DOCTORS ATTITUDE TO MANAGERIALISM:  
THE CASE OF THE BALANCED SCORECARD IMPLEMENTATION IN A  
CHINESE HOSPITAL

ABSTRACT
The adoption of a managerial innovation into a public sector entity may well provoke resistance, particularly from professionals who don’t want to their professional freedom to be restricted. Potentially, even more problematic is the utilisation of a Western management system in an Eastern context. We have analysed the implementation of the balanced scorecard (BSC) into a Chinese hospital to demonstrate that the traditional view that physicians might be particularly resistant to change is not necessarily valid. We demonstrate that contextual issues are far more critical than the behaviour of individual groups of professionals.

INTRODUCTION
Over the last decade many hospitals have started to implement the balanced scorecard (BSC) (Chan and Ho 2000; Aidemark 2001; Pink, McKillop et al. 2001). There are few case studies of Chinese hospitals that have taken up the BSC (Peng and Zheng 2005; Wei 2005; Xu and Yao 2005; Zhou and Zhong 2005). Motivations vary. In periods of significant change, the BSC may provide a tool to bring about change (Gao, Gurd et al. 2008)). Both (Adler, Kwon et al. 2003) and (Greenhalgh, Glenn et al. 2004) raise the need for more research on how health care organizations sustainably implement and maintain innovations. This paper further expands that literature.

PRIOR RESEARCH
BSC is an important innovation in strategic management practice (Aidemark 2001). The likelihood of an innovation to spread through communication within certain channels of a particular social system depends on perceptions of its usefulness rather than its novelty (Rogers 1995). Once diffused through a network, there are factors which are likely to reduce the resistance to change, whether it be an individual, organizational or a society level (Elsey
Understanding why people accept (or not) innovation remains one of the most challenging and complex issues (Davis, Bagozzi and Warshaw 1989; Frambach and Schillerwaett 2002). Adler et al (2003)) argue that hospitals are an excellent environment to observe innovations. Medical practitioners have often been cited as classic examples of ‘professional’ populations, and understanding decisions of what innovations are adopted and when in professional organisations has been especially problematic ((Fitzgerald, Ferlie et al. 2002; Greenhalgh, Glenn et al. 2004).

The work of Greenhalgh et al (2004)) shown in figure 1 presents their model as a synthesis of all 1,024 previous papers on the diffusion of innovation specifically applied to health care delivery. The abstract of the paper summarizes their key question: “How can we spread and sustain innovations in health service delivery and organization?” This presumes that innovations in healthcare delivery are worthy of sustaining due the likely increase in efficiency and effectiveness they underpin without the negative redistribution of health benefits. They look at different theoretical bases for the spread of innovation in service industries from the “Let it happen” at one end of the continuum to “Make it happen” at the other end, with “Help it happen” as a mid-point.

The model conceptualises key features that influence the process. There is the outer context; the socio-political climate and the inter-organisational dynamics that encourage or discourage the innovation. Next is the innovation itself; which includes aspects such as the observability,
risk, complexity and relative advantage. On the left hand side of the model they look at communication and influence – from dissemination (planned) to diffusion (informal and unplanned). They then delineate five features of the user system – system antecedents, system readiness, adopter, assimilation and the implementation process. Greenhalgh et al (2004) then explored the linkage between the user system and the resource system and knowledge purveyors.

Figure 1 about here

We specifically look at the characteristics of the user system. Our research question is how the role of professionals impacts on the implementation of the BSC in a Chinese hospital.

RESEARCH METHOD

The action research site was the Jinan Central Hospital in the capital of Shandong province in China, which provides services including clinical services, emergency rescue, medical education, research, disease prevention, rehabilitation and community health services. It has approximately 1,500 staff providing 1,082 beds caring for 800,000 outpatients and 20,000 inpatients in 2007. The hospital has a research base with 49 professors and research students. The key researcher, Mr. Tian Gao, was also the system implementer. During the research process minutes have been collected and notes taken of meetings. In addition there has been significant use of reflective memos. This forms the data for the research analysis.

FINDINGS

The Adopter

Prior to 2005, the former president of the hospital was promoted as the director of the board of
health of Jinan Municipal Government, but retained the dual role of the president of the hospital. In July 2005, the hospital had a new president appointed while it was facing serious management problems including too many capital construction projects and expansion into the Licheng district. Division of responsibilities lead to a large expenditure on redecoration with nothing left for medical equipment. A for-profit clinic had to be closed down. Medical quality was down. Most staff in the hospital were disappointed and talented people chose to leave. The hospital lacked direction.

The hospital lacked clear strategy and goals despite formalized annual goals and a strategic plan because nobody was charged with achieving the existing strategic plans and annual goals. They were not communicated to most staff and nobody was in charge to take action for achieving them. The strategic plan was put on the shelf, the annual goals just were read at the annual meeting.

The new president was a physician who finished his doctorate in Japan and welcomed new management theory from western countries. After consideration the new president decided to adopt the BSC; although he had limited knowledge of BSC. At the same time the hospital built a strategic plan and after the fourth revision it was submitted to the congress of workers and staff on February 2006 who adopted it despite doubts about its achievability. The BSC was seen by the president as one tool to implement strategy. Yet at the same time he was focused on a performance pay reform pilot. The key researcher could not find a link with strategy and yet the president saw it as urgent.
Implementation Process

The Pilot

The first stage was a pilot. A new director of general surgery was recruited with high expectations that he would improve the teamwork in the department as it was performing poorly and represented 8% of the hospital’s income. The president chose the general surgery department as the new performance pay project pilot department and with the expectation that this project would help the new director to turn a new page.

The pilot failed. Poor communication led to resistance to his new policy. For example, the new performance pay project tried to increase the pay gap between doctors and nurses. In China the salary of doctors is equal with nurses so changes in parity aroused strong objections from the nurses. Second, the new director wasn’t able to play the role expected by the president. His was not a particularly good specialist so he didn’t get the respect needed to deal with the conflicts among doctors. He resigned several months later. Although the BSC linked reward system was being used this system did not appear to promote the development of this department.

The start of BSC training

In August 2006, the lead researcher was appointed as the director of the president’s office and both researchers made a presentation to the top management and middle managers of the hospital to introduce the BSC in hospitals. Some hospital directors from other hospitals also attended the presentation. This gave a clear indication of commitment. This was followed by education of most middle managers including functional departments and clinical departments,
head-nurses, and senior doctors using a Chinese translation of Balanced Scorecard in A Week by Bourne and Bourne. Almost 200 people attended the four hour training sessions and returns of 153 anonymous surveys showed a strong interests to learn about BSC. The hospital began to publish BSC papers at the hospital newspapers and website which increased the level of interest.

Resistance to BSC?

There were signs of some level of resistance. Of the five vice presidents, just two vice presidents attended training; two seemed to show no interest, passive resistance. Passive behaviour includes feigning ignorance or withholding information or public agreement so that adoption does not result (Petrini and Hultman 1995). This same passive resistance was encountered among middle managers.

Hands on approach by leaders and managers

In November 2006, after much thought, the president set up a BSC steering group headed up by himself. This included all five vice presidents and several middle managers. The lead researcher was given the role of developing the hospital strategic plan, building the hospital level BSC, assisting the development of the department level BSC, and providing BSC training. The core members of BSC executive team included three people – the key researcher, Dr. Lin, who was in charge of medical quality control, and Zhao Qin, a former head-nurse of obstetrics.

Shared meanings of BSC
The vice president who was the deputy leader of the steering group was still doubtful about BSC. He seemed to believe that he had expertise in BSC but this was contrary to most BSC practice. Even an implementation schedule could not be agreed upon and needed the intervention of the hospital president. He emphasized the importance of completing the application of BSC in a relatively short time.

In February 2007 the whole steering committee met with conflicting versions of the BSC being put forward. Most members of the executive still had hazy understandings of the BSC. To move forward the steering committee was formed, although members of that group were still concerned about negative attitudes to the BSC project. The key researcher argued that there was both sufficient support from the president and a clear rationale for a pay system based on the BSC. There were senior doctors expressing strong interest. The director of pathology asked the key researcher to do BSC training for her doctors. At training it became clear that BSC was seen solely as a performance pay tool. It was argued that the BSC could help the organization achieve strategy and the department needed to set up its strategy consistent with that of the hospital, find out the long-term goals, make sure about the key area and KPIs for achieving the long-term goals, take action to achieve the goals. So in this way they can realize their ideas. In this way they could realize their ideas while applying BSC could also help the department to improve its performance.

After five times meetings, the hospital level BSC was set up with 39 measures and strategic action plans. The senior vice president maintained his opposition but the president’s support
for the steering committee saw it through. The resistance to or suspicions of the BSC could not be avoided because the benefits of applying BSC was unknowable. At beginning the firm support from top management was the most important factor for successful application of BSC.

User involvement in the functional department level BSC

The hospital has 25 functional departments. President Liu gave them a short time horizon. Most departments’ attitudes to BSC were positive, although a few middle managers disliked BSC. For example, the director of the finance department thought that BSC did not fit the hospital and was a waste of time.

Eventually all the functional departments submitted their BSCs. Most middle managers were suspicious of the application of BSC, some thought the BSC would never work, although they submitted their BSCs. In reality the BSC didn’t work at the time. Most strategy actions were not launched. More work was needed to get the implementation going and so we chose the clinical department for a more detailed pilot, these were the departments which do produce the revenue and are the core focus of strategy.

Conflicting experiences of BSC

The emergency department’s importance relates to its role as the portal of the hospital as emergency patients often become inpatients. Its efficiency is seen as an epitome of the hospital, it is the public’s window. At the time, it had serious difficulties with high staff turnover and
low morale. It was a high workload department and because emergency care is a young discipline and career paths were not clear. Professor Li Yun, the director, was strong on management but didn’t know where to start. It was an ideal breakthrough point to the hospital BSC project.

Professor Li was led through the process of how the BSC development process could help refine direction, identify the problems and action plans. Li recognized the particular problems for surgeons who didn’t have chance to do large operations so they would not stay in this department. Consequently there was only one surgeon and cyclic doctors from other departments. Li found that some hospitals chose to combine the trauma surgery with the emergency department. The key researcher suggested that he draft his department’s strategic plan on this basis; a decision which was agreed to by President Liu. The hospital combined trauma surgery with emergency surgery as a whole, added nurses for it, put an obstetrics and gynecology emergency clinic within the emergency department, and improved the treatment of staff. Through applying BSC the hospital optimized the service processes in emergency department, solved its strategic development issues and increased the enthusiasm of its staff. The efficiency of this department was improved with the utilization rate of ICU beds increasing from 30% to around 65%. The BSC measures brought focus on problems and initiatives for change.

According to a presentation by Prof. Li in the hospital BSC meeting, the benefits of applying BSC in his department are following:
“The setting up of measures helped… . The learning of this department was strengthened, specialized emergency medicine knowledge and skills of the doctors and nurses were strengthened. … the utilization rate of medical equipments is improved. Teamwork of this department is improved obviously”.

The key researcher talked with the doctors and nurses of this department, they enjoyed the results of applying BSC with no obvious resistance to BSC.

In contrast radiology was a department where there was strong resistance. There were three sub-departments each with different performance pay systems which the BSC reward system amalgamated. The resistance mainly came from the Medical Radiations unit, because under the old performance pay system, persons who worked in this unit could gain higher bonuses for the same work. Radiology’s strategy and new BSC based performance pay system aroused radical debate. The director decided to have a vote which left the MR unit disaffected and uncooperative. Markus (1983) believes resistance is more precisely explicable in terms of ‘interaction’ between characteristics of the people and the system. The political (distribution of power) variant of interaction theory holds that resistance is the outcome of different power distribution. Thus while accepted by those who gain power, systems seen to potentially change the balance of power will be resisted by those who lose it.

With encouragement from President Liu the MR unit had to reform its work processes to improve its work efficiency. This has produced wider satisfaction as younger doctors can work in the three parts cyclically with better learning. As for the experiences, the director of
radiology department indicated that:

“The application of BSC promotes the improvement of department management, avoiding the shortages of just using revenue indicators to measure the performance …. Applying BSC … promotes training young doctors to learn the utilizations and diagnosis of all radiology equipment, enlarges the specialized knowledge of doctors, provide more reasonable project for the integrated utilizations of radiology equipments. Applying BSC improves the enthusiasm of the staff to take part in the management of department …. ”.

In the case of the respiratory diseases department BSC was driven upwards. The director of respiratory diseases is known to be a strong person who came in with new ideas. When the hospital started to build up the BSC, the director drafted a so-called BSC performance pay project to the hospital. However it was built with limited understanding because she understood BSC just to be a performance pay tool. She resisted the organization’s approach to BSC. Eventually her coworkers forced her to change her attitude, because she had expressed her attitude on changing the department, and she had claimed to her staff that the hospital didn’t give her a good improvement tool. Now the staff said that the hospital thought BSC is a good tool, and gave the chance to her to use it, why she didn’t accept it.

What she did find was that the use of the BSC to highlight issues and develop action plans did help address long-standing problems. These departments understood the approach to BSC and the hospital’s determination. The director of respiratory diseases still doubted the BSC till the BSC based performance pay system was applied; her attitude to BSC was really changed,
because she found that all the goals that she wished to achieve before applying BSC were achieved.

The department of neurology and the department of digestive diseases were the two highest departments in whole inpatients revenues in the hospital. Through applying BSC, both the two departments achieved obvious progress. Sales of pharmaceuticals which had been the mainstay of revenue dropped almost 20%. Before applying BSC, there was little attention to some critical areas of performance, like students’ satisfaction rate (because Jinan Central Hospital is a teaching hospital). Physicians began to pay more attention to teaching quality. This was inconceivable before applying BSC. Most physicians and all the nurses welcomed the BSC, because applying BSC improve the efficiency of the department and hence improve the performance level of the department. The BSC based performance pay system is viewed to be fairer and more strategic.

**DISCUSSION**

The Greenhalgh et al (2004) model of innovations in health care provides a basis of exploring the process by which the BSC was adopted by Jinan Central hospital. In this analysis the system is interpreted as the hospital; richer studies might follow where the unit of analysis is a group of hospitals e.g. in Shandong province. From the viewpoint of *system antecedents* there were slack resources in the hospital in terms of the key researcher who was released into the project. There were limited networks to disseminate the knowledge – in fact the building of dissemination networks was one of the challenges of the project.
System readiness is difficult to interpret in a linear fashion. System readiness evolved for each department as the need to replace the previous ineffectual strategy implementation approaches was recognized and the imperfections of the pay for performance system became more apparent. It was therefore not a constant process across the hospital. The power balances of supporters and opponents was critical, with the most powerful individual, the CEO, exercising the greatest influence to push the BSC project forward. Nevertheless we have concerns about this part of the Greenhalgh model.

Adler, Kwon et al (2003) discuss the role of power balances between doctors and managers. Yet in this setting nearly all managers are doctors. They wear two hats, both as influencers of change and as professionals guarding against change. Respiratory diseases department was an example of how the manager might even be over-ruled by doctors in her team to take on an innovation which she is resistant to.

In relation to the adopter, there are distinctive things about the Jinan Hospital which made it ready for BSC. Previous approaches to strategy implementation had not worked and the current reward system was ready for replacement. Having sent a staff member to Australia for one year to study BSC in hospitals they had tried to build the necessary skills. Yet the adopter cannot be seen as a single entity but as a string of departments which all have their own contexts and history.
There is little to critique about the implementation. Consistent with prior research, training and resources are critical (Adler, Kwon et al. 2003; Rogers 2003; Cavalluzzo and Ittner 2004; Greenhalgh, Glenn et al. 2004).

Nevertheless there are concerns about the process of the implementation of this managerial technology – the BSC. Liu and Mills (2005) argue that pay for performance in Shandong hospitals has produced an increase in hospital revenue and cost recovery but not in the societal benefits from a well functioning hospital system; especially in terms of unnecessary care. The advantage of the BSC was to move away from just revenue measures to other strategic goals such as the quality of training of doctors. Yet Adler et al (2003) argue that professional groups have much greater difficulty with the implementation of strategy. The problem for this case is that the BSC in Figure 2 shows no indicators of unnecessary care. While patient satisfaction is important there is no reason to believe that patients can truly detect unnecessary care.

Although Kaplan and Norton have strongly argued for the “balanced paycheck” we have concerns that the Jinan hospital project at times has been seen as performance-related pay project and not a strategic system, while acknowledging the importance of performance related pay in providing incentives for financially unrewarded doctors (Liu and Mills 2005). Yet the improved financial outcomes to doctors may explain the lack of resistance

CONCLUSION
Aidemark (2001) argues that the BSC may improve hospitals through a shift away from financial outcomes to patients and care. There is some reason for optimism that this may happen at Jinan Central Hospital. Yet doctors do resist managerial initiatives sometimes due to the belief that managerialism has reduced their autonomy (Garside 2004).

The case illustrates the strengths and weaknesses of the Greenhalgh et al (2004) framework. In a single hospital the implementation may appear very different in different contexts just simply because of history and personalities. Context is so overwhelming that it may take a strong champion to continue to push through such dramatic changes. In a high power distance culture like China this may well be the role of the hospital president. The process of adoption needs to be seen as a process through many adopting departments.
Figure 1 Conceptual map of Innovation in health care organizations
BSC of Jinan Central Hospital

Mission
To provide excellent medical, prevention, healthcare, rehabilitation service, and promote the development of teaching and research of clinical medicine at the same time.
1. To provide comprehensive medical, prevention, healthcare, rehabilitation service of high medical quality and high service level to the residents in Jinan city.
2. To promote the development of specialized medical service to the patients from Shandong Province, the other provinces within China, and overseas countries.
3. Responsible for teaching and research tasks of clinical medicine.
4. To promote the development of national healthcare business co-operated with all groups of the society.

Patients and Community
To make the patients to feel themselves honored, high quality service, make our services to be their first choice.
- Patient Satisfaction Rate
- Output Interview Rate
- Per Outputted Fee-for-Service
- Per Impatient Fee-for-Service
- Community Two-Way Referral Number
- Public Welfare Activities and Public Health Education Number

External Customer and Partnership
Under the leadership of the Jinan Municipal government and health bureau, to fulfill every task in the mission statement, to establish a good reputation and to get positive cooperation.
- Score of Health Bureau Subject Management
- Score of Medicaid Bureau Subject Management
- Medical Bureau Hospital Assessment Number
- Clinic: Number of clinic patients in the hospital
- Perioperative nurses: number of nurses from the agency

Internal Service Processes and Effectiveness
To provide the clinical and support services of effectiveness minimum. Our most prominent characteristic to an pursuit of improvement in these processes, devices and community satisfaction.
- Bed Occupied Rate
- Bed Turnover Rate
- Per person be charged with bed number
- Per person be charged with inpatient number
- The number of single disease quality and change control
- The ratio of income from medicine sales and the income from operation

Healthy Finance
To realize the use optimization and maintenance of resource distribution. To distinguish the resource use and the budget. To realize assets increment and accretion multiplication. To make sure our hospital have the best financial resource combination to support our hospital to realize our vision.
- Operation income growth rate
- Ratio of gross cost and gross income
- Number of inpatients and discharge number
- Number of operations and operation number
- Quick ratio
- Return on total assets
- Assets-liabilities ratio

Staff, Culture, Learning and Innovation
Staff is our the biggest value assets. We will focus on staff satisfaction, and we will see it as the driving force of patient and customer satisfaction. Our services are based on respect, service and teamwork, and strengthen management ability, provide development chance and resource to staff and promote learning and development, make staff ability can meet the requirement of changing environment, encourage innovation and support research for strategy, realize knowledge sharing.
- Staff rate of Satisfaction
- Adopted viable suggestions number from staff
- The ratio of number of research awarded and number of total research
- Number of new techniques and projects gained yield

Figure 2  Balanced Scorecard of Jinan Central Hospital
References


