



CREATION OF THE ORGANIZATIONAL AND ECONOMIC MECHANISM OF FORMATION OF THE CHEMICAL AND PETROCHEMICAL INDUSTRY OF THE REPUBLIC OF KAZAKHSTAN

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ABSTRACT

Purpose of the paper examines creation of the organizational and economic mechanism of formation of the chemical and petrochemical industry of RK. In particular problems which are inherent for branch now are described in the article: a lack of the petrochemical enterprises, a lack of qualified personnel of branch, insufficient modernization of the existing petrochemical enterprises, the environmental problems, problems connected with labor protection of employees of the chemical and petrochemical companies. The directions of the solution of these problems in particular - creation of a rent as one of effective tax regulation of the petrochemical industry, both for investors and for the country in the article is proposed. Customs regulation will help with export growth of the chemical and petrochemical industry of RK. Improvement of the ecological legislation in improvement of nature protection actions of the petrochemical enterprises, creation of safety arrangements of workers of the chemical and petrochemical industry will also help in reduction of number of accidents at the petrochemical enterprises. Regulation of transfer of technologies on a commercial basis will help to diversify and to technologically improve petrochemical production. Also creation of a chain: the higher education institutions such as university - science and Technology Park - the petrochemical enterprise will help with the balanced forecasting of qualified personnel in the country.

KEY WORDS: chemical and petrochemical industry RK, rent, ecological legislation, labor protection, transfer of technologies, qualified personnel.

Research type –point of view

Introduction

There is strong evidence that unsuccessful technology investment can be caused by the decision-making process method, as well as the top management's or decision makers' roles and responsibilities in making the investment decisions (Anderson et al., 2001; Juliusson et al., 2005; McGaughey and Roach, 1997). As illustrated by Al-Sharrah et al. (2001), the highly universal quest and pressurized demand for pollution prevention and accounting for environmental considerations makes sustainability an important objective function. Feibel (2003) defines investment as "an initial forfeit of something we value in exchange for the anticipated benefit of getting back more than we put in". Butler (1993) defines investment decisions as "the decision to commit a firm's resources (capital, people, know-how, and so on) to particular projects with the intention of achieving greater and other benefits in future years". Companies and organizations invest in or develop new technologies to support their operations and processes in order to gain better organizational performance and to meet their business objectives. However, making strategic decisions to invest in new advanced manufacturing technology is difficult and complex (Sambasivarao and Deshmukh, 1997; Tan et al., 2006a, 2006b).



A study on improvement in organizational performance and self assessment by Van Der Wiele et al (2000) suggest that many of the companies showing improvement in quality of product, process and service had ISO 9000 series quality system in place. Prominent trends in the management systems are evident everywhere, but study of these management systems has not yet taken place from an occupational safety perspective. Implementing a quality system is a long term exercise. Tsekouras et al (2002) suggest that being a continuous process improvement, adoption of an ISO 9000 quality assurance scheme is beneficial in the long term and does not necessarily improve financial ratios in the short term. The tangible benefits are always noticed and reported but the intangible benefits need detailed analysis. Perceived benefits of ISO certification varies with the nature of business, in the petrochemical industry it is safety performance and risk mitigation that are of prime importance.

According to Boyle (2002), management systems can be divided in to four groups namely, Health, Safety and Environment (HSE) Management Systems, Quality Management Systems, Total Quality Management Systems and Integrated Management Systems. There exists a high degree of overlap between all these management systems. Management systems are devised and promulgated by national /international standard setting bodies like ISO and BSI, authoritative agencies such as Health and Safety Executive, UK and commercial and academic organizations (Boyle, 2002). Certifiable management systems like ISO 9001, ISO 14001 and OHSAS 18001 are practiced in order to ensure that a management system is adequate and effective.

According to the statistical review of world power prepared by the British company BP (British Petroleum) for the end of 2013 Kazakhstan on reserves of oil has taken the 12th place. Oil reserves in Kazakhstan are estimated at the level of 30 billion barrels, or 3,9 billion t., what makes 1,8% of world reserves. Leaders in oil reserves in the world became Venezuela (46,5 billion t., 17,7%), Saudi Arabia (36,5 billion t, 15,8%) and Canada (28 billion t., 10,3%). Universal reserves of oil for the end of 2012 were equal to 268,2 billion t.

But, nevertheless, in branch there are problems connected with deep oil refining and in particular with creation of complexes of the enterprises for petrochemical production. In particular absence of the petrochemical enterprises which would carry out deep oil refining, the environmental problems connected with regulation of a harmful garbage from the petrochemical enterprises, lack of effective system of labor protection of employees of the petrochemical enterprises, lack of modernization of the existing petrochemical enterprises, lack of flexible system of forecasting of workers for the chemical and petrochemical companies of the country.

Creation of the organizational and economic mechanism of formation of the chemical and petrochemical industry would help with the solution of the problems existing at the moment in the branch.

In particular improvement of investment attractiveness of regions would become one of the main blocks of formation of the petrochemical industry in Kazakhstan.

Therefore, foreign investment acts as objectively necessary process for Kazakhstan as it promotes restraint of crisis and at the same time financial stabilization of the oil and gas sector, solves strategic and tactical problems of macroeconomic character.

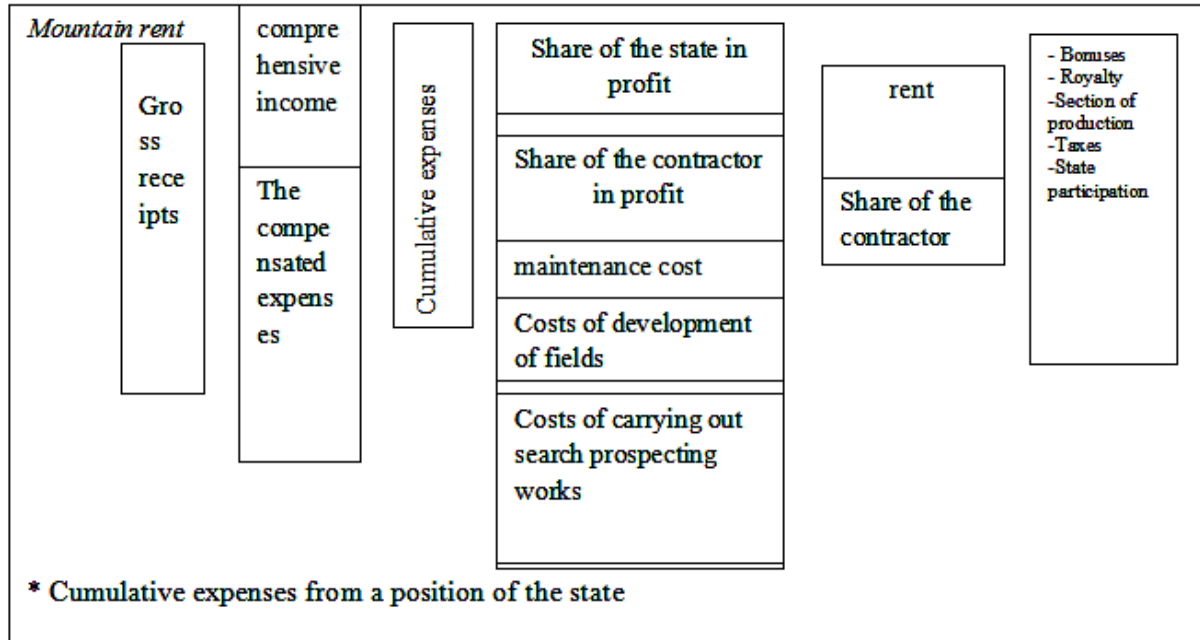
At the heart of any taxes is the theory of a rent. The economic theory considers the earth productivity created with use of work and the capital.

The theory of a rent considers how oil production is distributed between workers, owners of the capital and land owners in the form of the salary, profit and a rent.

In the oil-extracting industry the economic rent represents a difference between the cost of production and expenses on its production. Costs for oil production, for geological exploration and development of fields and also branch rate of return are a part of expenses. All other is a rent. Economic rent synonym of excess profit. The governments try to appropriate as it is possible the most part of excess profit for what use any taxes, duties, a royalty and bonuses.

In the drawing 1 distribution of receipts from oil and gas production between different types of expenses and profit in the USA is shown. Revenues of the U.S. Government are equal to a difference between gross revenue and cumulative expenses. This scheme shows that for the government the profit taken by the contractor is a part of costs for production. In the same way costs for investigation,

development and operation of fields as the contractor compensates the corresponding expenses from gross receipts are considered. If the government manages to organize effectively business, it receives all the rest, i.e. an economic rent.



*Figure 1 - Scheme of rent in the USA
 According to the source 3*

The following major block of the organizational and economic mechanism of formation of the petrochemical and petrochemical industry of Kazakhstan is improvement of the customs legislation.

Customs legislation

The new customs policy is pursued according to the draft of the Customs code, accepted in connection with formation of the Customs union the Decision of Interstate Council of the Eurasian Economic Community at the level of heads of states on November 27, 2009.

The following measures will be applied to creation of effective system of protection and advance of economic interests of Kazakhstan:

- development of offers on rates of the customs duties of the Common customs tariffs of the Customs Union stimulating activity of the Kazakhstan enterprises;
- development of the negotiation position providing protection of economic interests of RK on accession to WTO within negotiations on the system questions which are within the competence of the Customs Union: import and export regulation, commercial laws.
- development of the negotiation position providing protection of economic interests of RK on accession to WTO within negotiations on access to commodity market and services in protection of compliance to the economic interests of the republic and also assessment of its influence on national economy.
- elaboration of suggestions for improvement of system of non-tariff regulation of member countries of the Customs Union, within simplification of administrative procedures and creation of the favorable mode for business;
- improvement of system of preferences for the purpose of development of trade relations with developing and the least developed countries, taking into account the economic interests of the Kazakhstan producers;

- the quarterly analysis and development of common positions with member states of the Customs Union on signing of the contracts on creation of a free trade regime, for the purpose of advance of goods on foreign markets;
- development of offers on application of measures for protection of domestic market when importing goods (anti-dumping, protective, countervailing measures) and also the analysis of offers on application of similar measures from member countries of the Customs union concerning the third countries.

In general, the following principles of customs regulation concerning chemical industry of RK and other members of Eurasian Economic Community are offered (the Russian Federation and Belarus Republic):

- The types of production which are made in the territory of the countries of the Customs union will be assessed with the protective import duties (from 5 to 15%, and they practically by all Foreign Economic Activity Commodity Classification codes correspond to earlier operating import duties of RK or even exceed).
- The types of production which aren't made in the territory of the countries of the Customs union won't be imposed the protective import duties.
- Types of production which can potentially be made in the territory of the countries of the Customs union at first after accession won't be imposed taxes, however, gradually will raise within 2-3 years.
- The equipment and other investment goods will be imported without payment of the import customs duties.
- Raw materials and materials which aren't produced in the territory of RK, the Russian Federation and Belarus, won't be assessed too, the discrepancy raw materials will be considered at the same time that is even if raw materials are available it (is made) in the territory of the Union countries, but doesn't suit requirements, including industrial consumers), it will also not be imposed taxes.

The operating customs tariffs for Kazakhstan, Belarus Republic and the Russian Federation and also a new customs tariff are shown further in the table of change of customs tariffs for the Union:

In general, this policy will well affect the Kazakhstan chemical industry with providing the bigger level of customs protection against producers out of member countries of the Customs Union.

So, excess of the import duties over earlier operating, will happen for the following positions:

The table - 1 Change of customs tariffs for member countries of the Customs Union

Commodity Nomenclature of Foreign Economic Activity code	Name of a position	common customs tariff	Rate of the operating import customs duty		
			Russian Federation	Republic of Belarus	Republic of Kazakhstan
2905 31 000 0	- ethylene glycol (ethandiol)	10	10	10	0
3901 20 100 0	- polyethylene in one of forms	10	10	10	0
3901 30 000 0	- ethylene copolymers with vinyl-acetic ester	10	10	10	0
3902 10 000 0	- polypropylene	10	10	10	0
3902 20 000 0	- polyisobutylene	10	10	10	0
3902 30 000 0	- propylene copolymers	10	10	10	0
3903 90 200 0	polystyrene	10	10	10	0
3907 20 110 0	- polyethyleneglycols	10	10	10	0
3909 50 100 0	polyurethane	10	10	10	0
2707 99 800 0	- phenols	5	5	5	5
2917 36 000 0	- p-phthalic acid and its salts	5	0	0	5
3907 60	- polyethyleneterephthalate:	5	5	5	0
5402 11 000 0	threads from aramids	20	20	20	5

Note-source-4

Thus, on separate positions the level of customs protection will increase – meta-aramids, polyethyleneterephthalate, on others will remain at the same level.

The general institutional bases of regulation of the ecological relations will be the following block of formation of the organizational and economic mechanism of the petrochemical industry.

The surrounding environment serves as a condition and means of human life, the territory in which people live and also the place for placement of the production objects providing their useful activity. Somehow to order influence of the person on the environment, in each country there are legal, economic, political, technical, social mechanisms of regulation of the ecological relations.

The Republic of Kazakhstan rich with natural resources, having modern production, including in the sphere of subsurface use, forms the economic policy so that somehow to lower load of the surrounding environment. For this purpose institutional bases of regulation of the ecological relations are enshrined in the current legislation, of which the following is important:

- Legal institute of the property right of the state to the earth, subsoil, waters, plant and animal life, other natural resources.
- Legal institute of ensuring "sustainable development" of the Republic of Kazakhstan.
- Legal institute of ensuring ecological safety.
- Legal institute of ensuring availability at a price of environmental management and an allowing order of impact on the environment.
- Legal institute of ensuring inevitability of responsibility for violation of the ecological legislation.
- Legal institute of ensuring availability of ecological information to society.

These are only the most significant institutional bases of regulation of the ecological relations in Kazakhstan. However in the sphere of realization of these legal institutes there are many problems which prevent to provide necessary balance between environmental management and environmental protection.

Questions of improvement of the ecological legislation:

Existence of clear, fair and rational system of the ecological legislation - an important step on the way of realization of the state environmental policy which is based on the Constitution. State regulation has to provide the direction of money on actions for restoration and improvement of an ecological situation in the country.

In this regard on the basis of the analysis of the current legislation and law-enforcement practice and also studying of ecological regulation the following measures are proposed:

- it is offered to enter a direct duty to restore the done harm (damage) to the environment in nature for restoring such harm.
- it is offered to raise a tax payment for issues at the single rate for the actual volume of issues irrespective of legitimacy or illegality of issues that answers the real nature of tax payments.
- the administrative penalty for subjects of large business is offered to be established uniformly with other subjects in a size, multiple to a monthly settlement indicator.

It is offered to limit the right of local authorities to raise rates of a payment for issues as the existing system leads to the fact that the same offense can be treated in one administrative and territorial unit as administrative offense, and in another - already in criminal offense, than the principle of unitarily of the state and the legislation is violated.

It is offered to direct ecological contributions and administrative penalties for ecological offenses to National Ecological Fund which needs to be created. At the same time a fund will be used only on nature-restoring and nature protection actions.

Bases of ecological safety on petrochemical and oil processing productions

Safety at the workplace is a collective responsibility of an organization and its employees. Safety is based on the fundamental premise that accidents are preventable by eliminating unsafe acts or conditions in a systematic manner. At the same time, it may be noted that organizations are facing varied amount of safety risk due to lack of adequate Safety, Health and Environment measures taken by it.

In the conditions of the increasing toughening of the legislation, development of economic policy and other measures directed to environmental protection and also in the conditions of growth of concern of society in environmental issues more and more efforts direct the management of the petrochemical plants to achieving sufficient environmental efficiency and to completely control impact of activity of the enterprises on the environment. For achievement of high environmental efficiency has assumed liabilities to apply systematic approach and to constantly improve a control system of the environment.

The Control System of the Environment (CSE) - a part of the general system of administrative management which includes the organizational structure, planning, responsibility, methods, procedures, processes and resources necessary for development, introductions, realization, the analysis and maintenance of environmental policy. ISO9000, ISO 14000 demands definition of the purposes and tasks (level of ecological indicators) which have to be reached, and operational management on each kind of activity affecting the most important ecological aspects. It is developed by the International Organization for Standardization of ISO according to requirements of the UN for the purpose of reduction of negative impact on the environment.

The systems of ecological management on the basis of the GOST RISO standards the 14000-effective tool by means of which the organization operates all set of the impacts on the environment and brings activity into accord with various standards and the international requirements. An ISO certified company automatically gets many layers of protection for accidents and failures as indicated in Figure 2.

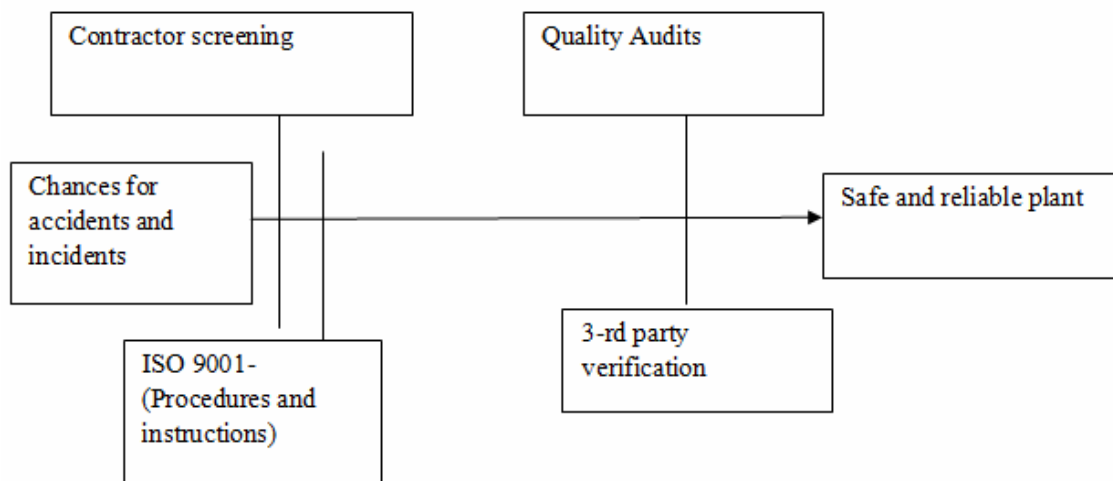


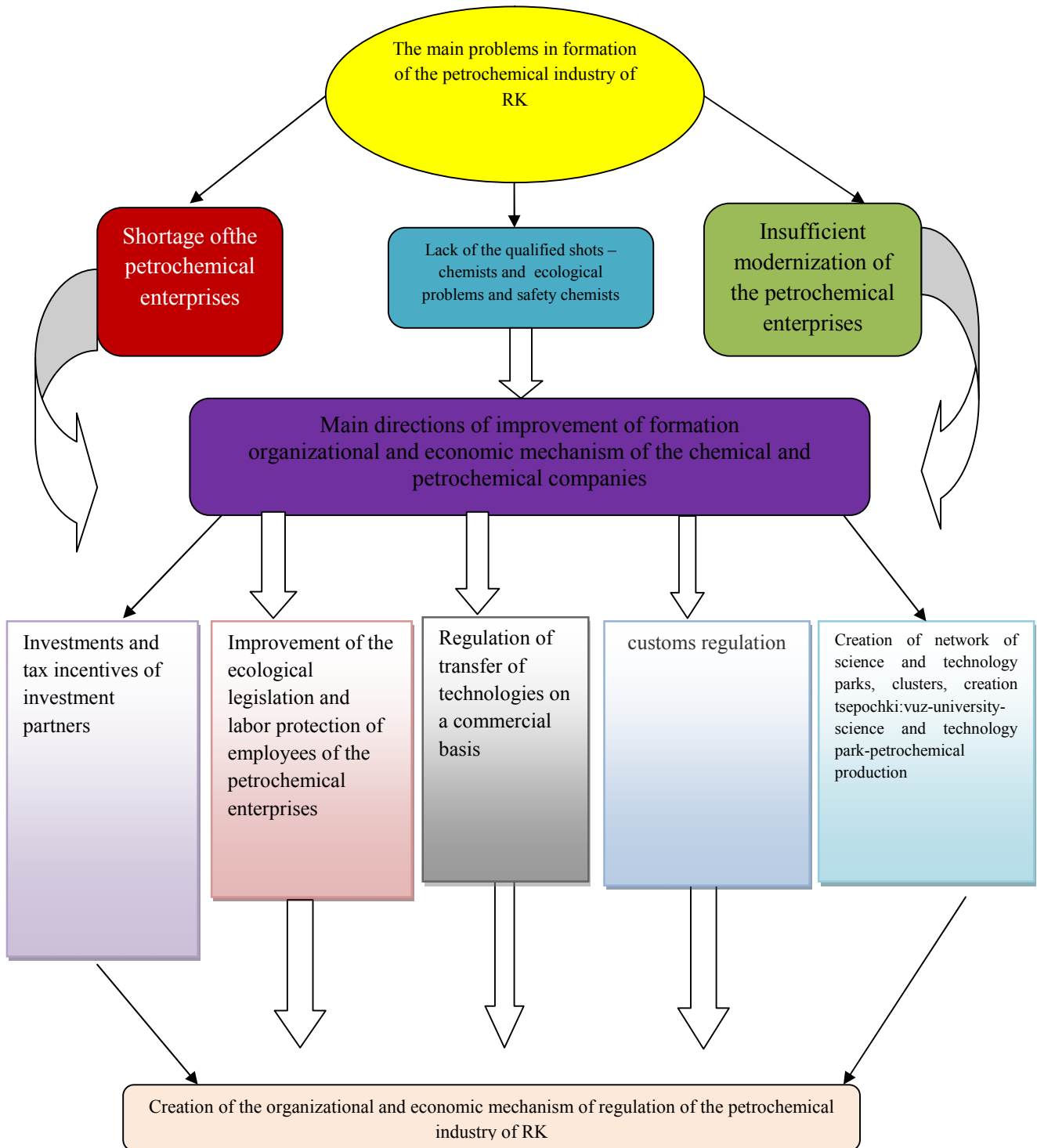
Figure 2- Levels of protection Barrier Diagramm (Purdy, 1997)
 Note-According to the source 5

The following important block of improvement of formation of the chemical and petrochemical industry of RK regulation of transfer of technologies on a commercial basis:

Transfer of technologies on a commercial basis carried out the by next ways:

- «license agreements» – a commercial transaction at which the owner of intangible assets provides to other party permission to use of the rights for intellectual property in certain limits;
- «patent agreements» – a commercial transaction at which the owner of the patent concedes the rights to use an invention to the buyer of the patent;
- a know-how – providing technical experience and

know-how including data of technological, economic, administrative, financial character which use provides certain advantages. A subject of purchase and sale are not patented inventions having commercial value;



*Figure 3- Scheme for organizational-economic mechanism in the chemical and petrochemical industry Republic of Kazakhstan
 Note –created by author*

- «*engineering*» – providing the technological knowledge necessary for acquisition, installation and use of the bought or rented cars and the equipment. Here the wide complex of actions for preparation of the feasibility study on projects, to implementation of consultations, supervision, design, tests, guarantee and post warranty maintenance" enters [56].

It is also necessary to create communication of production and the universities. Creation of communication between petrochemical science and technology parks, the universities and petrochemical productions would be also possible.

Creation of *petrochemical clusters* is also necessary. Within a petrochemical cluster perhaps chains: higher education institution-science and technology park-petrochemical enterprises.

The flowchart of creation of the organizational and economic mechanism of formation of the chemical and petrochemical companies is given below.

Conclusion

Thus, in article the problems existing in branch have been considered and the directions of the solution of these problems in the form of creation of the flowchart of formation of the petrochemical industry of RK are proposed.

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