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EFFECT OF MANAGEMENT SYSTEM ON MANAGEMENT ACCOUNTING: THE CASE OF CHINESE CELLULAR PHONE TERMINAL UNIT MANUFACTURERS

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Abstract

In this paper the recent characteristics of Chinese management accounting and its general background are examined with reference to the cellular phone terminal unit manufacturers in comparison with the Japanese situation. In particular the formation of big businesses and the effect of their management system on management accounting are clarified. At the same time, this paper refers to a bipolar divergence between the big businesses and the defeated firms in this industry which was caused by the intense price competition. Lastly, it is concluded that the big businesses and the defeated firms which were reorganised with broadly raised social capital by state-owned enterprises will move the management accounting system forward into the new type of international management accounting.

Keywords: Chinese management accounting, cellular phone, combined typed management, modular production

Introduction

The aim of this paper is to clarify the general tendency and background of recent developments in management accounting in China with reference to the cellular phone manufacturing industry. Chinese production and management systems and their relationship with management accounting are examined in contrast with the Japanese situation and, at the same time, a bipolar divergence occurring between the prosperous and the defeated enterprises in Chinese cellular phone production is analysed. It is clarified that the driving force behind the emergence of a new management accounting system in China is the global expansion of Chinese multinational enterprises. The process whereby state-owned enterprises reorganise the defeated enterprises by broadly raising social capital is worthy of attention since such activities will drive management accounting system development forwards.

This paper fundamentally makes clear the present general framework and the future of Chinese management accounting. It begins by examining the background as well as the recent tendencies of Chinese management accounting through an analysis of Chinese economic and business growth. The features of the Chinese management systems are then compared with those of the Japanese systems. Lastly, it is concluded that the current reorganisation occurring in Chinese enterprises will produce a strong driving force for the emergence of a new third wave of development in international management accounting.

Background and Present Features of Chinese Management Accounting

Chinese management accounting, when considered from the angle of its international relationships, has developed in three stages, from nationality (independence and autonomy, and commodity economy) during the period 1949-1990 through introduction and learning from the West (conformity to international standards) during 1990-2000 to nationality based on internationalisation at present time (Table 1). After the adoption of reform and open policy in 1978, the Chinese government, enterprises, and academic circles, intent on joining the World Trade Organisation (WTO) in 2001, started not only to introduce advanced methods and theories of management accounting from Western countries, but also to modernise its management accounting systems differently from the strong ethnic characteristics isolated earlier from Western countries. Chinese contemporary management accounting is characterised as nationality based on internationalisation or the integration of nationality and internationalisation (Nishimura, 2006) [(1)].

Recently, Chinese enterprises and management accountants have shown strong interest in value-chain management, value-based management, balanced scorecard (BSC), activity-based costing (ABC) and corporate governance, and tend to favour more strongly American-type management accounting systems over the Japanese systems which are characterised by cost design, cost improvement (Genka Kaizen) and total quality control.

At the same time, they also stress the generalisation of various management accounting methods, conformity with international standards, trans-economy, empirical study, and speed economy. These concepts thoroughly embody the contemporary general features of Chinese business management and accounting[(1)].

It is noteworthy that this latest trend of management accounting basically originated from the global development of Chinese enterprises and their strong desire for dominant control over the international market. Thus, their internationalisation does

Table 1: Relationship Between Chinese Management Accounting and the West

First Stage (1945-2000): Management accounting isolated from the West; the period of responsibility accounting
(1) 1945-1978: cost responsibility=cost control; productivity; national planning=enterprise budget; statistic=accounting
(2) 1978-1985: profit responsibility; profit contracting system; joint-stock company
(3) 1985-2000: cost responsibility based on market price: market principle; simulated market and rejection by cost evaluation
Second Stage (2000-present): Introduction of Western management accounting; entering the WTO
ABC; BSC; value added; performance evaluation; Just-In-Time
Third Stage (present to future): Nationality based on internationalisation
Generalisation; trans-management science; conformity; empirical study; speed economy

not require simply adapting their management accounting systems to international standards, but also actualising the most suitable combination of international management accounting methods from the global viewpoint. As a result, in efforts to identify and select the best from among international practices and theories, management accounting research in China has broadened in scope and become more practical, tending towards a general and common approach in order to develop a Chinese type of management accounting that is universally useful.

The Recent Chinese Economy and Enterprise Globalisation

In order to make clear how such a general and global tendency for development came about, it is important to examine recent economic circumstances and the situations in which enterprises are operating in China. The growth rate of the Chinese economy has been very high and stable over the past ten years (EAEP, 2007); the annual growth rate has consistently been higher than 7.5% of GDP and shows a tendency to ascend due to the increase in fixed capital formation and trade balance: in terms of the contribution rate to GDP, the fixed capital formation was 42.31% in 2006 against 34.35% in 1995, while the trade balance was 5.59% against 1.64, respectively (Table 2).

Table 2: Contribution to GDP

Factors	1995	2001	2006
Final private consumption expenditure	46.67	46.22	38.73
Final governmental consumption expenditure	13.78	15.79	14.21
Total fixed capital formation	34.35	34.11	42.31
Increase of inventory	7.5	1.01	1.14
Net trade balance of money, property and service	**1.64**	**2.41**	**5.59**

Source: Sakamoto, H (2007), China, Recent Trends and Prospects for Major Asian Economics, *East Asian Economic Perspectives*, Vol.18 No.1, February (Special Issue), pp.27-38.

At present, the export structure, which relies upon the heavy and machinery industries, is completely different from the previous export-led economy, which mainly depended upon light industries such as textile goods and toys. As Table 3 shows, the increased fixed capital investment which is closely related to export is concentrated on the machinery and processing industries, consisted mainly of manufacturers of communication and information machinery, electronic apparatus, automobiles, and steel. Among them, the liquid crystal television and the cellular phone industries are important contributors to the increased GDP. Table 3 shows the rapid increase in mobile phone, micro-computer and integrated circuit productions after 2000.

Table 3: Production Growth of Main Electrical Machines, Motorcar, and Steel

	2000	01	02	03	04	05	06 (Production volume)
Mobile Telephone	1	1.5	2.3	3.5	**4.5**	**5.8**	**9.2** (480 million)
Micro-computer	1	1.3	2.2	**4.8**	**8.9**	**12.0**	**13.9** (93 million)
Integrated circuit	1	1.1	1.6	2.5	**4.0**	**4.6**	**5.7** (33575 million)
Colour television	1	1.0	1.3	1.7	1.9	2.1	2.1 (83.8 million)
Motorcar	1	1.1	1.6	2.2	2.5	2.8	3.5 (7.3 million)
Steel	1	1.2	1.5	1.8	2.4	2.9	3.6 (469 million ton)

Source: National Bureau of Statistic of China (2007), *China Statistical Year Book, 2007*, Http://www.stats.gov.cn/tjsjlndsj/2007/indexeh.htm

At the same time, the export of office electronics supplies and computer machinery showed an increase, contributing strongly to increased total exports (Table 4).

Table 4: Exports of Communication and Information Machinery Products

					(US$ billions)
Items	1995	1998	2001	2004	2006 (times of 95)
Total amount	148.8	183.8	266.1	593.3	**971 (6.5)**
Machinery	21.07	27.38	35.6	45.21	47.07(2.23)
Office supplies, computer machinery	3.23	6.44	8.86	14.68	**13.81 (4.28)**
Communication machinery	5.65	6.04	8.93	11.54	12.79 (2.26)

Source: Sakamoto, H (2007), China, Recent Trends and Prospects for Major Asian Economics, *East Asian Economic Perspectives*, Vol.18 No.1, February (Special Issue), pp.27-38.

Chinese big businesses in the electronic machinery industry have developed under such conditions and since Western multinationals launched into this sector. These Chinese and Western enterprises are presently driving the global increase in production and export of communication and information machinery and appliances. Figure 1 shows the rapid growth of the main Chinese cellular phone manufacturers,

although they as yet have failed to dominate the domestic market; the share of Western firms was 59.4% against the 40.6% share of domestic firms in 2005 (Xu and Imai, 2007).

Figure 1: Sales Trend of the Main Chinese Cellular Phone Manufacturers (2)

The fortunes of these Chinese companies are characterized between 2000 and 2003 by rapid growth and development, both domestically and internationally. Such growth owes much to governmental assistance, the production systems employed and the plentiful supply of foreign currency brought in through exports.

Specifically with regard to production systems, in principle, every country at the present time has the capability to easily produce a finished product of low cost and high quality by combining modules (parts) thanks to the development of advanced and widely modular parts (appliances). Chinese enterprises have made the best use of their status as a newcomer into the mature industry by introducing the best technologies and parts from overseas before developing their own adequate technological and design capabilities. Through this strategy, they can use cheap domestic labour to penetrate the international market. Table 5 shows the relationship in imported parts between foreign countries and China's Bodao Company (2).

In addition, the Chinese government has supported some enterprises of good standing by strictly limiting the establishment of communication enterprises and providing financial aid to nurture and strengthen the national communication and information industry while simultaneously exercising social control over information. In 1999, the promulgation of 'Some Proposals for the Promotion of Development in the Mobile Communication Machinery Industry' by the Department of State covered such issues as the prohibition of overinvestment in

Table 5: Modular Type of Production in Bodao Company

* Supply of parts from Chinese domestic market: loud speaker, packing article, charge device, and metal products (about 40% of the total)
* IC chip module: from Phillips (Switzerland), Siemens (Germany) and Sagem (France)
* LCD: from Seiko (Japan)
* Crystal oscillator, resister, condenser, and filter: from Japan
* High volume dry cell: from Sanyo Electronics and Sony (Japan)
* Plastic case: from Korea
* Low volume dry cell: from domestic manufacturers

Note: the corporation buys parts from less than 4 and more than two companies.
Source: Marukwa, T, Bodao Company: *http://www.issue-tokyo.ac/~marukawa/bodao.pdf*

the cellular phone machinery industry, the licensing of production and marketing of cellular phone terminal units, control over the extensive foreign capital investment, encouragement for domestic manufacturers to develop their businesses, and the investigation into and permission for the enhancement of production capacity (Xu and Imai, 2007). These regulations were aimed at accelerating the development of the Chinese mobile communication machinery industry and control over anti-social information for reasons of national defence. Thus, Chinese cellular phone machinery manufacturers had more advantageous conditions for business expansion than their counterparts from overseas.

Chinese enterprises also took a positive attitude to comply with national policies. For example, Huawei[(5)] has maintained a strong connection with the national defence force and conforms closely to the doctrines of the Communist Party and the state, despite its private company status. Private enterprises autonomously and positively utilise the Communist Party's or government's ideas and rules to awaken a spirit of nationality and build an enterprise community bound together by common fate. Ren Zhengfei, President of Huawei says with reference to nationality in business: 'Employees should do their best for Chinese prosperity, the development of Chinese nationality, and the fortune and happiness of themselves and their families'. He also states the following: that the independence of technology is a fundamental problem; the independence of industry would simply be groundless without its own main prop of science and technology; there is no independence of a nation without national industry; and only the Chinese can resolve this issue themselves. On the basis of this notion, he set a target for his firm to achieve: 'the development of national industry should depend on the development of its own science and technology and catch up with the most forefront technologies in the world in order to occupy the Chinese domestic market, find a new overseas market, and cope with competitors of the same industry overseas.' With regard to the relationship between opportunity and technology, he holds that a person can realise an opportunity by himself, but there must be a tool for him to realise that opportunity. The tool is simply technology, where technology creates a new

product and opens up a new market to create another opportunity afresh. This is an ascending spiral (Cheng and Liu, 2008). According to Huawei, technology is only a means and the goal is market entry.

Chinese enterprises can also avail themselves of outstanding technologists as a result of strengthened education in science and technology and utilise in cooperation with local governments or social capitalists the huge funds to support their business operations. On the basis of the above analysis, the following section will discuss and compare the structure and features of Chinese and Japanese management accounting.

Structure of the Chinese Production and Management System in Reference to that of the Japanese

Structure and Features of Chinese Production and Management System

The production departments of cellular phone and liquid crystal television manufacturers have newly evolved in China responsible for introducing from the West some new systems and concepts of management and accounting. Their management styles are now shifting to a new integration of nationality and internationalization, a process which shows potential for starting, the third wave in international management accounting. This third wave can be compared with the first wave of Western management accounting distinguished by strategic decision-making, efficiency, organisational identity (BSC) , and feedback control, and with the second wave of Japanese type management accounting characterised by the integration of low cost and high quality, cost design, and feed-forward control. The third wave absorbs the outcomes of the first and the second waves to formulate a new combination type of management accounting, which originated from the production strategy of Chinese enterprises aimed at integrating high quality, low cost, and quick delivery through the import of advanced technologies and parts from foreign countries on the basis of cheap domestic labour and plentiful economic resources.

Contemporary management in China is not merely of the modular type dealing with the import and combination into the manufacturing process of advanced and cheap parts, facilities, and technologies (Huang, 2006). More important is the global integration of market and production strategies, which is in contrast to the business integration found in Japan where enterprises have integrated cost management with market strategy and created cost design from the feed-forward viewpoint. Chinese enterprises identify and select advanced apparatus and technologies from across the world, combine them and use or transform them

into the cheapest and highest quality goods by using their own cheap labour and resources according to the international market condition, sell them first in the domestic market and continually extend their business to Western countries through the Asian and African markets. Their production and market strategy depends upon Mao Zedong's doctrine of rural revolution (revolution from rural to urban communities). Cheng Dongsheng and Liu Leilei (2008) explain Huawei's technology strategy as follows: 'Its purpose is not to become the technology leader, but to weaken, give a blow to, and annihilate a rival in a market. Therefore, we adopt different methods and develop different levels and kinds of technologies against different rivals under different situations.' This way of thinking is derived from Mao Zedong's martial strategy. According to this doctrine, Chinese enterprises try to reap everything they can from the international market. Their main strategy is price-oriented, since quality is guaranteed by the advanced parts and technologies imported from foreign countries and abundant cheap domestic labour. As a result, the strategy is short-term in nature and rather similar to America where the stockholders' standpoint is regarded as important. Their business growth is very strong and fast, although short-term price competition can drive some of them into dangerous situations or indeed just short of bankruptcy. Indeed, the law of the jungle extends from the domestic to the international market, naturally creating a bipolar division between successful and defeated enterprises in the domestic market. This type of management system is known as the 'combined or modular management system' which not only optimally combines a system of advanced parts and technologies introduced from foreign countries, but also harnesses internationally superior technologies and markets just like a 'combine harvester'.

The Comparison of the Chinese Management Accounting with the Japanese

As already mentioned, their strategic management is simultaneously global and aggressive. Japanese management accounting, on the other hand, is characterised by the integration of market strategy and cost management and feed-forward control, in which cost design is carried out on the basis of virtual or estimated markets by establishing its own development and design of technologies and products. The long-term virtual cost is reciprocally collated with short-term competitive cost in the target cost at the level of product design prior to production. This is altogether long-term strategic cost management, characterised by self-development and design of the production system based on market strategy. We can sum up these features in Figure 2 (Nishimura, 2003).

Thus, the contemporary production and management system of Chinese enterprises are characterised by feedback control and are a modular in which the best parts and technologies harnessed globally are combined with cheap domestic labour and resources in the most suitable form. This integration of foreign advanced

technologies and cheap labour has produced a fan-shaped market strategy in which marketing has gradually spread from the domestic to the Western markets through the Asia-African markets. Therefore, this short-term and aggressive strategy with feedback as its control, which is characterised by repeated 'trial and error' (practices and reflections) based on the law of the jungle, is in stark contrast to the feed-forward strategy of Japan.

Figure 2: Framework of Japanese Management Accounting

Chinese cellular manufacturers have been strongly concerned with technology superiority, since they believed that it could lead to the monopolistic dominance over the international market. Because market strategy was not integrated with strategies of original technology development beforehand, in other words, it relied on the feedback strategic system, the immoderate dependency on overseas technology caused a bipolar diversity between the defeated and undefeated enterprises.

Although foreign enterprises also use cheap labour and resources in China and combine them with their own technologies to produce strategic competitive goods and promote their sales in the Chinese market, at present Chinese enterprises more effectively and more efficiently use foreign technologies from the global viewpoint of combining them with their labour and other resources in order to place their price-competitive goods in the international market (Figure 3). In particular, TCL group [(3)] placed priority on the internationalisation of product manufacturing ahead of product marketing, and Ai Xinnan (2008) views such a strategy as the cause of this company's ultimate downfall. Bodao [(4)] also adopted the internationalisation of

technologies and parts under governmental support and extended its market into small rural towns in China (Kawamura, 2008). Placing greater importance on production internationalisation rather than marketing internationalisation has become a general trend among mobile phone manufacturers (Li, 2007).

Figure 3: Framework of Chinese Management Accounting

While many Chinese enterprises can easily make inroads into new markets helped by short-term technology development, price competition, and the import and application of foreign design technology and parts, most of them promptly fall into a bad situation. The reason for this is the big investment risks entailed in developing a practically indistinguishable technology under competition conditions of severe cost reduction when the demand of the market is supplied by those enterprises which are in a more advantageous position in terms of price competition. Such a situation aptly illustrates the operation of 'the survival of the fittest' in the Chinese market and its related markets. In the production area of cellular phone machinery, Huawei(5) and ZTE(6) continue to be prosperous and to grow, while Bodao(4), Xiaxin(7), and TCL(3) struggle with adversity (Tables 5 and 6). Right now, huge multinational corporations such as Huawei and ZTE, which have tremendous capital power and tie up with governmental policies, are emerging from China to shape the third wave of management and management accounting globally.

When we come to think of the Chinese type of management accounting from not the historical but spatial viewpoint, it is characteristic of speed and the cheapest one based on world marketing strategy and modular management against profitability and efficiency based on strategic decision-making and organisational identity in the US and the integration of low cost and high quality based on marketability (market-share) and technological development in Japan. Thus, the Chinese management accounting stresses speed economy, value chain and

conformity: selection and concentration, and nationality and internationality of management accounting.

The modular or combined system of Chinese management accounting focuses particularly on a global and practical viewpoint which is more in favour of the American management accounting methods (e.g. ABM, BSC, value chain, and EVA) than the Japanese methods, and simultaneously it is interested in the concepts of speed economy, multilateral and cross economy, empirical study, corporate governance, and conformity. Presently, Chinese enterprises encounter intense international competition as a result of joining the WTO (the international market), although they have undoubtedly learnt much about the aforementioned advanced management accounting methods used overseas. Thus, they recognise the advantages and disadvantages of these new methods and are busy creating a new type of management accounting based on internationalisation.

The Bipolar Diversity of Chinese Enterprises and Reorganisation

There exists bipolar diversity in the cellular phone industry between firms showing sustainable growth and firms that have experienced defeat as a natural consequence of short-term severe price competition. Bodao, TLC, and Xiaxin companies very rapidly fell into decline and since 2004 have yet to recover. Figures 4, 5, 6, and 7 indicate the stably growing financial situation of ZTE against the rapid drop in sales and profits of Bodao and Xiaxin.

Figure 4: Trend of Accounting Index in ZTE [(2)]

Source: ZTE Annual Reports.

Figure 5: Sales, Cost and Profit in ZTE [2]

Source: ZTE Annual Reports

Figure 6: Trend of Accounting Index in Xiaxin

Source: Xiaxin Annual Reports.

Figure 7: Trend of Accounting Index in Bodao [(2)]

Source: Xiaxin Annual Reports.

Conversely, Huawei and ZTE continue to grow as world companies. As Table 6 and Table 7 show, a fundamental difference of cost rate to sales exists between the former and the latter groups. In 2006 and 2007, the rates of the former ranged from 80.1% to 92.4% and 83.5% to 98.66%, respectively, while those of the latter were 63.8% and 64.1% in the same years.

Table 6: Business Comparison of the Main Chinese Producers of Cellular Phone Terminal Devices for 2006

Items	Xiaxin	Bodao	TCL	Huawei	ZTE
Cash ratio % (1)	13.95		23.87	22.2	64.83
Liquid ratio %	92.95	120	97.38	132.5	145.6
Return on total assets %	-2.45	-11.21	-8.8	7.56	6.25
Cost ratio to sales % (2)	80.13	92.42	84.97	63.8	64.07
Turnover of total assets (times)	1.26	2.15	2.13	1.13	1.03

*(1) =cash or its equivalent/liquid liability; (2) =sales cost/total sales revenue
Source: see note (2)

Table 7: Business Comparison of the Main Chinese Producers of Cellular Phone Terminal Devices for 2007

Items	Xiaxin	Bodao	TCL	Huawei	ZTE
Cash ratio %	6.56		33.79		43.11
Liquid ratio %	66.41	114	122.08	140	180.53
Return on total assets %	-25.40	-24.97	3.88	6.39	5.83
Cost ratio to Sales %	90.64	98.66	83.47	66.1	66.1
Turnover of total assets (times)	1.14	1.92	1.89	1.19	0.9

(1)=cash or its equivalent/liquid liability; (2) =sales cost/total sales revenue
Source: see note (2)

In addition, since the turnover of total assets in the former was relatively higher than that in the latter group, profits were reduced because of the high cost ratio to sales even when sales increased. When fixed assets reduced, the business of the former worsened because of incompetent technology development and a high turnover of total assets, leading to the need to downsize. As a result of such circumstances, the former not only fared badly in terms of cash ratio, liquid ratio and return on total assets than the latter, but also their return on total assets fell into the red within a period of just two years.

The Possibility of a New Potential in World Management Accounting

If we evaluate the present management accounting in China from the perspective of its component parts rather than as a whole, we can variously point out weak points. However, no-one can ignore Huawei's global strategy of combination (modular) system. From the global viewpoint, Huawei, with its strong capabilities in development and design which it combines with the most advanced technology and parts while utilising cheap domestic labour and other resources, should be able to attain its full growth potential as one of the strongest multinational companies. At present, the possibility clearly exists for a global enterprise from China such as Huawei to establish a new wave of management accounting that will spread globally, even though such a huge multinational enterprise will eliminate many weak enterprises along the way and further the bipolar divergence of enterprises in China. Even Bodao, through its complete transformation to a stated-owned company with broadly raised social capital and strong ties between its board and the government, could become a huge multinational enterprise and also push forward the third wave if it establishes such a strong presence in terms of design and development as Huawei and adopts a global combination strategy. The Chinese government is presently actively promoting the strengthening of autonomous innovation-competence of private firms (Hashida, 2008). Against this backdrop, the third wave of management accounting could, quite conceivably, be born in China.

Figure 8: Reorganization of Fenghua Bodao Company

Note: SOC = State-Owned Corporation; F = Founders; G = Government
Source: Bodao Annual Reports 2004 and 2008 (see note (2))

Figure 9 shows the control relationship in which two state-owned enterprises (XEIIG and XEIC) have a strong influence on Xiaxin Electronic Joint Stock Limited Company (XEJC) through stock holding and their indirect control of other companies. The stock holding consists of 59.8% state-owned stock holdings (257.04 million stocks) which are not dealt with on the stock exchanges and 40.2% Renmin Bi general stocks (172.8 million stocks) which are dealt with on the exchanges. At the same time, such an ownership relation complicates the relationships of control within the company; the president of XEJC legally represents eight companies including American and Singapore subsidiaries and two other directors each hold positions of legal representation with other related companies, and the vice president of XEIIG holds the position of Chairman of the Board at XEJC and a secretary of the Party committee and the vice president are directors of XEJC.

With strong governmental funding, the reorganised enterprises will be able to execute the same policy as Huawei's global and integrated strategy of combination (world marketing strategy and module system). Chinese enterprises will, therefore, be able to shift from the old dictatorial type of management to the new combined type in which the best combination of international technologies and management accounting methods is integrated by the harnessing of world markets. If other countries take for granted their use of Chinese labour and other resources to

Figure 9: Xiaxin Electronics Joint Stock Company and Control
Source: Xiaxin Annual Reports (see note (2))

expand their share in the Chinese market, before they know it, their best technologies and parts will be exhausted and their markets already taken by Chinese big enterprises. We should all take more notice of the relationship between this new phenomenon emerging from China and the formation of a global third wave of management accounting.

Conclusion

This paper has examined recent trends in the transformation of Chinese enterprises and the relationship of such transformation with management accounting, pointing out the possibility of a new wave of management accounting emerging from China, although we cannot yet witness its concrete form. Although is examined only the general framework of present management accounting in China is examined, it makes available some symptomatic evidence for the possibility of this new wave, from the viewpoints of the economic situation and business management.

In cooperation with one of Toyota-affiliated firms, some Japanese researchers, impressed with the remarkable growth of Chinese competitive power, proposed 'Product Management Accounting' related to 'Sustainable Business Enterprise' in which module idea is applied to product-oriented management system (Kawada, 2003). The integration of the world marketing strategy and module management system will be developed in various forms of management accounting in order to aim at speed and global marketing. The management system in Dell Inc. gives us a fundamental idea of the new wave, since this company does not design and

produce its own parts and only assemble them on the basis of direct sales and 'Build to Order's system' (system of orders-received production) (Negoro, 2000). This idea may be the original form of the Chinese module system. Chinese firms actualised it in the cellular phone production and connected it with the world marketing strategy. The integration of global marketing and module management system will become the mainstream of international management accounting as a result of Chinese management development.

The global development of Chinese enterprises leads to generalisation, practicability, and a cross-science approach in management accounting, and there is a fair opportunity for a Chinese type of management accounting to gain general currency in the international market. The behaviour of Chinese enterprises provides suggestions as to the future development of international management accounting; enterprises worldwide would be wise to learn from the Chinese example, developing and creating the most advanced technologies and management accounting methods in the context of intense international competition while at the same time combining foreign advanced outcomes with its own technologies and methods to create a new type of management accounting which is superior in cost and quality.

The global development of Chinese enterprises will serve to further intensify international competition and "the law of the jungle" in the international market. Simultaneously, management accounting will be regulated by this law. In order to realise a globally peaceful and stable society, we should move towards a true third wave of international management accounting which is based on sustainable growth of the global economy and environmental and ecological preservation. All management accountants should assume responsibility for making clear the relationship between economic competition and social stability. Therefore, they should more eagerly study management accounting from the viewpoint of enterprise social responsibility and governance, and more deeply clarify its relationship with management accounting from the scientific viewpoint. At present, management accounting cannot be described independently of enterprise governance since the former is not separable from the latter in present practices.

Notes

1 This article concerns recent management accounting practices and research in China, and the present paper largely refers to its contents on the new wave of international management accounting: Lin Wanxiang, Chen Xujiang, Bu Danlu, and Xicun Ming (A. Nishimura), Management Accounting in China: Present State and Future Prospect, *Asia-Pacific Management Accounting Journal*, Forthcoming.

2 Data for each cellular phone manufacturer are quoted from their financial reports and edited for the purpose of this article: http://www.chinabird.com/zh-cn/about/; http://money.finance.sina.com.cn/corp/go.ghp/vFD_FinancialGuideLine/stocid/

600057/displaytype/4.pthml; http://www.cinafo.com.cn/gszx/gszx000100.html;http://www.cinifo.com.cn/gszx/gszx6000057.html; http://share.jrj.com.cn/cominfo/ggdetail_2008-06-07_600057_648490_stock.htm: ZTE Corporation Annual Report, 2007 and its Summary; Xiaxin Electronic Joint-Stock Company Annual Report 2005, Annual Report Summary 2006 and Annual Report 2007: Huawei Technologies Co., Ltd Annual Report 2004, 2006 and 2007.

3 TCL refers to the TCL group which was established in 1980 by a local government in Guangdong Province, which became TCL Communication Facilities Corporation, Ltd in 1985 (Hashida, 2008).

4 Bodao is officially Fenghua Bodao Company, which was established in 1992 by four private capitalists and local government. It rapidly grew in the domestic of cellular phone production market, passing Western top manufacturers (Nokia and Motorola) in market share in 2003 (Marukawa, Bodao Company).

5 Huawei Technologies Co., Ltd was established as a private science and technology company in 1988 by Ren Zhengfei who was discharged from military service. It is well known for its rapid growth in mobile communication and information machinery marketing (Hashida, 2008; Marukawa, Huawei Technologies Co., Ltd)

6 ZTE is Zhongxing Communication Stock Co., Ltd established in 1985 in Shenzhen. It is one of the two most successful companies in Chinese communication facilities production (Li, 2007).

7 Xiaxin is officially Xiaxin Electronic Co., Ltd and is in the same situation as Bodao.

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