## Description

Located in the central region of the People's Republic of China (PRC), Shanxi is a less developed province with a population of 36 million. In 2011, Shanxi’s gross domestic product per capita ranked 18th in the PRC and 18.8% of Shanxi’s rural dwellers lived below the national poverty line, significantly higher than the national average of 13.4%. As one of the PRC’s key energy and industrial bases, Shanxi has contributed to the energy supply and industrial development in the PRC. The province’s key industries include coal, metallurgy, coal-fired power generation, and machinery. However, Shanxi’s resource-based economy is characterized by low-technology manufacturing, high energy consumption, and a significant contribution to environmental degradation. In 2010, the PRC State Council designated Shanxi as a national pilot reform zone for the transformation of a resource-based economy. This provides a significant opportunity to foster innovation and industrial upgrading, expand and modernize the services and agricultural sectors, and support an inclusive and environmentally sustainable growth.

To achieve these objectives, Shanxi needs a multi-skilled workforce. Strengthening human resources through the development of technical and vocational education and training (TVET) is one of the key priorities under the PRC’s and Shanxi’s 12th Five-Year Plans, 2011-2015. Currently, Shanxi is facing a severe shortage of highly skilled workers in priority sectors and emerging areas. Under the provincial 12th Five-Year Plan, Shanxi is expected to further reduce the number of coal mining sites and to automate extraction in 70% of the coal mines. This planned technological upgrading and the need to ensure coal mining safety has resulted in a shortage of 200,000 highly skilled workers in the coal industry.

In manufacturing, the provincial development plans emphasize renewable energy, biotechnology, new materials, and advanced equipment manufacturing, which are in line with national level strategic industries. To move up the value chain and diversify the production structure, it is essential to improve research and development capacity and to train high and medium skilled workers. Given Shanxi’s central geographic location, the province plans to accelerate development of the rail and air freight transport systems, multimodal transport hubs, and distribution and logistics centers to achieve an interconnected network. There is a demand for more skilled workers to further improve its logistics system. Further, with abundant cultural and natural heritage sites, Shanxi is well positioned to develop a modern tourism industry; however, a lack of skilled workers has been a constraint to further development of tourism. There is a need to retrain migrants and displaced workers from small coal mines to improve livelihoods.

### Project Rationale and Linkage to Country/Regional Strategy

Shanxi’s TVET system needs to be transformed to be responsive and relevant to the province’s transition. The TVET development in Shanxi is hampered by several constraints including lack of practical skills of vocational instructors, insufficient investment in training equipment and facilities, low relevance of the training curricula to labor market needs, insufficient mechanisms for industry school partnerships, fragmentation of policy and funding from various government agencies, and challenges in improving the overall governance of TVET. While diverse reform initiatives in TVET are emerging, policy and regulatory frameworks to guide implementation are lacking. There is an opportunity to contribute to strengthened policy development in areas of quality assurance, industry partnerships, and TVET governance and coordination at a provincial level, in line with the National Long-Term Strategy on Education, 2010-2020. The proposed project aims to develop model institutions in four priority sectors (coal mining, manufacturing, tourism, and logistics), that will serve as centers of excellence for other TVET institutions in Shanxi. The project is in line with the Asian Development Bank's (ADB’s) Strategy 2020, education policy, and education sector strategies. It aligns with ADB’s PRC country partnership strategy, 2011-2015 and supports the PRC’s 12th Five-Year Plan, which prioritizes developing high-quality human resources, increasing scientific and technological innovations, and accelerating educational reform.

The technical assistance (TA) is required to prepare an investment project for possible funding by the Asian Development Bank (ADB) to support development of technical and vocational education and training (TVET) in Shanxi Province in the People's Republic of China (PRC). The investment project components will include capacity building (strengthening TVET management and planning capacity, training of instructors, development of competency-based curriculum (CBC), and strengthening industry-school collaboration); and upgrading of TVET facilities and equipment. The government was advised that approval of the TA does not commit ADB to financing any ensuing project.
### Summary of Environmental and Social Aspects

#### Environmental Aspects

- Involuntary Resettlement
- Indigenous Peoples

#### Stakeholder Communication, Participation, and Consultation

**During Project Design**  
Project has been cancelled/removed from the ADB financing pipeline.

**During Project Implementation**  
Stakeholders include: students; short-term trainees (existing workers); staff of the selected project TVET institutions, Shanxi Education Department, Shanxi Development and Reform Commission, Shanxi Finance Department, Shanxi Human Resources and Social Security Department, Shanxi Coal Mining Department, Shanxi Tourism Department, Shanxi Department of Housing and Urban-Rural Development, Shanxi Department of Poverty Alleviation, and Shanxi Department of Cultural Heritage; and representatives of industry associations in priority sectors and international development organizations.

#### Business Opportunities

Consulting Services  
In accordance with the two-phase approach described above, the consulting services provided under the TA will be grouped into two for phase one and phase two respectively. Phase one will provide 5.0 person-months of international and 7.0 person-months of national consulting services to conduct a review of the TVET sector in Shanxi for the project. The consulting services under phase one will be engaged by ADB on an individual consultant basis, in accordance with ADB Guidelines on the Use of Consultants (2010, as amended from time to time), to ensure immediate mobilization to facilitate project scoping. For phase two, an international consulting firm will be engaged in accordance with ADB's Guidelines on the Use of Consultants. ADB will select and engage the consultants based on the quality of the proposal (90%) and the cost (10%) of the services to be provided (the quality- and cost-based selection method) using the simplified technical proposal procedure. The 90:10 weighting is considered appropriate because it is expected that the proposed project will have a strong impact on the development of the TVET system in Shanxi and can serve as a model for replication in other provinces and autonomous regions of the PRC, and therefore requires high-quality technical inputs. A total of 34.5 person-months of consulting services (13.0 international and 21.5 national) will be recruited as Phase II consultants. The consultants will provide expertise in TVET, labor market analysis, CBC, industry-school collaboration, training of instructors, management of TVET, finance and economics, poverty and social assessment and development, resettlement, environment, institutional development, construction engineering, and project management.

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### Timetable

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### TA 8399-PRC

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### Project Page

http://www.adb.org/projects/47029-001/main

### Request for Information

http://www.adb.org/forms/request-information-form?subject=47029-001

### Date Generated

23 September 2019

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