A Management Audit Investigation During the Economic Slowdown in Indonesia

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CHAPTER I – INTRODUCTION 1.1. BACKGROUND INFORMATION

In Indonesia's today environment, there are many companies, particularly the relatively large domestic-based institutions, which are now facing the financial distress following the prolonged economic crisis in the country. This turmoil has definitely brought about significant requirements to any type of assistance that had previously been extended to those troubled firms. International consulting and accounting firms in Indonesia are experiencing a significant increase in demands for their aids. The big-five accounting-firms, specifically, have been flooded by requests from international and domestic bodies to provide aids in verifying many institutional accounting books and records pursuant to the international standards. This first step of verifying accounting books and records is just the beginning stepping-stone to the overall objectives of requesting assistance from the international consulting and accounting firms in the first place. The ultimate goals are indeed the implementations of the debt restructuring as well as the corporate recovery procedures that mostly entail substantial change management schemes.

This research focuses on the topic of the change management, in particular the leadership aspect of the change management in providing the guidelines and affirmative actions that necessitates the direction of the successful implementation of the debt restructuring and corporate recovery procedures in PT Tekstil Bandung¹, or otherwise referred to herein as "the Company", or "PTB".

1.2. PROBLEM IDENTIFICATION

The issue underlying the processes of a change management is often looked upon as the very last resort to perform within troubled institutions. It is just much too common that business owners are too seldom to realize the difficulties that may arise because of the lack of managerial skills, professionalism, and/or leadership qualities in their own teams. Regeneration, or better known otherwise as the transfers of skills are often forgotten until the time that the international consulting and accounting firms are ordered to conduct due diligence assignments into those troubled firms.

¹ Due to the agreements I have previously signed with the Company and/or their representatives in accordance with letters of power of attorney, to act for and on behalf of the firms, I shall maintain the names of the firms confidential, including the members of their management teams.

At this time, mistakes and other non-standardized systems and procedures are certainly located. The number one problem that may have caused these non-standardized provisions was the quality of human resources employed in an organization. Again, it is just too common that no matter of how large a particular organization, there is usually only one person who holds the authority to give commands regardless of his or her own position within the formalized organizational structure. To make it worse, family members, relatives and acquaintances may also have considerable influence toward the organizational decisions, not only operational, production, managerial, but also including the decisions on recruitments and hiring.

Therefore, the following questions and concerns are certainly pertinent to the problem identification of this research proposal on change management;

- Would the issues of leadership affect the successful implementation of the change management processes?
- Would the issues of management competencies affect the successful implementation of the change management processes?
- Would the educational level of the executives be significant to bring about success within the organizational change management?
- Would the length of experience of the executives be a major factor to ensure the triumphant realization of the change management processes?
- Would the impact of an early regeneration be significant toward the successful implementation of a change management?
- Would the implementation of a change management in troubled firms guarantee the successful executions of the debt restructuring and corporate recovery schemes?

1.3. RESEARCH PURPOSE

The purpose of this research is to evaluate the significance of change management processes that are frequently attached to the debt restructuring and corporate recovery schemes. In particular, the concepts of leadership effectiveness and quality which are implanted in PTB. It is expected, however, that the change management processes and the quality of the new management and leadership effectiveness would certainly sway or otherwise increase the chances of survival and sustainability of the Company. It is also expected to boost the ability of the new management team to carry out obligations in accordance with the agreed-upon procedures of the debt restructuring and corporate recovery schemes effectively.

1.4. BENEFITS OF RESEARCH

To date, there is essentially limited-readily-available information on the subjects of a change management that is associated explicitly with the topics of debt restructuring and corporate recovery schemes. Even multinational consulting firms with frequent appointments to tackle on issues on debt restructuring and corporate recovery may not have published written notes and remarks on the close association of the schemes with the importance of the change management within an organization.

Thus, following the completion of these research activities, it is undoubtedly expected that the results are able to bring about two key factors;

- Results can certainly be used by many organizations, in both similar industry and other industries, in particular in understanding, researching, and implementing the immediate change management procedures to support the execution of the debt restructuring and corporate recovery schemes.
- Results can certainly be used by many institutions, colleges, and universities in receiving additional information on the topic of studies. Specifically, this thesis and research outcomes are directed toward the enrichment of the human resources and strategic management fields.

1.5. FRAMEWORK OF THINKING

Following the second semester of 1997, the Indonesia's economy has been struggling to rebound itself to the normal level as it was before. The exchange rate of Rupiah against US Dollars continued to diminish over time, consequently, the country's economic drives, including attractiveness to potential foreign investors have disappeared significantly. Although the greater Asian region is also facing the similar condition, it is rather apparent that Indonesia may have gigantic hurdles in overcoming the economic drawbacks. Also, referring to the property market slides in the US in mid 2005, which affected many countries across the globe, Indonesia may face double jeopardy in trying to get the economy going.

1.5.1. PTB STRATEGIES

Strategies that have been implemented and will be considered by the Company in counter-attacking the continuous declines of PTB's performance are as follows;

Change Management and Leadership Effectiveness

The Company's management may have committed and/or otherwise carried-out ineffective roles in turning around PTB's overall performance. Hence, dismantling the current management and form a new team with professional leadership's quality, skills, talents and expertise, could not be avoided any longer. Inward looking into the Company's management policies and structures shall be acted upon at once as the first priority. Ideas to be filtered in within the new flocks of the management team include; the new ideology, technology, and new consumer profiles. Within this main topic of ideas, the new leaders must acknowledge the notions of faster, better, and cheaper along side with the new consumer profiles of demanding anything, anytime, and anywhere. This is not forgetting to mention about the need of PTB to jump onto the second curve phenomenon by first, developing the leaderships effectiveness and infrastructure betterment.

<u>Faster, Better and Cheaper</u>

It is very important for the Company to immediately re-create and/or otherwise re-design new products with high intricacies that make the products difficult to copy by competitors. The strategy of bringing PTB onto the second curve phenomenon does require the most effective leadership to pilot the Company on the right path and direction.

Improvement on the work quality and production efficiency

"*We strive for the best quality*" is the motto for PTB to show the management commitment in the Company's product quality. The product quality can be achieved, at last, through improvement on the work excellence and production efficiency.

These main issues within PTB are considered the direction and reasons to turn up side down its current management practices. After all, the objectives of achieving the

highest product quality and consumer acceptance are clearly stated in PTB's visionary plague. Nonetheless, it must have been left hanging all this time until the time that the firm is technically bankrupt and/or when the debt-restructuring and corporate recovery schemes are pushed from external parties.

1.5.2. CONDITION WITHOUT CHANGE MANAGEMENT

Without the change management schemes, it is undoubtedly assured that the Company's difficulties in maintaining its daily operations, including setting up directional pathways, will be unbearable. Liquidation of the Company's assets is the last action to take since the network of PTB is still in existence and the Company has been able to maintain its relationships successfully with various parties – suppliers and buyers worldwide. With the instigation of the free trade agreement in the South East Asian nations, it is projected that PTB would able to strengthen its position locally as well as internationally by means of improving its product quality, production processes, and new market penetration. Thus, following the free trade agreement within the Asian region, the Indonesian economy may soon be influenced to grow. With the current production ability, it is believed that PTB is able to rebound to its normal positioning in the textile market, if and only if, the new management team members are professionally willing to participate in the terms and conditions of the debt-restructuring and corporate recovery processes of the Company's operations. Should the new selected and elected management be unwilling to do so otherwise, it is becoming difficult for PTB to compete, as the fiercer competitions will unquestionably entail the free trade agreement.

Several founding motivations for the current management team members in par taking the debt-restructuring and corporate recovery schemes are as follows;

- To find the way-outs in solving the non-performing loans and inability of the Company to generate sufficient cash flows as expected. Although the assumptions used are considered accurate at the time, it is rather complex to surpass the government regulations on price increments of electricity, communications, wages, exchange rates, and water.
- To mutually support the intricacy of PTB's operational, cash flows, and/or working capital requirements, which have direct affect to the performance of the creditor at-

large.

- To jointly hand-in-hand performing overall renovation within the internal aspects of PTB in ensuring the longevity of the Company into many years to come.
- The clause of change management is directed toward the leadership effectiveness within PTB as a compulsory requirement in guaranteeing the successful execution of the schemes for the creditors.

1.5.3. OBJECTIVES OF CHANGE MANAGEMENT

The following are the goals and objectives expected by PTB with the implementation of the change management in relation to the previously conducted debt restructuring and corporate recovery;

- Establishing monitoring and controllership roles within the firm alongside with the external parties, such as the pertinent banks, and consultants.
- Maintaining the relationships with creditors as business partners in times of difficulties and the prolonged economic slumps in Indonesia.
- Assisting the creditors to safeguard their portfolios with a longer-term to gain profits in-line with the political and economic recovery.
- Change management progressions to ensure the successful accomplishment of the recovery processes.
- Improving the Company's financial condition by means of the Win-Win Solution factor, or at least by incorporating in-depth analysis on the best option out of the worst solutions.
- Continuously support the Company in extending the working capital requirements,

particularly the required funding to meet the imported raw materials.

- Viability of the Company is indeed crucial for the Indonesian economy as well as the local economy where PTB is located. PTB is one of many biggest textile firms in the country with ability to absorb significant numbers of workforce from its local community.
- Ensuring that the agreed-upon procedures of the debt-restructuring and corporate recovery schemes are successfully carried out via leadership effectiveness and qualities of PTB.

Therefore, regardless of how persistent the Company strives to perform the best possible option to meet the required demand, including fulfilling its obligation toward loan repayments, PTB's performance is solely dependent upon the externalities beyond the Company's control. Nonetheless, in striving to minimize the deviations of the externalities, the internal factors of PTB must also undergo some repairs. This is to hope that such re-conditioning of the internal factors, in particular the management and its leadership effectiveness ensures the triumphant schemes totally.

1.6. RESEARCH METHODOLOGIES

1.6.1. CHOSEN METHODS & RESEARCH STEPS

The research methods proposed in this thesis include the descriptive (case, interview, and surveys), quantitative, and qualitative studies. This descriptive method will incorporate the studies of internal cases with reference to the specific theories as foundations. The theories surrounding the topics of Human Resources Management as well as the Strategic Management would be definitely tempted to proof the relationships of the variables and/or responding positively to the situation on-hand within PTB. Interviews and distributed questionnaires concerning management audits will certainly be included to employees throughout the Company as a part of the management audit steps and processes. The interviews and surveys are portraying the qualitative studies that support the issues of available human resources, in particular the issues of management commitment, leadership, and strategic visions into the future. It is also

anticipated that the results of the distributed surveys will likely to provide adequate quantitative support. This, in essence, leads to the need toward change management, and thus, supporting the notion of leadership development within the Company.

The research steps in attempting to complete the study are as follows;

- Performing management audit using the prescribed list of questions and/or objectives to achieve.
- The sampling method used for the purpose of the management audit follows the premise of stratified sampling, that is, from the middle to the top layer of management, with an approximate numbers of respondents of 50 people.
- Theories on the leadership effectiveness, including the intricacies of cost/benefit analysis, going-concern of the Company following the structural modifications, and/or other momentous impacts that may put the Company into further drawbacks, otherwise.
- Analysis and consultation periods, including necessary corrections and development of supplementary chapters and sections of the research.
- Continuous review and consultation sessions with the research advisors, the management of PTB, and constant monitoring to economic news/updates to ensure the direction of the study.

1.6.2. RESEARCH VARIABLES

Variables that might be integrated throughout the research period may include the following, as prescribed and/or otherwise previously requested by the creditors;

- Management visions and missions.
- Management strategic plans and actions in various departments.
- Decision-making processes.
- Style, behavior, attitude, examples, and figures of the leaders of PTB.

1.6.3. DATA & SAMPLING METHODS

The sampling method used for the purpose of the audit management follows the premise of stratified sampling, that is, from the middle to the top layer of management, with an approximate numbers of respondents of 50 people. It is assume that the respondents are homogenous, that they can act in much of similar fashions toward supporting the organizational goals. Of course, the minimum qualifications of those individuals in accordance with the database of the Company's Department of Human Resources and Personnel become the major foundation of the homogenousity. Besides, should the first-line supervisors and/or operators be included as respondents, they do not have the ability to imagine the broad targets to achieve from the top management perspectives. Previous interviews during management audits have pointed out such irrelevancies.

1.6.4. DATA ANALYSIS

The analysis step will be very much beneficial to be undertaken as a way to propose and formulate testing and solutions toward the problem identified within the Company's operations. From the audit findings performed within the Company, a classified summary is developed to enhance the focus of the analysis. It is expected that the data analysis will sufficiently support the hypothesis that to ensure the successful schemes implementation, leadership effectiveness is compulsory.

1.6.5. HYPOTHESIS TESTING

In order to satisfactorily complete the analysis, the following hypothesis testing is to be attempted. In accordance with the goals and objectives of the writings, it is, thus, expected that the outcomes of the research would unquestionably support the original assumption, that the Company's viability, subsequent to the implementation of the debt restructuring and corporate recovery schemes, would be highly dependent on the internal change of management; that is, the quality of the leaders of PTB. The hypothesis testing is as follows;

H₁: Leadership style in PTB **does** affect the success of the agreed-upon debt restructuring and corporate recovery schemes.

CHAPTER II – REFERENCES TO THEORIES 2.1. LEADERSHIP

In terms of developing the necessities of formulating and implementing the previously agreed-upon terms and conditions of the debt restructuring, and corporate recovery schemes, leadership comes into play. The existing management style, including the Company's current leadership appear to be unproductive in turning the performance of the Company around and meeting the objectives of the debt restructuring and corporate recovery schemes. The quality of leaderships within PTB is momentously doubtful to be ignored, especially following the participations of creditors to hold the majority of shares in PTB in a debt-to-equity swap agreement. This is not forgetting to mention the possibilities of unsuccessful escort toward the survival of PTB in the years to come should the management, and thus, leaderships within the Company are insufficiently developed.

Leadership is a topic that has intrigued many people due to various images that the term of "leadership" refers to, however. The term of leadership refers to any situation at which time a person is working with others. Examples of such connotations include images of power and vibrant people, who command corporations victoriously. Stories of military, religious, political, or otherwise social leaders have arisen as legends worldwide. Some explanations and/or definitions of the term "leadership" are as follows;

- Leadership is "the behavior of an individual [and the process of influencing the activities] when [a person] is directing the activities of a group toward a shared goal" (Yukl, 1989: 3).
- Leadership is "any attempt to influence the behavior of another individual or group" (Hershey, 1992:16).
- The experts generally define "leadership as the art of influencing and directing people in a manner that wins their obedience, confidence, respect, and enthusiastic cooperation in achieving a common objective" (Watson, 2001:156).
- The group of practitioners, on the other hand, commonly describes leadership as the practice of "applying principles and techniques that insure motivation, discipline and productivity when working with people, tasks and situations in order to accomplish

the [C]ompany's objectives" (Watson, 2001:156).

The definitions above differ in many respects, including essential distinctions in who exercises influence, the purpose of influence attempts, and the manner in which influence is exercised. The difference conceptions of leaders can be summarized as follows;

Table 1 – Leaders' Conceptions

Broader Conceptions	More Restrictive Conceptions
A person who influences group members ("distributed leadership").	A person who exerts the most influence on the other group members ("focused leadership").
A person who influences group members in any manner.	A person who systematically influences member behavior toward attainment of group goals.
A person who influences group members to comply with his or her requests willingly or unwillingly.	A person who obtains the enthusiastic commitment of group members in carrying out his or her requests.

Source: Gary A. Yukl, 1989:4.

Thus, leadership shall be effective as to the extent to which the leader's group or organization performs its task successfully and attains its goals. In some cases, objective measurements of leadership performance and/or goal realization are readily available, such as; sales and market share increase. On the other hand, however, subjective ratings of leadership effectiveness are acquired from leaders' superiors, peers, and subordinates. The attitude of the followers toward their leaders is just another sign of the leadership effectiveness.

The notion of leadership, by itself, connotes that it is both a science and an art, and it is both rational and emotional. Using this association on the concept of leadership, it is thus, believed that leadership is, indeed, a process and not a position (Hughes, 2002:8). Leadership is vastly different from the term of management. In this instance, leadership is essentially value-choosing activities. Leadership concerns with all activities, which are going to do the right things, whereas management emphasizes on doing things right. The term of leadership, nowadays, has become inter-changeable with the term of management although the significance of those two terms is immeasurably unlike. The basic distinctions between managers and leaders are as follows;

- Managers -	- Leaders -
Doing things right (efficiency).	Do the right things (effectiveness).
Administer.	Innovate.
Maintain.	Develop.
Control.	Inspire.
Short-term perspective.	Long-term perspective.
Ask "How" and "When".	Ask "What" and "Why".
Imitate.	Originate.
Accept the status quo.	Challenge the status quo.

Table 2 – Managers & Leaders

Source: Richard L. Hughes, Robert C. Ginnett, and Gordon J. Curphy, 2002:10.

The above table portrays the continuous parameter of the two extremes between behaviors of managers and leaders. In an article entitled What Makes a Leader, which was published in the Harvard Business Review, Daniel Goleman stated that effective leaders are similar in one fundamental way; that is, they all have a high degree of emotional intelligence. The emotional intelligence is to determine which personal capabilities drove outstanding performance within any organizations, and to what degree they did so. The personal capabilities are grouped into three distinguishing kinds of purely technical skills, such as accounting; cognitive abilities, such as analytical and reasoning; and competencies demonstrate emotional intelligence such as the ability to work with others and effectiveness in leading change. An emotional intelligence has proven to be increasingly important at the highest management level of any firms whereby at this top management level, differences in technical skills are of negligence importance. Hence, additional researches and analysis have put forth that emotional intelligence is not only set apart exceptional leaders, but also closely related to robust performance. The ingredients of creating emotional intelligent leaders are summarized in the following table;

Ingredients	Definitions	Hallmarks
Self Awareness	 Ability to recognize and understand moods, emotions, and drives, as well as effects on others. 	 ✓ Self-confidence ✓ Realistic self-assessment ✓ Self-deprecating sense of humor.
Self Regulation	 Ability to control or redirect disruptive impulses and moods. The propensity to suspend judgment – to think before acting. 	 ✓ Trustworthiness and integrity. ✓ Comfort with ambiguity. ✓ Openness to change.
Motivation	 A passion to work for reasons that go beyond money or status. A propensity to pursue goals with energy and persistence. 	 ✓ Strong drives to achieve. ✓ Optimism, even in the face of failure. ✓ Organizational commitment.
Empathy	 Ability to understand emotional stage of others. Skill in treating people according to their emotional reactions. 	 ✓ Expertise in building and retaining talent. ✓ Cross-cultural sensitivity. ✓ Service to clients and customers.
Social Skills	 Proficiency in managing relationships and building networks. An ability to find common ground and building rapport. 	 ✓ Effectiveness in leading change. ✓ Persuasiveness. ✓ Expertise in building and leading teams.

Table 3 – Emotional Intelligent Leaders

Source: Daniel Goleman, 1998:95.

The ingredients mentioned in the table above do show correspondence with the successful exploitation of the company-wide visions and missions, including becoming as an effective managers and leaders (Hershey, 1992:15). In his book, *The Situational Leadership*, Dr. Paul Hershey states that to create a successful leadership, it is not just a mere applying the concepts of leaderships, but it is more of a matter of relating the concepts within the proper timeframe in accordance with the appropriate styles. The notion of differences in leadership styles shall provide the necessary guidelines for the following discussion for a simple reason that leadership effectiveness escalates the more

people understand and practice the essential skills. Looking from the perspective of management, it becomes apparent the difference between successful and effective leadership, in provisions of explaining why supervisors can get results only when they are physically present looking over the subordinate's shoulder. As the supervisors depart, results slide. It is valuable to note that short-term leadership is very much different from the long-term leadership, hence. In order to counterattack these phenomena, the leaders shall bridge the gap of a one-time success and long-term leadership effectiveness. The bridge that leaders ought to build shall consist of the following; understanding past behavior, predicting future behavior, directing, changing, and controlling behavior. The last three ideas convey the responsibility for influencing the behavior of others, in an attempt to complete tasks and attaining goals.

In a way, the three bridging components are very much relevant to what DR. Paul Hershey explains, that is, the task and relationship behaviors. The task behavior is defined as; "the extent to which the leader engages in spelling out the duties and responsibilities of an individual or group" (Hershey, 1992:31). It includes telling what to do, when to do it, where to do it, how to do it, and who will do it. On the other side, the relationship behavior is defined as; "the extent to which the leader engages in two-way or multi-way communication if there is more than one person" (Hershey, 1992:32). It includes listening, encouraging, facilitating, providing clarifications, and giving socioemotional support.

The bridging components, or the so-called contingency approach, appear to have the ability to combine various leadership methods into a single comprehensive, but understandable model. Thus, given the two sets of behaviors that must exist, the combination of the leadership styles can be illustrated as follows;

- **Telling**, or otherwise called directive style, incorporates high task, but low relationship behavior. The representation of this style is to provide specific instructions and monitor closely the progress and results.
- Selling, or otherwise called catalytic style, uses high task, and high relationship behavior. The actions taken on this style attempt to explain the decisions and provide opportunities for clarifications.

- **Participating** integrates low task, but high relationship behavior. Leaders, who use this style, tend to intensively share ideas and facilitate in decision-making processes.
- **Delegating**, or otherwise called nondirective style, utilizes low task, and low relationship behavior. The actual proceedings of this style are nothing else than turning over the necessary responsibilities for decisions and implementation to the members of the group, or so-called the followers.

The above combinations of leadership styles are just the first component to make up the successful, yet effective leadership. The next component is the followers' situation. Assessment on the followers' situation seems to be the trickiest part of all. However, once the followers' situation has been effectively accessed, appropriate leadership style can be well determined. As there are four combination leadership styles, there are also four combination followers' situations, or so-called followers' maturity levels, as follows;

- Level 1 the lowest followers' maturity level, which is indicated by both inability and unwillingness behavior. Insure attitude is also included in this portion of the followers' maturity level. In this instance, the followers are simply not capable of doing the necessary tasks as well as lacking the willingness to commit themselves to do the required work, and motivation to keep up with the work and performance. As a consequence, confidence is undoubtedly lacking.
- Level 2 the moderately low level of the followers' maturity, which is shown by both **inability** and **willingness** behaviors. A relatively apparent confidence level is actually noted. In this instance, the followers do not possess the necessary skills, but they are motivated toward making an effort for their own betterment. Although they may not have the skills to do the work, they are, indeed, confident that they can perform well with the work as long as the leaders remain by their side to provide the indispensable guidance.
- Level 3 the moderately high level of the followers' maturity, which is exposed by both substantial **ability** and **unwillingness** behaviors. On the contrary to the level 2

above, these followers do hold on insecurity attitude toward work. In this instance, although the skills are evident, the followers are unwilling to use such skills to do the work, particularly when they have to do the tasks alone. This is when the insecurity attitude presents in the situation.

Level 4 – the relatively high level of the followers' maturity, which is characterized by the substantial **ability** and **willingness** behaviors. The followers in this level show a relatively high degree of confidence. In this instance, the followers do obtain the required ability to perform the necessary tasks, and they are motivated to the job. Hence, they become very much secure and confident in doing the job alone. This is the ultimate level of the readiness of the workforce.

Considering the mixture of the above ingredients of the leadership styles and the followers' maturity levels, it becomes rather apparent that the level of maturity of each of the employees shall be substantially improved right along the path of choices of leadership styles. Notwithstanding, in order to productively utilize the contingency model, one shall also recognize another element of the so-called "time-span orientation", or referred to herein as "TSO", besides merely putting those elements together and apply them pertinent to the situation at stake. Just like the maturity levels of the followers, and contingency leadership styles, TSO recognizes various aspects that potentially influence the contingency leadership styles used (Watson, 2001:161). TSO becomes the key success factor of the contingency management, that is, it depends on the following;

- Nature of business the core business, including the daily routines of the organization affects the TSO. For example, general merchandise stores waste their valuable time if they were attempting to predict internal budget-planning period for the next 3 years.
- Nature of employees this considers the background, including the formal educational level of the employees. Those with relatively inadequate formal education would likely to stress on the immediate upcoming issues. On the other hand, those with sufficient formal education would put more stress on the longer timeframe.

- Line versus staff authority affects the TSO largely in a way that line group of employees with functional authority would likely to focus on the short TSO whereas the structural group of employees with the rather layers-type of authority would likely to see beyond the horizon, instead.
- Presence or absence of internal crisis mode does determine the TSO, and thus, the leadership style chosen. For example, for a firm whose is the verge of bankruptcy, it logically wastes of time to extensively use the participating and/or delegating leadership styles. The tendency of using telling and/or selling leadership style may proof beneficial.

Thus, it is apparent that the combinations of the various perspectives shall be put into one comprehensive package to minimize confusion and failure. The determination of the contingency theory appears ample to provide basis of improving the internal lack of leadership. One shall consider the aspects of maturity level, condition, and TSO before deciding to use any one of the leadership style. There is no single leadership style that is recommended in this case, as the style will substantially influence the outcomes.

CHAPTER III – RESEARCH METHODOLOGIES 3.1. CHOSEN METHODS

The research methods proposed in this study include the descriptive (case, interview, and surveys), and qualitative studies. The descriptive method will concentrate on the analysis of the variables chosen and/or otherwise researched. This descriptive method will incorporate the studies of internal cases with reference to the specific theories as foundations. The theories surrounding the topics of Human Resources Management as well as the Strategic Management would be definitely tempted to proof the relationships of the variables and/or responding positively to the situation on-hand within PTB.

Interviews and distributed questionnaires concerning management audits will certainly be included to employees throughout the Company as a part of the management audit steps and processes. These sets of interviews are conducted in accordance with the audit processes that have been undertaken in the Company, consisting of preliminary questions, verification, and finalization of the audits. Distributed surveys were also incorporated in the same manner as to confirm the responses received. Internal cases will be reviewed in-line with the management audit in order to extract the actual occurrences within the Company as well as portraying the fundamental information for the completion of the research. Internal solutions would also be extended to evaluate the quality and/or otherwise the processes on the Company's decision making procedures. Again, the reviews on the internal case studies would also be based on the guidelines provided in the theories.

The above-mentioned interviews and surveys are portraying the quantitative and qualitative studies that support the issues of available human resources, in particular the issues of management commitment, leadership, and strategic visions into the future. It is also anticipated that the results of the distributed surveys will likely to provide adequate quantitative support. This, in essence, leads to the need toward change management, and thus, supporting the notion of leadership development within the Company.

3.2. RESEARCH STEPS

The research steps in attempting to complete the study are as follows;

Performing strategic management audit in accordance with the agreed-upon terms and

conditions between the Company and concerned third parties.

- Performing management audit using the prescribed list of questions and/or objectives to achieve.
- Conducting interviews to various employees from the lowest management level all the way to the top board members. Survey distribution will likely to follow the responses received on the interviews.
- The sampling method used for the purpose of the management audit follows the premise of stratified sampling, that is, from the middle to the top layer of management, with an approximate numbers of respondents of 50 people.
- Distribution of survey to at least 50 people within the organization, who are in the
 positions of Department Heads all the way up to the positions of Vice Presidents,
 excluding the members of the Board of Directors and Commissioners, who are the
 shareholders and/or otherwise members of the family business. Inclusion of family
 members and shareholders may deviate the responses received. The organizational
 structure shows the middle to top-level management only
- Theories on the leadership effectiveness, including the intricacies of cost/benefit analysis, going-concern of the Company following the structural modifications, and/or other momentous impacts that may put the Company into further drawbacks, otherwise.
- Analysis and consultation periods, including necessary corrections and development of supplementary chapters and sections of the study.
- Continuous review and consultation sessions with the research advisors, management of PTB, and constant monitoring on economic news/updates to ensure the direction of the study.

3.3. RESEARCH VARIABLES

Variables that might be integrated throughout the research period may include the comparisons of those variables prior to and following the prolonged economic turmoil in the country as a way to provide sufficient illustration of what is currently happening inside PTB, and what is expected to be in existence in PTB. Comparisons of these variables between the audit findings and the framework of the effective leadership that the Company searches for will be presented. Hence, it is expected that the results of those comparisons will support the testing hypothesis that leadership is crucial to ensure the success of implementation of the debt restructuring and corporate recovery of PTB. Those variables are as follows;

- Management visions and missions, which contain the ultimate goals of the direction of the Company in the years to come.
- Management strategic plans and actions in various departments, which contain back-ups and prescriptions to ensure the successful realization of the organizationalwide goals.
- Decision-making processes, which contain the flow of data and information as well as demonstrating the communication media that is in existence within the Company to support the decision-making processes, and thus, inventing the management and leadership effectiveness.
- Style, behavior, attitude, examples, and figures of the leaders of PTB. This is the qualitative measure of human resources of the Company in showing the competencies of leadership to carry out tasks of restructuring.

3.3.1. MANAGEMENT VISIONS & MISSIONS

The Company's vision is to establish and maintain presence in the textile industry in Indonesia with the highest product quality and customer acceptance. It is expected that the total accomplishment of the management vision may be inexistence without the presence of leadership in PTB. The Company's mission statements are as follows;

1. To establish and maintain presence in the textile industry in Indonesia.

- 2. To establish and maintain presence in the textile industry in the international market.
- 3. To obtain worldwide customer acceptance, recognition, and brand-awareness on the textile products.
- 4. To continuously improve the product quality.
- 5. To continuously improve the financial soundness.
- 6. To generate sufficient revenues to be returned to the local community in the forms of employment, food aids, convenient stores, shows and other special events entertainment.

It is expected that the achievement of the management missions may be a total failure in the near future without the back-ups of leadership effectiveness. Taking a different view, it is also expected that if the visions and mission statements of the Company have been failed to be carefully formulated and socialized throughout the organization, the roles of leadership of the existing management are definitely lacking.

3.3.2. MANAGEMENT STRATEGIC PLANS AND ACTIONS

The Company's strategies are as follows;

- Improving the value creation via speed of production and delivery as well as continuous improvement on quality as a result of business process re-engineering and leadership development.
- 2. Improving the stakeholders' commitment to ensure the partnership relations via continuous advancement within the Company's human resources and its leadership quality.

The Company's actions to support the successful accomplishment of the strategic plans pursuant to the Company's visions and mission are as follows;

1. Change Management and Leadership Effectiveness

The Company's management may have committed and/or otherwise carried-out ineffective roles in turning around PTB's overall performance. Hence, dismantling the current management and form a new team with professional leadership's quality, skills, talents and expertise, could not be avoided any longer. Inward looking into the

Company's management policies and structures shall be acted upon at once as the first priority. Ideas, which are to be filtered within the new flocks of the management team, include the following; the new ideology, technology, and new consumer profiles. Within this main topic of ideas, the new leaders must acknowledge the notions of faster, better, and cheaper along side with the new consumer profiles of demanding anything, anytime, and anywhere. This is not forgetting to mention about the need of PTB to jump onto the second curve phenomenon by first, developing the leaderships effectiveness and infrastructure

betterment.

Illustration 1 – Second Curve

2. Faster, Better and Cheaper

The book by Ian Morrison's *The Second Curve: How to Command New Technology, New Consumers, and New Markets* provides the necessary foundations on the strategies formulated by the Company. It is believed that PTB ought to totally re-define its direction on doing business. It is very important for the Company to immediately re-create and/or



otherwise re-design new products with high intricacies that make the products difficult to copy by competitors. The strategy of bringing PTB onto the second curve phenomenon does require the most effective leadership to pilot the Company on the right path and direction. In line with this strategy, PTB has implemented computerized information system in few critical departments to minimize the data processing time as well as enhancing the speed of information to various locations and departments within the Company. The Company attempts to promote the notions of faster, better, cheaper for the internal production processes to compete competitively with both domestic and international textile manufacturers.

3. Improvement on the Work Quality and Production Efficiency

This strategic move has also been formulated in accordance with the other strategies

mentioned above, in a way that this plan shall provide the necessary measurements upon the successful achievement of the goals and objectives. "*We strive for the best quality*" is the motto for PTB to show the management commitment in the Company's product quality. The product quality can be achieved, at last, through improvement on the work excellence and production efficiency.

The strategic plans and actions proposed above are useless without the strong and established structure within the organization. It is expected that the successfulness of the strategic plans and actions would be relatively dependent on the formalized organizational structure as the major channel of information. If the channel of communication through the intangible organizational structure does exist in both ideas of formality and in actual practices, the strategic plans and actions of all departments should have been formulated in accordance with the overall institutional-wide goals and objectives. In other words, the divisional plans and courses of action follow the vision and mission statements of the Company.

3.3.3. DECISION-MAKING PROCESSES

This variable attempts to portray the flow of data and information, both ways from the bottom up, and top to bottom in order to invent the most effective working environment toward decision-making processes. Undoubtedly, in a way, this decisionmaking processes illustrate the communication flow among different levels of management.

Similar to the above analogies, this variable is expected to show relationship between the successful leadership and the process of problem solving, brainstorming, decision-making, and thus, the communication flow. In fact, the processes of the communication flow do utilize the organizational structure previously in-place.

3.3.4. STYLE AND BEHAVIOR OF LEADERSHIP

The style and behavior of leadership may provide adequate information of the Company's human resources competencies toward supporting the successful execution of restructuring schemes.

3.4. DATA GATHERING

The necessary data and information will solely based on the audit findings performed by the Department of Internal Audit of PTB, which takes forms using the prescribed list of questions and/or objectives to achieve. During the process, the management audit takes forms in two different ways; direct interviews and distributed surveys. The actual processes of such management audits were, in fact, requested, conducted, and closely monitored by an independent third party. Although the areas of management audits cover various topics, for the purpose of this research write-up, only the following audit findings are used;

- <u>Audit findings on PTB's human resources</u>, especially the topic on management and leadership effectiveness, organizational structure, and the employees' satisfaction on the existing management policies.
- To provide additional support and evidence on the need of leadership effectiveness in safeguarding the successful implementation of the agreed-upon debt restructuring and corporate recovery schemes, the following issues shall be incorporated within the framework of this research;
 - Leadership in terms of developing the necessities of formulating and implementing the previously agreed-upon terms and conditions of the debt restructuring, and corporate recovery schemes. The current management style and leadership effectiveness appear to be unproductive in turning the performance of the Company around and meeting the objectives of the debt restructuring and corporate recovery schemes. The quality of leadership within PTB is momentously doubtful to be ignored, especially following the participations of creditors to hold the majority of shares in PTB. This is not forgetting to mention the possibilities of unsuccessful escort toward the survival of PTB in the years to come should the management, and thus, leaderships within the Company are insufficiently developed.
 - Second Curve in terms of portraying the needs to jump from the current stage of conducting businesses as well as trying to develop the infrastructure within PTB to create demand and/or meeting consumer demand, otherwise. Updating

the styles of doing business may not be avoided any longer to ensure the survivability of the Company. The other reason to jump onto the second curve is mainly due to the obsolete products within PTB in comparison with the domestic and international competitors. The Company shall attempt the fashionable-type of products instead.

3.5. SAMPLING METHOD

The sampling method used for the purpose of the audit management follows the premise of stratified sampling, that is, poll of respondents are gathered from the middle to the top layer of management only, with an approximate numbers of respondents of 50 people. These respondents are made up of both gender and expected to show responses similarities on the distributed questionnaires. All of those respondents are included in this study. The positions of those respondents range from Department Heads to Vice President, excluding the members of the Board of Directors and Commissioners, as they are the shareholders and members of the family business. Inclusion of family members and shareholders may deviate the responses received. The organizational structure shows the middle to top-level management only.

The reasons of choosing the stratified sampling method are;

- In line with the objectives of conducting the audit management in the first place, which is to find out the management and leadership effectiveness, as well as predicting the requirement of leadership qualities within the Company to ensure the successful implementation of the agreed-upon restructuring schemes. Should the audit management be conducted all the way to the first-line supervisors and operators, the responses may not be relevant and/or otherwise fulfill the expected objectives. Previous interviews during management audit have pointed out such irrelevancies.
- The respondents of middle to the top management are assumed homogenous, in the sense that they are supposedly able to act in similar fashion as the bridge, or the so-called "middle-man", whenever the creations of corporate-level strategies are underway. It means that these members of management shall accommodate differences of perspectives of the lower, middle, and top management, including the necessary of aligning the creation of functional and business strategies into the

corporate plans. Of course, the minimum qualifications, such as years of experience and levels of education, pursuant to the database of the Company's Department of Human Resources and Personnel, become another founding reason of the homogenousity.

3.6. DATA ANALYSIS

The analysis step will be very much beneficial to be undertaken as a way to propose and formulate testing and solutions toward the problem identified within the Company's operations. From the audit findings performed within the Company, a classified summary is developed to enhance the focus of the analysis. It is expected that the data analysis will sufficiently support the hypothesis that to ensure the successful schemes implementation, leadership effectiveness is compulsory.

Steps on the data analysis are as follows;

- Internally, the Department of Internal Audit of the Company has conducted the management audit within PTB. The interview results, or the so-called "audit findings", were combined with comments and recommendations on the particular situation and/or topic discussed. These audit findings are included in the appendix of this research entitled "Summary of Audit Findings and Recommendations".
- Using the interview results, sets of questions were developed in accordance with the
 prescribed management audits as well as pertinent to the agreed-upon terms and
 conditions between the Company and concerned third parties.
- The sets of questions developed were classified into 4 different groups as a way to focus on the most generic managerial, and thus, leadership deficiencies within PTB. These sets of questions were approved by both the management of PTB and the concerned third parties prior to their actual distribution.
- Once the questionnaires are distributed, the results are recorded and tallied.
- The results are then inserted in accordance with the appropriate questions to see the total numbers of respondents and thus, the questions answered.

3.7. HYPOTHESIS TESTING

In order to satisfactorily complete the analysis, the following hypothesis testing is to be attempted. In accordance with the goals and objectives of the writings, it is, thus, expected that the outcomes of the research would unquestionably support the original assumption, that the Company's viability, subsequent to the implementation of the debt restructuring and corporate recovery schemes, would be highly dependent on the internal change of management; that is, the quality of the leaders of PTB. The hypothesis testing is as follows;

H₁: Leadership style in PTB **does** affect the success of the agreed-upon debt restructuring and corporate recovery schemes.

CHAPTER IV – MEASUREMENT TESTING 4.1. VALIDITY TESTING

The validity testing is a measure to indicate the level of fitness of each items, in this case, is the statements on the questionnaires, in supporting the variables concerned. In other words, the validity testing attempts to provide evidence on the strength of the statements in relation to the overall research methodology toward previously assigned and/or otherwise predicted variables. The stronger the validity, the higher the value, vis-à-vis (Singarimbun, 1995:124). Soepeno (1997:51-53) indicates that in order to examine the validity of any statements or research instruments, one shall determine the value of the correlation using the Product Moments Pearson Correlation formula as follows;

$$r_{s} = \frac{n\sum XY - \sum X\sum Y}{\sqrt{\left[n\sum X^{2} - (\sum X)^{2}\right]x\left[n\sum Y^{2} - (\sum Y)^{2}\right]}}$$

Notes:

rs	: Correlation coefficient
n	: Number of respondents
Y	: Total score of all items
Х	: Total score of each of the items

After the correlation coefficient, or noted above as " r_s ", is calculated, the next step is to calculate the value of t, or better-known as the " $t_{calculated}$ ", to test the validity of the statements or research instruments in the prescribed environment. To successfully calculate the required t-value, the following formula is used;

$$t_{calculated} = \frac{r_s \sqrt{n-2}}{\sqrt{1-r_s^2}}$$

Notes:

rs

: Correlation coefficient

n : Number of respondents.

The criteria to note the validity of the statements on the questionnaire is the calculated t-value. That is, statements are said to be valid if, and only if, the calculated t-value is higher than that of the listed t-value in the published table with the degrees of freedom of (n-2), and $\alpha = 0.05$. On the other side of the coin, to know the validity level, it is necessary to look into the criterion of the correlation coefficient as stated by Guilford

(1956:145), as follows;

- a. Very high validity : $0.80 < r_s \le 1.00$
- b. High validity $: 0.60 < r_s \le 0.80$
- c. Average validity $: 0.40 < r_s \le 0.60$
- d. Low validity $: 0.20 < r_s \le 0.40$
- e. Very low validity : $r_s \le 0.20$

4.2. RELIABILITY TESTING

The reliability testing is an index to show how far each of the measuring statements within the questionnaire are trustworthy in the process of data gathering. The reliability testing attempts to evaluate the likelihood that each of the measuring statements used in the questionnaire are usable in two different settings without substantially altering the results. If such measuring statements are, indeed, functional in two different ways with consistent results, those statements are said to be reliable (Singarimbun, 1995:140).

This is the point whereby the Split Half Test comes into play. This split-half test considers the total score of responses noted for the odd and even-numbered statements in the questionnaire. In other words, the test divides the responses in one category into two parts; odd and even. From the total score calculated of both the odd and even-numbered statements, the correlation coefficients are calculated as the basis for the overall correlation coefficient of all the statements used to measure the various categories in the questionnaire. The following formula is used;

$$r_{tot} = \frac{2(r_{s1/2})}{1 + r_{s1/2}}$$

Notes:

r tot : Reliability level of all items

 $r_{s1/2}$: Correlation coefficient of the first and second half split

After the correlation coefficient, or noted above as " r_s ", is calculated, the next step is to calculate the t-value, or better-known as the " $t_{calculated}$ ", to test the reliability of the measuring statements or research instruments in the prescribed environment. To successfully calculate the required t-value, the following formula is used;

$$t_{calculated} = \frac{r_{tot}\sqrt{n-2}}{\sqrt{1-r_{tot}^{2}}}$$

Notes:

r_s : Correlation coefficient

n : Number of respondents

The criteria to note the reliability of the measuring statements on the questionnaire is the calculated t-value. That is, statements are said to be reliable if, and only if, the calculated t-value is higher than that of the listed t-value in the published table with the degrees of freedom of (n-2), and $\alpha = 0,05$. However, to know the reliability level, it is necessary to look into the criterion of the correlation coefficient as stated by Guilford (1956:145), as follows;

a.	Very high reliability	: $0.80 < r_s \le 1.00$
b.	High reliability	: $0.60 < r_s \le 0.80$
c.	Average reliability	: $0.40 < r_s \le 0.60$
d.	Low reliability	: $0.20 < r_s \le 0.40$
e.	Not reliable	: $r_s \leq 0.20$

4.3. SUCCESSIVE INTERVAL METHOD

The raw data based on the actual responses follows the ordinal scales of 1 to 5. In order to successfully analyze the data using the statistical approach of multiple linear regressions, the ordinal-scaled data shall be transformed into the interval-scaled data range. This transformation process using the Successive Interval Method seems to be the way to alter the data (Hays, 1969:41). In this instance, the transformation is, indeed, essential to arithmetically process the data using the multiple linear regression approach.

Steps of transformation process are as follows;

- The ordinal-scaled data will have to be categorized into each of the variables of X₁, X₂, X₃, and Y.
- 2. Calculate the proportion of each of the responses fall within each of the categories.

- 3. Calculate the cumulative proportion of all categories, starting from the first variable.
- 4. After the cumulative proportion is determined (n>30 is considered to be relatively portray the normal distribution), then it is necessary to refer to the normal distribution table (z-value) to establish the boundary limits.
- 4. Next step is to calculate the average interval using the following formula;

Mean of interval = (density of lower limit)-(density of upper limit) (area below upper limit)-(area below lower limit)

The total area below the lower limit represents the cumulative proportion of the lower limit of the concerned category. Likewise, the total area below the upper limit represents cumulative proportion of the upper limit of the concerned category. The probability density functions, or referred to as "pdf", can be verified using the pdf table on the normal distribution.

4.4. MULTIPLE LINEAR REGRESSION ANALYSIS

The multiple linear regression analysis attempts to estimate the average population of dependent variable of Y based on the independent variables of X_1 , X_2 , and X_3 . Besides, the multiple linear regressions are used to explain how far the independent variables affect the fluctuations of the dependent variable. The relationship of variable Y and X_1 , X_2 , ..., X_k , can be expressed in the following equation;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$$
⁽¹⁾

The above equation (1) is called the multiple linear regression equation. It is said linear as all variables are not squared. Hence, the equation is said to be multiple as there are more than just one independent variable.

4.4.1. CALCULATING B_0, B_1, \ldots, B_K

The functional relationship of variable Y and $X_1, X_2, ..., X_k$ stated in the above

equation (1) is better known as the population model of the multiple linear regression. The sample model of the multiple linear regression is as follows;

$$Y = b_0 + b_1 X_1 + b_2 X_2 + \dots + b_k X_k + e$$
(2)

Notes:

- $b_0 = Y$ -intercept coefficient; that is stated the value of Y if $X_1 = X_2 = ... = X_k = 0$
- b_i = partial regression coefficient between Y over X_i , which stated the changes on the value of Y if X_i moves one unit.

The Least Square Method is used to determine the values of b_0 , b_1 ,..., b_k , which attempts to look for the linear relationship among the variables with the minimal squared deviations of the straight line developed based on the observed values. Two ways of concluding is based on matrix and the Doolittle-Gauss' procedures.

4.4.2. COEFFICIENT OF DETERMINATION

To test whether or not the independent variables are, indeed, influencing the dependent variable substantially, Nosanchuk and Erickson propose the hypothesis testing of H_0 : $R^2 = 0$ against the H_1 : $R^2 \neq 0$; by taking advantage of the value of F, which is calculated using the following formula;

$$F_{k,N-k-1} = \frac{R^2 (N-k-1)}{(1-R)(k-1)}$$
(3)

Notes:

k = total numbers of independent variables

N = total samples

The results of the F-value above can actually determined whether or not H_0 is rejected. Thus, if $F_{calculated} > F_{\alpha}$ (from table), then H_0 is rejected.

The value of R^2 represents the fitness of model based on the sample data. In order to portray the fitness of the model against the actual population, it is necessary to modify

the value of R^2 . Adjustment of R^2 to search for the value of Ra^2 (R^2 adjusted) is using the following formula;

$$Ra^{2} = R^{2} = \frac{k(1 - R^{2})}{(N - k - 1)}$$
(4)

4.4.3. MODEL DEVELOPMENT

The most frequently-asked concerns toward the use of the statistical model is the numbers of independent variables $X_1, X_2, ..., X_k$, to illustrate the prediction of the value of dependent variable Y. It is apparent that indecisiveness toward the use of one independent variable of X_1 or just X_2 , or the use of two independent variables are sufficient, X_1 and X_2 , or X_1 and X_3 , are creating its own concerns.

Thus, additional analysis is essential to determine which model is best among all available alternatives. The approach to determine such an analysis is known as The Best Fit Regression Analysis.

4.4.4. THE BEST FIT REGRESSION MODEL

To determine the best fit of a model, stepwise processes may proof beneficial. In these processes all variables will be fitted-in the regression equation prior to the actual suggestions. The variables will be inserted and/or taken out during the stepwise processes in the following manners;

- 1) Determine the regression equation of the first independent variable; that is, $Y = f(X_1)$.
- 2) Analyze the results using the ANOVA table.
- 3) Reject the variable to be inserted in the regression equation if the $F_{partial} < F_{\alpha;n-k-1}$. On the other hand, add the next variable should the first independent variable be accepted.
- 4) Analyze the results using the ANOVA table.
- 5) Repeat the process mentioned above in (3). The following are the possible alternatives;
- a. X_1 is rejected.
- b. X_1 is not rejected.
- b. X_2 is rejected.
- c. X_2 is not rejected.
- d. X_1 and X_2 are rejected.
- e. X_1 and X_2 are not rejected.
- f. Or the combinations of the above alternatives.
- 6) The processes are repeated for all independent variables.

The actual calculations of the above stepwise approach use the computer software of SPSS (Statistical Package for Social Science) with the following results;

VARIABLES ENTERED/REMOVED ^(a)						
MODEL	VARIABLES ENTERED	VARIABLES REMOVED	METHOD			
1	X3	-	 Stepwise with the following criterion; probability of f to enter is less than or equal to 5%, probability of f to remove is higher than or equal to 10%. 			
2	X2	-	same as above.			
3	X1	-	same as above.			
^(a) dependent variable: y						

Illustration 2 – The Stepwise Approach

MODEL SUMMARY						
MODEL	R	R- SQUARED	R- SQUARED (ADJ)	STD. ERROR OF THE ESTIMATE		
1	.916 ^(a)	.839	.836	2.50408		

2	.955 ^(b)	.911	.907	1.87804	
3	.962 ^(c)	.926	.921	1.73382	
^(a) predictors: (constant), x ₃					
^(b) predictors: (constant), x ₃ , x ₂					
^(c) predictors: (constant), x ₃ , x ₂ , x ₁					

	ANOVA (d)						
MODEL		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG	
1	REGRESSION	1567.214	1	1567.214	249.938	.000 ^(a)	
	RESIDUAL	300.980	48	6.270	-	-	
	TOTAL	1868.194	49	_	-	-	
2	REGRESSION	1702.424	2	851.212	241.340	.000 ^(b)	
	RESIDUAL	165.770	47	3.527	-	-	
	TOTAL	1868.194	49	_	-	-	
3	REGRESSION	1729.913	3	576.638	191.821	.000 ^(c)	
	RESIDUAL	138.282	46	3.006	-	-	
	TOTAL	1868.194	49	_	-	-	
(a)	^(a) predictors: (constant), x ₃						
^(b) predictors: (constant), x ₃ , x ₂							
^(c) predictors: (constant), x_3 , $x_2 x_1$							
(d)	dependent variable	: y					

	COEFFICIENTS (a)					
MODEL	UNSTANDARDIZE D COEFFICIENT		STANDARDIZE D COEFFICIENTS	Т	SIG	
	В	STD. ERROR	ВЕТА			

1	(CONSTANT)	4.074	1.226	-	3.323	.00 2
	X ₃	1.330	.084	.916	15.80 9	.00 0
2	(CONSTANT)	-1.778	1.319	-	-1.349	.18 4
	X ₃	.856	.099	.589	8.625	.00 0
	X ₂	.283	.046	.423	6.192	.00 0
3	(CONSTANT)	-1.532	1.220	-	1.256	.21 6
	X ₃	.735	.100	.506	7.352	.00 0
	X ₂	.211	.048	.316	4.362	.00 0
	X1	.448	.148	.217	3.024	.00 4
(a)	dependent variabl	e: y				

	EXCLUDED VARIABLES (c)						
MODEL BETA IN		T I SIC I		PARTIAL CORRELATION	COLLINEARITY STATISTICS TOLERANCE		
1	X1	.370 ^(a)	5.036	.000	.592	.412	
	X2	.423 ^(a)	6.192	.000	.670	.404	
2	X1	.217 ^(b)	3.024	.004	.407	.313	
^(a) p	^(a) predictors in the model: (constant), x ₃						
^(b) predictors in the model: (constant), x_3 , x_2							
^(c) d	^(c) dependent variable: y						

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APPENDIX 1 – SUMMARY OF AUDIT FINDINGS & RECOMMENDATIONS

The following summary of audit findings and recommendations are based on the interview sessions initially conducted by the Department of Audit of PTB in the month of June 2002. The audit findings, including the comments and recommendations are classified to serve the purpose of the research, and in accordance with the agreed-upon terms and conditions between PTB and the pertinent third parties;

Audit Findings	Comments & Recommendations
 1.The existing organizational structure appeared inefficient to handle the organization-wide operations. a. The span of control of the members of the Board of Directors appeared rather wide. This reduced the effectiveness and efficient use of time of the top management. b. The instructions and decisions of one Director were often contradictory among other members of the Board of Directors. c. Many employees were positioned as the Managers and Department Heads, while there are too few employees who are acting as the First-line Supervisors and Operators. Likewise, though there are Managers, who are responsible for handling matters and work within their own divisions, the authority and delegation seem significantly lacking. 	 The existing organization structure shall be substantially and immediately modified to accommodate flow of data and information, including the flow of two-way communication. Ratio of top, middle and lower management shall also be carefully studied to re-create the organizational structure that will support all activities within PTB. Spans of control shall be limited for all employees of PTB as a way to improve effectiveness and enhancing the efficient use of time of the management. Thus, overlapping of work and responsibility for each of the employees can be considerably reduced. Routine board meetings shall be enacted to share ideas, concerns, and problem solving. This should be used as a media to transfer knowledge among board members, including necessary corrective discussions to all Managers. Authority and delegation are also considered as major concerns from workforce of PTB. Thus, immediate modifications on the current organizational structures are valuable.

Audit Findings	Comments & Recommendations
2.The Company appeared to have focused on insignificant buyers. The Department of Sales and Marketing may have accumulated too much energy into dealing with smaller, but a lot of numbers of buyers. As a consequence, large buyers may have been overlooked and ignored.	 Considering the Pareto notion of 20:80, it is highly advisable that the Department of Sales and Marketing may have to limit the time spent on smaller buyers. Focusing on the 20% large buyers may eventually bring about 80% revenues to the Company whereas the concentration on 80% smaller but many buyers may only boost the Company's revenue by 20%. According to Paul Temporal and Martin Trott in his book entitled <i>Romancing the Customer – Maximizing Brand Value Through Powerful Relationship Management</i>, it is to say that the Company shall concentrate its efforts toward profitable customers by pondering upon the following questions; Why spend money on customers who seem impossible to make profit from? Why spend money talking to customers who bought one product a couple years ago, and to whom you have been unable to sell anything since? Considering today's tight budget for all departments, in order to convince the management that the marketing programs proposed are much more than just costs to be reduced. Thus, it is recommended to do the following; Focus on customers who are regularly. Focus on customers who are recommending the Company's products. Focus on customers who are making contributions to the Company's profits.
3.Product maturity is just another concern for PTB.	3. With regard to the Company's product maturity, research and development of new products ought to be initiated soon. Perhaps, simultaneous implementations are beneficial.
4.Product maturity is undoubtedly a challenge for PTB. Immediate actions shall be implemented to safeguard the Company's market share and existence in the textile industry domestically and overseas.	4. It has been identified during the audit processes that the existing PTB's products are relatively unproblematic to be copied by competitors.

Audit Findings	Comments & Recommendations
	 Level of Resources Sustainability (easy to initiate) SLOW-CYCLE RESOURCES Strongly shielded Patents Brand Names Gillette: Sensor Razor PMI: Products PMI: Products PMI: Grey Products Complicated Processes Complicated Products Fast-CYCLE Easily Duplicated Idea Driven Sony: Walkman PMI: Grey Products Complicated Products Referring to the above diagram, it is noticeable that product lifecycles are very much pertinent to the series of both internal and external resources. At one spectrum, the fast-cycle resources, Sony's walkman, for instance, is just comparable to the Company's cotton and yarn productions. The production processes of the cotton and yarn are just easily duplicated due to a relatively simple idea-driven and generation in the first place. In order to safeguard the Company's product maturity, it is important for PTB to jump onto the other end of the spectrum where the manufacturing processes become difficult and/or otherwise unique, and the secured by patents, perhaps.
5.Customer satisfaction index appeared to have been decreasing over time due to lack of care and services to the existing buyers.	5. PTB shall improve its customer satisfaction index soon to avoid further depletion of its customer base. A formation of a special committee to substantially boost such an index.
6.Sales declined.	6. It is expected that the realization of both points [3],[4], and [5] above shall rebound the sales figures.
 7.The Company's objectives (vision and missions) appeared to have been perceived only as formality as they were never discussed and/or supported by functional strategies, otherwise. a. The corporate strategies toward change management, leadership effectiveness, faster, 	7. The Company's objectives are considered a mere formality and unnecessary to be shared among employees. Those objectives are treated with relatively high confidentiality that only concerned members should able to get a hold of such information. Thus, it is highly advisable that the top management shall attempt to relax such a strict confidentiality immediately as the Company's objectives are supposed to be the path for employees to follow. Deferment of any revisions and substantial emphasis on modifications on the following issues may prove problematical to successfully

Audit Findings	Comments & Recommendations
 Audit Findings better, cheaper, including work and production efficiency may have emerged only in the top management level. Socialization of the terms into the other management layers may have been overlooked. b.Business strategies of the Company, in particular strategies of the Departments of Production, Sales, and Marketing, may not have been formulated in accordance with the corporate strategies. Hence, those business level strategies may have been failed to be coordinated alongside the functional strategies as well. c.Functional strategies appeared to have been separately put together without regard to the business and corporate 	 Comments & Recommendations accomplishing the organizational-wide objectives. Hence, the agreed-upon processes and procedures of the debt restructuring and corporate recovery may lead to a total failure in the near future. a. Socialization of such objectives, including strategic plans, into multiple layers of management shall be initiated to avoid miscommunication among employees as well as increasing the comprehension of each of the employees on creativity and initiative. b. Analyze the business-level strategies of the existing departments. Match those strategies with the corporate-level strategies, or better known as the Company's objectives, vision, and missions. Instant revisions of the business-level strategies appear unavoidable. c. Similar analyses shall also be conducted concerning the functional-level strategies.
strategies that the Company attempts to accomplish.	8 It is apparent that the work coordination among staff
 8. Work coordination among staff and various departments appeared to be very minimal. a. The importance of work coordination may have been ignored, and thus, creating an unpleasant negligence and rivalry at the same time in all departments. b. Critics and complaints were seen only as 	8. It is apparent that the work coordination among staff and departments are pretty much non-existence. Competition is rather fierce among staff. This working environment may have been automatically evolved following the directive/authoritarian leadership style of the family members as top management.

Audit Findings	Comments & Recommendations
directed to a specific individual and/or department. Submissions of such critics and complaints were very much dependent on courage of an employee.	
9. Maturity levels of employees were considerably low as the workforce can only work as told. Creativity and initiative appeared to be blocked by current authoritarian and/or directive leaders, otherwise.	9. The leadership effectiveness seems worthless without the relatively high maturity levels of workforce. The level of maturity ought to be shown in various manners, such as; initiatives, creativities, responsibilities, work commitment, positive thinking, as well as able to relay constructive and objective criticisms.
10. Human resources of the Company appeared to be rather troublesome, in particular concerning the coping ability toward changes, improvements, initiatives, and creativities.	 10. Findings on the human resources audit concerning the existing leaders (from Department Heads to the members of the Board of Directors) within the Company reveals the following; a. No teamwork. Everybody works by him or herself without regard to the continuous and relevant work among staff and departments. b. Tend to wait for further instructions prior to the commencement of the next tasks. c. Individual work orientation is much higher than teamwork and/or the Company's orientation. These show the high level of subjectivity. d. No career planning and clear path for promotion. The remuneration packages, bonuses, and raises are very much subjective. e. Avoiding responsibilities and tend to point fingers at other staff. f. Provide instructions without the ability to control the actual fulfillment of such instructions, including inability to give examples and alternative solutions. g. Promotions and appointments are solely based on individual relationships and family members' information, ignoring the individual competencies. h. Ideas are failed to be further developed as they were piled up, trapped, and misplaced on the boss' desk.

Audit Findings	Comments & Recommendations				
	i. Training sessions and seminars are inexistence as they were seen as just a mere waste of the				
	Company's funds.				

Source: Management Audit performed by the Department of Audit of PTB, June 2002; 2012

APPENDIX 2 – MANAGEMENT AUDIT PROCESSES

The following information contains the guidelines on actual implementation of the management audit processes within the Company. The comments and recommendations are solely based on the interview sessions of the management audit initially conducted by the Department of Audit of PTB in the month of June 2002.

 What are the Company's objectives for the next 5 years are as follows; a. The Company's Vision is to establish and maintain presence in the textile industry in Indonesia with the highest product quality and customer acceptance. b. The Company's Missions are as follows; To establish and maintain presence in the textile industry in Indonesia. To establish and maintain presence in the textile industry in the international market. To obtain worldwide customer acceptance, recognition, and brand-awareness on the textile products. To continuously improve the product quality. To continuously improve the financial soundness. To generate sufficient revenues to be returned to the local community in the forms of employment, food aids, convenient stores, shows and other special events entertainment. The Company's strategies are as follows; Improving the value creation via speed of production and delivery as well as continuous improvement on quality as a result of business process re-engineering and leadership development. Improving the stakeholders' commitment to ensure the partnership relations via continuous advancement within the Company's human resources and its leadership quality. 	Management Audit Processes – SETTING OBJECTIVES	Comments & Recommendations
	 What are the Company's objectives for the next 5 	 are as follows; a. The Company's Vision is to establish and maintain presence in the textile industry in Indonesia with the highest product quality and customer acceptance. b. The Company's Missions are as follows; To establish and maintain presence in the textile industry in Indonesia. To establish and maintain presence in the textile industry in the international market. To obtain worldwide customer acceptance, recognition, and brand-awareness on the textile products. To continuously improve the product quality. To continuously improve the financial soundness. To generate sufficient revenues to be returned to the local community in the forms of employment, food aids, convenient stores, shows and other special events entertainment. c. The Company's strategies are as follows; Improving the value creation via speed of production and delivery as well as continuous improvement on quality as a result of business process re-engineering and leadership development. Improving the stakeholders' commitment to ensure the partnership relations via
2. In comparing the The comparisons of the realizations of the stated	2 In comparing the	leadership quality.

Management Audit Processes – SETTING OBJECTIVES

realizations of those objectives and the original objectives set in the previous 5 years, it is important to note the reasons why the Company is (or is not) successfully achieving such objectives. **Comments & Recommendations**

objectives to the originals indicate a substantially large deviation. The findings are as follows;

- a. The goal to attain the highest product quality is yet to be enhanced as there have been numerous customer complaints with product returns, and defective products during the production processes. Likewise, customer acceptance declines.
- b. In establishing and maintaining presence in the textile industry in Indonesia seemed to have been sufficiently accomplished as local sales improve. Nonetheless, it appeared that the enlargement of the domestic market share has been solely due to the unstable political and economic condition in the country. The international buyers were hesitate to purchase from the volatile market such as Indonesia, and thus, they had directly purchase more textile products from neighboring countries, such as China and Vietnam that are supposedly the biggest competitors of PTB. Though the domestic market has been absorbing the abundantly available textile products in the market, the revenues were insufficiently compensated the US dollar income for PTB. As PTB faces difficulties in realizing its exports, the domestic market is flooded with large amounts of textiles products, which consequently pull-down the price. Hence, profit margins are radically squeezed. The products are merely sold to reduce the cost of inventory, and PTB practices cut-loss scenarios.
- c. In establishing and maintaining presence in the textile industry in the international market seemed to be troublesome. As stated above, the international buyers were rather uneasy to visit Indonesia, check on the factories, and directly purchased textile products from unpredictable country. Large numbers of pre-shipment orders were cancelled and PTB has experienced significant reduction on its export orders and sales.
- d. In terms of obtaining customer acceptance, recognition, and brand-awareness, the Company appears to have a bit struggling in doing so. Numerous merchandise returns and customer complaints do provide the necessary evidence that

Management Audit Processes – SETTING OBJECTIVES	Comments & Recommendations
	customer acceptance may have declined substantially. Having said that, it is untrue to conclude that product recognition and/or brand- awareness of PTB may also decline. The current condition portray that the customer acceptance may slide due to the rise of overseas competitors, particularly China, with abundant supports from the Chinese government. However, facts on large and continuous orders from overseas agents to supply the branded clothing manufacturers, such as; Mama Leon, Marks & Spencer, and numerous of other brands, are flowing into PTB despite economic drawbacks in Indonesia. Though the Company continuous to receive large orders mentioned above, the volume of orders are steadily diminishing overtime. This is due to the shifting in textile products acquirement from the neighboring countries like China.
	e. The Company seems to have successfully improving its product quality, via the notions of faster, better, and cheaper products. This commitment toward product quality is responding to the neighboring countries' manufacturing methods. Unless PTB improves its production techniques, it is rather uneasy to maintain its popularity of its product quality worldwide.
	f. PTB is facing financial dilemmas, and thus, has participated in a debt-restructuring and corporate recovery schemes with the debtors. This is just a mere short and long-term solution to get PTB back on its feet and normal operation again. The failure in financial conditions will have to be turned around and create the solid financial base in the years to come. The lack of leadership effectiveness within the Company may have to be immediately filled to ensure the improvement PTB's financial soundness.
	g. For years, PTB has been generous to the local community development, and it has no plan to reduce and/or otherwise cut its charitable activities. Nonetheless, the textile industry is currently underwent a major restructuring to rebuild its existence in the country. For the past few years, generating sufficient revenues to be returned

	Management Audit Processes – SETTING OBJECTIVES	Comments & Recommendations
		to the local community in the forms of employment, food aids, convenient stores, shows and other special events entertainment has been problematical. It is expected that the restructuring schemes coupled with the selection of effective leadership will re-bound the free-fall of PTB's profit margins.
3.	Based on the Company's objectives, does each of the Departments within the Company prepare functional procedures to realize to those objectives?	There are no supporting documents to provide sufficient evidence that each of the departments within PTB prepare their own version of functional procedures as a way to support the Company-wide objectives, either directly or indirectly. It is recommended that each of the departments shall immediately prepare specific versions of functional procedures to assist the accomplishment of the Company-wide objectives. The initiation and formulation of these functional procedures shall not be delayed any longer.
4.	Work coordination is essential to achieve the Company-wide objectives. Is there any work coordination among the departments?	There is no evidence to support that necessary work coordination is actually in existence within the organization of PTB. Each of the department has a tendency to blame, or otherwise pointing fingers at other departments for errors, mistakes, and negligent actions.

Management Audit Processes – PLANNING	Comments & Recommendations
 5. To attain the Company's objectives; a. All units and departments shall prepare their own sets of work plans. b. Work plans are the guidelines to allow each of the units and departments to coordinate their functional work and jointly accomplish the 	There are no evidence to support that all units and departments within PTB have sufficiently prepared work plans to assist the realization of the Company's objectives. Refer to point 3 mentioned above, this step of forming work plans shall not be delayed any longer as well.

Management Audit Processes – PLANNING	Comments & Recommendations
Company's objectives. These work plans include; i. Definition of key projects with time schedule and supporting resources. ii. Focus on the human resources abilities in	
iii. Approval from the top management on	
projects. iv. Measurements of key success factors in comparison with the proposed plans, budgeting, results, and others.	

	Management Audit Processes – ORGANIZATION	Comments & Recommendations
6.	The management audit processes shall emphasis on the quality of work and effectiveness of the key officers within the Company to handle such projects.	 Key officers of all management level (low, middle and top) within PTB do not seem to show ability, to initiate, formulate, and otherwise create the quality of work. There is no evidence to support that the officers of PTB perform the necessary tasks. a. It is recommended that the maturity of each of the officers shall be improved through intensive training and development. b. Work coordination with the Department of Personnel shall be initiated. c. Communication among departments shall be effectively started to enhance the project handling and maintaining the quality of work.
7.	Performance appraisals following the completion of each project;	There is a simple performance appraisal, which is currently used within the Company. Nevertheless, such an appraisal may not have developed sufficiently and/or able to indicate strengths and weaknesses of the

Management Audit Processes – ORGANIZATION	Comments & Recommendations
 a. Sufficient workforce? b. Sufficient technical expertise, skills, and talents to carry out the work assigned? 	workforce. In addition, the existing performance appraisals fail to promote objectivity between the appraisers and the appraisee. Hence, it is well recommended that the performance appraisals shall be largely enhanced to note the progress and areas of improvement for the workforce, not forgetting the need toward reducing subjectivity.
8. Decision making processes shall be based on the information flow within the Company, that is, the instructions are clearly transmitted in details to form the chains of command pursuant to the existing organizational structure. Interviews become inevitable in analyzing the workload, attitude of the workforce, and comments of the employees toward the projects assigned.	 The Company's decision-making processes are considered traditional and thus, inexistence. The decisions are solely made by the Board of Directors with little discussions and analysis with the officers of PTB. Such decisions are often contradictory among the board members, nonetheless. a. Inefficient organizational structure may propose the roots of the problems in decision-making processes. Also, the borderless and/or otherwise vague limitations on the board members' responsibilities enrich the impediment of the decision-making practices. b. Chain of command has just been a formality within the organizational structure to fulfill the third party queries. c. Analysis of workload, attitude of workforce and/or commands of employees toward any projects and/or tasks may not have been performed satisfactorily thus far.

	Management Audit Processes – CONTROL	Comments & Recommendations
9.	The management audit processes shall verify that the organization does have all necessary controls; in administration, management, and operational aspects, which are considered adequate to ensure that the Company's objectives, policies,	There is little evidence that the organization does have all the necessary controls. The establishment of a separate controlling body, consisting representatives from Departments of Personnel, Quality Assurance, Accounting, Internal Audit, and Management Information Systems, are continuously attempted to analyze the internal structure for further improvement on workforce.

Management Audit Processes – CONTROL	Comments & Recommendations
systems and procedures are simultaneously fulfilled.	
 10. Evaluation of control includes; a. Policies of the top management. b. Forms, files, standard and work plans are ample. c. Budget and analysis of financial realizations. 	The controlling body within PTB has just been formed although the work performance remains difficult to judge as the maturity of employees and the board members may have to be improved. The formation of the controlling body is essential to set up policies, systems and procedures in the Company.

Source: Jung, 2002, and Management Audit performed by the Department of Audit of PTB, June 2002; 2012

APPENDIX 3 – MANAGEMENT AUDIT QUESTIONNAIRES

The list of questions below are based on the internal audit findings as a way to support the interview results initially conducted by the Department of Audit of PTB in the month of June 2002. These questions have been previously approved by the top management of PTB as well as the concerned third parties. The distributed questionnaires concerning the management audit are divided into 4 different categories; [a] vision and mission statements, [b] organizational structure effectiveness, strategic plans, and actions of various departments, [c] decision-making processes, and [d] leadership competencies and capabilities. The distributed questionnaires are as follows;

	Management Audit – VISION & MISSION STATEMENTS	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
1.	The Company appeared to have developed and published its short and long-term objectives.					
2.	The Company's short and long-term objectives and/or other plans appeared to have been clearly socialized to employees.					
3.	Multi-level management members appeared to have been invited and strongly encouraged to participate in the creation of the vision and missions of the Company.					
4.	You appeared to be in agreement and/or otherwise satisfied, and would likely to support the vision and missions of the Company.					
5.	The Company appeared to have achieved at least some objectives stated in its vision and mission statements.					

	Management Audit – ORGANIZATIONAL STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
1.	A formal organizational structure does exist within the Company.					
2.	The Company's formal organizational structure appeared to adequately support an effective and efficient use of skills, talents, expertise, and experience of each of the employees.					
3.	The Company's formal organizational structure appeared to have divided workload, tasks, responsibilities, and authorities equally.					
4.	The Company's formal organizational structure appeared to have provided the necessary guidance to carryout each functions and responsibilities sufficiently well.					
5.	The Company appeared to have clear job descriptions, responsibilities, and authorities for each of the employees.					
6.	The Company's job description, responsibilities, and authorities appeared to have been divided equally among employees.					
7.	The Company's formal organizational structure appeared to have adapted a relatively centralized systems and structures.					
8.	The Company's top management appeared to have shown genuine intention to move away from the strict- centralize systems and structures to a more dynamic and decentralize systems and structures.					
9.	The Company appeared to have written out the job descriptions clearly to allow each of the employees to understand his or her own responsibilities and					

Management Audit – ORGANIZATIONAL STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
obligations well.					
10. The Company's management appeared to have provided updated information as soon as there are modifications on the job descriptions as well as there are amendments on the Company's organizational structures.					
11. The Company's existing organizational structure appeared efficient in supporting the pre-requisite operational procedures.					
12. Any of the Company's divisions and/or departments can be combined to re- create the most effective and optimal structure as a way to support the Company's overall operational production processes.					
13. It appeared that any of the Company's existing divisions and/or departments may not have contributed positively to the whole operational production processes					
14. It appeared that any of the Company's existing divisions and/or departments may have carried imbalance workload and responsibilities as compared to the other divisions and/or departments within the Company.					
15. It appeared that any of the Company's functional staff within specific departments may not have contributed positively to the overall operational production processes.					
16. It appeared that any of the Company's divisions and/or departments may have been considered less important in comparison to other departments within the Company.					

Management Audit – ORGANIZATIONAL STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
17. The communication channel among management appeared to have been exhaustedly utilized to form the necessary two-way communication.					
18. The Company' supervisors appeared to have performed effective and efficient evaluations and analyses on the job performance of all departments within the Company.					
19. You appeared to be in total agreement and/or otherwise satisfied with the existing organizational structure effectiveness, and would not likely to recommend changes.					
20. The Company appeared to have shown evidence to support that the existing organizational structure is able to support the Company's objectives stated in its vision and mission statements.					

	Management Audit – DECISION- MAKING PROCESSES	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
1.	The Company's board members appeared to have made decision based on relevant and updated data and information.					
2.	All members of management (from the lowest to the top) appeared to have been strongly encouraged to provide the most up-dated data and information for decision-making processes.					
3.	The board members, managers, and other decision-makers appeared to have heavily and equally involved in formulating decisions.					

	Management Audit – DECISION- MAKING PROCESSES	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
4.	The relationships among the board members, managers, department heads, and other decision makers appeared to be efficient.					
5.	The satisfaction levels of all employees appeared to be high in relation to the Company's decision-making processes.					
6.	Data and information appeared to have flown freely from the top management all the way to the lower level management.					
7.	Data and information appeared to have flown freely from the lower management all the way to the top-level management.					
8.	Two-way communication appeared to have existed and cultivated within the Company.					
9.	You appeared to have satisfied with the decision-making processes of the Company.					

Management Audit – LEADERSHI COMPETENCIES & CAPABILITIES	P 1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
 The Company's current top management appeared to have shown leadership qualities in handling various issues during the routine daily operation. 	5				
 The Company's current top management appeared to have shown leadership qualities in setting up vision and mission statements. 	S				
3. The Company's current top management appeared to have shown leadership qualities in formulating the short and long-term business plans.					

	Management Audit – LEADERSHIP COMPETENCIES & CAPABILITIES	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
4.	The Company's current top management appeared to have shown leadership effectiveness in encouraging participation during decision-making processes.					
5.	The Company's current top management appeared to have shown the most appropriate leadership style in managing the routine daily operation.					
6.	The Company's current top management appeared to have been relayed instructions clearly and objectively.					
7.	The Company's current top management appeared to have established the effective communication channel within the organization.					
8.	The Company's current top management appeared to have maintained and/or otherwise promoted job securities within the organization.					
9.	The Company's current top management appeared to have acted in accordance with the instructions given and acted upon such instructions.					
10.	The Company's current top management appeared to have established open-door policy to invite ideas, initiative, and creativity from the workforce in relation to job enhancement & job enrichment of the organization.					
11.	The Company's current top management appeared to have provided positive examples and become the role model to employees.					
12.	The Company's current top management appeared trustworthy to employees.					

Management Audit – LEADERSHIP COMPETENCIES & CAPABILITIES	1 (Strongly Agree)	2 (Agree)	3 (Neutral)	4 (Disagree)	5 (Strongly Disagree)
13. The Company's current top management appeared to have continuously boosted the employees' motivation.					
14. The Company's current top management appeared to have acted objectively in handling various issues.					
15. The Company's current top management appeared to have created positive and supportive working environment to employees.					

Source: Jung, 2002, and Management Audit performed by the Department of Audit of PTB, July 2002; 2012

APPENDIX 4 – QUESTIONNAIRES' RESULTS

The following tables contain results from the distributed questionnaires;

	Management Audit – VISION & MISSION STATEMENTS	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
1.	The Company appeared to have developed and published its short and long-term objectives.	14	25		5	6	50
2.	The Company's short and long-term objectives and/or other plans appeared to have been clearly socialized to employees.			6	32	12	50
3.	Multi-level management members appeared to have been invited and strongly encouraged to participate in the creation of the vision and missions of the Company.				8	42	50
4.	You appeared to be in agreement and/or otherwise satisfied, and would likely to support the vision and missions of the Company.		5	13	17	15	50
5.	The Company appeared to have achieved at least some objectives stated in its vision and mission statements.		3	2	22	23	50

	Management Audit – ORGANIZATIONAL STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
1.	A formal organizational structure does exist within the Company.	47	3				50
2.	The Company's formal organizational structure appeared to adequately support an effective and efficient use of skills, talents, expertise, and experience of each of the employees.				6	44	50

	Management Audit – ORGANIZATIONAL STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
3.	The Company's formal organizational structure appeared to have divided workload, tasks, responsibilities, and authorities equally.			1	4	45	50
4.	The Company's formal organizational structure appeared to have provided the necessary guidance to carryout each functions and responsibilities sufficiently well.			1	38	11	50
5.	The Company appeared to have clear job descriptions, responsibilities, and authorities for each of the employees.				1	49	50
6.	The Company's job description, responsibilities, and authorities appeared to have been divided equally among employees.		7	1	3	39	50
7.	The Company's formal organizational structure appeared to have adapted a relatively centralized systems and structures.	36	13	1			50
8.	The Company's top management appeared to have shown genuine intention to move away from the strict-centralize systems and structures to a more dynamic and decentralize systems and structures.			1	12	37	50
9.	The Company appeared to have written out the job descriptions clearly to allow each of the employees to understand his or her own responsibilities and obligations well.				3	47	50
10.	The Company's management appeared to have provided updated information as soon as there are modifications on the job descriptions				1	49	50

Management Audit – ORGANIZATIONAL						
STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
as well as there are amendments on the Company's organizational structures.						
11. The Company's existing organizational structure appeared efficient in supporting the pre- requisite operational procedures.			1	46	3	50
12. Any of the Company's divisions and/or departments can be combined to re-create the most effective and optimal structure as a way to support the Company's overall operational production processes.	13	33	4			50
13. It appeared that any of the Company's existing divisions and/or departments may not have contributed positively to the whole operational production processes	37	9	4			50
14. It appeared that any of the Company's existing divisions and/or departments may have carried imbalance workload and responsibilities as compared to the other divisions and/or departments within the Company.	41	8		1		50
15. It appeared that any of the Company's functional staff within specific departments may not have contributed positively to the overall operational production processes.	35	6	9			50
16. It appeared that any of the Company's divisions and/or departments may have been considered less important in comparison to other departments within the Company.	2	44		4		50
17. The communication channel among		1	1	47	1	50

Management Audit – ORGANIZATIONAL STRUCTURE EFFECTIVENESS, STRATEGIC PLANS, AND ACTIONS OF VARIOUS DEPARTMENTS	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
management appeared to have been exhaustedly utilized to form the necessary two-way communication.						
18. The Company' supervisors appeared to have performed effective and efficient evaluations and analyses on the job performance of all departments within the Company.				1	49	50
19. You appeared to be in total agreement and/or otherwise satisfied with the existing organizational structure effectiveness, and would not likely to recommend changes.				43	7	50
20. The Company appeared to have shown evidence to support that the existing organizational structure is able to support the Company's objectives stated in its vision and mission statements.		2	2	35	11	50

	Management Audit – DECISION- MAKING PROCESSES	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
1.	The Company's board members appeared to have made decision based on relevant and updated data and information.	1	1		6	42	50
2.	All members of management (from the lowest to the top) appeared to have been strongly encouraged to provide the most up-dated data and information for decision-making processes.		2		3	45	50
3.	The board members, managers, and other decision-makers appeared to have heavily and equally involved in formulating decisions.			1	1	48	50

	Management Audit – DECISION- MAKING PROCESSES	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
4.	The relationships among the board members, managers, department heads, and other decision makers appeared to be efficient.		2		4	44	50
5.	The satisfaction levels of all employees appeared to be high in relation to the Company's decision- making processes.		6		5	39	50
6.	Data and information appeared to have flown freely from the top management all the way to the lower level management.				3	47	50
7.	Data and information appeared to have flown freely from the lower management all the way to the top- level management.	11	37		2		50
8.	Two-way communication appeared to have existed and cultivated within the Company.	1	1	3	24	21	50
9.	You appeared to have satisfied with the decision-making processes of the Company.		1		16	33	50

Management Audit – LEADERSHIP COMPETENCIES & CAPABILITIES	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
1. The Company's current top management appeared to have shown leadership qualities in handling various issues during the routine daily operation.			7	19	24	50
2. The Company's current top management appeared to have shown leadership qualities in setting up visions and mission statements.		4		15	31	50
3. The Company's current top management appeared to have shown leadership qualities in formulating the short and long-term business		3		11	36	50

	Management Audit – LEADERSHIP COMPETENCIES & CAPABILITIES	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
	plans.						
4.	The Company's current top management appeared to have shown leadership effectiveness in encouraging participation during decision-making processes.				1	49	50
5.	The Company's current top management appeared to have shown the most appropriate leadership style in managing the routine daily operation.				2	48	50
6.	The Company's current top management appeared to have been relayed instructions clearly and objectively.		1		4	45	50
7.	The Company's current top management appeared to have established the effective communication channel within the organization.				42	8	50
8.	The Company's current top management appeared to have maintained and/or otherwise promoted job securities within the organization.		1	2	40	7	50
9.	The Company's current top management appeared to have acted in accordance with the instructions given and acted upon such instructions.				41	9	50
10.	The Company's current top management appeared to have established open-door policy to invite ideas, initiative, and creativity from the workforce in relation to job enhancement & job enrichment of the organization.				3	47	50
11.	The Company's current top management appeared to have provided positive examples and				1	49	50

Management Audit – LEADERSHIP COMPETENCIES & CAPABILITIES	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree	Total Counts
become the role model to employees.						
12. The Company's current top management appeared trustworthy to employees.	4	2	1	27	16	50
13. The Company's current top management appeared to have continuously boosted the employees' motivation.				33	17	50
14. The Company's current top management appeared to have acted objectively in handling various issues.				11	39	50
15. The Company's current top management appeared to have created positive and supportive working environment to employees.				4	46	50

Name*	Gender	Age	Education	Years of Experience
Manager 1	Male	45	Undergraduate degree in Civil Engineering	20
Manager 2	Male	44	Undergraduate degree in Civil Engineering	20
Manager 3	Male	40	Undergraduate degree in Civil Engineering	20
Manager 4	Male	48	Undergraduate degree in Computer Design	22
Manager 5	Male	55	Master degree in Physics, and an Undergraduate degree in Mathematics	29
Manager 6	Male	34	Master degree in Finance, and an Undergraduate degree in Economics	10
Manager 7	Female	40	Master degree in Marketing, and an Undergraduate degree in Economics	15
Manager 8	Female	35	Master degree in Computer Science, and an Undergraduate degree in MIS	10
Manager 9	Female	42	Master degree in Mechanical Engineering, and an Undergraduate degree in Chemistry	17
Manager 10	Female	31	Undergraduate degree in Textile Manufacturing	5
Manager 11	Female	30	Undergraduate degree in Accounting	4
Manager 12	Female	35	Undergraduate degree in Accounting	8
Manager 13	Female	32	Undergraduate degree in Finance	6
Manager 14	Female	33	Undergraduate degree in Management	7
Manager 15	Female	37	Undergraduate degree in Marketing	13
Manager 16	Female	36	Undergraduate degree in Chemistry	11
Manager 17	Female	42	Undergraduate degree in Chemistry	16
Manager 18	Male	34	Master degree in Management, Master degree in Economics, Undergraduate degree in Finance, Undergraduate degree in Economics, and various professional certifications in Accounting and Audit	10
Manager 19	Female	39	Undergraduate degree in Civil Engineering	14
Manager 20	Male	39	Master degree in Mathematics, Master degree in Computer Science, and an Undergraduate degree in Computer Science	13

APPENDIX 5 – EMPLOYEE PROFILE

Name*	Gender	Age	Education	Years of Experience
Manager 21	Male	35	Undergraduate degree in Accounting, and a professional certificate in Accounting and Audit	11
Manager 22	Male	40	Undergraduate degree in Management	12
Manager 23	Male	44	Undergraduate degree in Management	14
Manager 24	Male	45	Undergraduate degree in Management	15
Manager 25	Male	52	Doctoral degree in Chemistry, Master degree in Material Science, Master degree in Civil Engineering, and an Undergraduate degree in Physics	29
Manager 26	Male	57	Doctoral degree in Mechanical Engineering, Master degree in Civil Engineering, and an Undergraduate degree in Industrial Engineering.	31
Manager 27	Female	49	Undergraduate degree in Psychology, and a professional certificate in Counseling	23
Manager 28	Female	38	Undergraduate degree in Psychology	13
Manager 29	Female	41	Master degree in Human Resources, and an Undergraduate degree in Psychology	16
Manager 30	Female	42	Undergraduate degree in MIS	18
Manager 31	Female	45	Undergraduate degree in Computer Design	20
Manager 32	Female	33	Undergraduate degree in Computer Design	8
Manager 33	Male	38	Undergraduate degree in Management	13
Manager 34	Male	46	Undergraduate degree in Management	18
Manager 35	Male	41	Undergraduate degree in Management	16
Manager 36	Male	53	Doctoral degree in Management, Master degree in Accounting, and an Undergraduate degree in Economics	26
Manager 37	Female	54	Doctoral degree in Management, Master degree in Economics, and an Undergraduate degree in Civil Engineering	22
Manager 38	Female	49	Master degree in Law, and an Undergraduate degree in Law	19
Manager 39	Female	35	Undergraduate degree in Law	9
Manager 40	Female	33	Undergraduate degree in Communication & Public Speaking	7
Manager 41	Female	41	Master degree in Communication, and an Undergraduate degree in	18

Name*	Gender	Age	Education	Years of Experience
			Communication	
Manager 42	Male	37	Undergraduate degree in Law	10
Manager 43	Male	44	Diploma in Textile Manufacturing	20
Manager 44	Male	48	Diploma in Computer Accountancy	24
Manager 45	Male	39	Diploma in Financial & Cost Accounting	10
Manager 46	Female	36	Diploma in Public Relations	6
Manager 47	Female	37	Diploma in Public Relations & Broadcasting	7
Manager 48	Female	32	Diploma in Secretary & Office Management	5
Manager 49	Male	30	Diploma in Computer (Hardware)	5
Manager 50	Male	31	Diploma in Electronic Data Processing (Software)	5

Source: Department of Human Resources and Department of Audit of PTB, June 2002; 2012, including assistant managers, managers, senior managers, general managers, and vice presidents.

* Due to the agreements I have previously signed with the Company and/or their representatives in accordance with letters of power of attorney, to act for and on behalf of the firms, I shall maintain the names of the firms confidential, including the members of their management teams.



APPENDIX 6 – PROPOSED ORGANIZATIONAL STRUCTURE

APPENDIX 7 – EXISTING ORGANIZATIONAL STRUCTURE




APPENDIX 8 – RESEARCH METHOD & STEPS

APPENDIX 9 – MEASUREMENT TESTING

I. Validity Testing

I.1. Vision & Mission Statements (X1)

No.	R	tcalculated	t _{table}	Validity
A1	0.833	10.423	2.010	Valid
A2	0.552	4.592	2.010	Valid
A3	0.298	2.161	2.010	Valid
A4	0.838	10.645	2.010	Valid
A5	0.762	8.160	2.010	Valid

The above table indicates no invalid data pertinent to the independent variable X₁. Hence, all statements in this category can be incorporated as indicators of validity of this variable.

I.2. Organizational Structure Effectiveness, Strategic Plans, and Actions of various Departments (X₂)

No.	R	tcalculated	t _{table}	Validity
B1	0.6179	5.445	2.010	Valid
B2	0.6063	5.283	2.010	Valid
B3	0.6248	5.544	2.010	Valid
B4	0.8338	10.466	2.010	Valid
B5	0.4386	3.381	2.010	Valid
B6	0.6625	6.127	2.010	Valid
B7	0.7700	8.362	2.010	Valid
B8	0.6909	6.620	2.010	Valid
B9	0.5393	4.436	2.010	Valid
B10	0.4386	3.381	2.010	Valid
B11	0.7434	7.700	2.010	Valid
B12	0.8366	10.579	2.010	Valid
B13	0.8019	9.297	2.010	Valid
B14	0.7410	7.646	2.010	Valid
B15	0.7883	8.875	2.010	Valid
B16	0.8008	9.263	2.010	Valid

No.	R	tcalculated	t _{table}	Validity
B17	0.6317	5.646	2.010	Valid
B18	0.4386	3.381	2.010	Valid
B19	0.7199	7.187	2.010	Valid
B20	0.8819	12.959	2.010	Valid

The above table indicates no invalid data pertinent to the independent variable X_2 . Hence, all statements in this category can be incorporated as indicators of validity of this variable.

No.	R	tcalculated	t _{table}	Validity
C1	0.707	6.926	2.010	Valid
C2	0.731	7.421	2.010	Valid
C3	0.780	8.625	2.010	Valid
C4	0.515	4.168	2.010	Valid
C5	0.536	4.399	2.010	Valid
C6	0.782	8.702	2.010	Valid
C7	0.606	5.273	2.010	Valid
C8	0.875	12.528	2.010	Valid
C9	0.827	10.176	2.010	Valid

I.3. Decision-Making Processes (X₃)

The above table indicates no invalid data pertinent to the independent variable X_3 . Hence, all statements in this category can be incorporated as indicators of validity of this variable.

I.4. Leadership Competencies & Capabilities (Y)

No.	R	tcalculated	t _{table}	Validity
D1	0.868	12.092	2.010	Valid

D2	0.931	17.639	2.010	Valid
D3	0.903	14.592	2.010	Valid
D4	0.072	0.502	2.010	Invalid
D5	0.286	2.068	2.010	Valid
D6	0.566	4.762	2.010	Valid
D7	0.420	3.206	2.010	Valid
D8	0.734	7.488	2.010	Valid
D9	0.447	3.461	2.010	Valid
D10	0.463	3.618	2.010	Valid
D11	0.044	0.304	2.010	Invalid
D12	0.845	10.962	2.010	Valid
D13	0.595	5.130	2.010	Valid
D14	0.778	8.571	2.010	Valid
D15	0.809	9.545	2.010	Valid

The above table indicates two invalid data pertinent to statements D4 and D11. Hence, these two questions are excluded as the indicator of validity of the dependent variable Y.

II. Questionnaires Reliability Testing

II.2. Reliability Testing of X₁

Split-half results of variable X_1 are as follows;

No. Respondent	I ₁ (first-half)	I2 (second-half)
1	8	5
2	7	4
3	8	3
4	6	4
5	6	4
6	7	5
7	8	5
8	10	7
9	9	6

No. Respondent	I ₁ (first-half)	I2 (second-half)
10	6	5
	7	3
12	5	3
12	3	3
14	3	3
15	8	5
16	6	3
17	8	3
18	8	5
19	10	7
20	10	7
20	11	5
22	7	5
23	7	4
24	6	4
25	6	3
26	4	3
27	4	2
28	4	2
29	3	3
30	3	3
31	6	2
32	6	3
33	6	3
34	7	4
35	6	3
36	6	5
37	7	2
38	3	5
39	4	2
40	7	4
41	6	4
42	7	4
43	7	5
44	8	6
45	7	5

No. Respondent	I ₁ (first-half)	I2 (second-half)
46	9	5
47	7	4
48	7	4
49	7	3
50	8	5

Using the computer to aid the calculations, it is known that the correlation coefficient (r_s) between the first (I_1) and second half (I_2) of the data gathered for X_1 is 0.670. The total reliability score (r_{tot}) for the whole items is calculated using the following formula;

$$r_{tot} = \frac{2*(r_{s1/2})}{1+r_{s1/2}}$$
$$r_{tot} = \frac{2*(0.670)}{1+0.670}$$
$$= 0.802$$

The value of 0.802 indicates the reliability level of all statements under this category of variable X_1 . In order to evaluate whether or not all questions included for variable X_1 do provide sufficient reliability in predicting variable Y, the calculation of t is necessary, as follows;

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$
$$t = \frac{0.802\sqrt{50-2}}{\sqrt{1-0.802^2}}$$
$$= 9.302$$

From the above calculations, it is apparent that the value of $t_{calculated}$ is 9.302 whereas the value of t_{table} at the significant level of $\alpha = 0.05$, and the degrees of freedom,

or referred to herein as "df" = 50 - 2 = 48, is 2.010. As a result, since the t_{calculated} > t_{table}, it is said that the measurement used in the form of questions is, indeed, reliable. The reliability level of those questions listed under category variable X₁ is rather high with the correlation coefficient of 0.802.

II.2. Reliability Testing of X₂

The split-half results of X₂ are as follows;

No. Respondent	I ₁ (first half)	I2 (second half)
1	29	25
2	29	24
3	29	22
4	29	22
5	29	22
6	29	22
7	29	26
8	31	29
9	30	28
10	29	22
11	29	22
12	25	19
13	19	16
14	17	14
15	27	22
16	28	22
17	29	25
18	29	27
19	30	29
20	32	31
21	36	35
22	29	22
23	29	22
24	29	22
25	29	22
26	26	20

No. Respondent	I ₁ (first half)	I2 (second half)
27	24	19
28	24	19
29	21	16
30	24	19
31	26	20
32	26	22
33	29	22
34	29	22
35	29	22
36	29	22
37	26	22
38	19	16
39	25	19
40	29	22
41	29	22
42	29	22
43	29	22
44	29	24
45	29	25
46	29	28
47	29	22
48	29	22
49	29	22
50	29	22

Using the computer to aid the calculations, it is known that the correlation coefficient (r_s) between the first (I_1) and second half (I_2) of the data gathered for X_2 is 0.845. The total reliability score (r_{tot}) for the whole items is calculated using the following formula;

$$r_{tot} = \frac{2*(r_{s1/2})}{1+r_{s1/2}} = \frac{2*(0.845)}{1+0.845} = 0.916$$

The value of 0.916 indicates the reliability level of all statements under this category of variable X_2 . In order to evaluate whether or not all questions included for variable X_2 do provide sufficient reliability in predicting variable Y, the calculation of t is necessary, as follows;

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.916\sqrt{50-2}}{\sqrt{1-0.916^2}} = 15.819$$

From the above calculations, it is apparent that the value of $t_{calculated}$ is 15.819 whereas the value of t_{table} at the significant level of $\alpha = 0.05$, and the degrees of freedom, or referred to herein as "df" = 50 - 2 = 48, is 2.010. As a result, since the $t_{calculated} > t_{table}$, it is said that the measurement used in the form of questions is, indeed, reliable. The reliability level of those questions listed under category variable X_2 is rather high with the correlation coefficient of 0.916.

II.3. Reliability Testing of X₃

The split-half results of X₃ are as follows;

No. Respondent	I ₁ (first half)	I2 (second half)
1	11	5
2	9	5
3	9	7
4	8	5
5	8	5
6	8	5
7	12	5
8	14	8
9	14	8
10	8	4
11	11	4
12	11	4
13	9	4
14	6	7

No. Respondent	I ₁ (first half)	I ₂ (second half)
15	8	4
16	8	4
17	11	5
18	11	5
19	14	6
20	14	11
20	18	15
22	8	5
23	8	5
24	8	4
25	8	4
26	8	7
27	8	4
28	8	4
29	8	4
30	8	4
31	8	4
32	8	4
33	8	5
34	8	5
35	8	4
36	8	4
37	8	4
38	6	5
39	8	4
40	11	5
41	8	5
42	8	5
43	9	5
44	9	5
45	11	5
46	11	7
47	9	5
48	9	5
49	8	5
50	8	5

Using the computer to aid the calculations, it is known that the correlation coefficient (r_s) between the first (I_1) and second half (I_2) of the data gathered for X_3 is 0.716. The total reliability score (r_{tot}) for the whole items is calculated using the following formula;

$$r_{tot} = \frac{2*(r_{s1/2})}{1+r_{s1/2}} = \frac{2*(0.716)}{1+0.716} = 0.834$$

The value of 0.834 indicates the reliability level of all statements under this category of variable X_3 . In order to evaluate whether or not all questions included for variable X_3 do provide sufficient reliability in predicting variable Y, the calculation of t is necessary, as follows;

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.834\sqrt{50-2}}{\sqrt{1-0.834^2}} = 10.472$$

From the above calculations, it is apparent that the value of $t_{calculated}$ is 10.472 whereas the value of t_{table} at the significant level of $\alpha = 0.05$, and the degrees of freedom, or referred to herein as "df" = 50 - 2 = 48, is 2.010. As a result, since the $t_{calculated} > t_{table}$, it is said that the measurement used in the form of questions is, indeed, reliable. The reliability level of those questions listed under category variable X₃ is rather high with the correlation coefficient of 0.834.

II.4. Reliability Testing of Y

The split-half results of Y are as follows;

No. Respondent	Y ₁ (first half)	Y2 (second half)
1	13	11
2	13	11
3	12	10

No. Bospondont	Y ₁ (first half)	Y ₂ (second half)
Respondent 4	12	
5	12	9
6	13	10
7	13	11
8	17	18
9	14	13
10	11	9
11	10	8
12	9	8
13	8	9
14	9	8
15	9	8
16	10	8
17	13	10
18	14	12
19	15	17
20	17	17
21	18	22
22	12	9
23	11	9
24	11	9
25	11	9
26	10	8
27	8	8
28	8	8
29	8	9
30	8	9
31	10	8
32	10	8
33	11	7
34	11	9
35	11	9
36	10	9
37	10	8
38	9	8
39	8	8

No. Respondent	Y ₁ (first half)	Y ₂ (second half)
40	12	9
41	12	8
42	12	8
43	12	10
44	14	9
45	13	11
46	14	14
47	12	10
48	12	10
49	12	9
50	12	8

Using the computer to aid the calculations, it is known that the correlation coefficient (r_s) between the first (I_1) and second half (I_2) of the data gathered for Y is 0.826. The total reliability score (r_{tot}) for the whole items is calculated using the following formula;

$$r_{tot} = \frac{2*(r_{s1/2})}{1+r_{s1/2}} = \frac{2*(0.826)}{1+0.826} = 0.905$$

The value of 0.905 indicates the reliability level of all statements under this category of variable Y. In order to evaluate whether or not all questions included for variable Y do provide sufficient reliability, the calculation of t is necessary, as follows;

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}} = \frac{0.05\sqrt{50-2}}{\sqrt{1-0.905^2}} = 14.739$$

From the above calculations, it is apparent that the value of $t_{calculated}$ is 14.739 whereas the value of t_{table} at the significant level of $\alpha = 0.05$, and the degrees of freedom, or referred to herein as "df" = 50 - 2 = 48, is 2.010. As a result, since the $t_{calculated} > t_{table}$, it is said that the measurement used in the form of questions is, indeed, reliable. The

reliability level of those questions listed under category variable Y is rather high with the correlation coefficient of 0.905.