

管理世界 特輯

中國大型企業排

THE LARGEST ENTERPRISES IN THE PEOPLE'S
REPUBLIC OF CHINA

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管理世界中國企業評價中心
國家統計局工業交通統計司

中國·北京
BEIJING, CHINA

管理世界特辑 中国大型企业排序

MANAGEMENT WORLD: THE LARGEST ENTERPRISES IN THE

PEOPLE'S REPUBLIC OF CHINA

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主办: 中华人民共和国
国务院发展研究中心
编辑: 《管理世界》杂志编辑部
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传真: 2028141
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Address: No. 6 Bei Sanhuan Zhong Road,
Beijing, China
Tel: 2029312, 2016699-592
Fax: 2028141

前言

《管理世界特辑：中国大型企业排序(1990年)》刊载了国务院发展研究中心《管理世界》中国企业评价中心与国家统计局工业交通统计司共同合作的研究项目：“1989年中国500家最大工业企业及行业50家评价”的全部研究成果。《特辑》今后将每年定期出版。现在我们将这部记载着中国大型企业四十年业绩的《特辑》，奉献给为中国国民经济发展建立了丰功伟绩的建设者和海外实业界的友人。

从《管理世界》中国企业评价中心第一次推出“1987年中国100家最大工业企业及九大行业50家评价”研究成果始，本研究项目已经进行了三年。三年来我们坚持“科学、客观、公正”的态度，依据国际惯例，同时根据我国的实际情况，对中国大型企业加以排序。这项研究充分揭示了我国大型企业在国民经济中的重要地位和骨干作用。特别是通过每年对中国工业企业及行业此落彼长的研究，准确地刻划出中国产业结构的变化，以及产业的分布及其变动趋势，为进一步调整产业结构和提高经济效益提供了有效的咨询。目前这一评价在国内外产生了重要影响，为国内经济政策咨询、分析市场变化、制定企业经营战略，乃至国际经济交流与合作提供了客观的依据。

《管理世界特辑：中国大型企业排序(1990年)》作为中国第一部以企业评价系统构架而成的大型企业资料，由两大内容组成：第一，根据销售额的大小对企业经营规模进行评价；第二，根据五项经济指标对企业进行综合经济效益评价，力求使评价更为科学，更为全面。“1989年中国500家最大工业企业及行业50家评价”是在我国现行的40个行业大类1万余家大中型企业中进行排序的。与1987年和1988年的评价相比，这次评价所覆盖的中国大型企业的范围更为广泛，基础资料更为翔实，分类更为规范。此外，《特辑》还收录了“台湾省500家最大工业公司”、“美国500家最大工业公司”及“世界500家最大工业公司”，以便我国读者可以加深了解和研究海峡两岸以及世界工业企业发展的趋势，进一步推动我国对外经济的往来与合作。

这一部有关中国大型企业的珍贵资料，记载着我国大型企业每年创造的业绩。一年一度持续的评价，可以描绘出我国大型企业发展的轨迹。它既是一种历史的描述，也是一种对未来发展趋势的前瞻。当《管理世界特辑：中国大型企业排序》出版到第10版、第20版时，我国必将有一批大型企业进入“世界500家最大工业公司”的行列，那将标志着我国工业进入一个全新的发展时期，我们相信并期待这一天早日到来。

值此《管理世界特辑：中国大型企业排序(1990年)》出版之际，我们谨向热情关心、支持这一评价项目的有关部委的领导同志、新闻界的朋友，表示衷心的感谢。特别需要提及并致谢的是企业界对这一评价的响应与支持，没有这种响应与支持，评价就不可能取得今天的成就。

PREFACE

The "Management World" Special Issue: Listing of China's Largest Enterprises, 1990, promulgates the complete evaluation results of China's Top 500 Industrial Enterprises & Top 50 in Major Industries in 1989, out of the research programme jointly undertaken by China Enterprise Evaluation Centre of the "Management World" affiliated to the State Council's Development Research Centre and the Statistics Department of Industry and Transportation attached to the State Statistical Bureau. This special issue, carrying the outstanding achievements of China's largest enterprises over the past 40 years, is dedicated to the builders who have made significant contributions to the development of China's national economy and to the friends from the industry and trade circles abroad.

This research programme has already been embarked upon for three years, since the first publication of the Evaluation of China's Top 100 Industrial Enterprises & Top 50 in Nine Major Industries in 1987 by China Enterprise Evaluation Centre of the "Management World". During these 3 years, taking a scientific, objective and impartial attitude and in line with the internationally accepted rules and practices, and also starting from China's actual conditions, we have evaluated and ranked the largest enterprises throughout China. This research programme has eloquently brought to light the mainstay acted and the important roles played by the largest enterprises in our national economy. By studying especially the annual rises and falls of China's industrial enterprises and industries, structural changes of the industries, their distribution patterns and their changing trends will be accurately described, so that effective advisories can be provided to further adjust the industrial structures and to better improve the economic results. At present, the evaluation of China's largest enterprises have brought about significant influences both at home and abroad, constituting the objective bases for the formulating national economic policies, analysing market changes, drafting enterprise strategies and for the international economic exchanges and cooperation.

The "Management World" Special Issue: Listing of China's largest Enterprises, 1990, with its evaluation framework systematically structured as the very first kind of information sources of largest enterprises in China, is composed of two parts. The first part deals with the evaluation of the operation scales of the enterprises in regard to their sales revenues. The second part refers to the evaluation of the comprehensive economic results of the enterprises on the basis of five economic indicators. The Evaluation of China's Top 500 Industrial Enterprises & Top 50 in Major Industries in

1989 was conducted within China's current 40 major industries and about ten thousand large and medium-sized enterprises, covering an even more extensive range of enterprises, more detailed and realistic information and more standardized classifications as compared with those used in the evaluations for 1987 and 1988. The special issue, furthermore, includes the top 500 industrial enterprises in Taiwan Province, top 500 industrial enterprises in the United States and the top 500 industrial enterprises the world over, and it will then facilitate our readers to understand and study the development trends of the industrial enterprises on both sides of the Taiwan Straits and all over the world, so as to further push forward our external economic exchanges and cooperation.

The special issue, containing valuable information of China's largest enterprises, records the annual achievements made by China's largest enterprises. The evaluation which is carried out every year and which can depict the development trajectory of our largest enterprises, is not only an account of the history, but also a prophecy of the development trend in the future. When the "Management World" Special Issue comes to its tenth, or in its twentieth edition, a number of China's largest enterprises will certainly be ranked among the top 500 industrial enterprises in the world, and that would then indicate that China's industry enters an entirely new era of development. We are confident of that and expect it to come at an early date.

On this special occasion of the "Management World" Special Issue: Listing of China's Largest Enterprises, 1990, coming off the press, we would like to express our sincere gratitude to the leaders from the central government and the ministries and to friends from the press circles, who have shown their profound concern of and given their support to this evaluation project. Our thanks are also due to the people in the industry and trade circles, without whose active response and firm support, great achievements made in conducting this evaluation would be impossible.

编辑说明

《管理世界特辑：中国大型企业排序（1990年）》是根据管理世界中国企业评价中心与国家统计局工业交通统计司共同推出的“1989年中国500家最大工业企业及行业50家评价”结果编汇而成。

“1989年中国500家最大工业企业及行业50家评价”是在中国1万余家大中型企业中进行的。具体划分两大部分：最大经营规模评价和最佳经济效益评价。这是我们在借鉴国际评价系统的基础上，根据我国统计的特点，所建立的一套比较符合国内实际情况的评价体系。评价结果包括以下内容：中国500家最大经营规模和最佳经济效益工业企业、行业50家最大经营规模和最佳经济效益工业企业，以及地区50家最大经营规模和最佳经济效益工业企业。因此，本书将通过全国属、行业属和地区属把以上内容全面地反映出来。

一、关于最大经营规模工业企业评价

1. 采用“销售额”指标衡量企业经营规模

我国在相当长的时期内，一直沿用“工业生产总产值”或“生产能力”的大小衡量企业的规模或经营的优劣。在这里，我们采用“国际语言”即“销售额”指标评价中国工业企业的经营规模，不仅仅在于沟通中外企业的交往与合作，更为重要的是“销售额”作为衡量企业经营规模的指标，其内在含义：

第一，年度销售额指标反映的是企业当年实现的价值，而不包括尚未实现价值的那一部分即库存产品的价值，因而更能正确地反映企业当年的实绩。

第二，销售额的增长本身就可以直接反映出企业的发展。因此，管理学界习惯将销售额增长率高于职工人数、工资费用、总资本增长率的增长，称之为“企业发展的第一原则”。

第三，在规范的市场行为下，销售额的增长蕴含着设备的更新、新产品的出现等技术进步因素所带来的经济效益的提高等项内容。

第四，在社会主义有计划的商品经济条件下，销售额指标也同样可以充分体现企业与计划的关系，以及企业与市场的关系。在宏观计划调控下，销售额指标本身就具有引导企业发展的作用，进而可以体现出企业的自主精神。

2. 企业经营规模评价的几点说明

企业经营规模评价是在我国现有的大中型企业中，按照销售额的大小进行排序的（主排序）。在企业经营规模排序中，有以下几个问题需要说明：

第一，凡属当年（指1989年）的在建项目（包括试生产阶段），地方统计局尚未上报的企业，均未列入本次企业评价的范围。

第二，隶属关系变动的企业，尚未做出正式更正之前，仍不能按照独立法人的地位参加评价。

第三，由于电力工业生产的特点，一些国家不将电力企业纳入此类评价的范围。但根据我国工业实际情况，包括大电网在内的电力企业作为独立核算企业仍参加行业50家最大经营规模与最佳经济效益评价。如果加入全国工业企业排序，可进入中国500家最大工业企业行列的电力企业为14家，其中华东、华北、华中和东北四大电网名列前茅。

第四，目前我国正处于深入进行产业结构和产业组织结构调整的过程中，特别是企业集团化的发展日益显著，这必将对我国工业的发展产生积极的影响。同时也给统计和评价工作带来一些新课题。国家统计局工业交通统计司已就此做出了原则规定，但在实际执行过程中仍存在一些具体问题。如吉林化学工业公司、西安电力机械制造公司、金新自行车（集团）有限公司、苏州普雷海电器公司包括下属联合公司企业或作为集团企业。其销售额分别为：406271万元（106988万元，利润额下同）、79853万元（12837万元）、61517万元（4511万元）、54318万元（4862万元），在中国500家最大工业企业排

序中则列为第9位、99位、150位和178位。

第五，木材采伐企业的评价，是表明该企业根据国家林业政策和法令，正常作业所完成的实绩，而并非鼓励破坏生态环境，进行掠夺性采伐。

第六，在最大经营规模评价中，除了按“销售额”指标进行排序（主排序）外，我们还同时进行了“利润额”和“固定资产净值”排序（辅助排序），以便反映最大经营规模工业企业中某一企业的盈利和资产状况。“销售额”在我国统计中称为“销售收入”，而“利润额”则应为“利税总额”（或称之为“毛利”）。

二、关于最佳经济效益工业企业评价

最佳经济效益评价是本评价的一个重要组成部分。在我国现行统计系统中，如何正确评价企业经济效益是我们研究的重要课题。

1. 确立经济效益评价的指标体系

由于我国现行经济管理体制和市场机制尚不完善，除农业外，我国目前还不可能存在一个平均利润率，各种生产要素在行业间难以合理流动，价格体系严重的扭曲等因素，致使各行业，甚至企业之间的数量指标不具有可比性。鉴于上述情况，我们认为，只有采用能够反映企业经济效益的一组相对指标，才具有可比性。即综合经济效益评价的结果才有可能在同行业的企业间进行比较。

“1989年中国500家及行业、地区50家最佳经济效益工业企业评价”中，劳动生产率、工业净产值率、人均利润（利税）率、销售利润（利税）率和资金利润（利税）率构成了综合经济效益评价的指标体系。

2. 使用模糊评价方法

第二次世界大战以后，工业发达国家对某个企业或某个项目的经济评价愈来愈重视，评价方法也不断涌现。据统计，至今已有100多种，而采用最多的则是“特尔菲”法（或称为“专家评审法”）和经济评价法。其中“特尔菲”法由于原理简单、使用方便，至今仍被大量使用。但目前通行的评价方法在针对个别企业评价时，都无法回避两个问题：一是如何准确地确定评价标准，二是如何合理地定量描述各指标间的数量关系。相比之下，模糊评价方法是解决上述问题的较为可行的评价方法。

模糊评价方法的特点主要表现在：其一，它不直接依赖于某项指标，也不过分地依赖于绝对标准，而是采取相对比较的方法，这样可以避免一般数学评价方法中，由于标准选用不尽合理而导致的评价结果的偏差。其二，指标的重要程度通过权数加以体现，但允许在权数选择上有一定的出入，而不致于改变最终评价结果。其三，在技术处理上有效地避免了累计误差的影响。其四，模糊评价中算子的选择和隶属函数关系的确立，使各项参与评价的指标之间建立了有机联系，使评价结果能够更好地反映出评价对象的整体特征和一般趋势。

模糊评价方法的一般步骤：

第一步，按照一定的隶属函数关系，计算各项指标的分值；

第二步，充分考虑当前经济发展特点，采用“专家调查法”确定指标权重；

第三步，选择适合的模糊算子，加权计算模糊得分；

第四步，进行规模修正，最后得出每个企业的经济效益评价综合得分。

3. 综合经济效益评价的几点说明

（1）由于我国现行经济政策与经济运行的特点，行业之间几乎不可能进行经济效益的比较。为此，我们将“1989年中国500家最佳经济效益工业企业”，根据行业大类进行划分，这样基本上可以反映出行业之间的特点，同时本行业的企业之间也可以进行经济效益的比较。在40个行业大类中，“1989年中国500家最佳经济效益工业企业”仅囊括了28个行业，有10个行业的企业未进入500家最佳经济效益企业的行列，这些企业只有在“行业50家最佳经济效益工业企业”中体现出来。

（2）无论是行业还是地区最佳经济效益企业综合评价，都是先将所有大中型企业放在一个模型中进行计算，然后按行业、地区分类形成的。由于行业方面的差异及各方面的原因，地区最佳经济效益企业，不具有可比性，但从整体方面看，还是具有很大的参考价值的。

三、指标计算公式及说明

指标名称	计算公式	说明
销售额增长率	$[(\text{当年销售额}/\text{上年销售额}) - 1] \times 100\%$	反映企业经营规模的变动情况,比率愈大,其成长性愈高。
利润(利税)增长率	$[(\text{当年利润}/\text{上年利润}) - 1] \times 100\%$	反映企业效益的变动情况,比率愈大愈好。
劳动生产率	工业总产值/年平均职工人数	表示每一职工所创造的总产值,比率愈大,生产效率愈高。
人均利润(利税)率	利润额/年平均职工人数	表示每名职工所创造的盈利额。
工业净产值率	$(\text{工业净产值}/\text{工业总产值}) \times 100\%$	新增价值占工业总产值的比重,反映企业或行业投入产出水平。
销售利润(利税)率	$(\text{利润额}/\text{销售额}) \times 100\%$	表示每一元销售额所带来的利润,比率愈大愈好。
资金利润(利税)率	$[\text{利润额}/(\text{固定资产净值} + \text{平均定额流动资金})] \times 100\%$	表示每元资金所创造的利润额,比率愈大愈好。
人均装备率	固定资产净值/年平均职工人数	每名职工平均拥有的资产额,反映企业或行业的资金和技术装备程度。
研究开发费比重	$[(\text{技术开发费} + \text{新产品试制费})/\text{销售额}] \times 100\%$	反映企业或行业技术进步投入状况。

四、行业划分及代码

本评价是根据《工业行业分类》中40个大类进行企业行业划分的。40个大类基本情况如下(最前面的数字是大类代码):

- 08 煤炭采选业,包括煤炭开采和煤炭洗选。
- 09 石油和天然气开采业,包括原油、天然气和油页岩开采。
- 10 黑色金属矿采选业,包括铁矿、锰矿、铬矿的采选。
- 11 有色金属矿采选业,包括重有色金属矿、贵金属矿和稀有色金属矿的采选。

- 12 建筑材料及其它非金属矿采选业, 包括土砂石、化学矿和其它非金属矿的采选。
- 13 采盐业, 包括海盐、湖盐、井盐和矿盐的开采。
- 15 木材及竹材采运业, 包括木材和竹材采运。
- 16 自来水生产和供应业。
- 17/18 食品制造业, 包括粮食、植物油、肉类、蛋品、乳品、水产品的加工, 以及糕点、食糖、罐头食品、食品添加剂和调味品的制造。
- 19 饮料制造业, 包括饮料酒、酒精、无酒精饮料的制造和制茶业。
- 20 烟草加工业, 包括烟叶复烤、卷烟制造和其它烟草加工。
- 21 饲料工业, 包括配合及混合饲料、蛋白饲料、饲料添加剂等的生产。
- 22 纺织业, 包括纤维原料初加工、棉纺、毛纺、麻纺、丝纺和针织品业。
- 24 缝纫业, 包括制帽、服装制做、制鞋等。
- 25 皮革、毛皮及其制品业, 包括制革、皮革制品、毛皮鞣制及制品。
- 26 木材加工及竹藤棕草制品业, 包括锯材加工、人造板、木制品及竹藤棕草制品等。
- 27 家具制造业, 包括木制家具、竹藤家具、金属家具、塑料家具的制造。
- 28 造纸及纸制品业, 包括纸浆制造、造纸和纸制品业。
- 29 印刷业。
- 30 文教体育用品制造业, 包括文化用品、体育用品、乐器及文娱用品、玩具和游艺器材等的制造。
- 31 工艺美术品制造业, 包括、漆器、花画、竹藤棕草、抽纱刺绣等工艺品制造, 以及毛毯、首饰的制造。
- 33 电力、蒸汽、热水生产和供应业。
- 35 石油加工业, 包括原油加工业和人造原油生产业。
- 35 炼焦、煤气及炼制品业。
- 36/37 化学工业, 包括基本化学原料、化肥、化学农药、有机化学产品、合成材料、林业化学产品、炸药及火工产品和日用化学产品的制造。
- 38 医药工业, 包括化学药品原料药、制剂、中药材及中成药、畜用药品和生物制品的制造和加工。
- 40 化学纤维工业, 包括人造纤维(纤维素纤维)和合成纤维的制造。
- 41/42 橡胶制品业, 包括轮胎、力车胎、橡胶制品、日用橡胶制品的制造及其修理业。
- 43/44 塑料制品业。
- 45/46 建筑材料及其它非金属矿物制品业, 包括水泥制造、石棉制品、砖瓦石灰、玻璃及其制品、陶瓷、耐火材料、石墨及碳素以及云母等制品的制造。
- 48 黑色金属冶炼及压延加工业, 其中包括铁合金冶炼业。
- 49 有色金属冶炼及压延加工业。
- 51/52 金属制品业。
- 53/55 机械工业, 包括除交通运输设备、电气设备、电子及通信设备、仪器仪表及其它以外的机械工业。
- 56 交通运输设备制造业, 包括铁路设备、汽车、船舶、飞机等的制造及修理。
- 58 电气机械及器材制造业, 包括电机、输配电及控制设备、电工器材、家用电器及照明器具的制造及修理。
- 60/61 电子及通信设备制造业, 包括通信设备、雷达、广播电视设备、电子计算机、电子元器件和日用电子器具的制造及其修理。
- 63 仪器仪表及其它计量器具制造业。
- 66 其它工业, 包括船舶、弹花、纽扣拉链制造等。

五、地区的划分及代码

地区企业评价的范围是根据中华人民共和国行政区划——省、自治区、直辖市一级——进行的。除台湾省外, 包括了30个省(自治区)、直辖市。在评价过程中, 地区排列是依照地区统一代码的顺序依次进行的。其基本情况如下(括号内为地区代码):

- (11) 北京、(12) 天津、(13) 河北、(14) 山西、(15) 内蒙古、(21) 辽宁
- (22) 吉林、(23) 黑龙江、(31) 上海、(32) 江苏、(33) 浙江、(34) 安徽
- (35) 福建、(36) 江西、(37) 山东、(41) 河南、(42) 湖北、(43) 湖南
- (44) 广东、(45) 广西、(46) 海南、(51) 四川、(52) 贵州、(53) 云南
- (54) 西藏、(61) 陕西、(62) 甘肃、(63) 青海、(64) 宁夏、(65) 新疆

EDITORIAL NOTES

The "Management World" Special Issue, Listing of China's Top Enterprises, 1990, is compiled from the results of the Evaluation of China's Top 500 Industrial Enterprises & Top 50 in Major Industries in 1989, jointly undertaken by China Enterprise Evaluation Centre of the Management World and the Statistics Department of Industry and Transportation of the State Statistical Bureau.

The Evaluation of China's Top 500 Industrial Enterprises and Top 50 in Major Industries in 1989 has been conducted in two major parts: evaluation of the largest operating scale and evaluation of the best economic results covering more than 10,000 large and medium-sized enterprises. This evaluation system, which has drawn on international evaluation systems and embodied China's own statistical features, is compatible with the actual conditions of our country. The results of the evaluation include the following: China's top 500 industrial enterprises of the largest operating scale and with the best economic results, top 50 industrial enterprises of the largest operating scale and with the best economic results in major industries (or sectoral top 50) and top 50 regional industrial enterprises of the largest operating scale and with the best economic results (or regional top 50). It is wished, therefore, that this book will give a full reflection of the above by presenting the data in National, Industrial and Regional Sections respectively.

I. Evaluation of Enterprises of the Largest Operating Scale

1. Judging enterprise operating scale by "sales"

For a long time, China has been evaluating an enterprise's scale and operation by its "total industrial output value" or "production capacity". The reason why we use the "international language" or "sales" to evaluate the operating scale of China's enterprises is to facilitate exchanges and cooperation between Chinese and foreign enterprises. What is more, "sales", an indicator in evaluating enterprises' scale, has the following intrinsic meaning:

A. Annual sales index reflects the value achieved in that year, not including the value yet to achieve, which is that of the products in stock. It therefore can truly reflect the actual results of the enterprises in that year.

B. The increase of sales can directly reflect the development of enterprises. So the management circles usually call the sales increase, whose rate is higher than those of staff, total salary expenses and total capital, the "first principle of enterprise development".

C. In the course of normal market action, the increase of sales serves to show the improvement of economic results brought about by technical progress, such as equipment renovation and new products.

D. Under the socialist planned commodity economy, sales index can also fully reflect the relations between enterprise and plan and enterprise and market. Regulated by macro planning, sales index has in itself the function of guiding the development of enterprises, thus serving to reflect the independence of enterprises.

2. Some explanations on evaluation of enterprises, operating scale

The evaluation of enterprises' operating scale is carried out within China's large and medium-sized enterprises currently in operation according to their sales (main listing). a few points

need to be explained about the listing of the enterprises' operating scale:

A. All enterprises which were under construction (or in trial production) in that year (1989) and which have not been nominated by the regional statistical bureaux are not covered by this evaluation.

B. Enterprises which have changed their subordinate relations cannot be evaluated as independent legal persons until they have made formal correction.

C. Some countries do not list electrical enterprises in the catalogue of this kind of evaluation owing to the production features of power industry. In view of China's actual industrial situation, however, electrical enterprises including major power networks are thus covered as independent accounting units by the evaluation of top 50 industrial enterprises of the largest operating scale and with the best economic results in major industries. Should they participate in the national industrial enterprise evaluation, 14 electrical enterprises would be ranked among the top 500. And among them, the four big power networks in East China, North China, Central China and Northeast China would be in the first rank.

D. At present, China is at the stage of deepening the readjustment of its industrial structure and organization, and the trend of forming enterprise groups, in particular, is notably gaining momentum. This will certainly have positive effects on the development of China's industry. At the same time, this also poses some new problems to our work of statistics and evaluation. Although the Statistics Department of Industry and Transportation of the State Statistical Bureau has laid down principled regulations in this regard, certain problems still exist in the course of their implementation. Take the following four enterprises as an example: They are Jilin Chemical Industrial Corp., Xi'an Electrical Machinery Corp., Goldlion Bicycle Co. (Group), Ltd. and Suzhou Xiang Xue Hai Electrical Appliance Corp. including their branch companies or enterprises, and their sales are respectively as follows: RMB 4,062,710,000, 798,530,000, 615,170,000, 543,180,000; and their profits RMB 1,069,880,000, 128,370,000, 45,110,000 and 48,620,000. In the listing of China's top 500 industrial enterprises, they rank No. 9, No. 99, No. 150 and No. 178 respectively.

E. The evaluation of lumbering enterprises, which reviews normal production results achieved in accordance with state forestry policies and decrees, certainly does not encourage acts of unbalancing ecological environment and plunder—like cutting.

F. In the evaluation of the largest operating scale, we also measure the listing or ranking by "profits" and "net assets" (subordinate listing) in addition to working out the listing by "sales" (main listing) in order to show the profit and capital situation of the enterprises of the largest operating scale. In China's statistical terminology, "sales" is called "sales revenue" and "profits" should be "total profit and tax value" (or "gross profit").

II. Evaluation of Industrial Enterprises with the Best Economic Results

Evaluating the best economic results forms an important part in this evaluation. How to correctly evaluate enterprises' economic results constitutes an important task in China's present statistical work.

1. Setting up index system of economic results evaluation

China's existing economic management structure and market mechanism leave much to be desired. Currently, it is impossible to find an average profit rate except for agriculture. Various kinds of production elements cannot flow reasonably in different industries and the pricing system is seriously twisted. And because of these factors, the quantity indexes in different enterprises are not comparable. Taking the above into account, we think, only by using a group of comparative indexes which can reflect enterprises' economic results, can we have the desired comparability. That is, the evaluation of comprehensive economic results makes it possible to compare enterprises in the same industries.

In the Evaluation of China's Top 500 Industrial Enterprises and Top 50 Industrial Enterprises with the Best Economic Results in Major Industries and Regions in 1989, productivity, net output value, profit (tax), sales profit (tax) and capital

profit (tax) constitute the index system of comprehensive economic results evaluation.

2. Using fuzzy evaluation approach

Since World War II, industrially developed countries have been giving more and more attention to enterprise or project evaluation, and many evaluation methods have been adopted. As statistics show, over 100 methods have been tried, in which the most commonly used are "Triffin" method or "expert judging method" and economic evaluation method. "Triffin" method is still widely in use for its simple theory and convenient application. But these methods will inevitably face two questions at the time of evaluating individual enterprises: One is how to accurately define the evaluation criteria, and the other is how to reasonably describe the quantity relations among various indexes in terms of fixed quantity. Relatively speaking, fuzzy evaluation is a workable method by which to resolve the above problems.

The features of fuzzy evaluation approach are as follows: First, it adopts a method of relative comparison instead of relying on certain index or absolute criteria, and consequently can avoid the deviations caused by irrationally chosen criteria in general mathematical calculation; secondly, the importance of indexes is reflected through the weighing number, but some discrepancy is allowed in choosing the weighing number so that the final evaluation results remain unchanged; thirdly, it effectively avoids the influence caused by accumulated deviations; and, fourthly, the selection of operator and the establishment of subordinate function will set up organic relations among evaluated indexes so that the evaluation results can better reflect the overall features and general tendency of the objects evaluated.

General steps of fuzzy evaluation method:

The first step is to calculate the value of each index in line with certain subordinate function;

The second step is to fully consider the current economic development features and determine weighed index by applying "expert judging method";

The third step is to select appropriate operator to calculate weighed fuzzy value; and

The fourth step is to make general amendments to get the final comprehensive scores of the economic results evaluation on each enterprise.

3. Some explanations on evaluation of comprehensive economic results

A. It is almost impossible to compare the economic results among different industries because of the features of China's current economic policies and economic operation. We, therefore, divide China's Top 500 Industrial Enterprises with the Best Economic Results in 1989 by major industries so as to reflect different characteristics of various industries and trades, while enterprises within the same industries can also be compared. China's Top 500 Industrial Enterprises with the Best Economic Results in 1989 only account for 28 out of 40 major industries, and enterprises of 10 industries have not entered the rank of the top 500 though they may appear in Top 50 Industrial Enterprises with the Best Economic Results in Major Industries.

B. In the comprehensive evaluation of enterprises with the best economic results in major industries and regions, all the large and medium-sized enterprises are calculated in one model first to be followed later by classification of industries and regions. Because of the difference of various industries and some other factors, regional enterprises with the best economic results cannot be compared with one another, though, generally speaking, the evaluation results are still of much significance.

III. Index Calculating Formulas and Explanations

Index	Calculating formula	Explanation
Change in sales %	$\left(\frac{\text{sales of this year}}{\text{sales of last year}} - 1 \right) \times 100\%$	Show the change of enterprises' operating scale, higher the rate, faster the increase.
Change in profits % (tax)	$\left(\frac{\text{profit of this year}}{\text{sales of last year}} - 1 \right) \times 100\%$	Show the change of enterprises' economic results, bigger the figure, better the rate.
Labour productivity	$\frac{\text{net value of product}}{\text{average staff number}}$	Show the net output value created by each member, bigger the rate, higher the production.
Profit (tax) per labour	$\frac{\text{profit}}{\text{annual average staff member}}$	Show the profit made by each staff member.
Net values as % of product	$\left(\frac{\text{net value of product}}{\text{total industrial output value}} \right) \times 100\%$	Show the proportion of newly-in industrial output value & economic results of enterprises or industries.
Profit (tax) as % of sales	$\left(\frac{\text{profit}}{\text{sales}} \right) \times 100\%$	show the profit created by each RMB of sales, bigger the figure, better the rate.
Profit (tax) as % of total assets	$\left[\frac{\text{profit}}{(\text{net assets} + \text{average quota flowing capital})} \right] \times 100\%$	Show the profit created by each RMB of sales, bigger the figure, better the rate.
Equipment per labour	$\frac{\text{net assets}}{\text{annual average staff member}}$	Show the average capital owned by each member & capital and technical density of enterprises or industries.
Research & development as % of sales	$\left[\frac{(\text{Technical development expenses} + \text{expenses for developing new products})}{\text{sales}} \right] \times 100\%$	Show the input for technical advance of enterprises or industries.

IV. Industrial Categorization and Codes

The 40 industries covered by this evaluation are thus categorized in line with the above Category. The general information of these 40 industries is as follows (each preceded by category codes):

- 08 Coal mining, including coal mining, washing and dressing
- 09 Oil and natural gas extraction, including crude oil, natural gas & oil shale extraction
- 10 Ferrous metal mining, including iron, manganese and chromium mining and dressing
- 11 Nonferrous metal mining, including heavy and light nonferrous metal, noble metal and rare metal mining and dressing
- 12 Building materials and other nonmetal mining, including soil sand, chemical mine and other nonmetal mining and dressing
- 13 Salt extraction, including sea salt, lake salt, well and mine salt
- 15 Lumbering, including wood and bamboo cutting and transportation
- 16 Running water production and supply
- 17/18 Food manufacturing, including cereals, vegetable oil, meat, eggs, dairy products, aquatic products, pastry, sugar, canned food, food additive and flavouring
- 19 Beverage manufacturing, including wine, alcohol, nonalcohol, beverage and tea
- 20 Tobacco processing, including re-cured tobacco, cigarette manufacturing and other tobacco processing
- 21 Feed processing, including mixed and compound feed, protein feed and feed additive manufacturing
- 22 Textile industry, including fibre raw materials processing, cotton spinning, wool spinning, ramie spinning, silk spinning and knit goods
- 24 Sewing industry, including hat, clothes and shoes making
- 25 Leather, fur and the products, including leather making, tanning, leather and fur products
- 26 Lumber processing, bamboo, rattan, palm and straw products, including timber processing, artificial board, wood-work, etc.
- 27 Furniture making, including wooden furniture, bamboo and rattan furniture, metal furniture and plastic furniture
- 28 Paper making and paper products, including pulp making, paper making and paper products
- 29 Printing industry
- 30 Cultural, educational and physical stationery, including cultural stationery, physical stationery, musical instruments, toys and recreational equipments manufacturing
- 31 Arts and crafts, metal, lacquer, bamboo, rattan, palm, straw, drawnwork and embroidery crafts, carpet and jewellery
- 33 Electric power, steam, hot water production and supply
- 34 Petroleum processing, including crude oil processing and artificial crude oil manufacturing
- 35 Coking, gas and coal products
- 36/37 Chemical industry, including basic chemical materials, chemical fertilizer, agricultural chemical, organic chemical products, synthetic materials, forestry chemical products, explosive and daily-use chemical products manufacturing
- 38 Medical industry, including chemical medicine, medicine preparation, traditional Chinese medicine, animal-use medicine and biological products manufacturing
- 40 Chemical fibre industry, including artificial fibre and synthetic fibre manufacturing
- 41/42 Rubber manufacturing, including tyre, rubber products, daily-use rubber products manufacturing and re-

- pairing
- 43/44 Plastics industry
- 45/46 Building materials and other nonmetal ore products, including cement manufacturing, asbestos cement products, bricks, tile, lime, glass, glass products, pottery and porcelain, refractory material, graphite, carbon, mica and asbestos manufacturing
- 48 Ferrous metal smelting and mangling, including ferroalloy smelting
- 49 Nonferrous metal smelting and mangling
- 51/52 Metal products
- 53/55 Machinery industry, excluding traffic transportation, electrical communication, electronic equipments and instruments
- 56 Transportation equipments manufacturing, including railway, motor vehicle, ship and plane manufacturing and repairing
- 58 Electrical machinery and equipments manufacturing, including electrical machinery, electricity transmission, power distribution, control equipment, electrical engineering equipments, daily -- use electrical appliance and illuminating equipments manufacturing and repairing
- 60/61 Electronic and communication equipments manufacturing, including communication equipments, radar, broadcasting & TV equipments, electronic calculator, electronic component and daily -- use electronic appliance manufacturing and repairing
- 63 Instrument, meter and other measuring instrument manufacturing
- 66 Other industries, including deconsolidating ships, cotton fluffing, button and zipper manufacturing, etc.

V. Regions and codes

The range of regional enterprises evaluation is divided according to the administrative regions of P. R. C. -- provinces, autonomous regions and municipalities directly under the central government. The order of regions in this evaluation is as the order of unified regional codes, which are listed as follows (regional codes in brackets):

- (11) Beijing (12) Tianjin (13) Hebei (14) Shanxi (15) Inner Mongolia
- (21) Liaoning (22) Jilin (23) Heilongjiang (31) Shanghai
- (32) Jiangsu (33) Zhejiang (34) Anhui (35) Fujian (36) Jiangxi
- (37) Shandong (41) Henan (42) Hubei (43) Hunan (44) Guangdong
- (45) Guangxi (46) Hainan (51) Sichuan (52) Guizhou (53) Yunnan
- (54) Tibet (61) Shanxi (62) Gansu (63) Qinghai (64) Ningxia
- (65) Xinjiang

总 论

我们追溯经济发展的历史，特别是现代工业发展的历史，不难看出：在各国国民经济发展过程中形成的大型企业，一直处于经济发展的中心地位。在现代经济以及未来经济发展中，大型企业或集团企业，不仅在国内经济中，同时也在国际经济中扮演着主要的角色，发挥着越来越大的作用。

从目前我国经济发展的实际情况看，大型企业在国民经济发展中的作用日益突出。尽管如此，我国工业企业的规模与工业发达国家以及一些发展中国家的工业企业相比还较小，在国际经济中的作用还相当有限。因此，充分发挥我国大型企业或集团企业的作用，为其自身的发展创造必要的外部环境，使其进一步发挥规模经济效益，发挥其在产业结构调整和产业组织中的作用，这对当前的治理整顿和深化改革具有重大的意义。当前我国工业正面临着大变革时期的到来，这一变革将产生一些代表产业发展趋势的企业或集团企业，大型企业将在其中发挥重要的作用。

在这里应当强调指出的是，评价的基本目的不仅仅是企业排序，还应包括以下几方面：其一，采用评价这种实证研究分析的方法，考察和研究企业经营发展的实际状况，以勾画出中国企业乃至产业变动的现状及其发展趋势。其二，通过企业经营发展分析，进一步考察企业发展的外部环境及其影响，以期为企业的发展创造出更为有利的外部环境。其三，在当前如何通过治理整顿、深化改革，进一步有效地调整产业结构、产品结构和产业组织结构，推动企业技术进步，使我国经济走上良性循环的轨道。这是关系到我国国民经济能否持续、稳定、协调发展的一个关键问题。本评价将为此从一个重要的侧面提供基本的依据。

第一部分：最大经营规模工业企业的基本分析

1. 中国 500 家最大经营规模工业企业将在国民经济发展中发挥更大的作用。1989 年全国独立核算工业企业总数不足 0.12% 的 500 家最大经营规模工业企业工业总产值、销售总额和利润总额（即利税总额或称毛利，下同）分别为：3590.61 亿元、3504.37 亿元和 683.49 亿元人民币，占全国独立核算企业工业总产值、销售总额和利润总额的 20.5%、22.1% 和 30.2%。当前我国大型企业集团化的趋势已初见端倪。这一趋势标志着我国的工业进入一个新的发展阶段。如果在深化改革中，进一步完善企业发展的微观机制，宏观经济政策更为协调，这样可以为大型企业发展创造一个更为有利的外部环境，大型企业将必然能够发挥更大作用。

2. 工业化初级阶段特征明显。1989 年中国 500 家最大工业企业主要分布在对国民经济发展影响较大的资金密集型的基础产业，集中在能源、冶金、石油加工和化工等少数行业。其中冶金、采掘、烟草加工、石油加工等行业的企业在 500 家中就占了 51.8%，为 259 家；其工业总产值、利润额分别占 500 家的 64.6% 和 67.9%（见表 1）。从“行业 50 家最大工业企业”的工业总产值的排序看，占前列的行业依次为：黑色冶金业、石油加工业、石油开采业、烟草加工业和化工业（见表 9）。这与 500 家的产业分布顺序是一致的。如果将此和工业发达国家的日本比较，其大企业分布的顺序为：微电子、汽车、石油化工、钢铁、食品、造纸、机械制造、纺织、烟草加工、建材、橡胶等行业。上述我国这种以基础产业为大企业主体特征的状况，与前两次评价相比，没有大的变化，说明我国工业发展仍处于工业化的初级阶段。