

# Jiangshan Machinery Works

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## Executive summary:

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Jiangshan is a state Owned Enterprise Company established in 1949 and is one of the biggest premier manufacturers of machine tools in China. The company has basically to types of manufacturing lines, standardized and tailor-made. Selection of human resources was based on SOE “full employment” policies. Under the planned economy government controlled enterprises.

After china entered into WTO (world trade organization), many multinational companies have established their businesses in China. Due to changed macro environment, Jiangshan was meeting increased competition. In order to meet these challenges, they had to consider major changes in their business setup. There were several problems which Jiangshan was supposed to solve internally due to low efficiency, lack of responsibility among employees, high payroll, low product margin, lack of motivation among employee, less efficient processes, surplus of employees etc. They identified their major cost to be material cost. They realized that their material cost was higher than their main competitors. Therefore they decided to look into the purchasing department.

Jiangshan hired MBA consultants to propose two business models to be able to fix the current problem in the purchasing department. The two business models presented in the case are the Branch and Subsidiary Models. We propose our model based on the evaluation of the comparative advantages and disadvantages from the management and employees’ perceptions between the two models. It is worth noting that, we will also evaluate our analysis in the context of all SOEs in China and therefore certain assumptions may be misleading when put in other contexts. The company model with less risk profile will be chosen.

Restructuring the purchasing department will have limited effect on the company performance. To be able to maintain its premium status as a manufacturing company the whole firm needs to be restructured. A hierarchical structure is proposed to create transparency and accountability. Measurable work processes will make it possible to implement reward/incentive systems, this will increase motivation and secondly efficiency.

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## **Human resources situation in Jiangshan Machinery:**

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Jiangshan Machinery Works is a state owned enterprise (SOE) in China. The company was established in December 1949 and is one of the biggest premier manufacturers of machine tools in China.

The human resource selection in a Chinese SOE is limited as compared to a western private enterprise. SOE's are committed to the idea of "full employment" and often people are hired because of their relations, not their skills. Nor is there a tradition of firing people, when personnel is hired they expect to have a job for life. This creates a surplus of employees (overstaffing), low productivity, low morale and higher labour costs. To occupy every employee, additional functions are created or more persons share one position. Before the reform had the SOE's a large part of social responsibility care of the employees. After the reform, this is not required by the government anymore. However, it is necessary to care for the employees when the government support is limited. The SOEs are facing a dilemma in managing the international competition vs. managing the additional cost related to the social welfare of the employees. In Jiangshan Machinery, there was a strong corporate culture among employees and there was no distinction between work and private life. Employees lived together in servant houses; they were like a big family.

In the past under the planned economy in china where government controlled enterprises, Jiangshan as SOE was supposed to follow the guidelines given from government.

### ***Why challenges? – Macro-environment changes***

After China entered into WTO (world trade organization), many international companies established their business in China. The international companies do not have the history and culture of the SOE's and is therefore free to follow efficient work processes and HR policies. New guidelines given by the government is also in contrast with existing corporate structure and it will require fundamental changes.

The changed external environment, in terms of open market for foreign companies' competition, is causing worries for Mr. Wang the CEO of Jiangshan. It was time to make decisions about company future in order to make a clear strategy about their future course, to survive in the emerging market economy of China. It was extremely important for Jiangshan to re-define the corporate culture and ethical standards in order to become more innovative and efficient to meet the increased competition.

### **Different challenges in the market segments:**

Jiangshan had mainly two types of production, tailor-made and standardized. Sales revenue for standardized production was much higher due to high sales volume, but profit margins were higher for tailor made production. (Need different processes?)

### **Challenges in Standardized product segment:**

Jiangshan was supposed to meet the competition from domestic companies in standardized product segment due to:

- ✚ Many of these domestic companies were subsidized by the local government, which gave them a strong financial position.
- ✚ Domestic companies could offer lower prices and Jiangshan`s revenue in this segment was reduced

### **Challenges in Tailor made product segment:**

Many foreign multinational companies having well known brand and more innovative products were established in China and it was a major threat to Jiangshan`s tailor-made product segment due to:

- ✚ Foreign companies were strong in technological innovation.
- ✚ Multinationals forced Jiangshan to cut the prices.

### ***Micro-environment:***

Managing director of the company Mr. Wang Hongguo analysed the situation and concluded that material cost counted for 70 % in the business, therefore he focused on improving the efficiency of the purchasing department. To overcome several problems faced by Jiangshan such as the inefficient work methods and high material costs described below, he came up with the idea of converting the purchasing department into a separate unit with its own overall responsibilities.

### **Authority and material cost**

The purchasing department was suffering from overstaffing and bureaucracy with no clear vision or structure reflecting the tasks and functions needed to buy the material in an efficient manner. The department saw themselves as an order-taking function not as a value-adding integrated part in the supply chain. The stuck bureaucratic pattern had led to unnecessary high material costs and inefficient workflows.

The new employees, replacing the older retired, did have relevant education, but they did not have the authority to implement changes and perform managerial roles actively. The company`s bureaucracy and culture, where age was respected above tasks and positions, limited its performance.

## **Performance measurement systems and reward systems**

The overstaffed, bureaucratic and inflexible organisation creates irrelevant functions and latent work. This together with the interpersonal relationships has created an unstructured organization with no clear responsibilities. Internal performance measurements systems do not exist when there are no measurable tasks. The lack of measurement systems causes a lack of reward systems. When there is nothing to measure, it is difficult to reward performance. There are no incentives systems motivating the individual to perform, and the ones that have self-initiative for performance are blocked by the bureaucratic organization. The system causes lack of motivation and low performance.

### **Summary - Challenges:**

There were number of challenges Mr. Wang was supposed to address:

- ✚ Increased transparency, accountability in the company and unclear responsibility
- ✚ Increase communication, there is no interaction among business units/departments.
- ✚ Slack performance of the purchasing department. (Cost effectiveness, minimise inventory, replacement of manual order processes system with IT systems).
- ✚ How to increase the profit margin?
- ✚ Motivation, stimulating employees to become more creative, innovative and start thinking out of the box.
- ✚ How to improve work processes; increase the efficiency of the internal operations
- ✚ Increased productivity
- ✚ The problem of overpaid employees as compare to the other companies in the same segment.
- ✚ Overstaffing

## Branch versus subsidiary

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Our selection is based on effective balance of economic, social and environmental responsibilities without minimizing requirements for ethical standards as stated in case. Based on our evaluation of the models above, we think that the Subsidiary should be the right company model at this time of Jiangshan's life when the company needs revolutionary strategy process to meet both the micro and macro challenges as stated previously.

Reasons:

✚ The high cost of production (70%) which is mainly material cost erodes almost all the company margins. There is therefore high level of cross-functional subsidization in the company to sustain the purchasing department and hence the department does not feel the heat. As a subsidiary however, the department will bear all the costs and therefore creates financial discipline in the department.

✚ As an SOE, the bureaucratic and old-fashioned style of management which creates complex decisions and policies do not allow the young and talented managers to exhibit their know-how. The subsidiary will provide the opportunity for these young managers to devise appropriate strategies and systems to enhance efficiency and make the department more profitability.

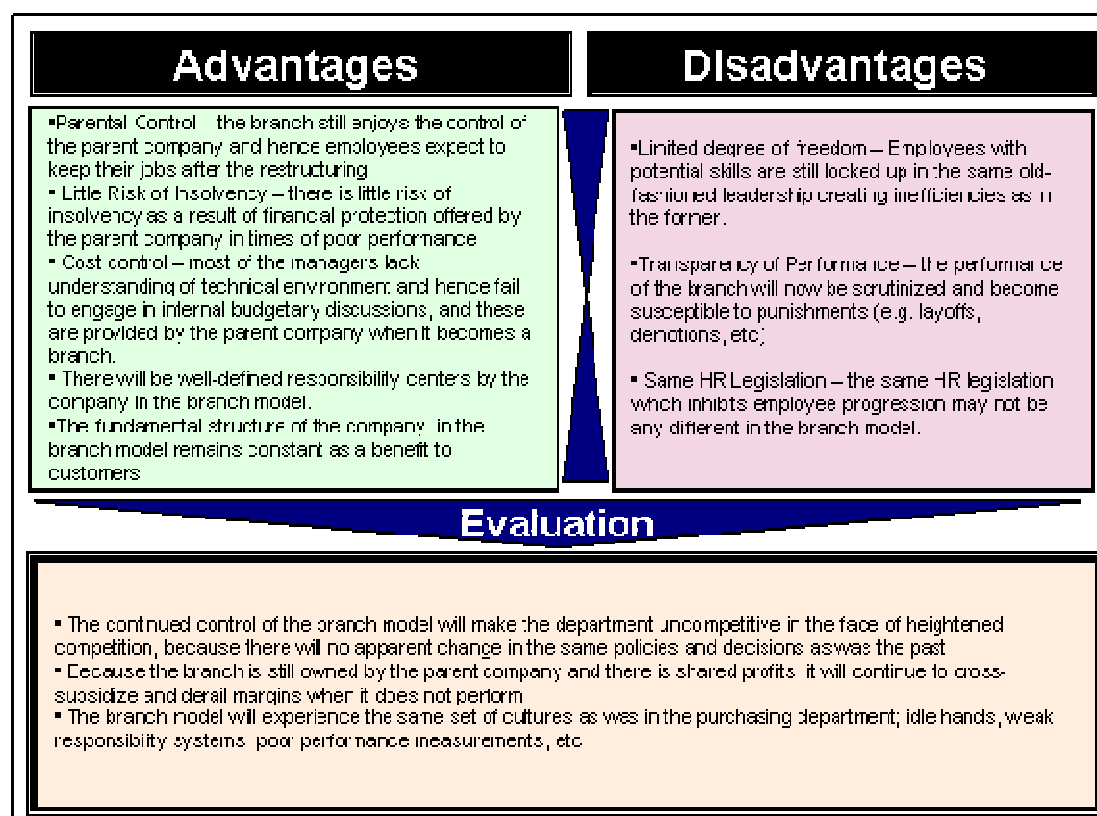
✚ The independency of the purchasing department as a subsidiary means that they will now have to "take the bull by the horn" to make them more competitive in the new environment. Clear design of responsibility areas, like budget decisions, is expected in the new subsidiary without the intervention of the parent company.

### ***The Branch Model***

A branch of a company is not a legal entity but an arm of the company which is wholly owned by the parent company. Therefore the branch submits to the policies and decisions of the parent company. The company budgets, whether cost or sales, are determined by the parent company and the branch is expected to meet them, which

differs from the current purchasing department where targets could have been negotiated (see case). To meet these budgets, parent companies usually steer the branch company towards company goals by defining responsibility centres and performance measurements, and the necessary rewards which go with them.

The following table summaries the advantages and disadvantages of the branch model.

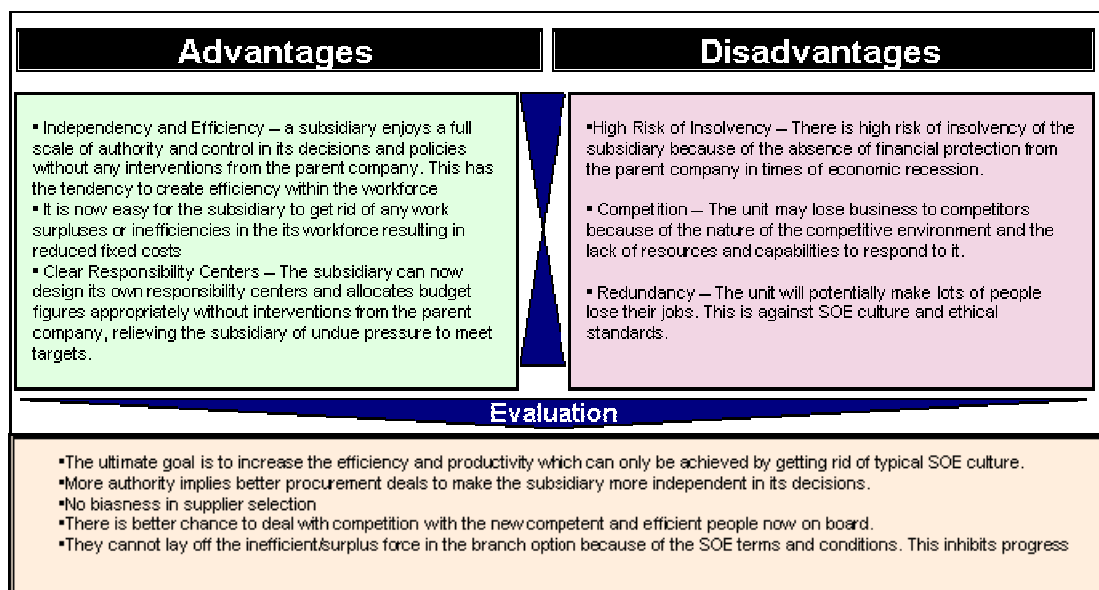


### ***The Subsidiary Model***

The subsidiary model of a company is distinct, separate and a legal entity for the purposes of taxation and regulation. A subsidiary is a shared ownership and therefore the parent company exercises control by virtue of ownership of all the shares or 50% plus one share that it has. The composition of the board of directors is therefore controlled by the parent company.

The following table a brief summary of the advantages and disadvantages in the choice of the subsidiary model.





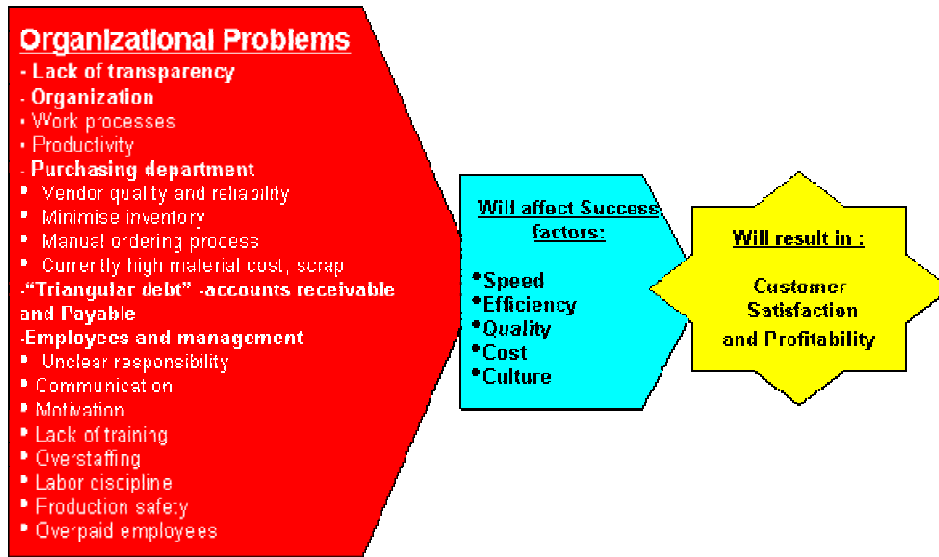
[1] This is a requirement for creation of a subsidiary

## Alternative company Model

The CEO of the Jiangshan has identified the respective problems and wanted to look specific into the purchasing department. In creating consistency in Jiangshan, major organizational changes (overhaul of the whole company structure) are needed instead of making the purchasing department a single entity. The Chinese business culture differs from that of the western ones and it should therefore be taken into consideration when making the appropriate organizational alterations. An example of how Total Quality Measurements (TQM) is incorporated into a Chinese context is the case of Haier group because the environment as described earlier is characterized by increased competition on price, cost and quality. Furthermore, there will be incorporated some western thinking by using Management Performance Measurements (MPM) as a measure of management's performance to support the TQM.

## **Problems, cause and effect**

### **Cause and affect in changing customer satisfaction**



By pinpointing the operational problems within Jiangshan one will be able to address these issues and perform the appropriate changes in improving Speed, efficiency, Quality, cost and overall company culture. In other words, customer's non-stop search for cheaper and better products would force the supplier to continuously improve their TQM. Continuously improving TQM will result in higher customer satisfaction and hence foster profits over medium to long term.

## **Re - Develop the existing organizational structure**

Due to the nature of the business (manufacturing) and unique Chinese cultural context, a hierarchical structure organized around the products produced is proposed. The new organizational chart will clarify the responsibility centres, mapping revenue costs drivers of the operations. Furthermore, it is proposed to introduce a touch of western managerial thinking in this organizational circumstance. The most immediate problem in Jiangshan is the inefficient organization with lack of transparency. This structure makes it difficult to measure cost allocation and implementation of incentive systems.

### **Proposed structure:**

The new hieratical structure will have head quarter which leads five divisions:

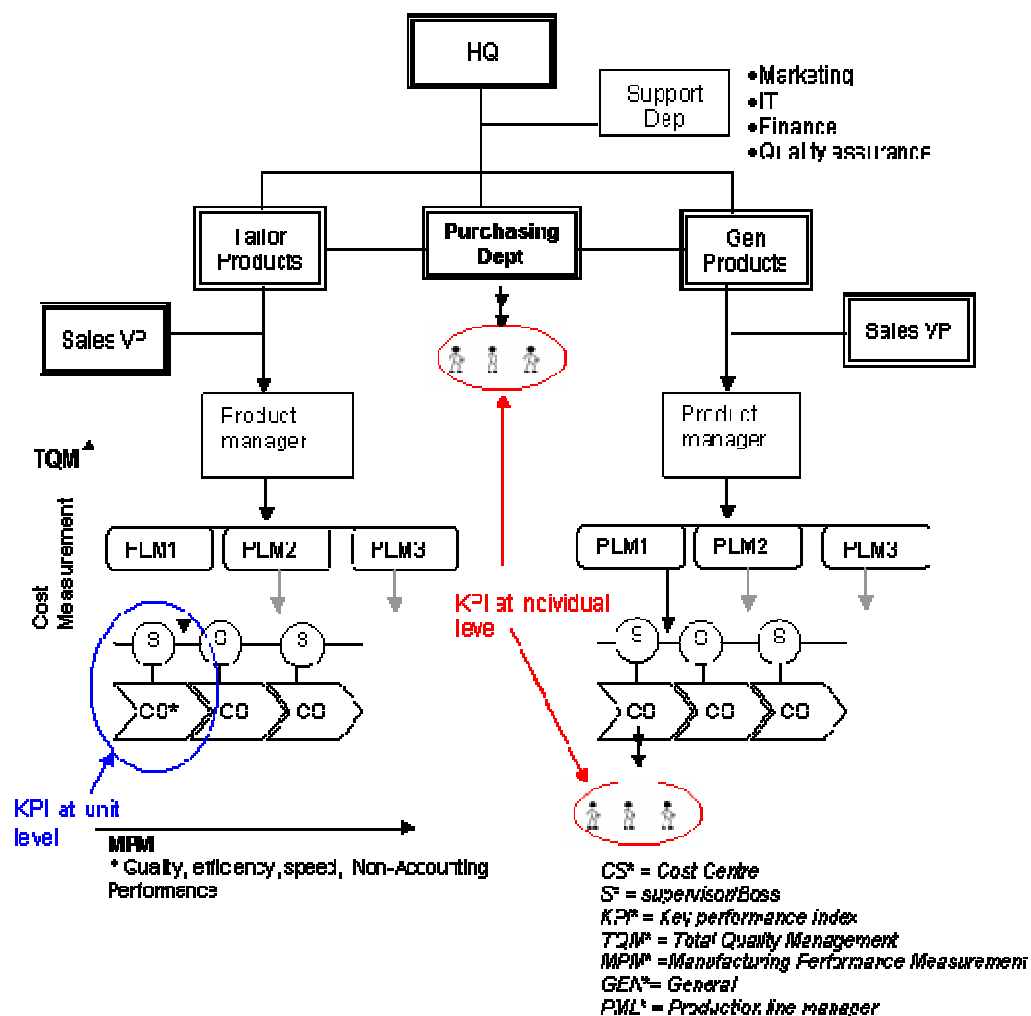
- Support functions

- Purchasing
- Specialized /tailor-made products
- Standardized products

All the divisions will have a VP who will be the part of executive team.

The following sections identify how the proposed new organization affect the above mentioned success factors

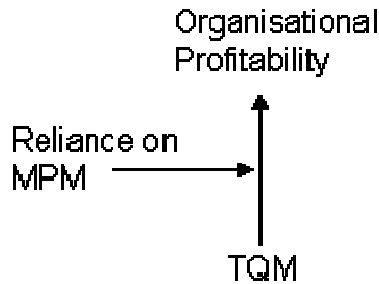
### Organizational setup



## Headquarters- executive team

The executives will be responsible in incorporating the future strategy and operations. Chenhall (1997) argues that MPM is essential to both operational and strategic control as it provide feedback and information from managers.

*“Strategies of TQM, when combined with a reliance on MPM are likely to lead to enhanced profitability because of feedback from operations that: (1) increase the clarity of factors associated with developing complementarities between elements of TQM; (2) focus managers attention on these factors; and (3) strengthen motivation to pursue these aspects of manufacturing. Thus, it is proposed that organizational profitability is likely to be higher in situations with TQM with a high reliance on MPM, than in situations with low reliance on MPM”* Chenhall (190:1997). Ergo incorporating TQM with heavy reliance on MPM is vital in growing organizational profits and creates transparency. It should be integrated it into the culture of Jiangshan in an early stage. The figure below illustrate that the TQM rely on a sound MPM to get the best result



## Product divisions:

The each production divisions (Specialized and General Products) will have their sales department as supporting function to generate sales. In this type of an organization, the manufacturing will be organized as a production line. However it is important to distinguish between the standardized and the specialized production units to give focus. Common for both the units is that quality, cost, speed and efficiency should be enhanced. In the standardized production, it is economy of scale that is most important and standardizing work processes would be essential. The Chinese cultural behaviour (i.e. Guanxi) allows for opportunistic behaviour. Ergo, it is vital that one evaluates performance and output on an individual level so transparency becomes apparent. One should include penalties and incentive schemes to enhance production and quality output of every employee.

In the specialized manufacturing unit, continuous innovation is important in making more innovative products. As strong control measurements may be a set back to innovation, it is proposed to evaluate performance on the supervisors' level to create more flexibility. The supervisor will control costs and efficiency of his team which should be less than 10 people so it does not become too opaque. One should motivate

work-circulation and incorporate a horizontal measurement basis for the reward system.

Cost centres should be allocated to the supervisors' part of the production line and make its way through production line managers, to production manager and end at CEO. The revenue centres are identified by sales of the relevant department. VP for the respective manufacturing unit will ensure revenue and costs (production and purchasing) are matching. Control and measurements, will be the responsibility of the VP product manager in ensuring revenue versus costs.

### **Purchasing division:**

The purchasing department should not be outsourced since it is a vital part of the business. It will be organized into cost centres, reflecting the production organization. The product divisions should also take control of the purchasing with particular emphasis of sourcing (procurement) of materials, quality and efficiency. Weekly or at worst monthly KPIs to measure performance and procurement with respect to time and suppliers are essential at the supervisory level.

Again, installing a new IT system will improve the current manual ordering processes and allocate costs automatically to products, as purchasing ordering take place. Forecasting should be carried out in planning future demand from the production departments. This would enable the purchasing department to lower its inventory (hence potential scrap) and enable closer relationship from its suppliers (who can plan production and delivery more accurate). The purchasing department should also get more autonomy in decision making and should be looked upon as an integrated part of the value chain interacting with the production departments. Material cost will be reported to the product VP's, who is responsible for each profit centre (described in above section). The VP in purchasing department is measured and rewarded based on the performance of the department.

### **Support division:**

Cost of these supporting functions is defined as overhead cost and will be allocated to the profit centre in the product departments using the Activity Based Cost (ABC) principles.

### **The quality assurance department**

The quality department should be given full autonomy to perform expected and unexpected quality checks in work floor to ensure that quality is sufficient. They should also be educated in checking the quality of purchasing department to ensure

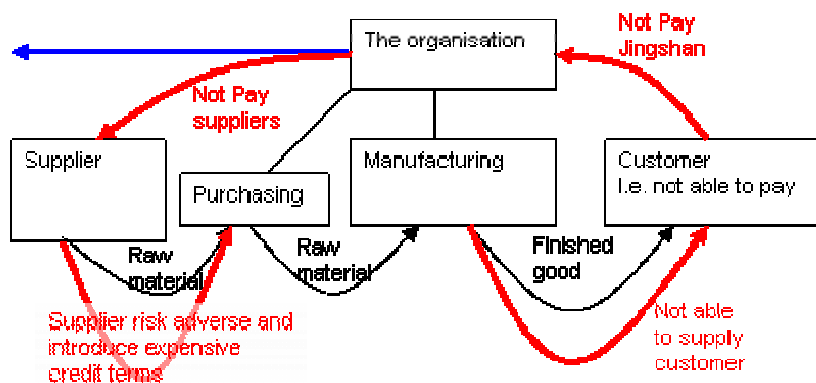
that no opportunistic behaviour occurs in the purchasing process. They should work on an incentive based system where they get bonuses in finding defects.

### Measurement and reward system:

In the new organization there should be possible to measure cost centres' performance of the production team and these measurements should be used for reward systems. Measurement systems will measure vertical on product cost and horizontal on efficiency and quality.

There are four measurement systems that are suggested for the restructured Jiangshan:

- TQM - Total Quality Management which will measure cost and efficiency in the production line.
- MPM – Manufacturing performance measures system which will measure individual performance in the value chain. This system will give feedback on quality of the product before it leaves the shop floor.
- Accounting measurement system- it will reflect responsibility centres in the organizational structure. That will give the possibility to allocate costs to the relevant cost centres; revenue centres, profit and even Investment centres, and that will give a high level of accounting control. Furthermore, this would allow for better accounts receivable and payable from customers to suppliers and lower credit terms



Each step in the value chain / function will have allocated cost centres and all the cost centres will be measured in the hierarchical organizational structure. In addition the vertical measurement systems will be implemented within functions. These measures will be the foundation for calculation of the incentive schemes. By implementing incentive systems which are linked to performance, it is expected that responsibility and accountability will increase.

## Conclusion:

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Studies have shown that by incorporating TQM with a heavy reliance on MPM will grow organizational profits and create more transparency. Jiangshan will create clear responsibility, proper measurement system and reward system. Additionally, it will increase responsibility and accountability among the employees. However, because the company culture and the management of this SOE are not educated in how to incorporate TQM and MPM, the company is expected to face major problem in restructuring process. The changes will create uncertainty and rivalry, and most certainly disturb the harmony of organizational behaviour in the company. Therefore, it is important to educate the people and continuously involve all the employees in the restructuring process.

The restructuring process will be difficult for CEO- Mr. Wang since this will most certainly ensure redundancies albeit keeping in mind that resistance to changing the company would mean bankruptcy for the company. Redundant personnel especially in the purchasing department should not be laid off but replaced into other vacancies within the company if possible.

Restructuring the only purchasing department will have limited effect on the company performance. In maintaining its premium status as a manufacturing company the whole firm needs to restructure. A hierarchical structure is proposed to create transparency and accountability. Measurable work processes will make it possible to implement reward/incentive systems; this will increase motivation, efficiency and quality.

## Bibliography

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### Articles:

Thomas, W. et al (May 2005), China Haier Group, Strategic Finance

### Books:

O'Connor, N.G. (2006) Management control of multinational enterprises in China: a *contrasting and managerial accounting perspective*, - Management Control of Wholly-owned Subsidiaries McGraw Hill

### Case

Jiangshan Machinery works, 2003

### Journals

Chenhall, R.H. (1997), Reliance on Manufacturing Performance Measures, Total Quality Management and Organizational Performance, **Management Accounting Research** 8, pp. 187 – 206.