

**MINISTRY OF EDUCATION AND TRAINING
HANOI UNIVERSITY OF MINING AND GEOLOGY**

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**RESEARCH IN INNOVATION OF PLANIFICATION OF
COAL MINING COMPANIES IN VIETNAM NATIONAL
INDUSTRIES HOLDING CORPORATION LIMITED**

Majors: Economic Management

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DOCTORAL THESIS SUMMARY

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INTRODUCTION

1. Rationale

Plan is a management tool that orient for other activities to adapt to fluctuation of the business environment. It has the opinion that there is no need to build plans in the market economy. However today planification is still necessary activities of companies.

The coal mining companies in Vinacomin have existed from planification economy. Management mechanism and also planification of these companies have been innovated step by step. But this work still have some weaknesses: (1) The companies are mainly directed by Vinacomin; Planification are still carried out follow “three down – two up” planification model as they did in planification economy; (2) The activities are mainly based on direction of Vinacomin; The fluctuation of the business environment has not reflected fully in this work; (3) Planification of these companies are still formalistic; (4) The companies also do not pay attention to build medium – term and long – term plans, etc.

Beside the current context of Vietnam’s coal mining industry also has many major changes: (1) The demand of coal in the domestic is increasing and exeeding the supply capacity of domestic coal sources; (2) more and more other companies are involved in the import, mining and supply of coal in the domestic market that making both the coal supply and demand markets very active; (3) the State has been having an orientation to built Vietnam’s energy market and also including Vietnam’s coal market.

In addition, energy securrrty requirements; rational exploiting and using of resources in climate change context; or the restructuring of state-owned enterprises also leads to the requirements of innovating the planification of these companies.

The results of research review also showed that planification and innovation of this work has not really received the attention of scientists. Beside, there are almost no regulations that directly guide the implementation of planification. This causes difficulties and confusion in both theory and practice for doing this work.

From the above arguments, the PhD student chose the topic: "***Research in innovation of planification of coal mining companies in Vietnam National Industries Holding Corporation limited***" as the subject for my doctoral thesis.

2. Research objectives and Research questions

a) *Research objectives*: Build a feasible and scientific basis for the contents of innovation of planification of coal mining companies in Vinacomin in the current context.

b) *Research questions*: (1) Why do coal mining companies in Vinacomin need to innovate their planification in the current context? (2) Which factors that effect to the planification of coal mining companies in Vinacomin? (3) What should be done to innovate the planification of coal mining companies in Vinacomin in the current context?

3. Research subjects

The thesis researches the planification and contents of innovation of planification of coal mining companies in Vinacomin in the current context.

4. Research scope

a) *Space scope*: The thesis researched in the coal mining companies in Vinacomin.

b) *Time scope*: The thesis is researched in the period of 2015 - 2020. The innovative contents can be applied immediately in the current conditions of these companies.

c) *Content scope*: The thesis researched general planification but focuses on annual plan.

5. Research methodology (*Has presented in chapter 3*)

6. The scientific and practical significance

a) *The scientific significance*: The thesis synthesizes and develops theories about planification and innovation of the work; explore and test the factors that effect to planification; building the plan model, the planning information system model, etc of coal mining companies in Vinacomin that will supplement the theory of planification.

b) *The practical significance*: Proposing the contents to innovate planification for the coal mining companies in Vinacomin.

7. New contributions of the thesis, including: (1) Synthesize and develop theories about planification and innovation of the work; (2) Explore and determine the impact level of the factors on the planification of coal mining companies in Vinacomin; (3) Analyzing the current situation and proposing some innovative contents on the planification of coal mining companies in Vinacomin.

8. Structure of the thesis: The thesis includes 5 chapters.

CHAPTER 1

OVERVIEW OF THE RESEARCH ABOUT PLANIFICATION IN ENTERPRISES

1.1. Overview research

The researches that the thesis overview focuses on some issues:

1.1.1. Research the implications of planification: the concept, classification, roles, principles, methods and processes of planning in the market economy

The researches have shown concepts, classification, requirements, roles, principles and planning methods which create the theoretical basis for the next studies.

1.1.2. Research the relationship between strategy building and business plan building in the planification of enterprises

The researches have explained the relationship between the parts of the planning system which laying the foundation to continue research, further clarify the relationship, and also the functions of each part in planification of companies.

1.1.3. Research the relationship and impact of planification to business performance of enterprises

The researches have focused on finding the relationship between business planning and business performance. The researches focus on interviewing, observing to discover the laws. Some researches have done testing. The researches are mainly done in small and medium enterprises context.

1.1.4. Researche the effects of the factors to planification of enterprises

The researches have found some individual factors that influence planification. No research has found total factors that effect to planification of businesses. The researches are also only conducted in small and medium enterprises context.

1.1.5. Research the business planning model

The researches have shown some models directly related to the planification or some models that can be applied to buil some parts of planification. These are important bases for further development of planning models.

1.1.6. Research on securing information for planification of enterprises

The researches have mentioned information system model; the role of information system for planification. These will be important basis for further researches in building and developing planning information systems and ensuring information for the planification.

1.1.7. Research the need to innovate planification to suit for specific context

The researches are conducted with specific subjects such as industrial enterprises, state-owned trade; constructional enterprises; or State-owned enterprises in general, etc in the context of economic transition. The researches indicate the need to innovate management mechanisms and also planification in each context. There are many other subjects and contexts that need to be researched.

1.1.8. Research plannification in the context of Vietnam's coal mining industry

The researches on the planification of Vietnamese coal enterprises are still very limited and mainly research on strategy. The planification of these companies should be continued to research.

1.2. Conclusions after reviewing research

1.2.1. The research gaps

Some research gaps were found after reviewing research, including: (1) Research on the planification is not really interested in research; (2) There are no studies to mention the building of information systems that integrated with other business activities; (3) Some researches have found several individual factors that effect to planification but have not shown total factors; (4) The researches were mainly carried out in the state-owned enterprises or small and medium enterprises context, but lots of other specific contexts have not been researched; (5) Many researches are done that based mainly on the subjective opinion of the researchers; (6) There are no

researches to build indicators to evaluate the qualification of planification; (7) The researches on innovation of planification that often focus mainly on current issues in the research period; (8) The researches about planification in the context of coal mining enterprises are very limited.

1.2.2. The contents that the thesis focuses on research

1. Clarifying the need to innovate the planification of coal mining companies in Vinacomin in the current context.

2. Research the basis for innovating the planification of coal mining companies in Vinacomin: theoretical basis; reality; influence factor.

3. Proposing the contents of innovating the planification of coal mining companies in Vinacomin (focusing on short-term plans) in accordance with the current context, including: (1) Innovating models and implementation processes; (2) Innovating targets, bases and planning methods; (3) Innovate implementing, checking and adjusting plans; (4) Develop the planning information system and orient the application of information technology in planification; (5) Propose solutions to promote innovation.

CHAPTER 2

THEORETICAL AND PRACTICAL BASIS OF PLANIFICATION AND INNOVATION OF PLANIFICATION IN COAL MINING COMPANIES

2.1. Overview of planification in the business

2.1.1. Concept

The purpose of planification in the business is that to realize the planning objectives and also the solutions and action programs that set out in the plans. Contents of the planification include: (1) Planning; (2) Implementing; (3) Checking and adjusting the plans.

2.1.2. Business planning system

The business planning system is classified according to many different criteria. For example, according to the plans content, the planning system is divided into production and consumption plan; labor and salary plan; material supply plan; financial plan; etc.

2.1.3. Implementation process of planification

The implementation process of planification includes the following steps: (1) Determining the mission and goals; (2) Analysing business environment; (3) Balance goals; (4) Building strategic plans; (5) Implementing the business strategy into a strategy map; (6) Developing operational plans and budget; (7) Organize the implementing, checking and adjusting the plans; (8) Evaluating the implementation of planification.

2.1.4. Principles of planning in the market economy

Including: (1) The plans must be in accordance with the laws and the State's policies and orientations; (2) The plans must be built on the basis of analyzing and forecasting the change of business environment; (3) The plans must be based on the capacity of companies; (4) The plans must be flexible; (5) The plans must ensure their science, consistency and accuracy; (6) The plans must ensure balance; (7) The plans must ensure optimum; (8) The plans must ensure continuity and have the next plans; (10) Mobilizing all members of the companies to participate in the planification.

2.1.5. Bases and methods of planning

a) Bases of planning, including: (1) the State's orientation, policies and laws; (2) Results of analyzing and forecasting the business environment; (3) Results of analyzing business activities; (4) The economic - technical norms system; (5) The achievements of science, technology and management.

b) Planning methods, including some methods such as: (1) General balance method; (2) The adaptive method; (3) Forecast methods for planning; (4) Dynamic relation method; (5) Method of superior advantage; (6) Method of planning follow product life cycle; (7) Planning method from impact factors analysis; (8) The method of basing on the economic-technical norms system; (9) Economical maths methods, etc.

2.1.6. Organizing the implementation of planification mentions the subjects and contents of implementation.

2.1.7. Checking and adjusting plans mentions setting up control systems, evaluating and adjusting the plans.

2.1.8. Qualification of planification

a) Concept

The qualification of planification shown through the objectives, plans that be given which in accordance with the change of the business environment and the implementation of these goals, plans, programs and solutions that could help companies achieve their objectives.

b) The targets that evaluate the qualification of planification

Group 1. Evaluating the collection of basis to build the plans, including: (1) Identify all of opportunities/threats; (2) Correctly identify the strengths/weaknesses of the business; (3) Correctly identify resources, potentials and advantages.

Group 2. Evaluating the model and the implementation process of planification, including: (4) Convenience and suitability of the planification model; (5) Reasonableness of implementation process.

Group 3. Evaluating of building goals and plans, including: (6) The adaptability of the targets; (7) The completeness of the planning system; (8) The reasonableness and science of the basis and the

methods that used to build the plans; (9) The ability to stick to the goals of the planning system; (10) Giving solutions to cope with change; (11) The effectiveness of these solutions.

Group 4. Evaluating of implementing, checking and adjusting, including: (12) Efficiency of solutions to implement the plans; (13) Rationale for allocation of resources to implement the plans; (14) Timely checking to detect wrong; (15) Timely and effective adjustment activities.

Group 5. Evaluating the results of implementing the plans, including: (16) Rate of completion of the plan's targets; (17) Level of adjustment the plans.

Group 6. Evaluating of information provision; coordinate activities, including: (18) Storing planning information reasonably and completely; (19) Providing plan information timely; (20) The ability to coordinate activities of the planification.

2.2. Innovating planification of coal mining companies

2.2.1. Innovation concept

Innovation can be understood as changing the old and outdated one with a more progressive new one in order to create more value or to be more effective.

2.2.2. Concept and contents of innovation of planification

Innovate planification is the changing of planning targets, processes, bases and methods building plans; The methods for implementing, checking, and adjusting to suit the new management mechanism and/or context. Contents of innovating planification: (1) Innovating the model and implementation process; (2) Innovating of planning (bases, methods, etc.); (3) Innovating of implementing the plans; (4) Innovating of checking, adjusting the plans.

2.2.3. The factors effecting to innovation of planification of coal mining companies

a) The external factors: Including (1) Fluctuations of the natural environment; (2) Changes in the consumer market; (3) Changes in the coal supply market; (4) Changes in the management mechanism of the State.

b) The internal factors: Including: (1) The qualifications and opinions of the leadership team; (2) The qualifications of staffs; (3) Level of applying information technology; (4) Quality of support activities.

2.2.4. The necessary for innovating planification of coal mining companies in the current context

a) The planification of these companies still has many shortcomings

Coal mining companies are mainly state-owned enterprises, having operated exclusively for many years, so the management mechanism in general and the planification in particular has many shortcomings (will be analyzed in Chapter 4).

b) The current context has many changes

**) Current economic context* has several highlights: (1) Vietnam is still transing to the market economy and more and more integrating deeply into the world economy; (2) Nowadays Vietnam is influenced strongly by the 4th industrial revolution (technology revolution 4.0); (3) Climate change is more and more fierce; requirements on environmental protection are increasingly stricter; Energy security issues are being very concerned and have plans to respond.

**) Current context of Vietnam Coal Industry,* has several highlights: (1) The demand for coal in Vietnam is increasing; (2) The

coal supply market in Vietnam has many big changes; (3) The government has the plans to build Vietnam's coal market. Thus, in the current context, it is necessary to innovate the planification of coal mining companies in Vinacomin.

2.3. Experiences in implementing and innovating the planification of foreign coal mining companies and lessons learnt for coal mining companies in Vinacomin mentions the experiences in implementing and innovating the planification of coal mining companies in some countries such as Australia, China, South Africa and some lessons learnt for coal mining companies in Vinacomin.

CHAPTER 3

RESEARCH METHODOLOGY OF THE THESIS

3.1. The research process

The research process of the thesis includes the following steps: (1) Overview of researches about planification; (2) Develop theoretical basis for the planification and innovation of this work of coal mining companies; (3) Survey the reality of the planification of coal mining companies in Vinacomin; (4) Exploring and testing the impact level of the factors on the planification of coal mining companies in Vinacomin; (5) Proposing contents of innovating the planification of coal mining companies in Vinacomin.

3.2. Research methodology

3.2.1. Systemized method

a) Purposes and contents of the method: Synthesize researches to have the basis for research overview and also develop theories.

b) Data sources, Including (1) The researches in domestic and oversea that related with planification of companies; (2) Theoretical documents on planification and innovation; (3) State documents that be promulgated to manage the coal industry.

c) Implementation process, includes the steps: (1) Finding and classifying documents; (2) Reading and analyzing researches; (3) Synthesize analysis, overview into problems; (4) Finding research gaps, inherited knowledge and the content that the thesis focus on researching.

3.2.2. Practical survey method

a) Purposes and contents of the method: Surveying the reality of the planification of coal mining companies in Vinacomin.

b) Data sources, including (1) Results of interviewing the experts; (2) System of State's and Vinacomin's documents that relating to the planification; (3) Planning system of coal mining companies in Vinacomin.

c) Implementation process, These steps include: (1) Interviewing the experts; (2) Collecting documents; (3) Data processing; (4) Synthesizing the reality and evaluating the planification of coal mining companies in Vinacomin.

3.2.3. Combining qualitative and quantitative research

a) Purposes: Exploring and testing the impact level of the factors on the planification of coal mining companies in Vinacomin.

b) Implementation process, includes following steps: (1) Determining research gaps; (2) Building new theories with qualitative research; (3) Testing the theory that be built with quantitative research.

c) Qualitative research with in-depth interview method

**) People interviewed*: The experts who do planification at coal mining companies and lecturers at universities.

**) Implementation process*, includes following steps: (1) Establishing the guideline for the in-depth interview; (2) In-depth

interviewing experts; (3) Synthesizing and analyzing in-depth interview results.

*) *Building Research model*

The research model was built in Figure 3.4.

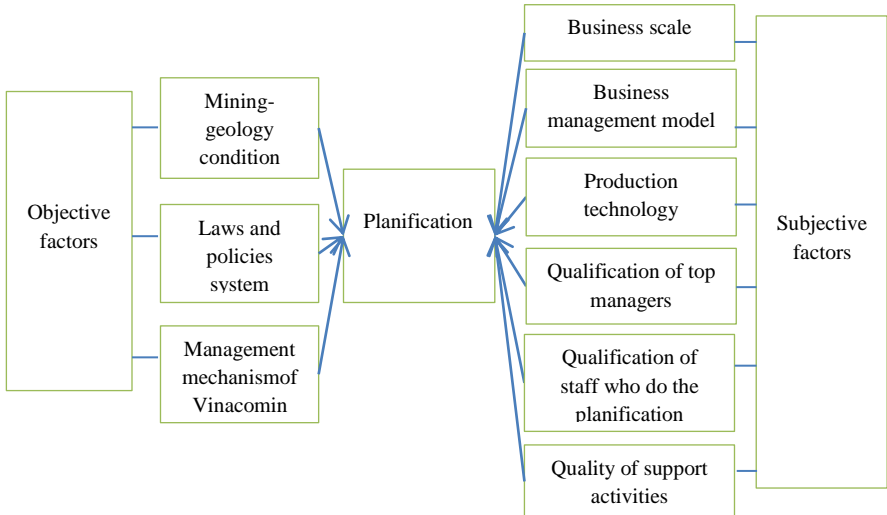


Fig 3.4. The research model of factors that affect to planification of coal mining companies in Vinacomin

d) *Quantitative research*

*) *Respondents*: Managers and staff who do planification at coal mining companies in Vinacomin.

*) *The way of surveying*: Combining both direct and online survey method.

*) *Sampling method*: Using both stratified sampling method and convenience sampling method.

c) *Process and method of analysing quantitative data*, follow the steps: (1) Developing scale and building survey questionnaire; (2) Pilot survey and complete questionnaire; (3) Mass survey; (4)

Processing survey data; (5) Testing the quality of the scale; (6) Calculating the mean.

The results: Collected total 355 votes and 286 votes qualified.

Results of the quality testing of the scale: Cronbach's Alpha of all Independent variables are more 0.6; Corrected Item-Total Correlation of all items are more 0.3. This shows that the scale are suitable for measuring independent variables.

CHAPTER 4

REALITY AND THE FACTORS EFFECTING THE PLANIFICATION OF COAL MINING COMPANIES IN VINACOMIN

4.1. Reality of the planification of coal mining companies in Vinacomin

4.1.1. Introduction about these companies

The companies perform two main functions coal mining and processing. In legal terms, coal mining companies in Vinacomin exist in two forms: (1) Joint stock companies; (2) Vinacomin's branch.

4.1.2. Organizational structure for doing planification

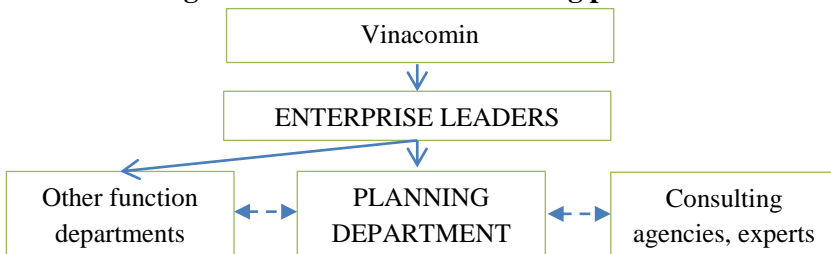


Fig 4.1. Organizational structure for implementing planification at coal mining companies in Vinacomin

4.1.3. Model and process for implementing planification

The planning model of these companies is shown in Fig 4.2.

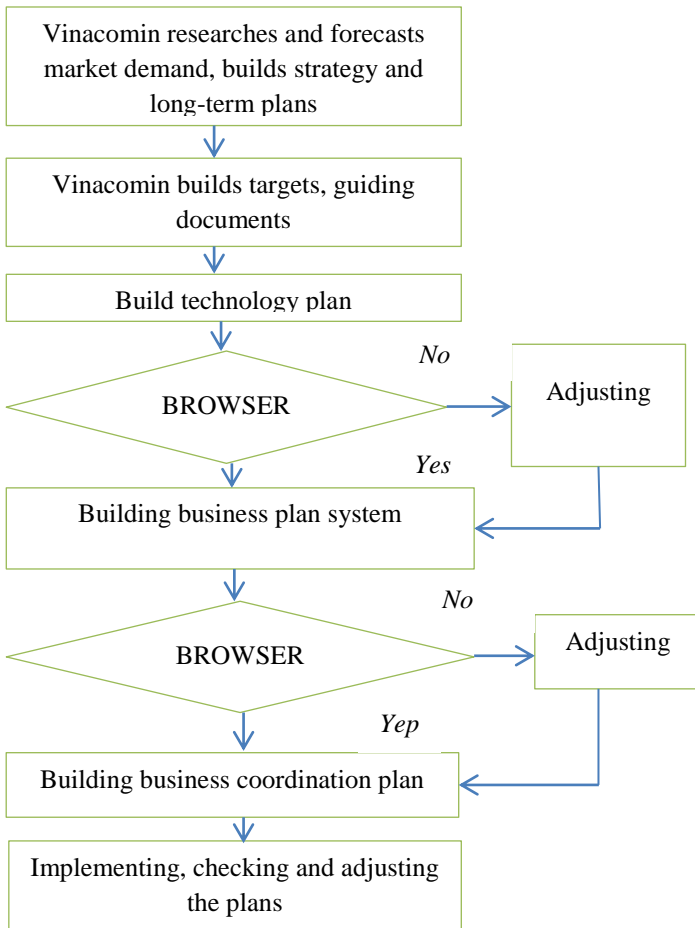


Fig 4.2. The planning model of coal mining companies in Vinacomin

4.1.4. The parts and targets of plan system

According to time of implementation, the companies build the plan system consisting of two parts: (1) long-term plan (in 5-year periods); (2) Short term plan (annual plan). The annual plan includes the following groups: (1) Technical - technology plans; (2) Economic plans; (3) Social plans; (4) Assemble plan (cost plan).

4.1.5. Planning methods

*) *Technical and technological plans*: (1) Experience method; (2) Resource-based method.

*) *Socio-economic plans*: (1) Method of planning that base on norms; (2) Experience method.

In addition, the companies also use other methods.

4.1.6. Implementing the plans

The implementation process includes the following steps: (1) The companies build the draft plan to distribute products; (2) The factories protect this plan; (3) Decising plan; (4) Make the necessary adjustments.

4.1.7. Checking and adjusting the plans

a) *Checking*: Periodically (monthly, quarterly) checks the implementation of the plans with settlement (products and costs)...

b) *Adjusting*: During checking, if any errors are found, the companies will make adjustments. Since 2016, in October (every year), Vinacomin will adjust the plans of these companies.

4.3.8. Synthesizing of evaluating planification of coal mining companies in Vinacomin

a) *Advantages*, including: (1) The companies received the orientation and also particular guides of Vinacomin; (2) There is coordination between Vinacomin's functional departments and the Companies' functional departments; (3) This work received the attention of leaders of companies; (4) The functions and duties of departments in the companies are defined clearly; (5) Mobilizing most of labour (include managers and staffs) to participate in planification; (6) The process of implementing the planification is very closely, balanced in many steps; can coordinate plans of coal mining companies with other companies in Vinacomin; (7) The

planning system of the companies is very detailed and complete; (8) The forms system of plans is relatively complete and detailed; (9) Implementing the plans is relatively reasonable; checking and adjusting plans regularly and promptly.

b) Some limitations, including:

**) About the model and process for implementing the planification:* (1) The "three down - two up" model is already outdated; (2) The process of implementing planification is relatively complicated.

**) About the bases, targets and planning methods:* (3) The companies are not interested in analyzing the business environment; (4) The planning is mainly based on internal fluctuations, so there is no basis for evaluating the objectives and targets, and also implementing the plans; (5) The companies have not paid attention to build long-term plans.

**) About implementing, checking and adjusting the plans:* (6) The assignment of plans to the factories has not full meaning; (7) The annual adjustment of the plans in October shows that the quality of the planification is not high.

**) About providing information and coordinating with other works:* (8) Storing information systematically and linking information between departments is still limited; (9) Applying information technology to planification is limited; (10) Planification of these companies is more formalistic; little integration with other activities.

4.2. The factors effecting the planification of coal mining companies in Vinacomin

Basing on the results of calculating the mean of the independent variables, the impact level of the factors to planification of coal mining companies is determined in the order of: (1) Qualification of

top managers; (2) Production technology; (3) Quality of support activities; (4) Qualification of staff who do the planification; (5) Mining-geology condition; (6) Business scale; (7) Management mechanism of Vinacomin; (8) Laws and policies system; (9) Business management model.

CHAPTER 5

INNOVATION OF PLANIFICATION OF COAL MINING COMPANIES IN VINACOMIN IN ACCORDANCE WITH THE CURRENT CONTEXT

5.1. Perspective and direction of innovation

5.1.1. Perspective of innovation

(1) Innovation of planification is an urgent requirement and an initial step to innovate the management activities of these companies; (2) Innovation of planification is a measure to help companies adapt to objective requirements of new context; (3) The planification of coal mining companies should be based on the rules of the market economy, and also comply with the State's policies and orientation; (4) Innovation of planification of these companies to enhance the position and role of this work and integrating this work with other governance activities, meet the requirements of modern governance.

5.1.2. Direction of innovation

(1) Innovating the model and the process of planification; (2) Innovating targets, bases and planning methods; (3) Innovating the implementing the plans; (4) Innovating the checking and adjusting the plans (5) Building the information system for the planification and propose applying IT in planification.

5.2. Contents of innovating

5.2.1. Innovating the model and the process of planification

New planification model is shown in fig 5.1.

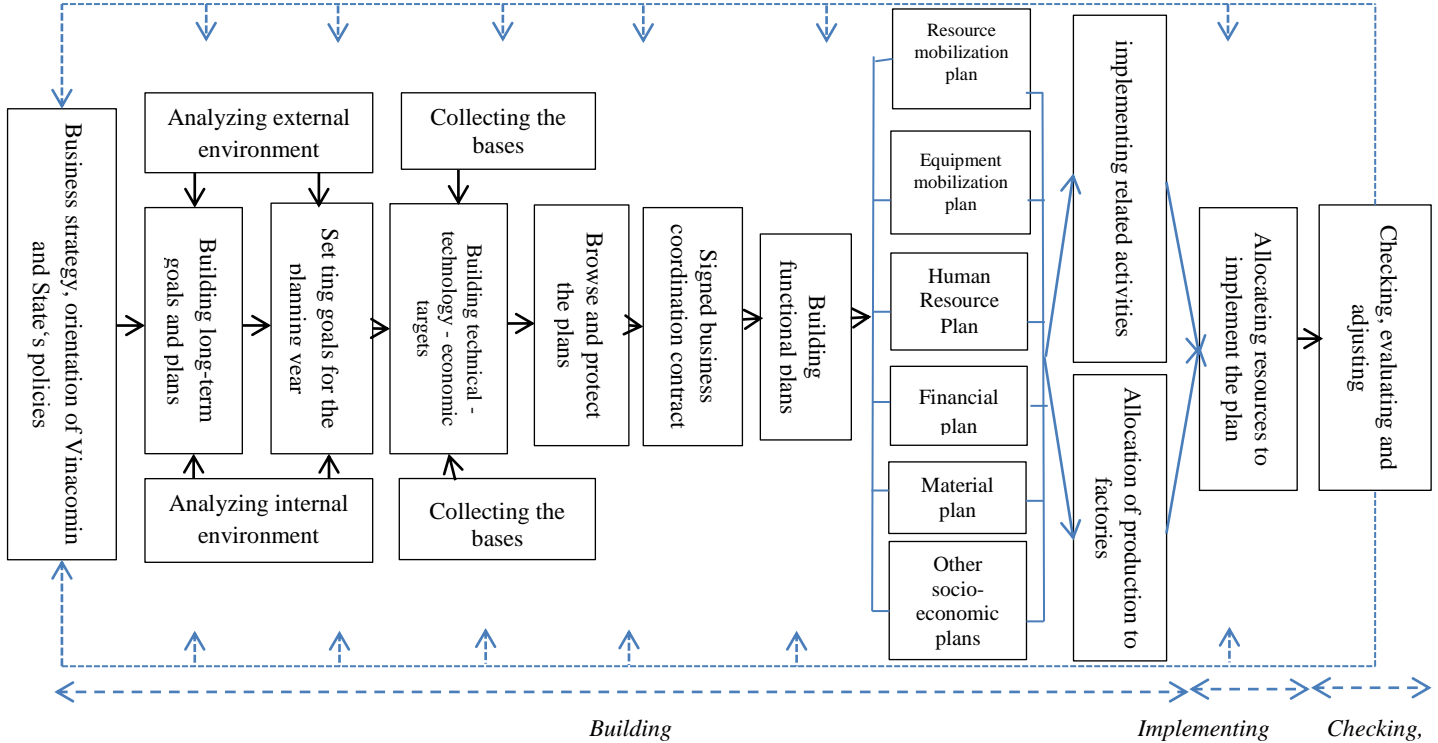


Fig 5.1. Planification model in accordance with coal mining companies in Vinacomin

5.2.2. Innovating targets, bases and planning methods

a) Innovating targets:

- Only browser Vinacomin some major targets, including: (1) The output and technique - technology indicators; (2) Some basic economic indicators: Revenue, profit ... (3) Cost plan.

- The companies build functional plans actively without having to browser Vinacomin.

b) Innovating bases and planning methods

Using the results of analysing and forecasting changes of the business environment as the basis for planning.

5.2.3. Innovating of implementing, checking and adjusting the plans

a) Innovating of implementing the plans

The thesis offer innovating the method of determining contracted products for factories and using contracted products to contract the non-consumable cost factors.

b) Innovating checking the plans

Companies need: (1) Compare the results of the implementing the plans to the potential and exploitable resources of the companies; (2) Evaluating of identifying opportunities completely and exactly; the level of using these opportunities; (3) Evaluating of identifying threats and avoiding these threats of the companies.

c) Innovating adjusting the plans

The thesis proposes to remove the annual adjustment of the plans. During the implementation process, if there is any objective fluctuation, the companies will analyze and adjust accordingly.

5.2.4. Building the information system for the planification and propose applying information technology in planification

a) Building the planning information system

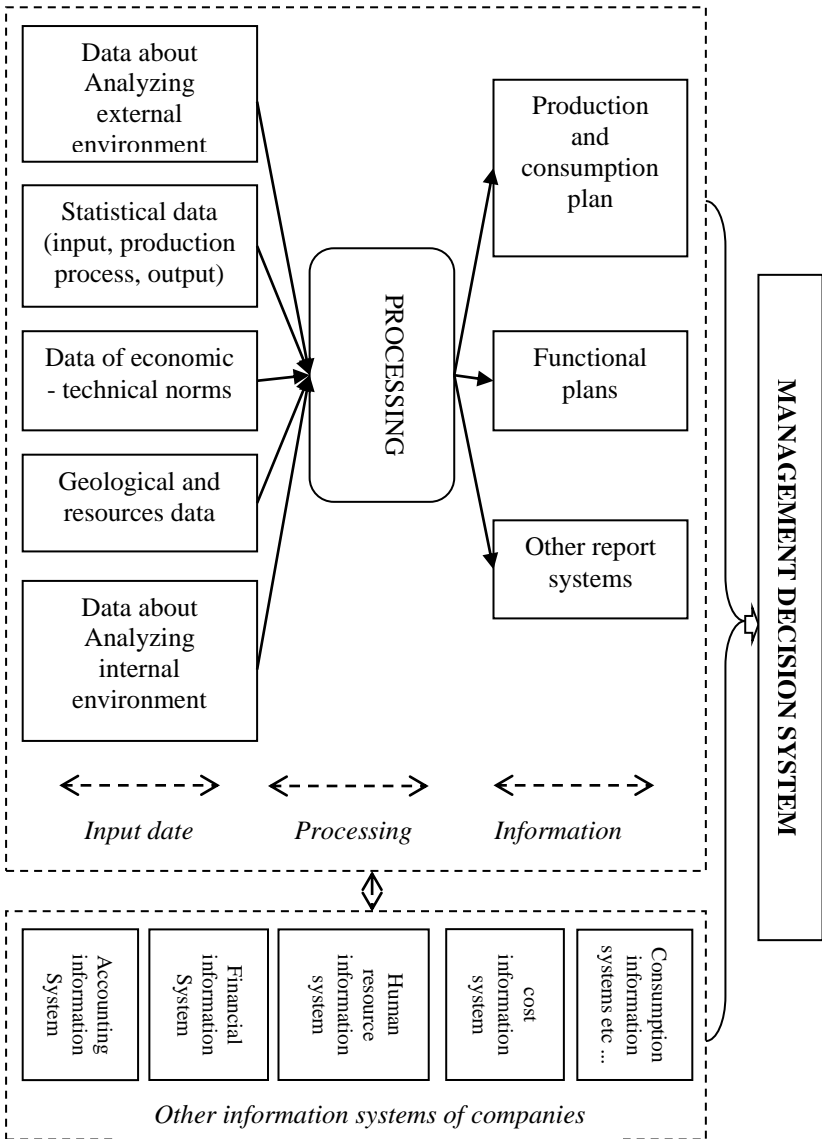


Fig 5.3. The planning information system of coal mining companies in Vinacomin

b) Propose applying information technology in planification

*) *Process to build the software*, includes the steps: (1) Define the objectives and requirements of building software and identify the parts, targets that make up the planning system; (2) Building output models; (3) Building of input database; (4) Develop software programs; (5) Testing the software; (6) Making necessary adjustments to complete the software and applying into the companies.

*) *Software structure*

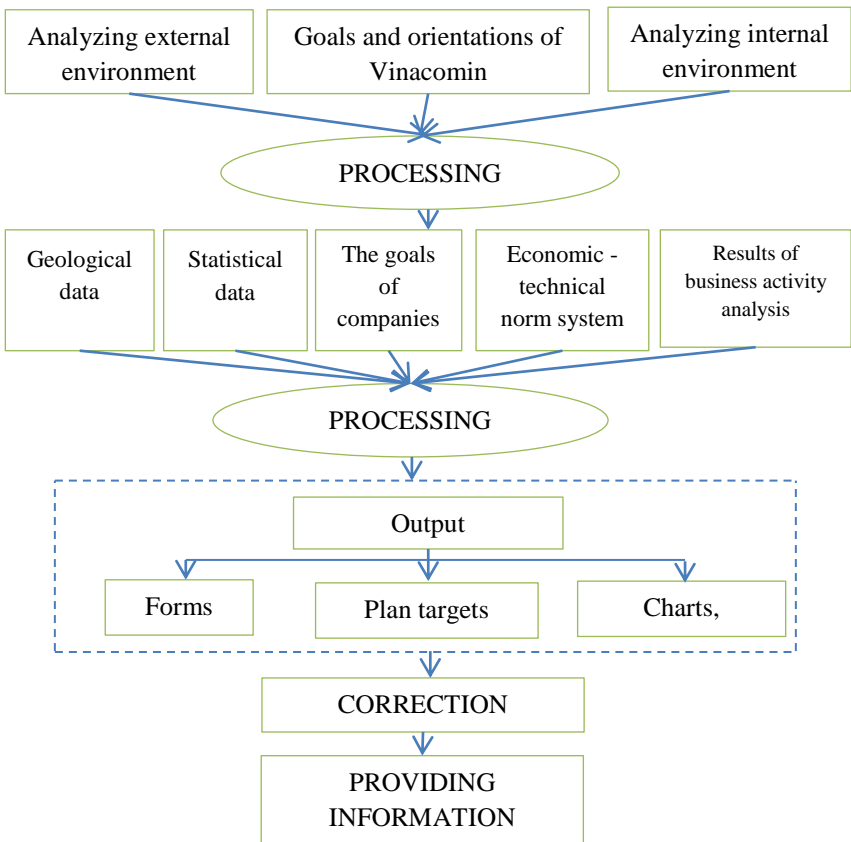


Fig 5.5. Planning software structure diagram

5.3. Some solutions to promote innovating

(1) Innovating planning thinking; (2) Increasing awareness about the role of planification and innovating the planification in the companies; (3) Focusing on training to improve the skills of staffs who working on planning; (4) Improve the effectiveness of support activities; (5) Improving production technology, mobilizing resources.

CONCLUSION

The thesis has implemented the following contents:

- Research overviewing, finding research gaps, inherited knowledge and identifying contents that will be done in the thesis.

- Building the theoretical basis about planification and innovation of planification of coal mining companies.

- Selecting and applying suitable research methods to perform the thesis.

- Analyzing the reality of the planification of coal mining companies in Vinacomin; exploring and testing the impact level of the factors on the planification of coal mining companies in Vinacomin.

- Proposing some contents to innovating the planification of coal mining companies in Vinacomin and also some solutions to promote implementing these innovative contents.

Through doing these contents, the PhD student has answered all three research questions and completed the research objective.

In addition, the thesis still has some limitations:

- In the thesis, there are some subjective statements so the research results may have limitations.

- The thesis has not found many factors effecting the planification of coal mining companies in Vinacomin; Quantitative analysis also just stops at calculating the mean, but has not done correlation analysis, regression analysis and other testing.

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