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A case study of the SMEs' organizational restructuring in Taiwan

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A case study of the SMEs' organizational restructuring in Taiwan

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Keywords

BPR, Small- to medium-sized enterprises, Organizational restructuring, Taiwan

Abstract

Business process reengineering (BPR) has been widely applied in many enterprises. However, most cases have targeted large enterprises. In Taiwan, small and medium enterprises (SMEs), which account for at least 95 per cent of all enterprises, have played an extremely important role in Taiwan's economic growth. The question of whether those SMEs can successfully implement BPR in order to strengthen their management structure is an important issue. Undertakes a detailed case study of an SME whose profits had fallen dramatically and which successfully implemented organizational restructuring (OR). Discovers that, although the SME in question did not make use of information technology to achieve the goal of organizational restructuring, by adopting use of BPR concepts and methods it achieved its goal of transformation. The model used for the implementation procedure of OR should provide a useful reference for other SMEs in Taiwan seeking to achieve perpetual operation, because most SMEs will eventually encounter similar problems.

Introduction

When an enterprise finds that it is becoming less competitive, it will usually invest heavily in information technology to improve its competitiveness. Computers are widely used to improve efficiency, processes, speed, service, quality etc. However, many tasks and processes date back from before the introduction of computers. If, in applying information technology, the enterprise does not rethink or streamline its process and organizational restructuring, and instead merely uses computers to speed up the implementation of existing processes, the results are likely to be very disappointing. That is, if an enterprise tries to implement business process reengineering (BPR) or organizational restructuring (OR) using a traditional management framework, the management mechanism will become more complicated, and negative results may be experienced; the enterprise may in fact find itself in an extremely dangerous situation, and display worse performance than it would otherwise have achieved.

Therefore, when applying information technology, an enterprise needs to undertake comprehensive planning (taking into consideration customers, suppliers, R&D, marketing and sales, purchasing, production/manufacturing, delivery/service, and finance etc.) in order to decide how to redesign their processes, so as to reduce the cycle time.

Fundamentally speaking, BPR or OR does away with traditional management methods based on hierarchical systems. Some traditional methods are retained, but others

are rejected; at the same time, imaginative new methods of working are discovered.

With BPR, one thinks in terms of the enterprise as a whole, implementing comprehensive, inter-departmental process improvement, and making appropriate use of information technology and training to give the enterprise flexibility and the ability to respond rapidly to changes in market demand.

The BPR concept is now widely used in many enterprises. However, the majority of enterprises that have adopted BPR are large enterprises. In Taiwan, over 95 per cent of enterprises are small and medium enterprises (SMEs), which account for around 50 per cent of total output value and 50-60 per cent of exports; they have played an extremely important role in Taiwan's economic growth. However, given the trend towards liberalization and internationalization, both the government and the private sector need to consider how SMEs can strengthen their operational structure in order to achieve perpetual operation. One important issue that needs to be considered is whether SMEs can implement BPR successfully. In this study, we undertake in-depth discussion of the procedure of BPR implementation by SMEs in Taiwan.

Related work

Hammer and Champy (1993) defined BPR as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical measures of performance such as costs, quality, service, job satisfaction and speed." Davenport and Short (1990) proposed five steps for the implementation of BPR:



- 1 Develop business vision and process objectives.
- 2 Identify processes to be redesigned.
- 3 Understand and measure existing processes.
- 4 Identify IT levers.
- 5 Design and build a prototype of the process.

Harbour (1994) also proposed seven steps for BPR implementation and noted nine major principles to which enterprises should pay attention when implementing BPR. In addition, Singh and Shoura (1999) designed 20 parameters focusing on the engineering projects, project engineers, and project managers to establish a model of organizational change. Luo and Ya (1999) proposed a framework for selecting business process modeling methods based on modeling objectives.

With respect to BPR applications, many successful cases applied in different fields were discussed, such as applications in purchasing process (Kim *et al.*, 2000; Hammer and Champy, 1993) customer service (Hammer and Champy, 1993) and cargo handling process (Khan, 2000). In addition, BPR or OR plays a very important role when a business successfully implements IT systems, such as SCM (Mohanty and Deshmukh, 2000), ERP (Ng *et al.*, 1999) and material supply management system (Wang *et al.*, 2000).

Despite the successful examples noted above, not every enterprise is successful in implementing BPR. The research of Altinkemer *et al.* (1998) in many BPR reports suggested that some of them have fairly high success rate, while some have a very high rate of discontent. Hammer and Champy (1993) noted that BPR implementation failed in many cases. Regarding the reasons for the failure of BPR implementation, Aldowaisan and Gaafar (1997) undertook further discussion on this issue and Sarker and Lee (1999) also discussed some failure factors. Sia and Siong (1996) mentioned in their research that, although BPR is widely discussed, very little attention is paid to management problems caused by BPR. In Sutcliffe's (1999) research on 30 BPR projects, he concluded that successful BPR leaders adopted the appropriate leadership styles. Dey (1999) explored how special projects can be used to increase the successful probability of BPR implementation.

Although abundant research in BPR has been conducted in the past, relatively little attention has been paid to investigating BPR implementation in Taiwan's SMEs.

Case study

Current status of the company

Chunghua Chengyang Co. Ltd (hereinafter referred to as "Chengyang") was established in 1992. It is a Class One water and electricity supply contractor, whose areas of business include electrical wiring, piping, air conditioning, fire prevention facilities, waste disposal facilities etc. When first established, the company had capitalization of NT\$5 million, operating revenue of NT\$5.4 million, and approximately 11 employees. By 1996, the company's capitalization had increased to NT\$25 million, its operating revenue had increased to NT\$68 million, and the number of employees had risen to around 20, of whom six were financial, purchasing, accounting and personnel staff, and the remainder were construction site personnel. It is a typical small business; its organizational structure is shown in Figure 1.

A characteristic of the water and electricity supply contracting industry is that once a firm has been given a contract, they implement construction in accordance with the plans, but before being given the contract they must give a quotation based on the specifications announced by the client. At present, Chairman Chang (hereinafter referred to as "the manager") handles the giving of quotations; once the contract has been secured, the foreman directs the employees in construction according to the plans. The emphasis of the company is on construction techniques.

Background

Since the company was first established, as the number of employees is limited and the company organization simple, the manager and employees have collaborated closely in trying to make the company a success. The manager is of vital importance to the company; he has to be personally responsible for production, sales and purchasing, and more or less carries the company on his back. When the company was small, it was possible to use human effort as a substitute for management mechanisms, but as the company grew, there was a risk of management problems occurring. Chengyang faced these problems after increasing its capitalization to NT\$25 million in 1996. Under the old structure of organization, employees' commitment to the company was reduced, and employees became passive and negative; in order to prevent them from becoming competitors, the manager did not teach them everything he knew. With their opportunity to learn restricted and apparently with no future,

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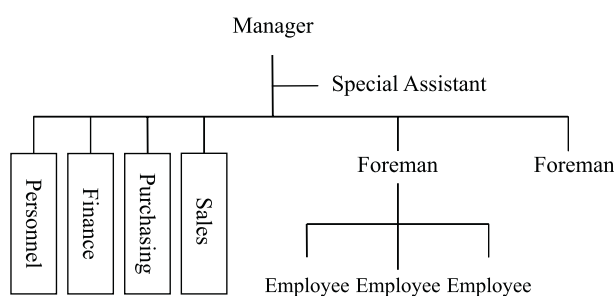
coupled with the company's unsound systems, employees did not concern themselves with cost and efficiency. The effort employees put in was out of proportion to the compensation they received. As a result, employee turnover was high, and the company's profits after the increase of capitalization were much lower than they had been in the previous two years.

In order to achieve perpetual operation, the company had to upgrade and transform itself. Faced with the difficulties described above, the manager began to think about how it should be developing. Besides seeking advice from outside experts, the manager also began to demonstrate more concern for employees, talking to them to find out what they hoped to get out of the company, and to explain to them the manager's management philosophy and his views on the future. After this subconscious establishment of a consensus, the manager got together with the foremen to discuss how to improve efficiency and reduce costs. After several rounds of discussion, a consensus was reached, which was that the company should establish sound systems and implement organizational restructuring. In following, we will discuss the way that Chengyang used the modified five steps for BPR implementation described in Davenport and Short (1990) to restructure itself.

Develop business vision and organization objectives

The report on next generation manufacturing (NGM, 1997) forecast a change from "stable growth" to "leaping growth," and a change in organizational operation from "small-scale physical enterprises" to "boundaryless virtual enterprises." In the water and electricity supply contracting industry, the age of the lone hero battling away on their own is over. Chengyang had to abandon its old "growth is everything" model and implement thorough re-structuring to establish a comprehensive, forward-looking work team.

Figure 1
Organizational structure of Chengyang



This team had to be able to achieve two enterprise growth objectives:

- 1 Enterprise upgrading – the establishment of core strengths, increasing efficiency and reducing costs, and being able to work together effectively;
- 2 Enterprise transformation – the enterprise needed to have the ability to change the sources from which it derived value; i.e. there had to be a shift away from an enterprise management model oriented towards labor and efficiency towards one oriented towards brainpower and creativity.

Identify organization to be redesigned

On the basis of the discussion in the Background section above, we can see that restructuring at Chengyang could be tackled from the following two angles:

- 1 *System establishment (improving efficiency)*. Water and electricity supply contractors need workers who are capable of hard work; they are not very concerned about the quality of their employees. However, poor-quality employees tend to take a passive, negative attitude towards their work, which results in low efficiency. If there is no sound system to regulate them, many management problems can be created.
- 2 *Increasing profits (reducing costs)*. In 1993, when Chengyang just started up, the company had operating revenue of NT\$20 million and a profit ratio of around 30 per cent. By 1996, the company's operating revenue had increased to NT\$68 million, but the profit ratio had fallen to 10 per cent. If things continued in this way, then no matter how big an increase there was in the company's operating revenue and no matter how many more new employees they added, the company would still not be able to increase its profits.

It can be seen from the above that, given the kind of organization which Chengyang had, as far as external factors were concerned, because of the fierce competition in the market, the company could not increase its scale of operations. As regards internal factors, the company's employees and managers could not reach a consensus, which resulted in conflicts and poor transmission of information; gradually, employees were losing their commitment to the company. Chengyang needed to establish sound, comprehensive systems and to adjust its organizational structure, in order to bring about thorough improvement; this was the only way in which the company could hope to achieve impressive operational performance.

Understand and measure existing organization

Under Chengyang's original mode of organization, not only did the manager have to secure contracts for the company, but he/she also had to manage all of the company's internal affairs and its personnel, as well as supervising construction works.

Organizational operations thus emerged the following problems:

- *Insufficient delegation of authority.* Direct management through oral instructions tended to lead to confusion regarding the division of responsibility, as well as lower working efficiency.
- *Poor salary and benefits structure.* Employees had to perform hard work in an unpleasant working environment; the hours were long, too. The compensation which employees received was not commensurate with the effort they had devoted.
- *Employee loyalty was low.* In water and electricity supply contracting, technical skill is the most important thing. In order to prevent employees from setting up as competitors after they had learned their trade, the manager did not teach them everything he knew. With opportunities for learning restricted in this way, the level of employee loyalty and commitment to the company was low.
- *Low internal management efficiency.* Once a company has grown to a certain size, the manager is no longer in a position to know what employees are thinking or to keep an eye on them to ensure they are working hard. Employees tend to act irresponsibly, and lack cost-awareness.
- *Lack of an auditing system.* Owing to the confused, disorganized state of inter-departmental control and performance evaluation, and the chaotic state of the accounts, data inaccuracies etc., it was not possible to maintain a clear picture of the company's performance and operational status.

Designing the new organizational structure

To be successful, an organization must be able to put ideals and concepts into practice. That is to say, the company's objectives, organizational structure and development strategy must be in conformity with employee career planning, and sound, comprehensive systems must be established. In order to improve the situation at Chengyang, the following principles for solving organizational problems were adopted in order to design a new organizational structure, as shown in Figure 2.

- *Delegation of authority.* Major adjustments were made to the responsibilities of managers and ordinary employees.
- *Profit-sharing.* A sound salary and benefits system was formulated.
- *A proactive technique learning mechanism.* Employees were encouraged to secure contracts themselves. In this way, employees would proactively learn the techniques needed for securing contracts, including design, quotation, order acceptance, construction, management etc.
- *Auditing system.* With the adjustment of responsibilities, ordinary employees' responsibilities were significantly expanded. In order to prevent this authority from being abused, an auditing system was needed, so as to meet the company's growth and performance goals.

Under the new organizational structure, every team can be viewed as a "subsidiary" that can complete tasks independently. Each team can consist of one or several employees. Employees evaluate whether they have the capabilities (in terms of design, quotation, order acceptance, construction and management) to complete a task independently. If so, they can ask other employees to form a team with them. If not, they can continue to work within another team, continuing to learn and develop until they are capable of completing tasks independently. There are two sources of business for the teams:

- 1 *Securing contracts themselves.* To secure a contract themselves, the team has to be able to submit an annual budget and implementation objectives (including anticipated operating revenue, cost of materials, personnel costs and all other costs). Once the team have discussed this with the manager and confirmed that it is feasible, they set a percentage of their operating revenue that will go to the company, with the remainder being allocated by the team foreman for planning and implementation expenses. If the team's annual objectives are achieved, they can go on to submit a work plan and implementation objectives for the following year. If they are not able to achieve their objectives, and make a loss, the team and the manager will agree how they will split the loss between them.
- 2 *Undertaking contracts secured by the manager.* In the case of those teams which are less capable of securing contracts, and those teams whose business volume is low, the manager will provide support by

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allowing them to undertake projects for which he secured the contract. For this kind of project, the manager and team will agree how to share the expenses between them.

The revenue which accrues to the company represents payment for support services and equipment (like a rental charge for the use of the company's offices and construction equipment). If employees start their own business independent of the company, they have to establish their own office and acquire their own construction equipment, and also need to manage their own employees and their own finances. With the kind of organizational design outlined above, employees can satisfy their desire to establish their own business, while the manager has more time to secure contracts and plan the company's future.

The manager can have the tasks which they would previously have undertaken themselves performed by the teams. They can also have some works performed by sub-contractors. The design helps the company to deal with the pressures that affect contractors, and to improve efficiency and reduce costs. In this way, when the teams cannot secure enough business by themselves, they will be able to secure orders which the manager would otherwise have contracted out (in deciding who should undertake the contracts which they secured, the manager will weigh up the relative efficiency and cost of having the work performed within the company or contracting it out). Where necessary, teams within the company can be spun off as independent companies. In this way, outside companies can help to improve the company's operational model, assisting in

the creation of the ideal virtual enterprise model for SMEs.

Under this organizational structure, every team is extremely careful in drawing up their annual plan. They allocate their own salaries and expenses, and control all work expenses (including stationery, telephone bills, materials, etc.). They also manage their own work progress. In the past, the manager had to handle the managerial work; now, the teams produce their own reports and undertake control themselves.

The purchasing department collates the annual purchasing amounts given by the teams in their annual plans, ordering in bulk to keep the cost down. The purchasing department's performance can be measured by the difference between the actual amount spent on purchasing and the budgeted amount (the materials costs given in the teams' budgets must be approved by both the manager and the team). This means that purchasing does not need to be carried out for every project individually, and materials surplus and shortage can be kept to a minimum.

A performance auditing system has been established by the accounting department and the manager with respect to the financial reports and progress reports submitted by the teams. Cost analysis and statistical methods are used to quantify these, so that the performance of each team can be audited, and follow-up performed. In this way, the manager can remain fully conversant with the company's current operational status. The operation of the old and new organizational structure is compared in Table I.

Implementation of the new organizational structure

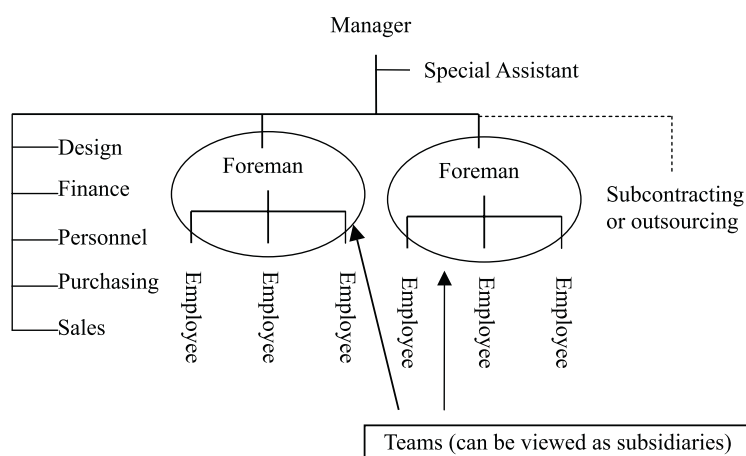
In this study, implementation of the new organizational model took place in three stages. From these three stages, we can see that for a small company to implement organizational restructuring through gradual progression is not easy.

Stage 1 – system establishment and education

In the early stages of restructuring, a consensus has to be established with employees. Once this consensus has been established, the main task is then to establish a system which both the company and the employees can accept, with clear responsibilities and obligations. If this system is properly designed, it can be very helpful with respect to increasing employees' loyalty and commitment to the company. However, for a manager with only a primary school education, it is a major challenge.

Figure 2

The new organizational structure



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Table I

Comparison of company organization before and after restructuring

	Before restructuring	After restructuring
Salary and benefits	Fixed (employees did not receive compensation commensurate with the effort they were putting in)	Payment based on actual profits made
Skills	Construction skill was the main requirement	Comprehensive range of contracting skills (including design, quotation, construction etc.)
Employee attitude	Passive and negative	Pro-active
Work assignment	Oral instruction by superiors	Assignment according to work assignment document
Sources of business	The boss	The boss and the employees
Operating revenue and profit growth	Operating revenue limited (due to high costs and low efficiency) and profits low	Operating revenue growth and stable profits (employees control costs and efficiency themselves)
Cost factors	The level of costs did not impact on the employee	The level of costs has a direct impact on the employee (waste results in a lowering of the employee's salary and benefits)
Employee turnover rate	High (employees felt they had no goals to aspire to)	Low (employees' desire to be their own boss was satisfied)
Responsibilities	Unclear (allocation of responsibilities mainly performed orally)	Clear (allocation of responsibilities mainly undertaken in writing)
Organizational structure	Fixed (functional)	Flexible (horizontal)
Organizational flexibility	Low (all construction work had to be undertaken by the company itself)	High (some construction work could be contracted out)
Management method	Indirect management	Direct management

In order to formulate a sound system, therefore, the manager first drew up a draft version with the assistance of experts. The manager and his employees discussed this draft version from the point of view of the overall interest of the company and its development principles, before deciding on a final version. The system design included:

- the model for the company's organization and its operation;
- responsibilities, scope of authority and performance standards for individual employees;
- description of construction standards;
- auditing system.

Once the new system has been established, the next step is to educate employees. Although the number of new employees in the company was not high, owing to their low level of education, transmitting the thinking behind the new system to the employees, so that they understood that only by working together as a team could they share in the company's profits, was no easy task. The manager educated and communicated with

the employees every day after work. Initially, the employees were dubious about the idea that the manager wanted to share the company's profits with them. However, those employees who had approved of the manager's ideas began to take a more proactive attitude to their work, while those employees who were less impressed adopted a wait-and-see attitude. This kind of communication and education is a key factor in determining whether restructuring can be successful.

Stage 2 – organizational adjustment

The new organizational structure (see Figure 2) is dramatically different from the existing system. This means that in the organizational adjustment stage, the manager must have the capability and patience to provide guidance to his subordinates. During this process no employees were laid off; those employees who did not approve of the new system were allowed to leave of their own accord, which further enhanced the sense of responsibility and commitment to the company of the

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remaining employees. This was a good method for reducing employees' anxiety during the transitional period.

During this stage, the number of employees in the company fell from 20 to three. After organizational adjustment, the company had more flexibility. The three remaining employees directed different projects, for which sub-contractors were used; at the same time, they also started to gradually build up their own work teams. After three months, the company had 15 employees, who were more in tune with the company's philosophy and methods than the original employees.

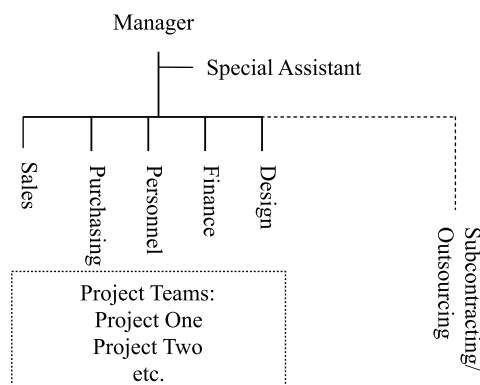
As the company gradually got on to the right track, working efficiency improved significantly, and expenditure fell. At this time, the company had to evaluate the performance of the work teams with respect to profits and productivity. The operation of the financial report auditing system made it possible to gain a clear picture of the company's current operational and profit status, so that the company's strategy and objectives could be adjusted if necessary.

Stage 3 – transformation of the enterprise

After completing organizational restructuring by the end of 1997, Chengyang had better quality employees, and the overall condition of the company had improved significantly. The manager could now maintain a firm grasp of the company's operational status through the performance auditing system. Following an incident that a client failed to make payment, in order to prevent similar incidents from happening again in the future, the company established a construction design department, while gradually reducing the size of the construction department; the company was being transformed into a water and electricity supply general contractor. The emphasis switched from labor and efficiency to design services, with the actual construction work being contracted out. After transformation, the company's organizational structure was as shown in Figure 3. By this time, the company's scale of operation expanded significantly, and profits grew steadily. The company achieved "large company operations with small company scale." In addition to their responsibilities within the company's fixed organization, all personnel also had to establish teams for the projects they were working on and implement the project management (for example, with respect to the progress made by subcontractors where work had been contracted out, cost control, etc.), to achieve the goal of creating a virtual enterprise.

Figure 3

Company organization for general contractor service



Discussion

We can see from this case study that, although information technology was not used to achieve the goals of enterprise restructuring, some concepts and methods of BPR were used for the restructuring. The goal of transformation was achieved in three stages – system establishment; organizational adjustment; and enterprise transformation. This case study was concerned with the restructuring of a private enterprise; there were some differences between the methods used and those reported in the Singh and Shoura (1999) study of restructuring in a public construction organization. A comparison of the two is given in Table II.

In the case study, when the Chengyang's profits began to fall after its increase in capitalization in 1996, it was decided to implement organizational restructuring, which was completed by the end of 1997. During these two years, although operating revenue increased, profits fell. Beginning in 1998, Chengyang started to transform itself completely into a general contractor concentrating on design and planning services; the actual construction work was contracted out to strategic alliance partners. The number of employees decreased, but every employee was actively involved in securing business. In 2000, the company began to enjoy stable profit growth; EPS more than doubled from 1.48 in 1998 to 3.28. We can see from Table III (all data have been audited by a CPA) that the benefits from restructuring are quite considerable: BPR or OR can be successfully implemented in a company no matter what size it is, as long as the company leader has the determination for making changes and the version for perpetual operation. Being a small business, the benefits created by

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Table II

Comparison of this case and Singh and Shoura 's case

	The present study	Singh and Shoura (1999)
Subject	SME	State enterprise
Methods	1. Making company management more systematic, with appropriate use of forms 2. Changes in thinking, concepts and attitudes	1. Organizational development – data collection and analysis 2. Organizational change mode and loop – point calculation 3. Statistical analysis
Emphasis	Restructuring of corporate philosophy and organization	Restructuring of organization
Employment	Allowing suitable employees to stay and unsuitable employees to leave	Stress on continued employment, and having confidence in employees
Level	Practically-oriented	Theoretically-oriented

Table III

Financial data for Chengyang

Item	1994	1995	1996	Year 1997	1998	1999	2000
Number of employees	11	18	20	15	4	6	6
Operating revenue (NT\$ million)	20.6	56.5	68	65.5	47.3	67.5	68.3
Output value per employee (\$NT million)	1.9	3.1	3.4	4.4	11.8	11.2	11.4
EPS	4.12	7.34	1.9	1.97	1.48	2.43	3.28

Chengyang's organizational restructuring were as pronounced as a large enterprise can do. The case reveals that, as a technology-oriented SME without skilled employees, it still has a great potential for successfully implementing BPR. From the case, several implications can be included in strategy and management.

The implications in management

- *Establishment of applicable management system.* SMEs tend to place too much weight on technology and consequently ignore the importance of management. Chengyang started facing a serial management problem when the company increased its capital to NT\$25 million in 1996. In order to overcome the managerial challenges and to ensure the survival and development of the enterprise, Chengyang left out the delusion of human-wise as the core management and established a mature management system.
- *Importance of empowerment.* Before a management system is established, managers typically control all operations in SMEs. However, after deploying BPR in Chengyang, every employee in the company is appropriately empowered according to his/her position. While the discipline and reward pertaining to well-defined responsibilities and authorities, it stimulates employees to pursue the best performance in the company.

- *Participation of top management.* With strong determination, the top management in the case fully utilized external resources and participated in the entire process from planning, providing solutions, and to final execution. It indicates that only when top management actively gets involved in organizational transformation, can a sustainable development of the enterprise be fulfilled.
- *Transparent information.* In an organizational structure of corporate decentralization, profit-sharing, and dynamic skill-learning mechanism, employees are allowed to handle corporate business and to organize project management teams. In addition, corporate information including finance and cost should be transparent so as to achieve the goal of project management and to keep the organization running smoothly.
- *Everyone is manager.* After OR of Chengyang, employees may set up project teams depending on their needs and be in charge of executing and managing various projects. In the past, only managers could do project management. For now, every employee gets an opportunity for taking responsibilities.

The implications in strategy

- *Step by step.* The OR strategy of the case is, in the first phase, to initiate an indirect layoff (because employees who do not

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agree with the company's core values will quit) and to retain employees who agree with corporate philosophy during organizational restructure period. Thus, Chengyang undertook the second phase of organizational transformation, which is to recruit skilful employees specializing in design service and to accommodate certain changes during the process of OR.

- *Enhancement of product value.* The company's business transforms from electricity and water supply contractor to the turnkey design service provider through the organizational reengineering so as to promote the added value or products. At the same time, the company's business scale extends considerably with steady growth in profit since every employee plays the role of manager and participates actively in handling business.
- *Setup of a flexible working team.* After OR of Chengyang, every employee is responsible for outsourcing engineering works and project management. By fully making use of external resources to support business operation, the pattern builds up a model of flexible teamwork for SMEs and also a typical virtual model of enterprise operation.
- *Creation.* After experiencing the managerial problems, Chengyang entirely understands that an enterprise can only survive in a highly competitive environment and maintain its perpetual management by continuing innovation in product, business process and organization.

In addition, a water and electricity supply contractor can offer indirect channels of information by contacting a variety of industries. Chengyang will select projects with great potential and foreseeing insight, and negotiate with business owners for transferring a portion of construction payment to investment. On the other hand, a water and electricity supply contractor needs to team up with numerous constructive service providers. Therefore, the contractor must manage its suppliers more efficiently so as to strengthen the competence of the teamwork in facing a more competitive environment in the future. As a result, diversification and strategic alliance are Chengyang's development direction in the future.

GE chairman Jack Welsh (Slater, 1999) noted that a manager cannot be afraid of change. One should stop managing but start leading, cultivate managers who share a common vision, face up to reality and take decisive action. From this case study we can

see that the method and philosophy adopted by the manager are in conformity with Jack Welsh's views, as well as conforming to the trend towards Next Generation Manufacturing.

Conclusions

In this case study, when the company's profits started to fall the manager grasped the opportunity for reform and determined to implement organizational restructuring. In just over one year, the company succeeded in transforming and recovering its vitality. Clearly, the manager has the vision needed for perpetual operation. The model which was used for BPR implementation in this case study and the process of implementation should provide a useful reference for other Taiwan SMEs which are seeking to achieve perpetual operation, because most SMEs will encounter similar problems eventually.

To summarize, organizational restructuring can be applied to SMEs in Taiwan; success in business does not depend on how highly educated you are. The manager in this case study only has a primary school diploma; it is that constant learning and willingness to change that is the key toward perpetual operation. So it just depends on whether the company's leadership has the determination to implement the restructuring. In order to achieve the organizational restructuring, the manager in this case study consulted experts and visited enterprises which had experience in BPR for gaining a better understanding of the strategies and methods needed, before implementing employee education and communication. Before taking action in OR, one needs to wait until the appropriate time comes. Thus, the risk of failure can be reduced to a minimum; this is the key to success in organizational restructuring. Another important factor for the manager is to direct the whole process of restructuring in person, because he knows best what he needs.

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