Organisational influences on management accounting toolkits in Chinese enterprises: an exploratory study

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Abstract: The purpose of this paper is to investigate Chinese management accounting practice regarding the question whether enterprises use a common set of management accounting instruments. In addition, the study explores the influence of selected organisational variables on the adoption of specific management accounting practices (MAPs). It utilises a Mandarin-language online survey of key actors and evaluates selected information from personal interviews with CFOs in Mainland China. The research finds no evidence of a common mix of management accounting tools in the sample of Chinese enterprises under investigation. However, the study does demonstrate that organisational variables have a significant impact on specific management accounting tools.

Keywords: management accounting; China; state-owned enterprises; privately-owned enterprises; organisational factors; joint ventures; controlling; small- and medium-sized enterprises; SMEs; management accounting practices; MAPs.


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1 Introduction and literature review

What influence do such organisational variables as size, ownership form, accountant training, and participation in joint ventures with foreign partners have on the adoption of specific management accounting practices (MAPs)? Whatever that may be, does some sort of standard toolkit emerge as a result? In other words, do most enterprises eventually come to use a common set of management accounting instruments? Much management accounting research focuses on these questions. This exploratory paper provides tentative answers to them based on efforts to improve Chinese management accounting practices.

China’s rapid economic development over the past three and a half decades has been unprecedented and thus has attracted worldwide attention. Since the country’s ‘Opening’ in December 1978, its political leadership has transformed what had been a highly centralised, socialist economy into a more market-oriented system. In doing so, Chinese enterprises also have benefited from foreign knowledge transfers, including the adoption of modern management accounting instruments for controlling purposes.

In fact, China has a considerable history of adopting foreign management accounting practices. In the 1950s, it borrowed work team cost centres and standard costing from the Soviet Union, although Chinese state-owned enterprises (SOEs) typically did not use them for control and performance measurement purposes (Burns and Stalker, 1961). Then, in the late 1970s, as it opened itself to the outside world and established four Special Economic Zones (SEZs), China also successfully introduced the Western concept of profit centres. Yet success with investment centres and other modern practices proved more elusive due partly to the low skill level of Chinese accounting personnel (Skousen and Yang, 1988). Nevertheless, China subsequently sought to improve and update its management accounting (Xiang, 1998; Chan and Rotenberg, 1999). Early efforts aimed at converting financial statements from Soviet-style, cash-based accounting to accrual-based financial accounting as well as building new ownership and corporate governance structures (Lee, 2001). Such policies proved useful in increasing efficiency and effectiveness, improving manager decision-making, enhancing learning and reducing corruption.

More recently, the country has been re-evaluating its prior experience, trying to find those management accounting practices that are most suitable within a Chinese context (Wu and Drury, 2007). By joining the World Trade Organization (WTO) in 2001, China opened itself further to foreign investors and their management concepts, while simultaneously creating opportunities for global expansion of its own enterprises. As a consequence, Chinese firms have relied heavily on foreign direct investment (FDI) and joint ventures (JVs) to speed their acquisition of Western knowledge and, hence, modernisation (Hong and Sun, 2006).

China’s opening also has led to complex institutional changes that have exposed its companies to intensifying domestic and foreign competition (Li et al., 2008). At the same time, both top Chinese Communist Party officials and enterprise managers have become aware that the exponential growth rates they have enjoyed for three decades are coming to an end (Halmtaier, 2013). To meet the resulting challenges, the Chinese government and businesses generally are eager to learn more about modern practices, including management accounting for controlling purposes (O’Connor et al., 2011).
More recently, in 2014, the Chinese Ministry of Finance issued guidelines for the comprehensive development of management accounting systems. The ministry’s goal is to create a uniquely Chinese management accounting within the next five to 10 years in keeping with its so-called ‘4+1’ model. The model foresees

- creation of a Chinese theoretical framework for management accounting
- development of Chinese management accounting guidelines for enterprise use
- major improvements in the education and training of Chinese management accounting personnel
- better IT-support for management accounting.

The ‘+1,’ in turn, refers to making management accounting consulting services more widely available (MF PRC, 2014).

Given the great emphasis, Beijing has placed on accounting reforms both historically and quite recently, it is important to examine the contents of the management accounting toolkits currently in use in Chinese enterprises. This paper adds to the existing literature in four main ways. First, in contrast to previous studies which relied on more general management accounting frameworks, it examines the specific tools employed. Second, recognising the rise of private business in the Chinese economy, it encompasses not only the SOEs and joint ventures (JVs) included in earlier studies, but also privately-owned enterprises (POEs). Third, it focuses on a small group of organisational variables. One or another prior investigation has found each of them useful for analysing the adoption of various instruments, but researchers heretofore have not subjected them to comparative analysis. Fourth, it utilises recently gathered data, which better reflect the state of current Chinese management accounting practices.

In doing so, this study contributes to a major body of accounting research, namely the diffusion of management accounting practices. Earlier investigations have identified both coercive and voluntary institutional pressures as well as the economic environment as general factors influencing an organisation’s accounting behaviour, change in the design of its management accounting system, and the diffusion of different conventions (Al-Omri and Drury, 2007; Ansari et al., 2010). A subgroup of these investigators has concerned itself with the adoption of Western management accounting concepts in transition countries, particularly in China. Consequently, several surveys have examined a wide range of variables potentially explaining the behaviour observed. One can group those explanatory variables as follows (Wu and Boateng, 2010; Zheng, 2012):

- culture-related factors encompassing traditional management norms and practices (Hoon-Halbauer, 1999; O’Connor et al., 2004; Chanegrí, 2008)
- firm-related factors, such as size, and age of JV (Firth, 1996; O’Connor et al., 2004)
- partner-related factors, including an allied foreign company’s influence (Firth, 1996)
• host country-related factors, such as government policy, legislation, and administrative regulation (O’Connor et al., 2004; Wu and Boateng, 2010)
• economy-related factors, for example, the level of market competition (Granlund and Lukka, 1998).

The few empirical studies of Chinese management accounting practices, however, principally have examined variables affecting the diffusion of Western conceptual approaches rather than the adoption of specific tools. For instance, Chinese SOEs involved in JVs with a foreign partner appear to make more changes in their management accounting practices, adopting techniques the joint venture employs. As a result, Chinese SOEs have experienced coercive (subsidiary companies adopting parent company MAPs), mimetic (companies copying models perceived as successful), and normative (qualification of management accountants through education and professional networks) institutional isomorphism (Firth, 1996). Besides JV participation with an American or European partner, greater market competition, transfer of Chinese accounting personnel, physical proximity, availability of training within the JV, and both the enterprise’s size and age appear to facilitate the diffusion of modern management accounting methods (Firth, 1996).

Another study focused on such dependent variables as formal approval and quality control procedures, performance targets, and directional sign change in management accounting controls. It, too, found the JV partner’s domicile, competitive pressure, and the availability of training to be important influences on MAPs. In addition, it expanded the list of useful explanatory variables to include the JV’s size, use of limited-term management contracts, lack of trust in senior management, and concern for the loss of power and one’s influence with immediate supervisors (O’Connor et al., 2004). On the other hand, the investigation concluded that enterprise age had a negative effect, while market competition had no statistically significant impact. Subsequent research discovered a positive association between the threat of foreign entrants and the importance firms place on their management accounting systems, with the association being stronger for companies competing predominantly in the domestic market than for enterprises acting mostly abroad (O’Connor et al., 2011).

Still, the use of Western, as opposed to traditional socialist management accounting controls by Chinese SOEs is in its infancy. Apparently, it is one of the biggest challenges currently facing Chinese suppliers. In a sample of 55 firms, less than 10% reported using master budgets based on sales forecasts and operational planning. Moreover, there was a marked lack of coordination in such planning functions as marketing and purchasing when compared to world-class norms (Handfield and McCormack, 2005). The situation is similar to many privatised Chinese firms, where the most widely adopted MAPs are strategic planning and budgeting systems (Chow et al., 2007).

More recent investigations have discovered some Chinese enterprises in JVs with foreign partners that employ advanced manufacturing techniques relying on modern management accounting practices. Together with the better quality of their accounting and management teams, this reliance endows the JVs with advantages relative to SOEs in mitigating long-standing, traditional customs (Wu and Drury, 2007). Likewise, both the ownership form of the enterprise (JV or SOE) and, to a lesser extent, the nature of the accounting techniques involved, influence the adoption of MAPs (Wu et al., 2007). Multivariate analysis indicates that firm size, the nationality of the foreign partner as well
as knowledgeable senior managers and employees have positive effects on changes in the management accounting practices of foreign-partnered JVs (Wu and Boateng, 2010).

In summary, previous studies have identified the significance of organisational characteristics such as the provision of management accountant training, company size, form of ownership (SOE or JV), and partnerships with Western businesses as key variables affecting the adoption of modern MAPs. In contrast, they have produced either no support or diverging evidence for hypotheses suggesting the Chinese government has a significant influence on changes in management accounting behaviour of JVs and SOEs (Wu and Boateng, 2010).

The next section develops testable hypotheses. The part following it then explains the research design and methodology employed, identifies the units of analysis, describes the data collection procedures, and summarises characteristics of the survey respondents and their enterprises as well as the individuals personally interviewed. Thereafter the paper examines the association of several organisational variables with the adoption of various management accounting instruments. The ensuing discussion interprets the analytic results and supplements them with information from personal interview responses.

2 Hypotheses

The present study tests four null hypotheses derived from results of the earlier investigations just discussed.

2.1 Organisational size

Organisational size is a significant factor in the design of management accounting systems (Abdel-Maksoud, 2011; Gordon and Narayanan, 1984; Pierce and O’Dea, 1998; Rossi, 2014). Large enterprises likely have access to both more human and more financial resources and thus are better positioned to modify, upgrade, or replace existing systems. The number of employees is an indicator of enterprise complexity. Presumably, executives are more likely to find management accounting tools useful for controlling purposes and to depend on them more heavily in more complex decision environments. Annual sales revenue, on the other hand, is an indicator of the financial resources available to an enterprise. Companies with more financial resources ought to be more likely to invest in the expensive IT-systems essential to support modern management accounting activities (Halbouni and Nour, 2014). What’s more, due to their large size, these businesses can spread the fixed outlays associated with such systems across more product units, thereby lowering per unit costs and making system acquisition financially more feasible. In the Chinese context, researchers have found that organisational size facilitates the diffusion of modern management accounting methods (Firth, 1996; Lin and Wu, 1998; O’Connor et al., 2004; Pan and Li, 2000; Wu and Boateng, 2010). Apparently, implementing change in management accounting practices may require a commitment of substantial human or financial resources. These insights lead to (null) hypotheses $H_1$ and $H_2$:

$H_1$: An enterprise’s size, measured by the number of its employees, does not affect adoption of management accounting instruments in China.
\(H_2: \) An enterprise’s size, measured by its annual sales revenue, does not affect adoption of management accounting instruments in China.

2.2 Form of ownership

The form of ownership plausibly may influence how firms are managed and controlled. In the Chinese context, whether a business is an SOE, a JV, or a POE, therefore, could influence the content of its management accounting toolkit. Previous research has revealed significant differences in the adoption of management accounting practices between JVs and SOEs generally (Porporato, 2013), and in the Chinese context in particular (Firth, 1996; O’Connor et al., 2004; Wu and Drury, 2007). These findings lead to a third (null) hypothesis:

\(H_3: \) The form of ownership does not influence adoption of management accounting instruments by Chinese businesses.

Chinese authorities actively have encouraged the formation of JVs as a preferred entry vehicle for foreign direct investment and the expertise often accompanying it (Firth, 1996). Participation in a JV also may subject a Chinese enterprise to elements of coercive isomorphism due to its foreign partner’s insistence on using best management accounting practices throughout an export value chain. Additionally, some investigators report that foreign partners in JVs often assist the change process through on-the-job and/or formal in-house training of Chinese personnel (Child and Markoczy, 1993; Yan and Gray, 1994; Firth, 1996). Earlier research indeed has found foreign joint venture experience to correlate with the adoption of certain Western management accounting techniques (Firth, 1996; O’Connor et al., 2004; Wu and Boateng, 2010). Moreover, Chinese JVs with foreign partners are more inclined to adopt modern management accounting practices than are domestic SOEs (Wu et al., 2007; Wu and Drury, 2007). Hence, the fourth (null) hypothesis is:

\(H_4: \) Participation in joint ventures with foreign partners does not influence the adoption of modern management accounting instruments by Chinese enterprises.

3 Methodology

3.1 Survey and interview questionnaires

To gain the necessary data, the authors of this study first decided to focus on key actors having a direct view of the management accounting techniques and practices in use. Next, they prepared and pre-tested a Mandarin-language online survey with closed-ended questions.

Whereas there is no readily accessible registry including all Chinese enterprises, previous empirical investigations have relied on convenience samples. That also was the case here. The contact persons, who identified potential survey respondents in their respective companies, came from a population of the authors’ former Chinese MBA students, together with their friends and acquaintances. The authors then made the survey available to the potential participants to answer anonymously on a voluntary basis.

Data based on such key informants may be biased and thus of low reliability (Mezias and Starbuck, 2003). To mitigate this problem, the study only collected data from
informants with adequate competency. In addition, the data collected pertained solely to observable behaviour or clearly defined objectives, not theoretical constructs. Nevertheless, a residual possibility of bias remained. To limit single-method bias and to compensate for the weaknesses inherent in online surveys, the authors subsequently conducted 10 personal interviews with a subset of the respondents. These interviews also helped to corroborate and extend the study’s findings.

3.2 Data collection

The target populations consisted of

- the internal management control departments of Chinese enterprises for the online survey
- company CFOs for the interviews.

The survey went online in mid-March 2013. The authors emailed a reminder message two weeks later. Although survey data collection formally ended in mid-April 2013, seven surveys received a bit later also were included in the data analysed. In total, 124 of the 313 companies making up the panel responded. Relative to the response rates associated with most survey research, the 39.6% participation rate attained here appears to be quite respectable. Additionally, four personal interviews with Chinese CFOs took place during June and another six in September 2013.

3.3 Descriptive characteristics of the surveyed enterprises

The composition of Chinese GDP by sector is: agriculture 10.1%; industry 45.3%; and services 44.6% (CIA, 2013). Excluding agriculture, industry and services, therefore, stand in the ratio of 50.3% : 49.7% to one another. For the 88 enterprises in the sample studied, whose sector could be identified unambiguously, the ratio is industry (automobile, construction, chemical, other manufacturing, consumer goods, food processing, machine building, pharmaceuticals and medical equipment, raw materials, and software) 47.7%; services (retail, financial services, IT, logistics, telecommunications, insurance, and public utilities) 52.3%. Despite relying on a sample chosen for its convenience, the resulting distribution of firms by sector approximates the structure of the Chinese economy outside agriculture and mining rather closely.

Most businesses (70) participating in the study were small- and medium-size enterprises (SMEs), with fewer than 250 employees. Nevertheless, the study population’s range on this measure was wide, extending to 11 companies with more than 50,000 workers each. Classified according to sales revenue in 2012, the distribution was more even, with 35 companies reporting less than ¥ 250 mio. and 15 enterprises recording more than ¥ 50 bil. in sales.

The firms also displayed an interesting mix of ownership forms. Wholly private ownership was the dominant form (76 companies), followed by wholly state-owned enterprises (31). However, there also were state-owned businesses with minority private participants (7) and privately-owned businesses with minority participation by the state (8). Furthermore, 17 of the enterprises were Chinese joint ventures with a foreign partner.
3.4 Descriptive characteristics of survey respondents

The online survey’s first section also solicited some demographic information about the respondents. 57 persons gave their gender as male and 65 identified themselves as female. They were as young as 20 and as old as 52, with a mean age of 32.8 years.

All 124 respondents answered a query about their position. With 17 mentions or 14.5%, by far the most frequent answer given was ‘licensed accountant’. Asked how many years they had held their current position, 118 participants responded. Answers ranged from as briefly as two months to as long as 30 years, with the average being a little under six years.

In addition, 87 or 70.7% of respondents said they had received specialised, on-the-job training for their current position. Of them, more than half (53) received their training on a voluntary basis from an external provider, while a somewhat smaller number (47) had taken part in mandatory, full-time trainee programs within their company. Another 38 individuals had participated in a company trainee program, but on a voluntary basis. With a total of 138 answers, some sizable portion of the 87 respondents must have had training from two or all three sources.

To summarise, then, a respondent to the online survey most likely was a female, in her early 30s, who was a licensed accountant and had held her current position for about six years. She had participated in training for internal management control on a voluntary basis with an external provider, but had received some internal training too, either in a mandatory or a voluntary trainee program. Her company was a wholly privately-owned Chinese SME.

3.5 Descriptive characteristics of interview respondents

Ten individuals participated in personal interviews, each lasting between 1 h and 2 h. Eight of them were either the CFO or the finance department director, one was the company’s owner, and one was the senior accountant. Five were men and five were women. They ranged in age from 27 to 49 years old. All had received additional training for their current position. They had between five and 20 years employment experience.

Four of the companies employing them were POEs and four were SOEs. Two other firms were JVs with foreign partners: one involving private Chinese ownership and a German company, the other joining a Chinese SOE with an American partner. Six of the firms were from the manufacturing sector, the other four from service industries. The enterprises had between 30 and 15,000 employees. Company sales revenue in 2012 varied between ¥ 30 million and ¥ 10 billion. Accordingly, the individuals selected for personal interviews and the businesses employing them appear to be broadly representative of the survey respondents and their companies.

4 Results

The survey asked respondents about their use of 15 specific management accounting tools, each of which appeared in at least one earlier study (Firth, 1996; Joshi, 2001; Wu et al., 2007). Figure 1 ranks these instruments in keeping with the percentage of surveyed enterprises using them. The two most popular tools by far were budgeting and project costing. Forecasting and cost centre accounting also enjoy widespread, but not
universal, employment. Chinese controllers used target costing and product profitability analysis even less, and little more than half of them engaged in standard costing or profit centre controlling. Use of customer profitability analysis and scenario planning was less frequent still. Benchmarking, shareholder value assessment, lifecycle accounting, and balanced scorecards seldom found employment, while variance analyses were relatively rare. Thus, the evidence shows there currently is no Chinese management accounting toolkit containing any combination of the various instruments in general use.

Figure 1  Controlling tools used

The explanatory variables employed in analysing the dependent variables were: additional management accountant training; number of employees (one dimension of organisational size); annual sales revenue (the second dimension of organisational size); form of ownership; and participation in a foreign-partnered JV. Table 1 reports the interrelationships among the explanatory variables. There is a weak, but clear tendency for respondents in enterprises with more employees to have had on-the-job training. Companies with more employees also are highly likely to generate larger sales revenue as well as to be moderately prone to state ownership and participation in joint ventures with foreign partners. For their part, firms with larger sales revenue are quite apt to have more employees, while being somewhat inclined toward state ownership and foreign-partnered joint ventures. Lastly, joint ventures with foreign partners are moderately liable to have more employees and higher sales revenue. Due to correlations among the causal variables, multi-collinearity is likely and precluded development of a multiple regression model explaining the adoption of management accounting tools.

Table 2 shows associations between the explanatory variables and whether a firm uses a particular management accounting instrument (use was coded 1, non-use 2). The most helpful explanatory variable is size, measured by the number of an enterprise’s employees. Businesses with more employees are more likely to use 11 of the 15 tools studied. Tools $T_7$, $T_8$, and $T_{12}$ have statistically significant relationships with size as measured by the number of an enterprise’s employees, but with none of the other
potential explanatory variables. In the case of instruments $T_4$, $T_{10}$, $T_{13}$, and $T_{14}$, there are no statistically significant relationships with any of the candidate explanatory variables. On the other hand, tools $T_1$, $T_2$ and $T_{15}$ correlate significantly with other explanatory variables. However, their strongest relationship is with the number of employees. Accordingly, (null) hypothesis $H_1$ fails under empirical testing: The size of a Chinese enterprise, as measured by the number of its employees, in fact often does influence its adoption of management accounting instruments.

Table 1  Matrix of statistically significant correlations among explanatory variables

<table>
<thead>
<tr>
<th></th>
<th>Additional management accountant training</th>
<th>Number of employees</th>
<th>Annual sales revenue</th>
<th>Form of ownership</th>
<th>JV with foreign partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional management accountant training</td>
<td>-0.198*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of employees</td>
<td>-0.198*</td>
<td>0.729**</td>
<td>-0.296**</td>
<td>-0.391**</td>
<td></td>
</tr>
<tr>
<td>Annual sales revenue</td>
<td>0.729**</td>
<td></td>
<td>-0.317**</td>
<td>-0.357**</td>
<td></td>
</tr>
<tr>
<td>Form of ownership</td>
<td>-0.296**</td>
<td>-0.317**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JV with foreign partner</td>
<td>-0.391**</td>
<td>-0.357**</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** and * represent $\alpha < 1\%$ and $< 5\%$, respectively.

When measured by annual sales revenue, larger enterprises are significantly more inclined to use instruments $T_1$, $T_2$, $T_3$, $T_5$, $T_6$, and $T_{15}$. Thus, this variable also appears to influence the adoption of at least some of the management accounting tools surveyed. So, with regard to them, the test results do not support (null) hypothesis $H_2$: As measured by annual sales revenue, the availability of financial resources associated with an organisation’s size in some instances does correlate with the use of management accounting instruments.

It is perhaps unsurprising that size correlates significantly with most of the tools studied. Yet, it is noteworthy that although the two measures of this variable (i.e., number of employees and annual sales revenue) correlate strongly and statistically significantly with one another ($0.729**$), the strengths of their associations with the same tool sometimes differ markedly. Such differences not only exist when one measure correlates with a given instrument, while the other measure does not. They also occur when both measures covary with a tool’s usage. For example, $T_1$’s correlation with the number of employees is $-0.492**$, but only $-0.315**$ with annual sales revenue. Similarly, large differences likewise result for $T_2$ with a number of employees ($-0.408**$) vs. $T_2$ with annual sales revenue ($-0.278**$) and for $T_{15}$ with number of employees ($-0.408**$) vs. $T_{15}$ with annual sales revenue ($-0.230**$).

Additional on-the-job training for management accountants (likewise coded 1 for yes and 2 for no) has significant statistical associations with only three of the 15 tools observed. These three tools ($T_1$, $T_9$ and $T_{11}$), though, are rather complex in their application and less frequently used by the enterprises studied. For example, $T_1$ ranks 14th in usage, employed by only 29% of Chinese companies. $T_9$ ranks 8th, used by 51% of firms, and $T_{11}$ ranks 10th, with 44% of the businesses having adopted it. Hence, additional on-the-job training for management accountants just seems to be important
with regard to the adoption of more complex instruments. These relationships could constitute an interesting topic for future study.

Table 2  Correlations between Explanatory Variables and Use of Controlling Tools

<table>
<thead>
<tr>
<th>Tool (No.)</th>
<th>Additional management accountant training</th>
<th>Number of employees</th>
<th>Annual sales revenue</th>
<th>Form of ownership</th>
<th>JV with foreign partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1, Balanced scorecard</td>
<td>0.209*</td>
<td>–0.492**</td>
<td>–0.315**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>T2, Benchmarking</td>
<td>–0.408**</td>
<td>–0.278**</td>
<td>0.197*</td>
<td>0.204*</td>
<td></td>
</tr>
<tr>
<td>T3, Budgeting</td>
<td>–0.213*</td>
<td>–0.256**</td>
<td>0.296**</td>
<td></td>
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</tr>
<tr>
<td>T4, Cost centre accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T5, Customer profitability analysis</td>
<td>–0.191*</td>
<td>–0.196*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T6, Forecasting</td>
<td>–0.204*</td>
<td>–0.281**</td>
<td></td>
<td></td>
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<tr>
<td>T7, Life cycle accounting</td>
<td>–0.247**</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>T80, Product profitability analysis</td>
<td>–0.211*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T9, Profit centre controlling</td>
<td>0.244*</td>
<td>–0.288</td>
<td></td>
<td>0.231*</td>
<td></td>
</tr>
<tr>
<td>T10, Project costing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T11, Scenario planning</td>
<td>0.210*</td>
<td>–0.244*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T12, Shareholder value assessment</td>
<td>–0.307**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T13, Standard costing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T14, Target costing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T15, Variance analysis</td>
<td>–0.408**</td>
<td>–0.230**</td>
<td></td>
<td>0.252**</td>
<td></td>
</tr>
</tbody>
</table>

** and * represent α < 1% and < 5%, respectively.

Companies with a foreign joint venture partner (again coded 1 for yes and 2 for no) are more prone to utilise three (T2, T9 and T15) of the 15 tools under investigation. (Null) hypothesis H4 therefore largely holds true too. All the same, benchmarking, profit centre controlling, and variance analysis are conspicuous exceptions. Given their importance in the pursuit of efficiency and profitability, it could be that Chinese enterprises joint venturing with foreign partners place greater emphasis on these objectives than non-JV firms do.

Inasmuch as form of ownership (coded SOE = 1, SOE with minority POE partner = 2, POE with minority SOE partner = 3, and POE = 4) correlates with only two tools (T1, T2), the evidence largely supports (null) hypothesis H3. The exceptions are benchmarking and budgeting, which SOEs use more frequently than POEs, perhaps due to the formers’ continuing involvement in centralised state planning.

The different numbers of explanatory variables correlating with employment of individual instruments is another notable feature of the analytic results. T2 covaries with four variables; T1, T3, T9, and T15 with three variables; T5, T6, and T11 with two variables; while T7, T8, and T12 have an association with just one variable each. In contrast, four tools, namely project costing (employed by 84% of the enterprises), cost centre...
accounting (70%), target costing (64%), and standard costing (55%) have no statistically significant relationships with any of the organisational variables. In the first two instances, the lack of such associations may be due to the fact that their usage is relatively widespread.

5 Discussion, limitations, and conclusions

The survey results reported above have numerous interesting implications for the understanding of management accounting tool usage in Chinese enterprises. To begin with, modern management accounting instruments are in use in China (Firth, 1996; O’Connor et al., 2004; Wu and Drury, 2007; Wu et al., 2007; O’Connor et al., 2011), but their employment is not pervasive. There is no standard management accounting toolkit consisting of some subset of the investigated instruments in place in most Chinese firms. Previous studies have found that managers in transition economies remain more reliant on traditional instruments and are reluctant to try newer tools (Halbouni and Nour, 2014; Joshi, 2001; Joshi et al., 2011). Despite management accounting techniques having begun to spread within China’s SOEs in the 1980s and 1990s (Firth, 1996; O’Connor et al., 2004; Wu and Boateng, 2010; O’Connor et al., 2011), today many of them still are not ubiquitous in the companies’ practice. Indeed, certain modern tools remain far removed from general acceptance there.

As shown in Figure 1, at least half the enterprises surveyed have not adopted customer profitability analysis, scenario planning, benchmarking, shareholder value assessment, life cycle profitability analysis, the balanced scorecard, and variance analysis for their management accounting practice. A possible explanation for this situation stemming from the CFO interviews is that many executives continue to feel more comfortable with the traditional tools employed during the period of centralised socialist planning such as budgeting, cost centre accounting, and standard costing than they do with newer instruments.

On that account, it is unsurprising to find budgeting to be the most widespread management accounting instrument in China, employed by 86% of the participating enterprises. Yet, the fact that around 15% of the Chinese companies surveyed employ neither of the two most popular instruments (budgeting and project costing) suggests a considerable number of them make no use of these tools at all. The CFOs interviewed offered several explanations for this result. On one hand, budgeting and project costing are not practised universally because some state-owned subsidiary companies just receive budgets and orders from higher authorities. Such firms often enjoy a quasi-monopolistic position in their region. For them, meeting politically-determined, physical output and delivery targets is more important than efficiency and cost reduction. Although their staff members may have management accounting know-how and enjoy adequate IT-support, they do not employ their expertise because those enterprises’ privileged access to credit and communist party patronage ensure their growth (albeit at the expense of potentially better alternatives). On the other hand, POEs often lack the requisite talent, cannot afford the necessary IT-support, and do not have sufficient time available for management accounting activities. Furthermore, their top management focuses mostly on winning the next contract, not on strategic or operational planning. These POEs tend to be family-run SMEs and constitute the backbone of the Chinese economy.
Earlier studies (Firth, 1996; O’Connor et al., 2004; Wu and Drury, 2007; O’Connor et al., 2011), cited management accountant training, enterprise size, and joint venturing with a foreign partner as important influences on the adoption of Western accounting concepts. Consequently, one might have expected them to correlate with the adoption of most, if not all the instruments surveyed. The results here show enterprise size as measured by the number of employees coming closest to meeting this expectation, followed by size as measured by annual sales revenue. Hence, they tend to support previous findings that organisational size affects the design of management accounting systems generally (Halbouni and Nour, 2014; Rossi, 2014), and in the Chinese context in particular (Firth, 1996; Lin and Wu, 1998; O’Connor et al., 2004; Wu and Boateng, 2010).

The results of additional management accountant training, ownership form, and foreign-partnered JVs, though, are more nuanced and pertain to just two or three tools apiece. Given earlier researchers’ findings, why aren’t there more instances of covariation between these organisational variables and the adoption of modern management accounting instruments?

First, the demographic information suggests that top decision-makers in Chinese enterprises still have not realised how important the activities associated with management accounting for controlling purposes are. The persons tasked with them tend to be younger individuals, who are relatively early in their careers and have little experience in their current positions. Without exception, these people have had little university preparation for controlling work. Moreover, almost 30% of the respondents have had no education or training beyond their university studies. The other 70% of survey participants have received some (additional) training for their position. Interviews with Chinese CFOs, however, confirmed that the training they have had mostly concerned internal auditing, corporate performance and/or risk management – not the usage of specific controlling instruments based on modern management accounting practice. What’s more, the youthfulness, professional inexperience, and lack of skills characterising individuals with management accounting responsibilities suggest that their positions enjoy little influence or prestige. It, therefore, seems likely that many Chinese executives remain unaware of the significant role ‘Western-style’ management accounting could play in their organisation – despite whatever diffusion of management accounting innovations has occurred during the last 35 years. Strengthening this impression were statements some CFOs made during personal interviews, in which they said they had heard of particular management accounting tools, but did not know how to use them.

Second, a previous study has investigated the varying impact of the level of training/knowledge of accounting employees on JVs’ and SOEs’ management accounting usage. It concludes that while training/knowledge of accounting employees contributes to change in management accounting practices in Chinese JVs, there is no significant influence on the adoption of such practices in SOEs (Wu and Boateng, 2010). Be that as it may, here the sample includes not only SOEs and JVs, but also a large number of POEs, especially SMEs. For this reason, the resulting differences in the findings simply may stem from the sample’s being more representative of the overall Chinese economy.
This study has three shortcomings, all stemming from the methodology applied. First, the study population is not a random sample of the universe of Chinese companies. Accordingly, the results presented here describe only the convenience population investigated. Second, the survey relies heavily on management accountants’ responses, so that a residual key informant bias is a distinct possibility. Third, correlations among the causal variables (multi-collinearity) and the large number of instruments examined precluded development of an elegant multiple regression model explaining the adoption of management accounting tools.

Nevertheless, the study provides an interesting analysis of selected organisational variables’ influence on management accounting tool usage. It thus extends the exploratory research underway in this area and contributes further to understanding management accounting practice in Chinese enterprises.

References


