

JABM

JOURNAL of
ACCOUNTING, BUSINESS and MANAGEMENT

- An Analysis of Management Accounting System Development from the Structuration Theory Viewpoint**
Anthony Moung Yin Chan, Paul Lo and Kong Ng 1-18
- Impact of Total Asset Turnover Ratios on Equity Returns: Dynamic Panel Data Analyses**
Jeanne-Claire Patin, Matiur Rahman and Muhammad Mustafa 19-29
- The Impact of Audit Committees on US Nonprofit Organizations' Governance**
Husam Abu-Khadra 30-41
- Implicit Taxes Amid Race to the Bottom in a Global Tax Game**
Igor Semenenko, Junwook Yoo and Parporn Akathaporn 42-53
- The Adoption of Financial Accounting Standards for Small Medium Enterprises by Muslim Entrepreneurs**
Muslichah, Sunarto, Anang Amir Kusnanto, Sri Indrawati and Hariyanto 54-65
- The Impact of E-Procurement Systems in the Biomedical Industry**
A. Seetharaman, Nitin Patwa, Simon Lai Koek Wai and Ahammed Shamir 66-85
- After-Tax Discounting: A Research Edge**
Hongtao Guo 86-100
- Rules-Based Accounting Standards and SEC Enforcement**
Devon Baranek 101-118

An Analysis of Management Accounting System Development from the Structuration Theory Viewpoint

Anthony Moung Yin Chan*

Paul Lo†

Kong Ng‡

Abstract

Our study covered the development and evolution of the management accounting system of a subsidiary company in a group. Our study was a longitudinal one starting from the incorporation of the company. We divided this period into five stages according to the major events happened, namely the formation of the company, the invoicing crisis, the conflict with parent company, the conflict with fellow subsidiaries, and the influence of the chief executive.

In our analysis we applied the three dimensions of structure in the theory of structuration (i.e., signification, legitimation and domination). The structuration theory explained the emergence of certain phenomena and events that were not explained by traditional accounting theories. Many events in our study validated the core ideas of the structuration theory which composes of the concepts of structure, system and duality of structure. The phenomena suggested that structure was both the medium and outcome of the conduct it recursively organized. Other features of the theory, such as the dialectic of control and system contradiction, were also applicable.

Keywords: management accounting, system development, structuration theory, signification, legitimation, domination.

I. BACKGROUND AND OBJECTIVE OF THIS STUDY

The objective of this research paper is to analyze the development of management accounting system in organization from the social theory perspective. The writers of this paper have participated in the development and implementation of a number of accounting systems in different organizations. We realize that human factors always dominate in the various stages of system development, rather than the actual functionalities of the system. In this paper, we apply this approach to study the past development of a local company's management accounting system. Among the various social theories, structuration theory developed by Anthony Giddens (one of the most influential social theorists in the contemporary world) is used for this project.

Management accounting provides financial information to various levels of management on the past, present, and predicted positions of a business to facilitate the smooth running of day-to-day operations, efficient decision-making as well as strategic planning. A management accounting system ("MAS") is a set of records, procedures and policies which integrates financial planning and analysis methods, information technology, and internal control to collect and distribute financial information from and to the relevant parties in the organization.

* Professor of Accounting, Ted Rogers School of Management, Ryerson University, 350 Victoria Street, Toronto, Ontario, Canada M5B 2K3. E-mail: myachan@ryerson.ca.

† Manager in the company studied in this paper.

‡ Manager in the company studied in this paper.

Following the rapid development of information technology, the performance and efficiency of MAS has been improved substantially. Online input and real time inquiry become more common as less computer time is required for the processing of raw data. Results of analysis are then presented in reporting forms in a shorten period of time. This also enables the application of advanced techniques on quantitative analysis such as simulation models.

No doubt these empowered systems further enhance the ability of MAS to achieve the purposes of assisting the smooth running of the daily operations, providing supporting financial information to various levels of management for efficient decision-making and formulating long term strategic planning. However, it is generally observed that implementation of a new system or changes made to an existing system often encounter resistance from individuals or groups of individuals within the organization mainly due to conflict and protection of personal interests.

The traditional approach of MAS emphasizes control and analysis of raw data, form of presentation, information flow, timeliness of report, decision support information, etc. This approach treats MAS as a tool to help managers to exercise control and to make efficient decisions. Normally the systems are designed and developed by technical-oriented personnel such as system analysts of the computer department and accountants who do not take into consideration seriously these organizational and social behaviors. Human factors are therefore ignored in the course of system development and thus result in resistance at the later implementation stage (Hopwood, 1979).

The social theory approach studies the interrelations among individuals, the accounting system and the organizational setting, how an individual person responds to a particular presentation of information and how the response of an individual affects the outcome of decision-making. This study also extends to social-psychological aspects of the operation of accounting system in the organizational setting. More and more research papers are written in these aspects to investigate the actual functioning of MAS in an organization. Researchers apply various social theories to explain the phenomena and provide insights as to how individuals interact with the setting of the organization. However, most of these research papers are done by psychologists, sociologists, political scientists and industrial anthropologists rather than accounting scholars. This paper intends to follow this line of research and study one company in details regarding the past development of its MAS. In the following section it will be discussed why the structuration approach among various social theories is chosen in this paper. The objective of this paper is to use the structuration theory approach to analyze the development of the management accounting system of a company in China.

II. LITERATURE REVIEW

Social theory intends to explain the inter-relationship between individuals and an organization. When social theory is applied to MAS, it attempts to understand and explain the accounting function and accountability of an organization and how management accounting can play an important role in goal congruence of individuals and organization.

Structuration theory, the innovation of Anthony Giddens (professor of social theory at Cambridge University), is one of the most influential contemporary social theories. It has been brought into attention of accounting researchers as well (Roberts & Scapens, 1985; Macintosh & Scapens, 1987, 1988, 1989a, 1989b, 1990; Roberts, 1988;

Capps et al., 1989; Laughlin, 1989; Scapens, 1989; and Chan, 2015, 2017). It is a rising research methodology in accounting studies because accounting researchers have considered the theory having particular merits that can fulfill the needs of management accounting system research.

For example, Roberts and Scapens describe the nature of accounting by referring to the theory's "three structural properties" (as the core concepts of structuration theory): "to consider accounting systems as a body of rules and resources and to analyse the operation of systems of accountability drawing upon and thereby reproducing particular structures of signification (meaning), legitimation (morality) and domination (power)" (1985, p. 447-448).

Among the three structural properties of meaning or power or morality, the final cause of social dynamics is considered contextually contingent (Macintosh & Scapens 1988, p. 25 & p. 34-36; 1989a, p. 21 & p. 28-29). In fact, in a paper Macintosh and Scapens used three cases to illustrate the way signification, legitimation, and domination played different parts in accounting systems. The three cases illustrated different primary causes (or factors) of the social dynamics at work (1989b, p. 21-22).

According to structuration theory, the three structural properties of meaning, power, and morality are all important to explain actions and interactions. The structural property of meaning is related to the domain of culture. The structural property of power is related to the domain of politics, and the structural property of morality is related to the domain of reason. In view of the accounting system development literature emphasizing the elements of politics and reason, the domain of "culture" in accounting system development needs to be explored for a valuable completion in examining the system development dynamics.

The theory of structuration is intended to interpret the meaning of human behavior in relation to the structural properties of, and domination and power in, a social institution. It shows the relationship between agency and structure. An agent participates in the dialectic of control and his action can be in discursive consciousness, practical consciousness or unconsciousness. With his capacity and knowledgeability, he can act otherwise and understand what he is doing. The discursive consciousness of the agent tells him to rationalize his action. The theory of structuration explains the social phenomenon in both subjectivist and objectivist ways (Giddens, 1982).

Compared with positivism which emphasizes on observation, verification and prediction in explaining social activities, the theory of structuration is more hermeneutic. With double hermeneutic which is a characteristic of the theory of structuration, social activities are interpreted in two dimensions with one understood by the actor and another interpreted more exactly and explicitly by the languages of social theories developed by social scientists.

The functionalists reckon structure as a received concept. They discount the role of the agent in social activities in order to identify the real cause of the phenomenon. They do not assign a meaning to the knowledgeability of the actor. The theory of structuration, however, addresses on the interaction of the actors and the structure within the social system. In here, structure means the rules and resources, and system is the pattern of behavior.

Structuralism emphasizes on the problems of organization and change, again an objectivistic approach. It pays attention to the structure of the organization and lacks an analysis on the relationship between actor and the change which the theory of structuration explains. It is concerned with unacknowledged conditions and unintended consequences and structure becomes the primacy of the issue in structuralism.

The theory of structuration, with its concepts and notions, better explains the evolution of a system in an organization. With a dynamic business environment, changes in organizational politics and asymmetry in power, the other theories emphasize on either structure or functions of the organization and ignore the perspective of human beings as agents and their role in social activities.

Another merit of the theory of structuration is the notion of duality of structure which suggest that structure is the medium and outcome of the conduct it recursively organizes (Giddens, 1984). Rules and resources of an organization regulate the evolution of the institution yet they create new rules and resources for their further development and evolution.

All in all, as Callinicos (1985) put it, the theory of structuration moves beyond subjectivist metaphysics without relinquishing some of its insights, and especially without lapsing into objectivism and determinism.

III. METHODOLOGY

This paper covered the development and evolution of the management accounting system of a company in China from its commencement of business in the early eighties. During the period there were two chief executives with different management styles. There were not many changes in the level of the senior managers. There was, however, a common style between the two chief executives that they seldom put down their instructions in writing.

In view of the time frame this study was a longitudinal and retrospective one. It showed the history of the development of the management accounting system. An account of the evolution of the management accounting system of the company will be presented in the next section of this paper. This case study can be well illustrated by the concepts and notions of the theory of structuration as stated in Figure 1.

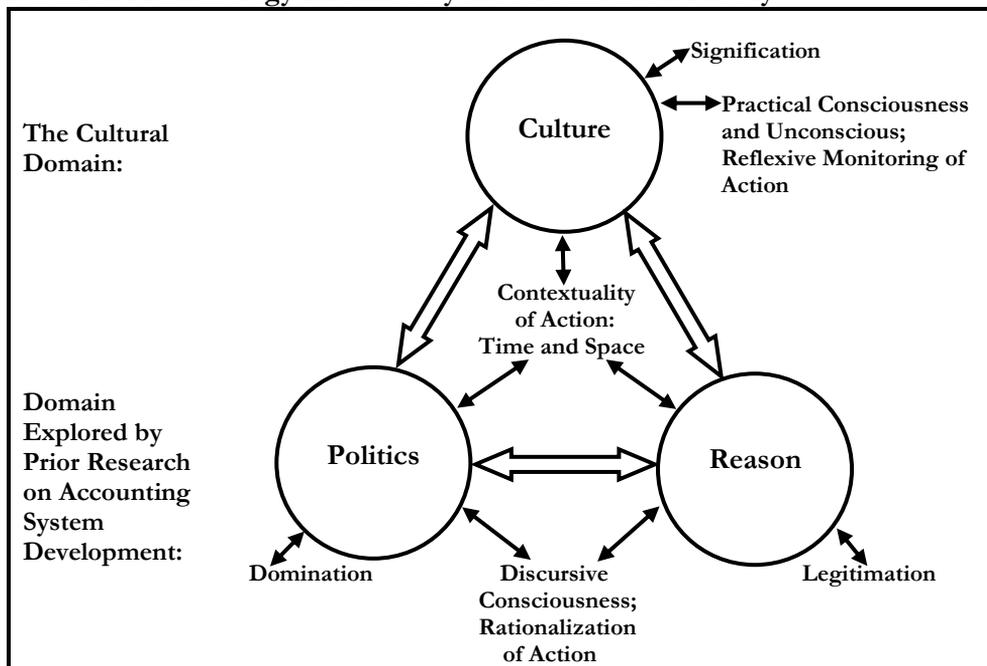
The core of the structuration theory composes of the concept of "structure", "system" and "duality of structure". According to Giddens' own definition, structure is the rules and resources, recursively implicated in the reproduction of social system. System is the patterning of social relations across time and space, understood as reproduced practices. The inter-relation of structure and system is explained by the concept of duality of structure which believes that structure is both the medium and outcome of the conduct it recursively organized (Figure 2).

Insert Figure 1 here.

Definitions of concepts in Giddens' own words (1984, p. 373-377): practical consciousness is "what actors know (believe) about social conditions, including especially the conditions of their own action, but cannot express discursively"; reflexive monitoring of action is "the purposive, or intentional, character of human behaviour, considered within the flow of activity of the agent"; contextuality is "the situated character of interaction in time-space, involving the setting of interaction, actors' co-presence and communication between them"; discursive consciousness is "what actors are able to say or to give verbal expression to, about social conditions, including especially the conditions of their own action"; rationalization of action is "the capability competent actors have of 'keeping in touch' with the grounds of what they do, as they do it, such that if asked by others, they can supply reasons for their activities".

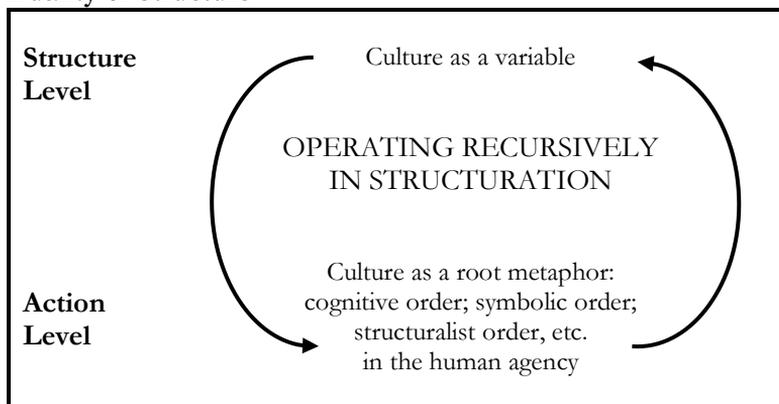
Insert Figure 2 here.

Figure 1
Research Methodology Informed by the Structuration Theory



Note: \longleftrightarrow Concepts in Structuration Theory related to the Three Domains.

Figure 2
Duality of Structure



Definitions of concepts in Giddens’ own words (1984, p. xxii & p. 373-377): agency or action is “the capacity of human beings to know what they do while they do”; structure is “set of rules and resources, recursively implicated in the reproduction of social systems”; structuration is “the structuring of social relations across time and space”.

Another important participant is the individuals who are assumed in the structuration theory to be knowledgeable and purposive agents. They have reasons behind each of their acts and can elaborate discursively if asked, even to the extent of lying about them. In particular, the concept of dialectic of control illuminates the situation where the weak can gather force against the strong. Every agent will have some influence on the activities of other agents though may be little. The less powerful

group can backfire the influence which the stronger group exerts on them. The former can gain a position within the boundary of autonomy and dependence constituting the social institution.

There are three dimensions of structure in the theory of structuration, namely signification, legitimation and domination. Signification is the interpretation and meaning of an action. For example, language is an interpretive scheme to create understanding and so are management accounting theories and practices (Macintosh & Scapens, 1987). MAS which collects and distributes financial information from and to managers in the organization is an interpretative scheme. It acts as a modality between signification and communication.

Domination refers to the exercise of power. In a particular time and space due to the imbalance of allocation of resources, different people have different power. Two types of resources are identified by Giddens, namely allocative and authoritative resources. The former comes from the position in commanding material resources and the latter arises from the capabilities and coordination ability of some actors over the others.

Legitimation is the recognition of certain behavior under an accepted code of norms. The shared values, ideals and rules form the base of this structure. In an organization, hierarchy and organizational politics are sources of legitimation. Elements like budget and control in the concept of MAS also provide legitimate rights to set value and hold individuals accountable in financial terms.

The above three dimensions enable an explication of the development and evolution of a social institution. They are the keys to find out the “real” meaning, the nurturing of the culture and the sharing of power in social institutions.

In summary, management accounting acts as an interpretative scheme in the signification dimension. It serves as a means of communication to let the managers understand the situation of the business. In the legitimation dimension, budget, targets and financial planning lay down a set of value, approved and disapproved. Also it provides the rights to hold others responsible in financial terms. Finally, MAS facilitates the coordination and control of individuals at all levels of the organization.

As one of the authors was working in the investigated company during the whole span of the period of study, he was in the position of involving in the actual development and implementation of the systems. His interpretations about the system were then verified by interviews with senior managers in the organization. In view of the sensitivity of the subject matter of this study, the meetings were informal. The interviewees did not know that they were being interviewed. The interviews were taken place during social functions and meetings for other business purposes.

IV. THE CASE

4.1. The Formation of the Company

The company, subsidiary limited, was spun off from its parent company, holdings limited, in the early eighties to engage in the business of selling and maintaining electronic equipment. The chief financial officer of holdings limited, Mr. Large, who was one of the masterminds of the spinning off, was appointed the head of the subsidiary limited. To ensure it a success subsidiary limited took over some very profitable lines of business from the holdings limited, which generated substantial revenue. On the other hand, thanks to the well-planned spinning off, this arrangement virtually did not cost subsidiary limited a penny as it was transferred from the parent company at the book value of the revenue generating assets. Subsidiary

limited was therefore guaranteed for profit in its first year of operation. In fact, the cost of the revenue generating assets of these businesses was slashed off before the formation of subsidiary limited.

In order to have information systems up and running as soon as possible, those of the parent company were copied to form the information systems of subsidiary limited. To simplify the task, key systems like payroll, stock, job costing and treasury systems of holdings limited were shared with subsidiary limited. Only the general ledger system was modified for statutory accounting purposes. Moreover, holdings limited absorbed majority of the costs of the supporting functions through management accounting methods and practices.

4.2. Invoicing System Crisis

The emphasis of subsidiary limited on selling activities blew the invoicing system as it was originally built for holdings limited which business was mainly on rental and maintenance of equipment. After the first year of operation of subsidiary limited, a large backlog of un-invoiced transactions for all sorts of reasons had been accumulated. A task force was called in from holdings limited to remedy the situation. In order to put up a system as soon as possible, the conventional method of system development was not used and an end-user computing tool was used to build up the database within a very short period of time. After the rescue operation, the deputy chief financial officer of subsidiary limited (Mr. Wong) stayed in that position, notwithstanding the chief financial officer's chair had changed hand twice. The first change went to a former subordinate of Mr. Wong and the second replacement was recruited externally. Mr. Ding who previously worked for Mr. Wong was subsequently appointed as a manager looking after the systems area which had been one of the duties of Mr. Wong. His promotion, according to Mr. Wong, was because he always procrastinated the requests of Mr. Wong for system development and amendments (but when Mr. Large asked for the same changes, Mr. Ding would get them ready within a few days). Mr. Wong was embarrassed and frustrated by these events and considered Mr. Ding a crook. In an interview with Mr. Wong he said:

"When I asked him to carry out some systems work he always told me that it would take a long time to complete it. I believed him as I had not enough computer knowledge. However, when Mr. Large raised the same request some days later he always delivered the changes within a very short span of time - almost immediately. I would almost sack him. He was a crook!"

4.3. Conflict with Parent Company

In the same year Mr. Large was appointed chief executive of subsidiary limited and was relieved from the duty of the chief financial officer of holdings limited. After two years, in order to standardize the management accounts reporting format of the group, Mr. Gorges of holdings limited (the successor to Mr. Large), requested all subsidiary companies to conform to a new reporting requirement. The request was ended up in the shredding machine and Mr. Large said to one of his assistants, "I never speak to this person [Mr. Gorges]."

Ultimately, subsidiary limited had to comply with the request upon receipt of a memorandum from the chief executive of holdings limited. It stated that the group chief financial officer had a functional relationship with the financial officers of the subsidiary companies and all subsidiary companies had to follow the reporting and

accounting policies issued by him. One year later, Mr. Large resigned and Mr. Andrew, a veteran salesman replaced him.

4.4. Conflict with Fellow Subsidiary Companies

By then subsidiary limited was in need of a customer information and invoicing system (CIIS) for one of its major products. It was also time to have a major overhaul of the product performance analysis system (PPAS). While it was desirable to have these two new systems the existing ones together with some manual operations enabled the survival of the services and reports required.

Subsidiary limited used a fellow subsidiary company affiliate limited as its computer bureau. The relationship between the two companies had been good as most of their staff were transferred in from holdings limited. Later Mr. Richard was appointed the chief executive of affiliate limited. Then, virtually all the senior staff resigned. Communication between the two companies broke down and everything was done through formal documents and procedures. As most of the veterans had gone, maintenance of the existing systems posed many problems (not to mention new developments).

4.5. Customer Information and Invoicing System (CIIS)

As a matter of fact, subsidiary limited had the idea of developing CIIS a few years after incorporation. Nevertheless, the specification of the system was never finalized. The design of the system came to a halt when Mr. Richard wanted to introduce a long-range plan for information systems immediately after he took up the post of chief executive of affiliate limited. He put forward various plans on common software packages for the group companies and the conducting of study on the management information systems of each fellow subsidiary company. He very often had dialogues with the chief executive of holdings limited before he talked to his counterparts in the other subsidiary companies.

The prolonged delay in the development of the CIIS caught the attention of Mr. Roger, the chief executive of holdings limited. Mr. Richard had to submit to the former in writing a status report on the issue.

4.6. Product Performance Analysis System (PPAS)

The PPAS had virtually a similar situation as the CIIS. The staff in affiliate limited had in fact completed the pseudocode. Again, with Mr. Richard's idea of using software packages instead of a tailor-made system, the project was stopped. An expensive quotation was made to subsidiary limited for using the recommended software package which affiliate limited was the agent. Mr. Richard was also able to convince Mr. Andrew to conduct a MIS study with the possibility of using the package as one of the terms of reference. The report on the study was positive.

A similar system had been developed by another fellow subsidiary company. The chief financial officer of holdings limited requested subsidiary limited to modify its system and requested the other fellow subsidiary company to give assistance to subsidiary limited for completing the project. In his memorandum to Mr. Andrew the chief financial officer wrote, "work should commence immediately."

However, ten days later Mr. Roger of holdings limited sent a memorandum to subsidiary limited writing, "please produce, as a matter of first priority, fully costed comparisons, ... If you are unable to produce ..., then obviously the first step ... [is] to agree the specification ..." The development of the project was suspended consequent to the receipt of this memorandum.

4.7. Influence of the Chief Executive

Within subsidiary limited the report produced from PPAS was always a document of controversy. The application of management accounting techniques inevitable led to different performance results for different products. The responsible manager would be unhappy when the performance of his line of business was not looking good. Other than investigating the issue within his own area he would point his finger to the accountants accusing them of making wrong cost allocations and turning the result of his business into chaos. Like many organizations, when under microscopic examination, the arbitrary costing methods could always be revised to the advantage of the complaining party. Accountants got used to advise the concerned managers whenever they noticed that there would be a downturn of the performance of their products. They collaborated to fine tune the cost allocation in order to show a better result for the product line before the PPAS report was distributed to senior management. The chief executive, Mr. Andrew did tell his directors in a meeting that he would rather see more positive comments in the PPAS report than the gloomy picture presented by the accountants. In response to the remark of the chief executive, much of the administrative and support costs were classified as general expenses. It went so far that the parent company eventually demanded for an analysis of these items. Top level correspondences were exchanged and the meaning of general expense was defined after lengthy discussion. The deputy chief financial officer responsible for the PPAS was more than happy to accept this change as it relieved him from pondering how to report the performance of the different products in order to avoid clashes among peers.

V. CASE ANALYSIS

5.1. Different Signification Structures on Accounting Purposes

The spinning-off of subsidiary limited from holdings limited was a result of goal conflict between the regulating authorities and the company. Mr. Large, being the chief financial officer of holdings limited, aimed to maximize profit, value of the firm and thus his remuneration. However, since the core business of the company was controlled by regulations which had set the maximum return on capital, the company could only improve its return by developing other side-line businesses that were not under the control of the regulations.

Mr. Large, possessing good knowledge on accounting and company law, fully understood the loop-hole and decided to go around the regulations. A separate entity, subsidiary limited, was then formed to handle the non-controlled businesses. Initially he identified the business of selling and maintaining electronic equipment and transferred the related operations to this new company. Furthermore, Mr. Large let the new company take full advantage on the use of accounting transfer pricing. First of all, the transferred assets were valued at book cost (i.e., historical cost less depreciation). Obviously the replacement cost of these assets must be substantially higher than the book value. Secondly goodwill, the value of an on-going business, was not accounted for. If these transactions were carried out at arms-length between two independent companies, all income-generating assets, both tangible and intangible, should be valued at market prices. Besides goodwill, agency contracts, dealer's agreements, etc. (though had no value on the books of account) were very valuable.

Knowing that the purpose of the spinning off is to improve return on capital, the structuration framework of subsidiary limited is very different from the framework of holdings limited. The latter operated under a set of regulations and its signification

structure had been less commercialized and emphasized on the control of the operations. However, as subsidiary limited was set up to improve the profitability of the group, its signification structure was the maximization of profit. The mission of subsidiary limited was fully aware of by all members. Therefore, its signification structure, though completely new to the group, was soon accepted by everybody. Gradually the marketing-oriented concept also dominated the legitimation structure.

According to Giddens' structuration framework, Mr. Large had the power and possessed the facility under the domination structure. He masterminded and exercised his power to put the plan into action. Although the spinning-off of the company did not follow the generally accepted accounting principles and practices in the profession, it was fully agreed by the other members of top management. Under the new signification structure they all shared the same idea with that of Mr. Large. They understood that it was their responsibility as the management team of the group to maximize the return on capital and thus the wealth of the firm to shareholders. And, of course, the improvement in the operating results also benefited themselves in terms of remuneration.

The new signification structure spread fast in the group and all other members of the company accepted that this newly formed company, subsidiary limited, should receive preferential treatments especially in terms of profitability. The message was clearly interpreted under the signification structure and became a norm under the legitimation structure. Duality of structure played an important role in this case. The company created new rules and regulations which gradually changed the social system. Preferential treatments were repeatedly given to the new company.

Subsidiary limited was allowed to duplicate the accounting system of holdings limited without sharing any development cost. Other computer systems were also made available to the new company without charge. Through management accounting system holdings limited absorbed most of the overheads to minimize the operating expenses. As the net profit of holdings limited was regulated and could not exceed a fixed percentage of return, increase in cost would not affect the profitability of the parent company itself.

In this stage the technical aspect of traditional accounting theories can hardly explain the following:

1. Incorporation of subsidiary limited – from the accounting point of view, it is not necessary to incorporate a separate subsidiary company to handle these existing businesses of selling electronic equipment. Other available alternatives such as departmental accounting systems are just as efficient. The traditional function of a limited company is to protect the shareholders from taking unlimited risk and to set the maximum level of liability that the shareholders are willing to undertake. Should this be the purpose of setting up subsidiary limited, it should have been formed at the starting stage of the business, which was then more risky, and not when it was running smoothly and profitably.
2. Preferential transfer pricing – the calculation of the 'give away' transfer price certainly is not a generally accepted practice judging from the view of a professional accountant. Computation of the value of tangible assets should be objectively referred to market price, replacement cost, and realizable value. Goodwill, being an intangible asset, is more difficult to set a price. However, since the business was up and running and was in fact very profitable, it proved that goodwill was existing and was very valuable. General accounting practices would recommend the calculation be based on financial and accounting techniques such as net profit,

return on capital, net cash inflow, present value, etc. In practice, an on-going business also has a disposable market price. Many merchant banks act as brokers in buying and selling businesses. They can provide financial advices on the valuation of such a business. No accounting practice will agree to give away the business at no price at all.

3. Absorption of overhead – accounting theories and practices offer wide varieties of costing methods on the calculation of overhead absorption. All these methods aim to allocate the indirect costs fairly to various cost centers according to their utilization. Similar to the transfer pricing strategy, the practice that holdings limited absorbed majority of the overhead does not agree with the generally accepted accounting practices. Without looking into the context and the intention of the individuals, it will be difficult to explain the rationale behind the changes and moves.

The spinning-off was very successful. The consolidated profit of the company jumped and the earnings per share increased by 69.5% in the following accounting year. Holdings limited became the star of the stock market. Its share price shot up 76% in the first year and 135% in the second year. With hind-sight it is observed that the authorities were in consensus with holdings limited. It was the intention of the authorities to continue on their non-intervention policy regarding commercial activities.

5.2. Intentional Activities and Unintended Consequences on Accounting System

The structuration theory explains how an agent's intentional activities create other unintended consequences that influence others. According to Giddens, human actors are knowledgeable and can report discursively about their intentions for their actions. An actor's action is initiated by a motivation and the action is carried out. It goes through the stage of rationalization and reflexive monitoring of action creates unintended consequences of action.

The motion behind the actions can be grouped under discursive consciousness, practical consciousness and unconsciousness. The only difference between discursive consciousness and practical consciousness is that the intention of former can be reported and the latter is simply done. Giddens did not draw a distinct frontier between the two. However, discursive consciousness and unconsciousness are distinguished by principally repression. The concept of practical consciousness is essential in structuration theory.

Mr. Large's motive in setting up subsidiary limited was at the level of discursive consciousness. Series of preferential treatments passed on to this new company were moved by both discursive consciousness and practical consciousness. These conducts created unintended consequences.

All the initial accounting staff of subsidiary limited were transferred from holdings limited. They came from an environment that 'control' was the dominating element of the signification structure. Although they all understood that the new company had a different signification structure, their norm under the legitimation structure was slow to change. They continued to use the same management accounting system in the new company. They did not doubt the ability of the old accounting system as they had been using it efficiently for a long time in a much bigger company. This phenomenon of inert to change was explained by the concept of ontological security.

The same control conception still dominated the management accounting system. This was subsequently proved to be disastrous. The signification structure in

subsidiary limited was soon dominated by the concern of profitability. Marketing and business-related activities became primary; accounting and other supporting functions were secondary.

Under the new signification structure, the development of a new management accounting system was classified as secondary and less important. It did not have high priority on the allocation of resources. Even the accounting staff believed so and they continued to use the old system. The incompatibility problem had been dragged for a long time until it was completely out of control. A huge backlog of un-invoiced transactions had been accumulated and an emergency operation had to be called in to rescue the situation.

For cost and convenience reasons, subsidiary limited had been right from the cost-benefit point of view to duplicate the entire accounting system from holdings limited. As the two companies were in different industries, the old accounting system of subsidiary limited must be modified to cope with its business activities. Mr. Large is a competent accountant and had enough qualified accountants and competent system analysts working for him. It is hard to explain from the technical point of view why he made such a mistake that led to the crisis.

Mr. Large's intention to set up subsidiary limited was clear. What was not known then was that as the regulating authority wanted to deregulate the industry at a faster pace, it had actually set a time frame for holdings limited. Therefore, there was also a major concern to meet the deadline. To duplicate an existing system was the most efficient way to set up the accounting system. However, the importance of subsequent modification was neglected due to the domination of the new signification structure and the concept of ontological security.

Another core concept of the structuration theory is the 'duality of structure'. In this conception, power is not itself a resource. Resources are the media through which power is exercised. In a social system each actor enjoys to a certain extent some degree of autonomy. The dependence between the actors or collectivities provides some resources to individual actors in the context of social interaction. Giddens called this inter-relationship in the social system the 'dialectic of control'. Therefore, the subordinates may utilize resources available to influence the others including their superiors.

The situation that Mr. Wong faced was a good demonstration of the dialectic of control in the social system. After the invoicing crisis, Mr. Wong was recognized as less competent in managing a computerized accounting system as his computer knowledge was limited. He remained as the deputy chief financial officer although the post of chief financial officer was vacant twice. The replacement was through internal transfer and recruitment.

Mr. Ding observed what had been happening and drew upon the resources available to him in the social system to influence Mr. Wong. Though Mr. Wong was the superior of Mr. Ding, the latter withheld his allocative resources and did not carry out the instructions received from Mr. Wong. In this case Mr. Wong did not exercise his power over Mr. Ding for he did not possess adequate allocative resource, e.g., knowledge on computer, as a medium to exercise such power.

This case also supported an important concept of the structuration theory that each individual is knowledgeable and purposive. The motive behind Mr. Ding's conduct was intentional. He had successfully utilized his resources in the social system and gained promotion by displaying his ability before Mr. Large.

5.3. Authoritative Resources and Allocative Resources on Accounting Reporting

After appointed chief executive of subsidiary limited, Mr. Large was totally relieved from his former post as the chief financial officer of holdings limited. Mr. Gorges was then recruited to fill the post. Soon after the appointment there was a rumor that Mr. Large were in conflict with the new chief financial officer. They had been arguing on many occasions.

They both held senior positions in the group and possessed power in the domination structure. On the matters over the management accounting reports, Mr. Gorges held authoritative resources while Mr. Large possessed allocative resources. Mr. Gorges requested subsidiary limited to report to him in a standard form. However, Mr. Large did not pass on the request to his subordinates. As the power struggle came to a deadlock, the chief executive of holdings limited Mr. Roger exercised his power and made the ruling that Mr. Gorges had the authority to request for accounting information and Mr. Large had to follow.

As described in the earlier section, the two companies had different signification structures. Mr. Large and Mr. Gorges had different interpretive schemes on the function of management accounting reports. Mr. Large being in the position as the chief executive of subsidiary limited considered that reporting was secondary. He was unwilling to allocate additional resources to entertain the request on new management accounting presentations and reports. Especially the old reporting format was initially designed by himself and had been used for some time without major problems. In his opinion the effort to improve the presentation of management accounting information should be minimal.

Working under a different signification structure, Mr. Gorges believed that management accounting was a tool of control and was essential from the point of view of holdings limited. In his position as the chief financial officer of the group, he had the perfect right in the legitimation structure to receive as much accounting information as he wanted. Therefore, he demanded the subsidiary companies to report additional management information and financial data that might not be available to him in the old presentation.

Nowadays, many companies, especially those that have a large number of subsidiary companies, lay down standard accounting reporting formats for all group companies. This technique improves the efficiency on consolidation of the group accounts and also assists the reader to locate the financial data in fixed locations. The request from Mr. Gorges was reasonable and legitimate. Mr. Large, being an accountant himself, should also understand that the request was sound from the accounting point of view. According to Giddens, their conflict was defined as system contradiction. Should Mr. Large hold the two positions as it was before, the conflict would never have happened.

This situation also demonstrated the dialectic of control. It was clear that Mr. Gorges and Mr. Large were in possession of the authoritative resources and allocative resources respectively. Mr. Large drew upon his power in the social system and delayed the reporting, though Mr. Gorges had the authority to request the reports. The power struggle between the two ended when Mr. Large resigned from the company.

5.4. Conflict among Structures on System Development Approach

After Mr. Richard was appointed the chief executive of affiliate limited, he started to impose his business philosophy to the company. Mr. Richard had a strong technical background and had a different approach to computer system development. He was in the opinion that detailed planning was essential at the initial stage of system development, though it might then take longer to deliver the product. He especially emphasized on the importance of the long term development of a system. His belief gradually dominated the signification structure of affiliate limited.

Similar to subsidiary limited, the initial staff of affiliate limited were transferred from holdings limited. They maintained good relationships with the computer users in both holdings limited and subsidiary limited. They were more service-oriented and believed that fast delivery of a system would be more helpful and welcomed by the users. Both holdings limited and subsidiary limited also agreed to the veteran staff of affiliate limited.

The signification structure and legitimation structure were therefore in conflict. Mr. Richard possessed both authoritative and allocative resources under the domination structure. His thinking became the signification structure of affiliate limited. This conflict led to the resignation of almost all the senior staff in affiliate limited.

As Mr. Richard possessed absolute power in the domination structure, his business philosophy continued to dominate the signification structure. Gradually after the resignation of most of the veteran staff, the legitimation structure changed. Detailed planning with emphasis on long term system development became the working approach in affiliate limited. Although Mr. Richard could influence the structuration elements in his company, he did not convince holdings limited and subsidiary limited. Both Mr. Andrew and Mr. Gorges disagreed with his approach.

With its signification structure dominated by profitability, subsidiary limited wanted to have the system to be in place in a short period of time. Mr. Andrew was less concerned with the long term development of the system. He was in the opinion that the management accounting system was only secondary and served to support the business related activities. The company should not spend too much time and effort in this area. All he wanted was a system that could be immediately up and running. Mr. Gorges agreed with Mr. Andrew, despite of the fact that the two companies had different signification structures. Without a computerized management accounting system, he found it difficult to exercise control over subsidiary limited. Mr. Gorges therefore based on his judgment as a professional accountant ordered that the system must be in place immediately.

Mr. Richard did not agree to Mr. Gorges' decision and, being the chief executive, withheld the allocative resources of the computer facilities. He did not carry out the decision of Mr. Gorges. In the meantime, he went over Mr. Gorges to Mr. Roger, the chief executive of holdings limited. Should he obtain the support from Mr. Roger, the signification and legitimation structures would continue in operation. However, he failed, and he had then been transferred to another unit in the group.

Mr. Richard's behavior could be explained by the three structures of the structuration theory. It was also a good illustration on the difference between traditional accounting theories and structuration theory. Mr. Richard had a strong background on computer and was technically trained in this aspect. He strongly believed that quality should surmount other elements in the development of a system. Despite of losing all his senior subordinates, he continued to enforce his own thinking. Even though Mr. Gorges made the decision and ordered for a faster delivery of the

system, he still insisted that a long term planning was more important and convinced Mr. Roger to accept his idea.

From the technical point of view, both the planning and fast delivery of the system are equally important. Each company has to compromise on what is most appropriate for itself. Apparently subsidiary limited needed a customized system badly in order to avoid other possible crises similar to that of the invoicing system.

5.5. Accounting Statements Manipulation

The management accounting system was originally designed by Mr. Large. Being an accountant, Mr. Large followed the accounting rules and regulations. However, Mr. Andrew was a veteran salesman and had a completely different concept on the usage of management reports.

Mr. Andrew considered that management accounting was a secondary activity that only served to support the primary activities of business. Being the chief executive, he possessed power and used management accounting as a means of communication to his best advantage.

Mr. Andrew addressed the other directors in a meeting that 'he would rather see positive comments in the PPAS report than the gloomy picture presented by the accountants'. As a result, the management accounting information system was changed accordingly and the accounts were manipulated to paint a better picture of the results.

However, the practice did not obtain consent from top management of holdings limited that had the domination power over Mr. Andrew. Guidelines and rules were laid down for management accounts. The deputy chief financial officer who did not agree to Mr. Andrew's opinion on the management accounts was happy to see the appropriate accounting practices in place.

One of the concepts of preparing accounting reports is that the information must truly and fairly reflect the state of affairs and the operating results of the company. The readers such as the management, can base on these reports to formulate policies and strategies, plan for the future and make correct decisions. However, just like Mr. Andrew, many people treat management accounting information as a personal asset to secure his allocative resources and thus his power in the organization. This practice in fact is becoming more and more common nowadays.

Mr. Andrew obviously would like to see profitable results on all the business lines he managed but he should not manipulate the management accounts in order to paint a false picture. The sudden change of the reporting format is again not explained under the traditional accounting theories.

VI. CONCLUSION

6.1. Signification, Domination, Legitimation

Traditionally, accounting system has a technical nature. Accounting information is presented to assist management in decision making, planning and control. However, there is increasing awareness that in practice human factors influence the implementation and changes of accounting system. Many of the changes cannot be explained by traditional accounting theories from the technical point of view.

In this study it is clearly seen that the technical aspects of accounting theories can only figure out very little the rationale behind the development of the management accounting system in subsidiary limited. The company has employed competent personnel both in the accounting and computer departments. Yet the development of

the accounting system has been dragging for years. Structuration theory in our study assists in clarifying most of the unexplained portions of the rationale behind the changes.

The signification structures of the three companies in discussion were all different. Holdings limited wanted to exercise control, subsidiary limited aimed at profit maximization and affiliated limited cared for providing professional computing services of good quality. This divergence in signification structure was understandable as the context of each company was different. As the head of the group, holdings limited has its primary responsibility to ensure that the subsidiary companies worked towards the accomplishment of goals set by the group. It had to establish a sophisticated control system to enable it to get the strategic information it required.

The goal of subsidiary limited was to earn as much as possible in order to contribute to the profit target of the group. Sales maximization and profit were its most important objectives. Accounting control, in the mind of the management of subsidiary limited, sometimes, in fact became a hindrance to its success.

Affiliate limited was the computer bureau of the group. Its objective was to provide professional service to support the business activities of the group. Nevertheless, resources were its biggest hurdle. It always wanted to balance quality of services provided and resources available.

While it was easy to talk of congruence of goals among the group members, it would be difficult to put it in practice. The difference in signification structures of the group members was the underlying reason for the winding path for the development of the management accounting system in subsidiary limited.

Through its agents Mr. Roger and Mr. Gorges, holdings limited had authoritative resources. Nevertheless, the agents of subsidiary limited Mr. Large and Mr. Andrew had allocative resources. By exercising their power over the allocative resources they could filter information (e.g. the allocation of overhead to product lines before passing the information to holdings limited). Mr. Richard could also hold up the development of the systems in subsidiary limited by exercising control over his allocative resources (e.g., to stop his people from working on the projects).

Like the different signification structures of the group members, the legitimation structures of the members were not the same. For holdings limited, the norm was to establish enough control over the subsidiaries via a management accounting system. For subsidiary limited the mentality was to maximize sales and to provide the best customer service. Affiliate limited, being a service company, was to ensure the provision of quality data processing service. This diversity of norms led to the clashes between the companies. Subsidiary limited, while in need of a good computing service, was not provided with what it expected. Yet on the other hand, it had to subdue to control by holdings limited.

6.2. Change in Influx of Factors

It might be worthwhile to consider the likely consequences in the management accounting system had there been a change in the influx of some of the factors described. In the formation stage of subsidiary limited, the regulatory authorities and holdings limited had the same interpretative scheme about the transfer pricing policy for the revenue-generating assets from holdings limited to subsidiary limited. Had the signification structure of the authorities on the spinning off be different from that of holdings limited, a different price tag would be attached to those assets and the legitimation structure of holdings limited on controlling subsidiary limited might

change. The relationship between the two companies would then be more business-oriented.

The allocative and authoritative resources held by Mr. Large dictated the direction of the management accounting system. Had a second thought been given to the nature of the business of subsidiary limited when it was formed, the invoicing system would be changed to cater for the different operation of the company. Then, the disastrous situation of the invoicing function might have been avoided.

Mr. Large had used to dominate the management accounting system of holdings limited and subsidiary limited. When Mr. Gorges wanted to change them, Mr. Large was upset. At that time, he was the weaker side in the continuum of dialectic of control. He wished to ignore the change yet he eventually had to give up upon the instruction of the chief executive of holdings limited.

Mr. Large considered the management accounting system as a tool for profit and performance monitoring. Mr. Gorges favored it as a tool for consolidation of accounts. A general remark from the financial executives of both companies interviewed was that the conflict would not have happened had Mr. Large been emerged from a non-accounting discipline.

Mr. Richard, pursuing for setting new systems for the data processing function of the holdings limited group, had a different view in management accounting system from those of the chief executives of the user companies. He played dialectic of control carefully and obtained some support from the chief executive of holdings limited (as evidenced from the memorandum sent by the chief executive to Mr. Andrew stopping the latter from developing PPAS). Wearing the hat of the chief executive of affiliated limited, Mr. Richard had the power of running the company which led to the resignations of staff.

The domination of Mr. Andrew in subsidiary limited was unquestionable. However, he had to answer to holdings limited. The reports generated from the management accounting system on the one hand told him the result of his company, but on the other hand informed the parent company of his performance. He was in discursive conscious applying duality of structure in the preparation of the reports submitted to holdings limited. Mr. Andrew would not be in this dilemma had subsidiary limited been a standalone corporation.

Recalling our belief in the beginning of this paper that social theory could better explain the phenomena of management accounting system development, this case study did illustrate that structuration theory could give us much more insights in the development of a management accounting system than the conventional accounting theories could do.

REFERENCES

- Callinicos, A. (1985, March). Anthony Giddens: A contemporary critique. *Theory & Society*, 14(2), 133-166.
- Capps, T., Hopper, T., Mouritsen, J., Cooper D., & Lowe, T. (1989). Accounting in the production and reproduction of culture. In Chua, W. F., Lowe, T., & Puxty, T. (eds.). *Critical Perspectives in Management Control*. London: The MacMillan Press Ltd.
- Chan, A. M. Y. (2015, March). Accounting regulation research and structuration theory. *Journal of Modern Accounting & Auditing*, 11(3), 131-137. Doi: 10.17265/1548-6583/2015.03.001.

- Chan, A. M. Y. (2017, February). Accounting systems in cultural context: A research framework for China studies in global economy. *Journal of Modern Accounting & Auditing*, 13(2), 45-50. Doi: 10.17265/1548-6583/2017.02.001.
- Giddens, A. (1982). *Profile and critiques in social theory*. Palgrave, London: The Macmillan Press Ltd.
- Giddens, A. (1984). *The Constitution of Society*, Berkeley, University of California Press.
- Hopwood, A. G. (1979). Editorial. *Accounting, Organizations & Society*, 4(3), 145-147.
- Laughlin, R. C. (1989). *Financial accountability in the Church of England*. Paper presented at the Annual Conference of the British Accounting Association at the University of Bath.
- Macintosh N. B., & Scapens, R. W. (1987, August 17-19). *Giddens' structuration theory: Its implications for empirical research in management accounting*. Paper presented at the Annual Meeting of the American Accounting Association, Cincinnati, Ohio.
- Macintosh, N. B., & Scapens, R. W. (1988). *Structuration theory in management accounting: A critique and an empirical illustration*. Working paper, University of Manchester.
- Macintosh, N. B., & Scapens, R. W. (1989a). *Structuration theory in management accounting*. Working paper, University of Manchester.
- Macintosh, N. B., & Scapens, R. W. (1989b, July 10-12). *Management control systems: A structuration theory analysis*. Paper presented at the International Conference on Management Control Systems jointly organized by the Management Control Association and the Accounting Behaviour, and Organizations Section of the American Accounting Association at London Business School.
- Macintosh, N. B., & Scapens, R. W. (1990). Structuration theory in management accounting. *Accounting, Organizations & Society*, 15(5), 455-477.
- Roberts, J. (1988). *Strategy and accounting in a U. K. conglomerate*. Working paper, University of Cambridge.
- Roberts, J., & Scapens, R. (1985). Accounting system and systems of accountability – understanding accounting practices in their organization contexts. *Accounting, Organizations & Society*, 10(4), 443-456.
- Scapens, R. W. (1989). *Accounting and control: A case study*. Working paper, University of Manchester.