investment even though they may not directly use those skills. This is illustrated as a high-skill equilibrium scenario in which VET institutions, industrial relations systems and production organizations, among others, can jointly promote an institutional environment that better appreciates and rewards skills. Workers end up better off, and the industry acquires a higher level of workforce productivity and additional bonuses as a result of the economic boom.¹³ However, an individual's level of investment in human capital is often based on his/her own cost/benefit calculation, which tends to be below the socially optimal level.

Finally, young workers at the start of their careers are unlikely to have sufficient money or motivation to invest in human capital that will only benefit them later in their careers because of the uncertainty associated with such an investment. Workers simply cannot accurately predict what skills will be needed in the future. This leads to insufficient self-investment in training. Overall, human capital investment based solely on market logic is not sufficient to fund the acquisition of required skills. Robert Lucas illustrates this with a model that suggests that the US economy would have reached its socially optimal level in the 1980s if it had invested almost three times as much in human capital as it had done.¹⁴

The market failure to provide for the best outcomes for society in skills training calls then for a type of collective governance to tackle the underinvestment problem.¹⁵ The key policy issue here is that the state should intervene to ensure that costs are fairly distributed among workers, employers and the state. Exemplar national skills-formation systems adopt one of three interventionist strategies to align the interests of all parties. The first and most straightforward strategy is for the state to subsidize VET. Although governments across the world subsidize education and training, this approach is particularly favoured by liberal market economies as it entails less direct intervention than other solutions. For example, the VET system in the US, which includes both schools and workplace-based training programmes such as apprenticeships, receives state funding, allowing the government to influence the training process in a way that is less interventionist and more market-friendly.¹⁶ In the United Kingdom, the state subsidizes training programmes but leaves standards setting, programme development and qualifications to licensed private actors.¹⁷ In China, a similar strategy has been

12 Streeck 1989.

13 Finegold and Soskice 1988.

14 Lucas 1988.

15 Olson 1965.

16 Stone and Lewis 2010.

17 Delebarre 2016.

adopted in some areas of the VET system. For example, the state covers the tuition fees of students with an agricultural *hukou* and students who are enrolled in an agriculture-related programme in both public and private vocational schools.

The second strategy is for the state to oblige employers and individuals to share the costs of training. Although direct state mandates compelling employers and individuals to pay for certain training are rare in major countries, the state may ensure this happens indirectly through taxation. For instance, in Singapore, employers are required to contribute the equivalent of 1 per cent of the payroll of employees earning less than \$1,500 per month to a special skills development fund which is then granted back to firms that carry out training programmes.¹⁸ The state may also make individual trainees bear part of the costs by a) allowing lower wages for apprentices than the legal minimum standards for ordinary workers; b) allowing employment contracts that stipulate mandatory post-training severance periods and liquidated damages upon breaching such agreements; or c) encouraging long-term employment relationships and discouraging labour poaching via legislative arrangements.

The third strategy is for states to make institutional arrangements in support of private governance. The German apprenticeship system, for instance, exemplifies a social partnership model of skills development with a clear division of labour among stakeholders. In the late 1960s, the German corporatist government inherited the craftsmanship tradition of apprenticeship training and enshrined the dualist system into training law. This system involves training young people in both workplaces and schools under contracts negotiated between employer associations and unions. Employers are approved, and training processes are monitored and eventually evaluated by chambers of trades, industry and commerce. In workplaces, works councils play a role in co-determining firm-specific issues regarding training. Hence, the state devolves authority to private governance at the workplace and industry level, and only serves to provide advice on designing apprenticeship programmes. This institutional structure has resolved the underinvestment problem by encouraging cost-sharing among a) the state, which pays for vocational schools; b) firms, which pay for workplace training; and c) apprentices, who contribute by working for lower wages than those of ordinary workers.¹⁹

Overall, the three strategies for state intervention described above are crucial to address underinvestment in skills development caused by the free-rider problem, positive externalities and uncertainty.

Problem II: skills mismatches

State subsidies or mandates may be able to encourage a wide range of employers to participate in an apprenticeship programme for one cycle; however, their

18 Kuruvilla, Erickson and Hwang 2002.

19 Culpepper 1999a, 3–5.

willingness to commit in the long run hinges on whether the programme actually caters for their needs. The second crucial issue in skills development is ensuring that skills acquired through VET processes match industrial needs. Especially in a country such as China where regional variation is huge, curricula development should have the flexibility to accommodate regional and industrial specificities. Therefore, although state intervention can enable the coordination of firms and potentially overcome the underinvestment problem, employers may still be reluctant to participate if skills mismatches remain.

The skills mismatch concern is derived from the French regulation school based on the Marxist theoretical proposition that the “economic base” or mode of production defines the limits of variation of a superstructure, understood as a configuration of institutional arrangements used by the ruling class to govern society.²⁰ It advances the notion of modes of regulation as a systematic mechanism for adjusting existing institutional forms and modes of production towards a coherent social-economic system.²¹ In other words, at the core of regulation theory is the compatibility between institutions and industrial society.

This theory, if applied to skills development, suggests that institutional arrangements for skills development must be adaptable to the latest technologies and process innovations adopted in industrial organizations to avoid the problem of skills mismatch. The Fordist mass production model that once dominated the manufacturing industry in the United States, for example, was associated with many features of the US skills-formation system including the extensive use of general and standardized skills, limited firm-specific training and a low level of workforce skills in general. This compatibility endured until the 1970s when the Japanese lean production system began to challenge the Fordist model in the North American market and US workers’ skillsets no longer met industrial needs. Firms have since integrated post-Fordist components into their production processes, including teamwork and worker participation. These adaptations have provided workers with a higher level and wider array of skills which enable problem-solving and multi-tasking in a more flexible production system.²²

The diversified quality production model adopted in post-war Germany, which is different from Fordism or the just-in-time production system, features incremental customization that allows firms to afford the relatively costly human capital investment in young workers by hosting apprentices.²³ In turn, workers equipped with specialized skills support the diversified quality production model and sustain the comparative advantage of German products in the global market.²⁴

These examples indicate that skills-formation processes should engage with firms and administer the types of skills needed by industry. A certain diffusion

20 Marx 1978 [1859].

21 Boyer 1990; Leborgne and Lipietz 1988.

22 Green 1992.

23 Sorge and Streeck 1988; Streeck 1992.

24 Culpepper 1999b.

of authority and school–firm collaboration is thus indispensable for bridging any skills mismatch. At the micro level, institutional arrangements for VET should incorporate the views of industry when setting skills standards, developing curricula and qualifications, and should encourage firm participation in the pre-employment skills-formation process.²⁵ As noted above, the German VET system has been rooted in a corporatist regime with a strong social partnership tradition that has helped to harmonize the training process among schools, industry and employers within an industry.

The governments in East Asian developmental states tend to assume a larger role than those in European corporatist countries and are more comparable to China. Successful post-war industrialization in Singapore, Taiwan, Hong Kong and South Korea was ascribed to those states' top-down efforts to not only facilitate the development of a skills-formation system but also proactively shape and coordinate demand for and the supply of skills in the market in the absence of a strong private governance tradition in these (once) authoritarian regimes.²⁶ However, this developmental state model of VET sometimes still relies on school–firm collaboration. In Singapore, the state-organized training agenda has encouraged foreign-invested firms to establish training institutes since the 1970s, allowing employers to enjoy preferential business investment and market-protection policies as well as priority over other firms in hiring graduates from those institutes. The government has expanded this project to collaborate with other national governments and accordingly offers such preferential policies to all firms in those countries.²⁷ By encouraging foreign firms to invest in skills development, this model has ensured that up-to-date technologies and skills are transferred to the Singaporean workforce and sufficient high-skilled workers are available to these firms. In conclusion, integrating industry needs through school–firm partnerships is important for tackling the skills mismatch problem and enabling a successful skills-development system.

Problem III: imbalanced skills training

While skills mismatch can be resolved with the participation of firms, there still remains the issue of maintaining a balanced delivery of general and specific skills. Employer-sponsored training programmes tend to focus excessively on the specific and immediate skill needs of individual firms and may therefore fail to fulfil China's long-term upskilling agenda. Human capital theory distinguishes general skills, which equally benefit all firms, from specific skills, which only benefit a certain firm (or group of firms).²⁸ However, Margaret Stevens argues that most skills are transferable skills which can benefit other firms, but not to the

25 Culpepper 1999a, 4.

26 Ashton et al. 1999.

27 Kuruvilla, Erickson and Hwang 2002.

28 Becker 1993.

extent that – assuming they are subject to perfect market competition – “the wage is driven up to the marginal product.”²⁹

Employers have strong incentives to focus their efforts on developing specific skills to avoid free-riders. Workers equipped with more specific skills are less attractive in the labour market and are therefore less likely to be poached by other firms than those with more general skills, assuming all other factors to be constant. It follows that when an employer is invited to participate in curriculum development, the training process risks being dominated by the specific skillset needs of that employer.

This poses a challenge not only to individual trainees but also to economic development in general. Too much focus on firm-specific skills can impact a worker’s employability in the labour market and can restrict long-term career development.³⁰ A workforce with a skillset biased towards the specific needs of individual firms undermines labour market mobility and increases retraining costs for new workers. The absence of a balanced skills-development plan at the societal level can therefore be detrimental to the economy.

The solution here is to establish mechanisms that take into account the interests of employers – preferably at industry level – when designing skill standards, curricula, qualifications and process monitoring in order to create a balance between general and firm-specific skills training and thus ensure a sufficient level of transferable skills. For institute-based training, a skill credentialing system should be established that focuses on occupation-related standards setting and certification for transferable skills at the industry level. These standards could be used to guide the development of training programmes and curricula to ensure that essential occupation-specific skills are covered in training. In the United Kingdom, for instance, sectoral skills councils establish national vocational standards, which are then used to guide formal institute-based training programmes, and issue certificates from approved organizations to attest to the receivers’ employability for a particular occupation.³¹

For employer-sponsored training, such as apprenticeship programmes, worker voice and workplace monitoring mechanisms are necessary to overcome the imbalance problem and avoid the misallocation of apprentices (as found in certain internship programmes in China, as noted above). Civil society governance plays a role here. Labour unions in particular are incentivized to strengthen the employability of member workers over time and across firms.³² In Germany, as noted earlier, training content is negotiated between employer associations and unions at the industry level. In the workplace, works councils have the right to co-determine issues that are firm-specific and to monitor the process daily. Finally, chambers of industry and commerce evaluate apprentices as a quality-control mechanism.

29 Stevens 1999, 19.

30 Locke, Kochan and Piore 1995.

31 Delebarre 2016.

32 Olney 1994.

In such ways, civil society actors can help to prevent the deviation of the training process from its stipulated agenda and from being overly firm-specific.³³

In conclusion, a successful skills-development system requires not only training institutes but also those institutes' extensive collaboration with the state, civil society actors and employers to address the three crucial problems outlined above which provide the criteria and indicators I use to assess the apprenticeship reforms of the MOE and MOHRSS. In particular, as shown in [Table 1](#), I examine employers' willingness to participate as a key criterion for overcoming the underinvestment problem; I measure employer satisfaction as an indicator of how successfully the skills mismatch is addressed – that is, whether the training meets employers' actual needs – and compare the consistency of the curricula of all training programmes within an industry to explore whether the programmes deliver a balance of both transferable and firm-specific skills.

Methods

I conducted ethnographic field research to evaluate and compare the reforms of the MOHRSS and MOE and to examine how their respective policies on apprenticeship training were institutionalized at the regional level. I started my fieldwork with national-level organizations in Beijing, where I interviewed central MOE and MOHRSS officials in charge of VET affairs, their think-tank organizations' officials, and academics. I assessed their central policymaking processes, their perceptions of the institutional division and potential competition between them, and their responses to the problems and challenges that have arisen during reforms.

I focus on Guangdong, as an information-rich case, to examine institutionalization processes at the local level.³⁴ Guangdong is acknowledged as being at the fore of China's economic reform over the past four decades. However, its economic development faces great challenges, including a shortage of skilled labour and growing labour costs and conflicts, a situation which requires industrial restructuring and upgrading and, therefore, the upskilling of the workforce. While local governments may or may not have fully embraced the studied apprenticeship reforms, Guangdong government officials have historically proven to be particularly efficient at implementing economic reform. As the VET reform programme is a relatively recent central initiative, the most dynamic reform practices and substantial early outcomes are to be expected in Guangdong.

Guangdong is also the largest vocational education provider in China, hosting VET facilities that educate the largest workforce of all the provinces. As such, a wide range of reform outcomes may be evident. Annually, more than a tenth of China's vocational school students graduate in Guangdong. Moreover, tremendous diversity is evident across its cities. At the core of the Pearl River Delta

³³ Streeck 1987; Culpepper 1999a.

³⁴ Patton 1990.

region, in cities such as Guangzhou, Shenzhen 深圳, Foshan 佛山 and Dongguan 东莞, are China's most advanced market economies and best vocational schools. In contrast, cities such as Qingyuan 清远, Zhanjiang 湛江 and Zhaoqing 肇庆 in western and northern Guangdong are more comparable to the less developed provinces in hinterland China. Hence, Guangdong is rich in both dynamics and diversity, and offers a wide representation of the Chinese VET system, making it a good starting point to evaluate the early successes and failures of the current reforms.

Data

I draw on 322 interviews with a portfolio of stakeholders in the VET system as my primary data source.³⁵ I conducted 28 interviews with officials from the MOE and MOHRSS as well as staff in local branches. Conversations with state officials helped me to identify experimental programmes and establish connections with vocational schools. I also held 200 interviews with presidents, administrators, teachers, students and parents from 25 schools, including ten schools implementing experimental apprenticeship pilot programmes. Through these schools, I was introduced to 21 collaborating firms, where I conducted another 79 interviews with managers, firm-level union officials and workers. These in-depth interviews, which lasted for one hour on average, provide a lens to understanding the complex dynamics of each experimental programme.

I also engaged in participant and non-participant observations through my involvement in two ongoing apprenticeship reform projects in Guangdong. First, I served as an external consultant for the curriculum reform in Guangdong's beauty sector in late 2015 and early 2016. Subsequently, I was invited to work as a translator for a team of British consultants working on the MOE's apprenticeship reforms in April 2016. In these roles, I attended many meetings, participated in informal conversations and dinners and had access to insider information and important documents, which I use to triangulate the first-hand interview data.

Top-down Reform of the MOHRSS

Following the central state's call for a new and innovative approach to apprenticeship training in its "Made in China 2025" guidelines, the MOHRSS and the MOE each launched an apprenticeship reform programme. However, as previewed in [Table 1](#), the outcomes of both reforms in Guangdong by mid-2016 were vastly different, with the MOE reform being more successful than that of the MOHRSS. This divergence is explained by the two ministries' different approaches. As summarized in [Table 2](#), the MOHRSS adopted a state-led, top-down model, which relies on detailed policies and guidelines, quotas, subsidies

35 A full list of interviews is available upon request.

Table 2: Features and Performance of the Two Models

Key problems in skills development	MOHRSS	MOE
Problem I: underinvestment in skills development	Centralized guidelines disqualify most firms; conflicting central and local policies discourage firm participation	Authority diffusion and integration of local experiments allow a wide scope of participation
Problem II: skills mismatches	Rigid policies fail to integrate firms’ needs	Flexible arrangements allow training programmes to be tailored for collaborative firms
Problem III: imbalanced skills training	NVCS-based training programmes only focus on general skills	Single employer-based training agendas narrowly focus on a firm’s specific and instant skills needs

and a centralized skill-credentialing system to motivate employer participation and guide them through the training process. The MOE, on the other hand, adopted a collaborative approach to apprenticeship training. With substantial authority diffusion, the ministry chose to integrate existing school–firm collaborative programmes in local vocational schools into their reform project and grant them sufficient autonomy to develop apprenticeship programmes based on their own idiosyncrasies. I examine the two models in turn, beginning with the MOHRSS model and how it fails to resolve the three key skills-development problems.

Lack of employer participation: failure to resolve Problem I

The MOHRSS launched its “new apprenticeship” (*xinxing xuetu zhi* 新型学徒制) system in July 2015 with the aim of facilitating employer participation. However, the reform failed to attract the participation of local firms in Guangdong, mainly owing to the programme’s rigid central policies, which not only dictate a detailed roadmap to direct firms through the institution-building process but also impose strict standards and quotas. In particular, only large- and medium-sized firms with an established training system and where 60 per cent of the workforce are skilled workers are allowed to participate. In each cycle, a participant firm must recruit and enrol no fewer than 100 apprentices on a one- or two-year programme. Firms purchase these subsidized programmes from participating vocational schools, which provide the apprentices with the relevant national vocational certificate.

These strict requirements essentially exclude many firms that would otherwise be interested in state subsidies for vocational training. In particular, small firms and start-ups desperately need skilled workers but lack the capacity to provide systematic internal training for staff. The Internet of Things Association of Guangdong Province, which has a membership of over 600 start-ups and

established firms in the local IT industry, runs a training programme with effective coordination among its member firms. Since its inception, it has self-funded this programme and has long been eager for support from the local government; however, it does not meet the eligibility criteria for the MOHRSS reform. In other words, the MOHRSS reform might have gained more traction if it had sought to integrate such well-established programmes into its own system instead of using a rigid state-led, top-down model and only focusing on local “celebrity” firms.

In addition, the MOHRSS offers subsidies to help spread the costs of training and to encourage firm participation, but the ministry’s policies conflict with existing local policies in Guangdong. A promise to cover 60 per cent of tuition fees clashed with the Guangdong Department of Human Resources and Social Security (GDDOHRSS) policy of subsidizing 100 per cent of the same NVCS training for individuals who successfully complete the course. Therefore, state intervention, which was supposed to bring more employers on board, became a deterrent to participation.

With many firms excluded under the strict criteria, the state had to use its administrative power to encourage several local “celebrity” firms to enrol. However, these firms showed little enthusiasm for the scheme. In October 2015, the GDDOHRSS formally announced five experimental apprenticeship programmes, run in collusion with five firms and four partner technical schools. In general, local state officials were happy to participate in my fieldwork in Guangdong, partly because of my connections to central ministries; however, this was not the case for those engaged with these experimental programmes. While I managed to access one of the programmes, the Toyota one, via my other networks, an inside informant revealed the worries of the GDDOHRSS officials with regard to its programmes:

The GDDOHRSS issued a subsidy policy, but no firm has applied for the funding. The department director was very concerned. We communicated a couple weeks ago, and they asked what was wrong with their policy because not a single firm had sent in their proposal so far ... None of the five selected firms had applied for the money, and they were so anxious.³⁶

As shown in [Table 1](#), the MOHRSS reform was less successful at resolving Problem I than the MOE reform. It recruited only five firms and four schools into five apprenticeship programmes in its first cycle in Guangdong, and none of these programmes had completed the apprentice admission process by mid-2016.

Participants’ complaints: failure to resolve Problem II

The rigid policies have triggered many complaints by participant firms. The case of the Toyota training programme illuminates many issues and reveals why the MOHRSS model failed to resolve Problem II. Established in 2004, Toyota in China is a joint venture between the Guangzhou Automobile Group (GAC), a

36 Interview with anonymous informant, Guangzhou, 25 March 2016.

state-owned enterprise, and Toyota (Japan). In 2016, the auto assembly firm employed 9,600 workers and had an annual production capacity of 380,000 cars.³⁷ As Toyota holds a 50 per cent share of the joint venture, the firm's human resource management system largely follows a typical Japanese model, which offers continuous internal training to workers. As a local "celebrity" firm that continues to receive generous support from the local state, Toyota was unsurprisingly selected to participate in the GDDOHRSS apprenticeship reform in 2015.

However, Toyota could not overcome two major obstacles to its whole-hearted participation in the reform. As noted above, the first obstacle was the conflict between central and local subsidy policies. Toyota had budgeted approximately 100,000 yuan for its first cycle of apprenticeship training, based on its own estimation, but under the MOHRSS scheme it then had to bear the additional, and unnecessary, cost of approximately 45,000 yuan. Second, Toyota was concerned that the strict policy required firms to offer 100 apprenticeship positions to newly recruited workers in one cycle; the firm did not have this many positions open to skilled workers in a year, let alone inexperienced apprentices. Toyota circumvented this policy by enrolling 100 existing workers onto the training programme.

The MOHRSS scheme triggered many complaints from Toyota. From an employer's perspective, the national vocational certificate-based training was useless. A human resources specialist from Toyota, Ms Wang, was appointed to coordinate the apprenticeship programme with the collaborating school, Guangzhou Technician College, as per the GDDOHRSS requirement.³⁸ She shared the following information:

Author: Why did Toyota decide to [take part in the training scheme]?

Wang: It is required by the GDDOHRSS. They issued a directive to us ... We said in private that this is a task from the state, so we cannot really avoid it. We also have a general manager from the Chinese partner – we are attached to the GAC, a state-owned firm. So, we have to take part whether we are willing or not.

Author: What do you think about the future of this programme?

Wang: [Shaking head.] In the long run, we will definitely suffer a loss. Even if the subsidy is increased to 100 per cent in the future, it is still a big burden for us. Yes, we would encourage our workers to go and get these certificates ... But if you ask us to arrange for them to do so, [we are not very willing] because these certificates are not very useful to us. We have our internal training system based on our own technologies.

Author: Are relevant NVCS certificates recognized in the auto industry in general?

Wang: We are happy if workers have these certificates, but they are not necessary. For instance, the certificate for auto maintenance is not really linked to real workplace [situations].³⁹

37 <http://about.gac-toyota.com.cn/visit/index.html>, 21 October 2016.

38 Ms Wang is a pseudonym.

39 Interview with a human resource official of Toyota, Guangzhou, 27 April 2016.

Toyota enrolled in the programme because they regarded it as a requirement from the state, but the firm was reluctant to turn in its finalized proposal to the GDDOHRSS. Indeed, none of the selected firms had done so by mid-2016, nine months after the MOHRSS deadline.

Overall, the MOHRSS reform generated numerous complaints from employers and was less successful than the MOE programme at resolving Problem II.

General skills-focused training: failure to resolve Problem III

Ms Wang's comments indicate that employers regard the general skills acquired through NVCS-based training as useless. Established in the 1950s, the NVCS was initially used to manage the employment and compensation of state workers under a centrally planned economy. Until the market economy reform in the 1970s, a worker's wages and benefits were linked to the NVCS. The economic reform sought to break the "iron rice bowl" of job security and grant firms the discretion to determine their own wages and benefits. The NVCS has since become increasingly incompatible with industry needs and NVCS-based training has thus lost its appeal among Chinese employers. The MOHRSS reform failed to resolve Problem III and achieve a balanced set of both general and firm-specific skills.

The NVCS-based training schemes have attracted much criticism. First, the credentialing system is too centralized to accommodate industrial and regional specificities. The MOHRSS sets the skills standards and designs the curriculum of the NVCS.⁴⁰ Local bureaus of human resources and social security and their approved entities, typically public technical schools, only implement and administer the qualification and training process. Many interviewees complained that the NVCS is too backward to respond to the relatively advanced industrial development in Guangdong. A school provost provided a good example:

We went to a food factory and set up an inspection laboratory there ... Every food factory is required to employ a full-time food inspector, but workers [holding a food inspector certificate] often cannot really get things done. A vocational certificate does not attest to the actual skill level of a worker ... The MOHRSS had a number of old experts who had set up the skills standards and had not updated them for years. These experts are probably unfamiliar with the industry, so the qualification does not really test the most important things.⁴¹

Second, most NVCS skill standards are updated every five years, rendering the NVCS outdated and unable to keep pace with rapid industrial development. For instance, in the new VW factory in Foshan, I saw skilled workers welding

40 In some exceptions, industry associations or industry-relevant state ministries are authorized to manage certain professional certificates and related qualification processes, e.g. for doctors and lawyers. These credentials are generally more accepted by the relevant industries.

41 Interview with a school provost, Qingyuan, 22 December 2015.

with robotic machines. A workshop manager relayed that the company had no interest in hiring a welder with a national certificate that only attests to his/her ability to operate traditional manual welding guns.

Finally, the absence of any effective coordination among employers at the industry level is a deeper institutional factor that accounts for the failure of the NVCS. Following Prime Minister Li Keqiang's 李克强 calls for reform of the NVCS, the MOHRSS has experimented with letting industrial associations run the relevant vocational certificates. According to my interview with an MOHRSS official, however, the ministry is reluctant to grant authority to these civil society actors because it is not confident of their capacity:

Employer associations in China are underdeveloped ... Traditional industrial associations are not real employer associations, but rather former government institutions, whereas those associations self-organized by firms do not have adequate capacity [to run vocational certificate programmes] ... We certainly hope to maximize their role, but not until they can represent their industries and govern their memberships.⁴²

In Guangdong, evidence largely supports this argument. A director of the Guangdong Provincial Enterprise Confederation told me:

To be honest, our confederation is doing nothing with regard to education and training. [Author: Why?] We lack the capacity, and enough employees, and we cannot understand what firms need. We used to have a department for training, which was closed later because it could not develop any profitable business.⁴³

It appears that the setting of NVCS skills standards is likely to remain centralized in the long term. Now that the MOHRSS applies the NVCS to its apprenticeship system, a fundamental concern is that curricula derived from these standards will not accommodate industry specificities. The Toyota programme comprised three separate classes, the middle- and senior-level certificates of auto maintenance, and the middle-level certificate of auto examination. The director of the Guangzhou Technician College's training centre relayed that all training would strictly follow the relevant NVCS standards (i.e. focus exclusively on general skills training). And, indeed, I did not identify any module in its training plan that was tailored to Toyota, indicating that the plan focused on general skills training only.

The Collaborative Model of the MOE

The MOE launched its "modern apprenticeship" (*xiandai xuetuzhi* 现代学徒制) reform in August 2014 and announced a list of experimental programmes a year later. Owing to its collaborative model, which was ready to engage local players and incorporate existing experiments with the various formats of the school–firm collaboration, by mid-2016, the MOE reform programme in Guangdong was already more satisfactory than the MOHRSS's efforts.

42 Interview with MOHRSS official, Beijing, 23 February 2016.

43 Interview with official of the Guangdong Provincial Enterprise Confederation, Guangzhou, 26 April 2016.

Integration of local experimental programmes: successful resolution of Problem I

Unlike the MOHRSS, the MOE adopted a decentralized, collaborative approach to its reform, encouraging schools and firms to actively contribute to the reform process instead of merely following state-issued guidelines. The MOE's August 2015 "Notification" on apprenticeship reform stipulated only four general principles and asked experimental programmes to establish and publish their own roadmaps and guidelines in coordination with local education departments. This allowed firms and training institutes greater autonomy to define their own programmes based on their individual circumstances.

In addition, the MOE's subsidy policy was flexible. While the MOHRSS required firms to make a detailed, trainee-based budget and promised to reimburse 60 per cent of the costs afterwards, the MOE disbursed a lump-sum subsidy of 500,000 yuan (for the seven programmes in the first cycle, and 100,000 yuan for the later programmes) to each programme beforehand, without requiring detailed budgets. Moreover, those conducting the programme had full autonomy to use this money to cover any costs associated with the training. Although the majority of the interviewed programme directors claimed that this was insufficient to cover all costs, they did appreciate the flexibility.

The flexible arrangements of this model have allowed many existing local experiments with school–firm collaborative training to be integrated into the state's formal reform agenda. Local vocational schools had continuously experimented with innovative apprenticeship training formats. These programmes, typically called "customized classes" (*dingdanban* 订单班) or "sponsored classes" (*guanmingban* 冠名班), featured extensive school–firm collaboration. Employers sponsoring these classes sought to shift part of their internal training over to the pre-employment skills-formation process for prospective workers, and thereby gain an advantage over other firms when selecting graduates. Such collaborative training was typically delivered at the individual school–firm level, in contrast to Western apprenticeship systems, which coordinate training content and skills standards across employers at the industry level.

The MOE model engages with a much wider array of employers within an industry and thus is better placed to resolve the problem of underinvestment in skills development. At the time of my research, the MOE apprenticeship system had generated two cycles of 51 programmes in 19 schools; my research covered nine schools, including all seven involved in the first cycle of apprenticeship experimentation.

Participants' satisfaction: successful resolution of Problem II

The flexible arrangements encouraged extensive collaboration between vocational schools and employers to their mutual satisfaction. Another multinational carmaker, Jaguar-Land Rover, signed up for this programme with the Guangdong Mechanical and Electrical College, which has offered education

and training for the auto sector for over 50 years, maintaining collaborations with VW, Jaguar-Land Rover and other major carmakers over time. Since 2012, the college's collaborative programme with Jaguar-Land Rover has led to a co-built practical centre, curriculum and textbook development, teacher training and firm-dispatched trainers who work full-time in the school, among other activities. In 2015, this "customized class" became an apprenticeship programme, one of the MOE's seven experimental programmes in Guangdong in the first cycle.

The curriculum was tailored to the skill needs of Jaguar-Land Rover. In 2015, 30 apprentices were recruited and enrolled in a three-year training programme which comprised general skills training of 900 credit hours in the first year, on-campus practical centre-based firm-specific skills training of 486 hours in the second year, and firm-based job-specific skills training of 1,020 hours (i.e. apprenticeships) in the final year.

This customized training process apparently appealed to all the participants. The apprentices I interviewed generally expressed satisfaction with the programme. When asked what he appreciated most about this programme, one apprentice said:

In our first year, we studied a wide range of things. So, when it comes to the second year, we must focus on a specific brand's car models. A superficial knowledge of many types of cars but no in-depth knowledge of any is useless. We have to be specific if we want to be an expert. This programme provides such an opportunity and has rich content. It gives us a deeper understanding of a specific brand.⁴⁴

Jaguar-Land Rover's management also had a positive evaluation of this collaboration and, in 2016, recruited its second cycle of apprentices. In addition, every year the firm invites schoolteachers to three or four training tours at the Jaguar-Land Rover headquarters in Shanghai and organizes regular visits to its dealerships in China to update their skills.

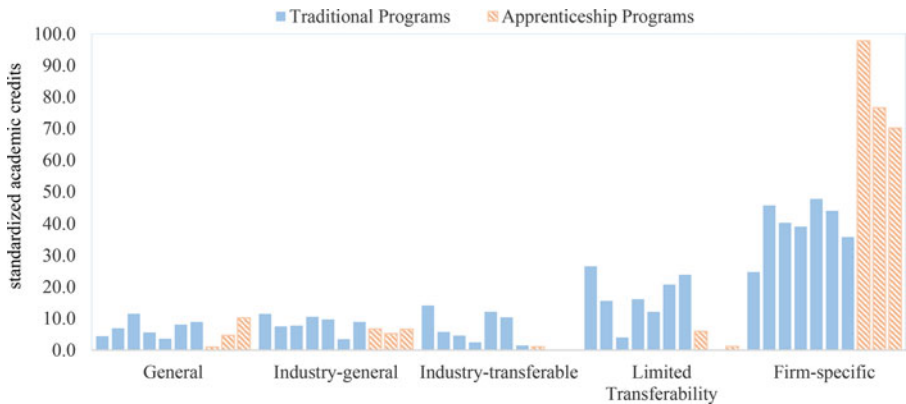
Single employer-focused training: failure to resolve Problem III

Although this model apparently satisfies all participants, it may undermine the local labour market in the long run because of its failure to achieve a balanced delivery of general and specific skills, Problem III. The collaborative training is exclusively institutionalized at the individual school-firm level. As schools enjoy full autonomy to develop their own curriculum under the MOE model, training tends to focus on firm-specific skills. While the Jaguar-Land Rover programme has somehow managed to retain general skills training for a year, this may not be the case in other industrial settings.

To estimate the skills transferability of the collaborative programmes across a local industry, I coded and compared the curricula of all ten beauty programmes offered by schools within the Guangdong Health Vocational Education

44 Interview with an apprentice, Guangzhou, 23 March 2016.

Figure 2: **Training Modules of Ten Training Programmes in Guangdong’s Beauty Industry**



Notes:

General includes CS, Mathematics, Chinese and English; Industry-general includes specialty-related courses shared by >60% (7–10) of programmes; Industry-transferable includes specialty-related courses shared by ≥50%, but ≤60% (5–6) of programmes; Limited Transferability includes specialty-related courses shared by ≥2, but <50% (2–4) of programmes; Firm-specific includes specialty-related courses unique to a programme. Mandatory ideological courses (political education) and physical education are excluded.

Association (GHVEA). Each of these programmes collaborated with a beauty firm; three had engaged in apprenticeship training, including one within the MOE’s reform programme. As shown in Figure 2, all curricula tended to focus on the specific skill needs of the collaborating firms. The three apprenticeship programmes highlighted are even more firm specific than the other seven ordinary vocational education programmes.

This inconsistency in curricula across training programmes for the same specialty has led to incoherent skill structures for the workforce within the local industry. In 2016, the GHVEA held a provincial competition to assess skills in the beauty industry. I participated in the preparation process as an external observer. There was no consensus among the schools regarding what skills are essential to a beauty worker’s job and thus must be tested in the competition. During a meeting in January 2016, for example, the directors of member schools engaged in a heated debate about the content and entry requirements of the competition. They could not even agree on the basic treatment techniques of Chinese traditional massage. On this specific issue, a teacher from the Zhuhai Health School argued her case against the other programmes:

Our massage training focuses on the know-how of lymphatic drainage in aromatherapy. So, we do not teach this “rubbing” treatment. The lymphatic drainage is to diffuse the lymph to the armpits, so we use only “pushing,” but not “rubbing.”

Another teacher: Why do you not teach students all the basic techniques and then focus on the use [in different services]?)

That is because we do not offer those services in our salons. Our training is targeted [for our collaborative firm], so we do not want to teach them many irrelevant things.⁴⁵

45 Field notes, February 2016.

Even though firms and schools, and frequently students themselves, are satisfied with single employer-focused apprenticeship programmes, the negative effects can be significant. Overly focusing on firm-specific skills in workforce training not only undermines workers' employability across the local industry, and therefore their labour market mobility, but also increases the retraining costs of firms, further aggravating the skilled labour shortage in China. Overall, the MOE model cannot grant sufficient skills transferability to workers.

All in all, both reforms have failed to secure a balanced delivery of general and specific skills. The MOHRSS programmes offer general skills training, whereas the MOE programmes are overly focused on firm-specific skills.

Discussion

With the central state recently shifting the focal point of its reforms towards supply-side labour market policies, both the MOHRSS and the MOE have embarked on efforts to reform vocational training within their jurisdictions by establishing an apprenticeship system with the overall objective of upskilling the Chinese workforce. However, both the data and my research show that, as of mid-2016, the MOE model had delivered more favourable outcomes in terms of the scale and level of satisfaction of participants than had the MOHRSS model. What explains this divergence, and what are the implications for understanding the Chinese state and its economic reform in general?

The divergence lies in the different reform strategies of the ministries. The collaborative model of the MOE has an advantage over the MOHRSS top-down approach for addressing key theoretical problems in skills development. First, both approaches have the potential to solve the underinvestment issue and encourage firms to offer apprenticeship positions, but the MOHRSS model has inherent problems. Chinese reforms have always relied on local pilot schemes and the successful ones have the potential to be rolled out nationally.⁴⁶ State-initiated collaboration offers a valuable opportunity for integrating important local experiments into the central reform agenda. The top-down model of the MOHRSS excludes such local experiments at the policy level, while the collaborative model of the MOE embraces them, leading to the latter's success. Moreover, the central MOHRSS policies conflict with local ones, creating a barrier to firm participation in Guangdong.

Regarding the long-standing mismatches of skills and needs in the Chinese VET system,⁴⁷ my findings suggest that effective school–firm collaborations will generate better outcomes as they better cater for employers' needs. The MOE's apprenticeship programmes have surpassed those of the MOHRSS in terms of employer participation and satisfaction as well as programme sustainability because of schools' abilities to tailor their curricula to employers' needs.

⁴⁶ Friedman and Kuruvilla 2015.

⁴⁷ Cooke 2005; Durden and Yang 2006.

The MOHRSS model does not allow that flexibility. Indeed, it requires firms to purchase training based on the centrally standardized NVCS, which has proven ineffective at meeting regional and industrial needs. The complaints from employers and the local government centre on the rigidity of this centralized approach.

Last, both the MOE and the MOHRSS have failed to offer a balance of transferable skills. The top-down model of the MOHRSS excessively focuses on general skills, partly explaining why it often fails to satisfy employers. The MOE's collaborative model is faced with a seemingly insurmountable obstacle, namely, the absence of civil society governance in China – a crucial factor behind the success of exemplar national models elsewhere. Instead, the MOE's apprenticeship programmes are reliant on collaborations between individual employers and schools. Without effective coordination at the industry level, such training is often heavily focused on the specific needs of collaborating firms.

These findings hold important implications for understanding and furthering the current skills-development reforms in China. The literature on Chinese reforms has focused on either a top-down or a bottom-up approach. The former is largely derived from developmental state theory, which ascribes the Chinese “economic miracle” to the state's leading role in coordinating different socio-economic aspects.⁴⁸ However, a relatively small but growing strand of the literature highlights the role of grassroot and private players (individuals and private firms) in initiating, coordinating and implementing reforms in various arenas.⁴⁹ While these players often lack the necessary political resources to effect a wider scope of change, they rely on informal institutions and networks to meet some of their goals.⁵⁰

I highlight the indispensable role of civil society organizations in coordinating the interests of these private players. The absence of civil society governance in China has rendered the current apprenticeship training either overly centralized (as in the MOHRSS reform) or overly decentralized (as in the MOE reform), trapping the Chinese state in a skills-development dilemma. The reform models of the two ministries have generated divergent outcomes, but neither is ideal. The MOHRSS case suggests that the centralization of skills development is likely to fail, as it is unable to accommodate regional and industrial specificities, let alone individual employers. The MOE case goes to the other extreme, as training is geared towards individual employers' short-term needs. While the furthering of decentralization since the 1980s has encouraged firms to participate in reform and increased their satisfaction, the best interests of society have been overlooked.⁵¹ The ideal skills-formation scenario entails civil society governance coordinating the diversified interests of firms and forming a long-term workforce

48 See Howell 2006 for a review.

49 Zhou 1996; Nee and Oppen 2012.

50 Tsai, Kellee 2006; Tsai, Lily 2007.

51 Lai and Lo 2006.

training agenda at the industry level that delivers a balance of general and specific skills.

However, consistent with many other China labour scholars,⁵² I am not positive about this prospect, especially given the changing state–civil society relationships under the current regime of labour.⁵³ Chinese labour unions and employer associations may have a relatively strong influence over the central state's policy-making process, but they lack the capacity to mobilize their members at the grassroots level.⁵⁴ I predict that for a fairly long period, the Chinese VET system will be trapped in the skills-development dilemma: its vocational training programmes will either overly focus on general skills by strictly following the outdated NVCS standards and thus failing to accommodate industry and firm specificities, or will overly focus on a single employer's specific immediate needs and overlook the students' long-term employability in a broader labour market.

The presented findings also enrich our understanding of the Chinese state. By revealing the proactive roles of the local state in advocating local economic reforms⁵⁵ and the diversified developmental strategies deployed across regional governments,⁵⁶ scholars have demonstrated that the Chinese state is not a monolith. This study provides a novel way of dissecting the Chinese state and illuminates the inconsistencies across its functional agencies. These inconsistencies are embodied not only in the always existing tension between different factions of the state in various reform arenas but also in their different approaches to carrying out their completely independent reforms under an apparently unified agenda imposed by the central leadership.

Conclusion

In this study, I compared and evaluated the early outcomes of two ongoing apprenticeship reform efforts by the MOHRSS and MOE in China. The MOE's collaborative model proved to be superior to the top-down approach of the MOHRSS in addressing the problems of underinvestment and skills mismatches. Without effective civil society governance in China, however, the reforms of both ministries are unable to secure a balanced delivery of general and specific skills. Hence, the Chinese state is facing a dilemma regarding skills development reform. Until effective civil society governance emerges to coordinate the training process (which does not seem likely in the short term), the VET system will be unable to deliver ideal outcomes, presenting a challenge to the state's long-term upskilling and industrial upgrading agenda.

52 Kuruvilla 2018.

53 Howell and Pringle 2019.

54 Friedman 2014.

55 Blecher and Shue 1996; Oi 1995; Walder 1995.

56 Segal and Thun 2001.

Although Guangdong offers an information-rich case with which to examine these reform dynamics, it is by no means representative. While the two ministries generally adopted different strategies elsewhere too, the way in which their different reform models perform may vary regionally. In the Yangtze River Delta area, for instance, local employer networks are more developed than those in Guangdong,⁵⁷ and employer associations have been shown to be relatively active in certain regionally centralized collective bargaining practices.⁵⁸ While the absence of civil society governance has become a major obstacle to the success of the MOE model, cases in the Yangtze River Delta area may portray a different, and potentially more coordinative, scenario. Future research is therefore encouraged to explore these processes in other political-economic settings.

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Conflicts of interest

None.

Biographical notes

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摘要: 中国政府已经将劳动力技能升级放在了其改革议程的核心位置,以期延续中国的“经济奇迹”。由此,劳动和教育部门各自开启了独立的学徒制改革,试图强化中国长期以来因其低效而饱受诟病的职业教育和培训体系。使用一个自创的理论框架,我考察了这两个改革项目,并将其改革结果的差异归因于两个部委截然不同的制度化中央改革倡议的方式,即劳动部门的自上而下模式和教育部门的合作模式。然而,鉴于中国缺少行业层面的公民社会治理机制,两种模式都未能产出理想的技能开发成果,虽然合作模式获得了更多雇主和学徒的满意。中国的经济改革因此陷入了一个技能形成的困境,这一困境很有可能阻碍中央政府长期的结构性改革的努力。

关键词: 职业教育与培训; 学徒制; 技能开发; 政府; 中国

57 Nee and Oppen 2012.

58 Friedman 2014.

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