Balancing Growth and Emission Reduction: Evaluating Carbon Tax's Impact on Sustainable Development in China

Ruilin Li [1], Xiaoqian Song [2,3,*], Aiwen Zhao [4], Xi Zhang [5], Jiajie Li [6], Ziao Yu [7] and Hong Sun [8]

[1] School of Political Science and Economics, Yonsei University, Seoul 03722, Republic of Korea
[2] School of International and Public Affairs, Shanghai Jiao Tong University, Shanghai 200030, China
[3] China Institute of Urban Governance, Shanghai Jiao Tong University, Shanghai 200030, China
[4] College of Finance, Xuzhou University of Technology, Xuzhou 20018, China
[5] School of Business, University of Shanghai for Science and Technology, Shanghai 200093, China
[6] Key Laboratory of Ministry of Education for Efficient Mining and Safety of Metal Mines, School of Resource and Safety Engineering, University of Science and Technology Beijing, Beijing 100083, China
[7] Antai College of Economics & Management, Shanghai Jiao Tong University, Shanghai 200030, China; yzaalex@163.com
[8] Zao Zhuang Mining Group Co., Ltd., Zaozhuang 277000, China
* Correspondence: songxq@sjtu.edu.cn

Table S1 Carbon Tax-adjusted Input-output Table of China's Non-competitive Carbon Emissions 2020 (26 sectors)

(Calculated at Producers' Prices) Unit: 10,000 CNY

Input / Output			Intermediate Use		Final Use+Carbon Tax	Domestic Output +Carbon Tax /Imports
			Energy Sectors	Non-energy Sectors		
			1, 2, 3, 4	5,6.....28		
Intermediate Inputs of Domestic Products	Energy Sectors	1.CO_2 Emissions from Coal Mining and Dressing (10,000 Tons)				
		2.CO_2 Emissions from Petroleum and Natural Gas Extraction (10,000 Tons)				
		3.CO_2 Emissions from Refined Petroleum and Nuclear Fuel Processing (10,000 Tons)				
		4.CO_2 Emissions from Gas Production and Supply (10,000 Tons)				
	Non-energy Sectors	5.Farming, Forestry,				

		Animal Husbandry, Fishery, and Services				
		6				
		...				
		26				
Intermediate Inputs of Imported Goods	Energy Sectors	1.Coal Mining and Dressing				
		2.Petroleum and Natural Gas Extraction				
		3.Refined Petroleum and Nuclear Fuel Processing				
		4.Gas Production and Supply				
	Non-energy Sectors	5.Farming, Forestry, Animal Husbandry, Fishery, and Services				
		6				
		...				
		26				
Added Value	Labor Remuneration (V)					
	Net Production Tax (T)					
	Carbon Tax (T*)					
	Depreciation of Fixed Assets (D)					
	Operating Surplus (S)					
	Total Added Value + Carbon Tax (GDP + Carbon Tax)					
Total Inputs + **Carbon Tax**						

Source: Based on the research of Chen Qingneng (2019) [1] and the methods for compiling China's Non-competitive Input-output Table 2020.

Reference:

[1] Chen, Q. (2019). Accounting and Decomposition of Carbon Emissions in Chinese Industries: Based on the Perspective of Input-Output Structure Decomposition Analysis. Economic Science Press.