

标准的经济效益

ISO 方法论 2.0

Economic benefits of standards

ISO Methodology 2.0

深圳市市场监督管理局 译
深圳市标准技术研究院



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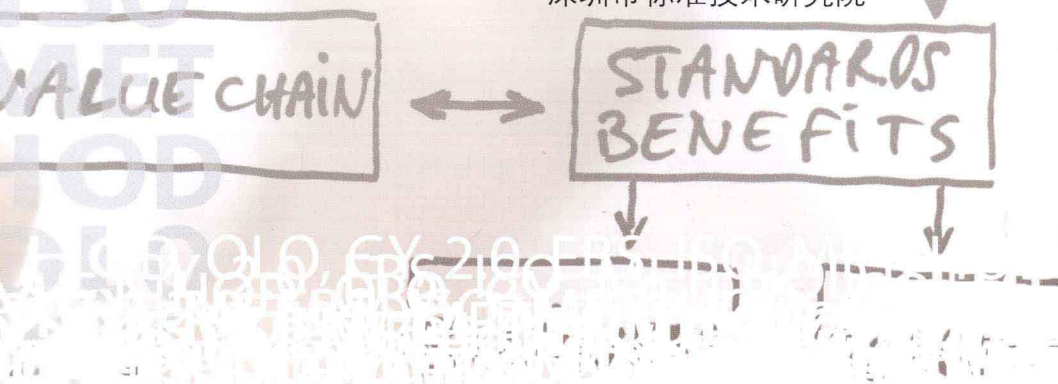
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《标准的经济效益——ISO方法论2.0》

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序一

“十二五”时期是我国全面建成小康社会的关键时期，也是深化改革、加快转变经济发展方式的攻坚时期。从国际环境新趋势看，经济全球化继续深入发展，科技创新和产业升级孕育新突破，全球治理结构进入调整期，围绕市场、资源、人才、技术、标准等要素的国际竞争更加激烈。标准作为创新技术产业化、市场化的关键环节，已成为参与国际合作与竞争、保障产业利益和经济安全的重要手段。从国内环境新特征看，促进工业化、信息化、城镇化、农业现代化同步发展，推进经济结构战略性调整，推动经济持续健康发展，对标准化工作提出了新的更高要求。

纵观国际国内形势，我国仍处于可以大有作为的重要战略机遇期，我们必须准确判断重要战略机遇的内涵和条件的变化，增强标准化创新发展、服务发展的责任感和使命感。按照“系统管理、重点突破、整体提升”的基本要求，坚持以科学发展为主题、以加快转变经济增长方式为主线，提升制造业标准化水平，拓宽服务标准化领域，加强能源资源环境标准化工作，推动外贸发展和规范市场秩序，加快战略新兴产业标准化步伐。

增进效益作为标准化的根本目的，一直受到国际标准化组织和各国专家学者的广泛关注。从2000年开始，全球范围内开展了大量对标准化和使用标准效益的研究。大部分的研究组织，尝试从宏观经济的角度评估标准化对国家经济效益的贡献，选取的指标如国内生产总值（GDP）增长、生产力增长等。虽然这些研究进展迅速，但是通过比较我们发现这些研究难以形成系统的分析方法。归结原因是由于这些组织抱着不同的目的、使用不同的方法。在研究过程中，对已表明标准带来经济或其他效益的研究，由于采用了不同方法，所得结论对比性不强，标准的效益难以用量化的数据加以证明。

正因为如此，国际标准化组织（ISO）在罗兰贝格管理咨询公司的帮助下，开发了“标准的经济效益——ISO方法论”。ISO方法论提供了一个系统的方法来评估标准对单个组织或公司的经济效益。它为各个组织评价标准的经济效益提供了统一准则、指导原则和工具框架，并对评价过程各个步骤和标准效益的计算方法提出了实用建议，向读者展现了一种具体、清晰的实用准则，具有重要的借鉴意义和较强的操作性。2012年2月以来，深圳市市场监督管理局、深圳市标准技术研究院先后翻译了《标准的经济效益——全球案例研究》（Ⅰ、Ⅱ）。书中的21个运用标准的成功案例均采用ISO方法论对企业进行经济效益的量化评估。

本书是在前两册书的基础上，进一步提供了ISO方法论的概要和所要达到的目标，描述了评估过程的关键步骤，提供了应用于特定评估步骤的参考工具。本书还重点介绍了试点案例的启示、成果概要等内容。将ISO方法论引入中国，有助于以直观的数据来鼓励利益相关方积极参与到标准化活动中来。希望社会各界能从此书中获得启迪，积极关注、支持和参与标准化工作，共同推动我国标准化事业创新发展。

陈 钢

国家标准化管理委员会主任

二〇一三年七月一日

Preface I

The 12th Five-Year Plan period is not only a key period to build China into a moderately prosperous society in an all-round way, but also a crucial period to deepen China's reform and opening-up as well as to accelerate the transformation of economic development mode. From the perspective of latest international development, the economic globalization continues to develop further in depth; new breakthroughs are under breed both in technological innovation and industrial upgrading; global governance structure enters into a period of adjustment. Thus international competition, focusing on market, resource, human resources, technology, standards and so on, is growing more and more fiercely. Standards, as the key element of the industrialization and marketization of innovative technology, become an important approach to participate in international cooperation and competition as well as to protect industrial interests and economic safety. From the domestic perspective, the demand to advance the synchronous development of industrialization, informatization, urbanization and agricultural modernization, to push forward strategic economic restructuring and to promote the continuous healthy development of economy, poses new and higher requirements for standardization work.

Looking at the overall international and domestic situations, we conclude that china's development is still in an important period of strategic opportunities. We have to understand correctly the implications of important strategic opportunities and react to their change, meanwhile strengthen our sense of duty that standardization assists innovative development and that standardization services development. As per the basic requirements of "systematic management, key breakthroughs and overall promotion", China should upgrade the standardization level of manufacturing industry, expand the area of service standardization, strengthen standardization in the area of energy, resources and environment, push forward foreign trade development and regulate the market order as well as speed up the pace of

standardization of the strategic emerging industries while sticking to taking scientific development as the theme and accelerating the transformation of economic development mode as the mainline.

The end of standardization is to improve benefits, which has attracted much attention from ISO and experts from various countries. Ever since 2000, a lot of studies have been carried out worldwide on standardization and the benefits of using standards. Most of the institutes used indicators such as GDP growth and productivity growth to assess the economic benefits of standardization for national economy from a macroeconomic point of view. Although these studies progress rapidly, we found that it is not easy for them to yield systematic analysis methods due to the different purposes of and different methods used by these institutes. It is difficult to validate the benefits of standards with quantitative data because of the poor comparability of these studies due to different approaches applied, although they showed that the use of standards brought about economic benefits as well as other benefits.

For this reason, with the assistance of Roland Berger Strategies Consultants, ISO developed a methodology to assess the economic benefits from standards. The ISO methodology provides a systematic approach to assess the economic benefits for an individual company or organization from using standards. It offers unified criteria, guiding principle and framework tools for estimating the benefits of standards, provides advices on carrying out the assessment and calculating the benefits of standards, which appears to be a concrete and clear framework tools and which could bring many inspirations for practical assessment. In February and August 2012, the Market Supervision Administration of Shenzhen (MSA) and Shenzhen Institute of Standards and Technology (SIST) jointly translated the two books *Economic Benefits of Standards* and *Standards-International Case Studies (I, II)* into Chinese. All of the 21 case studies included in the two books applied successfully ISO methodology to assess the economic benefits of standards on companies.

Based on *Volumes 1 and 2*, this book summarizes further the ISO methodology and its objectives. It also describes each key step for the evaluation and provides tools to be applied in specific steps. This book also introduces the implications of case studies as well as research results, etc. With its introduction into China, it will be helpful to encourage all interested parties to participate in standardization activities. We hope that all the society will benefit from this book and pay attention to, positively support and participate in standardization work, thus promote the innovative development of standardization in our country.

CHEN Gang

Administrator

Standardization Administration of P. R. China (SAC)

July 1, 2013

序二

随着经济发展的全球化，经济交往、技术交流，打破了原有的疆界，形成了全球范围的大生产和大流通。标准既可以成为促进国际经济交流的催化剂，又可以成为人为设置的贸易壁垒，主要发达国家纷纷把争夺和主导国际标准的制定作为国际经济竞争的首选策略。为了在融入经济全球化进程中掌握主动，我国必须从全球生产价值链的低端逐步向高端转移，积极促进标准化战略与核心技术、知识产权进行有机结合，充分发挥组合效应，建立自主的国家创新体系，从而实现行业和经济的跨越式发展。

深圳作为我国改革开放的窗口和试验田，以高新技术产业立市，又是外贸出口大市，其经济发展与国际市场息息相关，迫切需要运用标准化的手段增强产业发展后劲，应对国际市场竞争带来的挑战。

深圳市标准技术研究院作为身处特区、毗邻港澳的专业标准化技术机构，积极顺应经济社会转型发展和市场监管职能融合的新形势，以政府、企业和社会的需求为己任，改革创新，勇担重任，力求客户价值与自我价值的共赢发展。

近年来，在国家标准委和各级领导的支持下，在国际标准化工作方面我院承担了深圳欧洲标准研究中心、国际标准化组织发展中国家事务委员会（ISO/DEVCO）国内技术对口单位、国际标准化组织建筑用玻璃标准化技术委员会产品研究分技术委员会建筑用光伏玻璃产品工作组等工作，目前在研及发布的国际标准十余项。

自2012年以来，我院获得授权翻译出版了《标准的经济效益——全球案例研究》（I、II）。这两本书通过具体而丰富的企业案例，深入浅出地展示了一套评价标准经济效益的量化方法和模型，为我国企业开展标准经济效益评估工作提供了具有参考和借鉴价值的评价思路。

此次，我院再次获得授权，开展对《标准的经济效益——ISO方法论2.0》一书的翻译工作，这是对我们前期工作的再次肯定，更坚定了我们

将继续秉持精益求精的态度致力于标准化事业。在本书的翻译过程中，我们得到了国家标准委陈钢主任、国际合作部郭晨光副主任的大力支持和充分肯定，同时还得到ISO中央秘书处顾问Reinhard Weissinger先生的鼎力支持，在此一并表示感谢。

《标准的经济效益——ISO方法论2.0》一书阐明了ISO方法论的概要及其目标，描述了评估过程的关键步骤，提供了相关应用于特定评估步骤的参考工具。此外，该书还介绍了方法论的关键要素和概念，包括对组织项目、评估过程中特定步骤以及计算标准效益方法的实用性建议。总的来说，此书提供了一套系统的方法来评估标准对单个组织或公司的经济效益，它对公司的内部分析、案例研究和比较研究结果都提供了支撑作用。与此同时，ISO方法论也可被用于描述和衡量标准的非经济效益——如标准对社会和环境的贡献。此项工作力图从方法上进行突破，为标准化工作者建立一种根本性的思维，为进行深入研究奠定理论上的基础。

本书从翻译到出版发行时间紧、任务重，文中难免存在疏漏或不妥之处，请各位读者多提宝贵意见。新的时期，深圳市标准技术研究院也将充分利用深圳大部制改革带来的机遇和挑战，以“想干、敢干、快干、会干”的实干精神，勇于探索，敢为人先，为标准化事业的“中国梦”贡献深圳力量。

周 文

深圳市标准技术研究院院长

二〇一三年七月一日

Preface II

With the globalization of economic development, economic trading and technology exchange gradually breaks the original boundary of countries, products and services can be produced and circulated globally. Standards hence are not only an activator enhancing international economic exchanges but also a kind of trade barriers. Participating and taking lead in the development of international standards becomes many developed countries' priority strategy for international economic competition. In order to seize the initiative, China has to march up the value chain from the lower end to upper end of global production value chain. For this purpose, China has to promote the systematic combination of standardization strategy with core technologies and intellectual property rights to build up an independent national innovation system and thus realize great-leap-forward development in industry and economy.

As the window and experimental field of China's reform and opening-up to the world, Shenzhen is famous for its hi-tech industry as well as an important export city. Its economic development is inseparable from international market. Therefore it is especially urgent for Shenzhen to utilize standardization to enhance industry development and its ability to cope with challenge from international market.

As a professional standardization institute in Shenzhen, China's first economic special zone adjacent to Hong Kong and Macao, Shenzhen Institute of Standards and Technology (SIST) considers satisfying the demands of the government, enterprises and society as its main duty, and makes efforts to reform and innovate with an aim to arrive mutual success and development of the customers and itself, while actively reacts to the new situation in process of economic and social transformation as well as the adjustment of the government's functions in the field of market supervision.

In recent years, with the support of the Standardization Administration of China (SAC) as well as of leaders at all levels, our institute assumes impor-

tant tasks such as the establishment of European Standardization Research Center, Chinese Mirror Committee of the ISO Committee on Developing Country Matters (ISO/DEVCO), ISO/TC 160/SC 01/WG 09 Glass in building--Building Integrated Photovoltaics and so on. We also participate in the development of a total of more than 10 international standards, published or under development.

Since 2012, we have been authorized by ISO to translate and publish *Economic Benefits of Standards-International Case Studies (I, II)*. The analysis of case studies in the two books illustrates an approach to measure the economic benefits of standard quantitatively, which provide very valuable inspirations for China's companies to carry out the assessment of economic benefits of standards in their own companies.

We are much honored to be authorized again to translate *Economic Benefits of Standards-ISO methodology 2.0*, which not only shows the recognition of our previous work, but also encourages us to promote standardization work with an attitude of "pursuing excellence". Hereby I would like to express my sincere gratitude towards Mr. Chen Gang, the Administrator of SAC, and Mr. Guo Chenguang, the Deputy Director of International Cooperation Department of SAC, for their support during the translation and publication. I would also like to extend our appreciation to Mr. Reinhard Weissinger, the consultant of ISO central secretariat, for his consistent support to us.

Economic Benefits of Standards-ISO methodology 2.0 outlines the ISO methodology and its objectives, examines each key step of evaluation process and comes up with tools to be applied in the specific steps. In addition, this book also gives advices on how to organize a case study, how to carry out each assessment step and how to calculate the benefits of standards. In general, ISO methodology 2.0 provides a systematic method to assess the benefits of standards in a company or an individual organization. Moreover, ISO methodology can also be used to measure the non-economic benefits (e.g. contribution to social and environment performance) of standards. With

all these efforts, the methodology tries to make a breakthrough progress on the approach so as to lay down the foundation for those engaged in standardization to explore more in-depth the theories of standardization. Given the limited time available and work load, it is hard to avoid mistakes and misunderstandings in the book, we value any precious advice and suggestion from the readers. Facing the new round of administrative reform, we, Shenzhen Institute of Standards and Technology, will take full advantage of opportunities and face up the challenge courageously, with the spirit of *Doing Passionately, Doing Bravely, Doing Quickly and Doing Well*, to contribute to the Chinese Dream in the field of standardization.

ZHOU Wen

President

Shenzhen Institute of Standards and Technology

July 1, 2013

ISO简介

国际标准化组织（以下简称ISO）拥有162*个成员机构，它们是来自遍布世界各地的、大小不一的工业化国家、发展中国家和经济转型国家的国家标准机构。ISO通过其制定的19600*多项标准为企业、政府和社会提供实用工具，从而促进经济、环境、社会三个层面的可持续发展。

ISO标准为我们生活的世界做出了积极的贡献。它们促进贸易、传播知识和先进创新技术、分享优秀的管理方式和合格评定方面的实践等。

ISO标准几乎为所有领域的活动提供解决方案并创造效益，包括农业、建筑、机械工程、制造、分销、运输、医疗保健、信息和通信技术、环境、能源、安全和保障、质量管理和服务等。

ISO只制定具有明确市场需求的标准。ISO标准的主题直接来源于对标准具有实际需求的工业、技术和商业领域，由专家完成标准制定工作。标准随后也将会应用于这些领域。具有相关知识的其他人员和组织，例如来自政府机构、测试实验室、消费者协会、学术界的代表，以及国际政府组织和国际非政府组织的代表，均可加入专家组。

一项ISO国际标准的诞生，意味着各成员团体就该标准涉及的主题在当前最新技术发展水平上已达成全球协商一致。

* 2013年3月数据。

ISO方法论

计算标准的效益

ISO开发了一套简便易行的方法论，以及一套强大的工具来评估标准的经济效益。这套方法论可应用于所有的公司和产业领域来识别出标准对这些公司和产业领域所取得成就的贡献。



步骤1： 分析价值链

在价值链中找出公司所处的位置，以及公司的核心能力和参与公司价值创造的关键活动。

步骤2： 识别标准的影响

识别标准对公司各项主要业务功能及其相关活动的影响。标准影响图是非常方便的工具，它按业务功能列出了超过90项标准影响的示例。



步骤4:

收集信息并评估影响

将息税前利润（EBIT）作为衡量价值创造的指标。EBIT代表公司在某一时间节点的毛利润，即收入减去成本的值。

步骤3:

确定价值驱动因素和关键营运指标

价值驱动因素是赋予一家公司竞争优势的核心组织能力。因此最希望得到的标准影响应集中在这点上。营运指标用于衡量实际影响（如所需的人力资源或客户满意度）。

