

SERVICES IN GLOBAL VALUE CHAINS

SOLAR PANEL MANUFACTURING IN CHINA



International
Trade
Centre



FUNG
GLOBAL
INSTITUTE

SERVICES IN GLOBAL VALUE CHAINS

SOLAR PANEL MANUFACTURING
IN CHINA

Abstract for trade information services

ID=43145

2015

F-11.03 SER

International Trade Centre (ITC)

Services in Global Value Chains: Solar Panel Manufacturing In China.

Geneva: ITC, 2015. vii, 19 pages (Technical paper)

Doc. No. SC-15-302.E

This case study, based on corporate survey methodology, undertaken with the Fung Global Institute (FGI) in Hong Kong, China, contributes to and forms part of a larger FGI study on the importance of services in global value chains. It outlines the value chain for solar panel production; identifies the types of services entering the value chain; and calculates their share in overall costs. The study finds that 40 services are required for this value chain, and three-quarters of those are partially or fully outsourced to third parties. The study highlights the impact of government policies in shaping the photovoltaic sector and the impact of trade policies on export-dependent manufacturing.

Descriptors: **China, Global Value Chains, Environmental Industries, Manufacturers, Services, Outsourcing, Trade Policy, Case Studies.**

For further information on this technical paper, contact Mr. Quan Zhao, Trade in Services officer, ITC, zhao@intracen.org

English

Citation: Quan Zhao, (2015) Services in Global Value Chains: Solar Panel Manufacturing in China, International Trade Centre, Geneva, and Fung Global Institute, Hong Kong, China

ITC, Palais des Nations, 1211 Geneva 10, Switzerland (www.intracen.org)

The International Trade Centre (ITC) is the joint agency of the World Trade Organization and the United Nations. The Fung Global Institute (FGI) is an independent Hong Kong-based think tank that undertakes business relevant research on global issues from Asian perspectives.

Views expressed in this paper are those of the author and do not necessarily coincide with those of ITC, UN, WTO or FGI. The designations employed and the presentation of material in this paper do not imply the expression of any opinion whatsoever on the part of the International Trade Centre concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of firms, products and product brands does not imply the endorsement of ITC or FGI.

This technical paper has not been formally edited by the International Trade Centre.

© International Trade Centre 2015

ITC encourages the reprinting and translation of its publications to achieve wider dissemination. Short extracts of this technical paper may be freely reproduced, with due acknowledgement of the source. Permission should be requested for more extensive reproduction or translation. A copy of the reprinted or translated material should be sent to ITC.

Foreword

Quan Zhao's study of a Chinese solar panel manufacturer is in reality a study of the role of services in production. The study forms part of a wider project in which the ITC is an institutional partner with the Fung Global Institute (FGI) in Hong Kong. The project, initiated at FGI, seeks to analyse more deeply the role of services in production and consumption along global value chains (GVCs). It is based on a series of case studies which are intended to build insights to feed more systematic analysis.

Services are receiving greater attention today than ever before. Partly this reflects a broadly shared recognition that policymakers, analysts, scholars and sometime businesses have neglected the various economic contributions of services. The neglect has led to missed opportunities and policy miscalculations.

Several factors help to explain why the economic contributions of services have been under-appreciated. Historical habit of thought is one. Classical economic doctrine had it that services were worthless because value was equated to accumulation, and services could not be stored. Later on, fears arose that since populations produced and consumed proportionately more services as they grew richer, their economies would stagnate and decline because services could not contribute to growth through increased productivity. Added to that, the invisibility of services, their customized nature, the tendency for them often to be bundled with goods, combined with the huge challenges of measuring them, and the picture of past neglect is perhaps not surprising. But it is changing.

With the growing internationalization of economic activity, the rise of GVCs and intensified demand for services across a broad range of economic activities, interest has grown in trying to understand what and how services contribute to economic activity and human wellbeing.

Zhao's study of solar panel production sheds light on the variety of services used in GVCs, how they enter and what they can contribute. No fewer than 40 services are required for this value chain, and three-quarters of those are partially or fully outsourced to third parties. Outsourcing to this degree is not uncommon in many sectors. The implications of outsourcing opportunities for developing economies wishing to participate in value chains and upgrade that participation over time deserve careful study.

Finally, this project attempts to shed light on how government policies influence the configuration, location and cooperation of GVCs. Zhao's study identifies several key policy interfaces in the solar panel value chain. Services are more intensively regulated, and frequently more protected, than in many other sectors, and in virtually all economies. The collection of case studies that comprise the overall project will enrich our understanding of how governments can both help and hinder growth and development opportunities.

Patrick Low
Vice President of Research
Senior Fellow
Fung Global Institute
Hong Kong, China

Acknowledgements

This paper was undertaken as part of a project on the role of services in global value chains led by the Fung Global Institute (FGI), Hong Kong, China.

It was written by Quan Zhao, ITC adviser on trade in services, with support from Patrick Low, Vice President of Research at FGI. Any opinions expressed belong to the author, and should not be attributed to ITC.

The author wishes to thank Jane Drake-Brockman, ITC senior adviser on trade in services, for her support for this study, and Phoebe Downing and Max Thompson for editorial assistance.

We would also like to thank Natalie Domeisen, who oversaw production and quality control, and Serge Adeagbo and Franco Iacovino, who provided graphic and printing support.

Contents

Foreword		iii
Acknowledgements		iv
Acronyms		vi
Summary of Findings		vii
1. Background information: the company		1
2. Description of the value chain		2
3. Services along the value chain		3
4. Analysis of the services inputs in the value chain		6
5. Outsourcing, bundling and other aspects of services supply		8
5.1. Outsourcing		8
5.2. Bundling		8
6. Policies affecting services in the value chain		13
6.1. The role of government in economic activities		13
6.2. Trade disputes		15
6.3. Labour service companies		16
6.4. International labour mobility		17
6.5. Policy-related cost increases		17
Table 1. Occupational demographics		1
Table 2. Services entering the value chain		4
Table 3. Factors affecting outsourcing decisions		9
Table 4. Policies affecting services in the value chain		18
Figure 1. Key markets for company's PV products		1
Figure 2. Workflow of solar system production chain		2
Figure 3. Mapping the company's value chain		3
Figure 4. Global PV market in 2013: installed capacity		14
Figure 5. Global PV market at the end of 2013: cumulative capacities		15

Acronyms

The following acronyms are used:

AFASE	Alliance for Affordable Solar Energy
CPC	Central product classification
EPC	Engineering Procurement Construction
EPIA	European Photovoltaic Industry Association
FGI	Fung Global Institute
GDP	Gross domestic product
GVC	Global value chain
IEA	International Energy Agency
IEC	International Electrotechnical Commission
IPO	Initial public offering
ISO	International Organization for Standardization
IT	Information technology
ITC	International Trade Centre
JET	Japan Electrical Safety and Environment Technology Laboratories
MW	Megawatt
PR	Public relations
PV	Photovoltaic
PVPS	Photovoltaic Power Systems Programme
R&D	Research and development
RMB	Renminbi
SOE	State-owned enterprise
TUV	TÜV Rheinland Group
UL	Underwriters Laboratories

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_22996

