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**ROLE OF SOCIAL ENGINEERING IN DEVELOPMENT OF
INDUSTRIAL ENTERPRISES OF TYUMEN REGION (1964 - 1985)**

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Abstract

The article analyzes the mechanisms of social engineering human resources in the region. Attracting qualified specialists was constrained by inertia of the regional party and government organs. Another cause of the problem was the absence of long-term planning of the human resources aspect in the region. There was a program created to consider the pace of the economic development in the region. For the first time, this issue was widely discussed at the meeting of Tyumen Regional Party Committee in 1967. Young professionals left northern areas as there was an unsatisfied level of cultural and consumer services, especially medical and educational institutions. Later the lack of professional staff led to serious mistakes in the work of enterprises in the region.

The authors of the paper believe that the lack of a systematic approach in addressing the staffing issue caused a number of pathological phenomena in the organization of production and social processes, management system.

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Keywords: Social engineering; engineering and technical intelligentsia; staffing requirements; long-term planning; state and party politics; shapes of attraction frames.

1. Introduction

Attention to the problems of providing the industrial enterprises of Tyumen region with engineering staff was attracted by the government's intention to develop the raw material sector in the region. Export of raw materials was an important source of earnings. The earnings allowed solving a number of strategic objectives: for example, borrowing the missing cutting-edge technology from abroad or saving internal resources and using them to eliminate disparities of the economy and to reach an acceptable level of production efficiency.

The discovery and development of oil and gas fields in Western Siberia in the early 1960s and the rapid growth of fuel and energy industries required additional manpower. Understanding the urgency of the solution of the primary state problems, the Party and state agencies focused on hiring professionals, and eventually on the formation of their own human resource capacity in the region. In 1963, the USSR Council of Ministers decided to incite professionals willing to move to a permanent job in organizations and at enterprises of oil and gas industry, as well as geological and construction organizations located in Tyumen region.

2. Methods

2.1. Social engineering industry in Tyumen region

Since the mid-1960s, the issues of the industrial enterprises of engineering and technical specialists of the Tyumen region were regularly raised at conferences and plenary sessions, meetings of the Bureau and the Secretariat of Tyumen Regional Committee of the CPSU. The problems were also discussed by the district party committees and the executive bodies. Thus, in 1965-1971, the regional party committee held more than 20 Bureau meetings dedicated to problems of the formation of the engineering staff. In addition, the problems were discussed at the XX and XXI Khanty-Mansiysk district party conference (1964 and 1966), the XIV Tyumen Regional Party Conference (1971), the II Plenum of Tyumen Regional Committee of the CPSU (1971), etc.

However, the discussions held in 1964-1965 did not lead to any significant result: the only result was the statement of the presence of personnel problems in the region. Mechanisms of regulation of the personnel problems were not found. The Regional Party and government bodies did not have correct data on the needs of the national economy in the field of engineering and technical personnel. There was no deep analysis of HR issues. There was no research and no data on the dynamics of population, the causes of the turnover of engineering and technical personnel. Possible solutions were limited to general statements: "Always take care of strengthening the managerial personnel of enterprises; hire qualified, enthusiastic professionals, good managers; make sure that every agronomist, livestock specialist, mechanical engineer, economist are real professionals, active fighters for the further development of the agricultural industry".

Inertia in the activities of Tyumen Regional Committee of the Communist Party was caused by the lack of a long-term program regulating the problems of staffing needs of the region. The pace of the region's economic development showed that the region needed such program. As a result, the enterprises of Tyumen region hired the engineering personnel on the basis of their own applications. The process usually did not take into account future, prospective needs. In 1964, such factories as Stroy Mashina, Mechanic, ATE were taking into account only the annual data. Agriculture Management Executive Committee experts only considered the current indicators (Financial plan, 1964).

The issue of the need of long-term planning for training and hiring engineering and technical intelligentsia at the oil industry enterprises was widely discussed at the meeting of Tyumen Regional Party Committee in 1967. Head of "Glavyumenneftegaz" Muravlenko identified a number of problems connected with the engineering and technical personnel. It was noted in particular that more than 800

workers did not have a special higher education. Many of them did not meet the requirements for their positions. At the same time, only 10% of the workers studied at universities and colleges.

This was one of the reasons for underperformance during the construction of Ust-Balyk and Shaim oil fields. A similar state of affairs could be observed in engineering, fishing industry, wood processing, where more than half of enterprises were unprofitable and received approximately 14 mln. rub. of subsidies from the government. According to the first secretary of the Tyumen Regional Party Committee's report, lack of professional staff led to serious mistakes in the work of enterprises in the region.

During 1967, Tyumen Regional Party Committee discussed the staffing issue in January, June and December. The consequence of these discussions was a series of decisions. Heads of the enterprises were now supposed to develop long-term plans of training engineering and technical personnel and to make sure that the plans were implemented (Report №13, 1967). As a result, the long-term planning of engineering training was implemented.

In 1967, the government in association with "Glavyumenneftegaz" took into account data on long-term development of the oil industry and estimated the need for young specialists with higher education for the next five years. Every year, it amounted to not less than 800-850 people (Annual plans, 1970).

Similar activities were carried out by the Office of Agriculture of the Regional Executive Committee. For example, in the plan for 1970, not only the number and the specialization of agricultural engineering were taken into account, but also the ways of attracting this sort of personnel.

In addition, these new regulations recommended new forms of training and involvement of engineering and technical intelligentsia. Among them - the most convenient form of education which existed under the conditions of acute shortage of personnel – the evening/part-time education system; scholarships for technical and agricultural universities' prospective students of the region and the country.

The training of engineers for the enterprises of Tyumen region in the mid-1960s involved Ural technical colleges and their branches in Tyumen. For example, in 1965, the training and consulting center of Ural Electromechanical Institute of Railway Transport Engineers had 11 part-time courses, and the UE Ural Forestry Institute had an enrollment of more than 300 people.

At the same time, part-time and evening forms of education were not able to meet the needs of Tyumen region's economy. The First Secretary of the Party Committee of Tyumen region, Sherbina, noted, "The discovery and the industrial development of the unique oil and gas fields in Tyumen region led to an increased staff shortage. The region is suffering from an acute shortage of engineering personnel."

According to the calculations of the State Institute used for the construction of higher education institutions for the period of 1965-1970, the average annual demand for civil engineers in the oil field reached up to 320 people, and in 1970-1980, it increased to 800 people. Construction faculties of the universities of the Urals and Western Siberia which educated expert personnel were not able to solve the problem of the demand for civil engineers. In this regard, the opening of new schools was required, not only in big cities, but also in villages.

2.2. The ways of involvement of engineers in the agricultural industry of Tyumen region

To provide the region with agrarian engineers, the Regional Party Committee has repeatedly appealed to the government with the initiative of expanding the range of specialties at Tyumen Agricultural Institute. In 1966, in a note addressed to the Chairman of the RSFSR Council of Ministers, G. Voronov, the first secretary of the Party Committee, Sherbina, declared, "In the area of collective and state farms, out of 1014 people, working as foremen of the production teams of the state farms, only 113 have special higher and secondary education. The rest have no special education. The education that more than 2.5 thousand people, working as heads of collective farms, have is 7-8 school grades. Among these workers, most have extensive practical experience, organizational skills, an ability to manage agricultural production enterprises well with appropriate theoretical training"

As a result, in 1966, the economic branch of the Agronomy Faculty, TSKHI, was opened. In 1971, it became an independent department with a 100 students' enrollment plan. In 1974, engineering and mechanical departments were created as part of TSKHI. In 1976, it became the Faculty of Agricultural Mechanization.

The problem of formation of agricultural technical intelligentsia was rather complicated due the northern region's specificity, with its small farms, which could not afford hiring the necessary specialists. In 1966, there were no agronomists, livestock specialists or economists with higher education in Nizhnevartovsk region. The situation was similar in Khanty-Mansi National District. That factor reduced the number of livestock, decreased acreage.

This question was analyzed in detail by the Secretary of Nizhnevartovsk District Committee of the CPSU, Aksarin. In a memorandum directed to the first secretary of Tyumen Regional Party, Sherbina, and to the first secretary of Khanty-Mansiysk District Committee of the CPSU, Telepnev, Aksarin disclosed the reason of this phenomenon, which, in the opinion of the author, was directly related to the problem of the shortage of specialists.

In this regard, Aksarin proposed to consolidate the collective and state farms and to hand them over to the jurisdiction of "Glatyumenneftegaz". It allowed one to create a modern production base for agricultural enterprises, improved the cultural and living conditions of farmers and state farm workers, to increase the profitability of farms. (Work report, 1966).

Tyumen Regional Committee of the CPSU and the union leaders supported the idea of the regional authorities. In 1967, the association structure included Surgut, Cheuskinsky, Megion and Nizhnevartovsk state farms. Already by 1968, 70% of the engineering and technical services' employees had been specialists with higher and secondary special education; most of them were graduates of TSKHI (Work report, 1967).

Due to the taken measures, by 1971 the region had received from the regional universities more than 950 engineers of 15 different specialties, 217 agronomists and livestock specialists. Most graduates of Tyumen high schools were locals who were both physically and psychologically prepared to work in the harsh conditions of the North.

3. Results

However, the problem of engineering and technical personnel of industrial and agricultural enterprises, despite the massive state support and the positive dynamics of growth, remained still acute. Speaking at the XIV Regional Party Conference (1971), Sherbina stressed, "The current stage of technological progress places increased demands on personnel and its training. However, at the enterprises of the oil and gas industry, 30% of geology engineering positions require only practical skills. Many of the workers never studied. Very few team leaders and managers have special education."

Further decisions of the CPSU Central Committee contributed to the growth of the number of agricultural technical intelligentsia. The crucial role was played by the resolution "On measures regarding professional training of agricultural specialists with higher and secondary special education in the field of livestock and food production" (1972). On its basis, in August 1973, the Regional Department of Agriculture adopted the order, number 212, which established the right to appoint only the people with secondary or higher agricultural education as mid-level managers (Annual report, 1938). This document defined the plan-task of full-time and part-time training of rural youth at agricultural institutions and at the special section dedicated to management training. The plan took into account the need for agrarian specialists of each agricultural region in four main areas of training - agronomical, zootechnical, veterinary, mechanization.

At the same time, the executive committee of Tyumen Regional Council adopted the proposal of the regional department of agriculture and Tyumen Agricultural Institute to increase the enrollment of students at TSKHI up to 950 people.

Evaluating the results of this work in 1974, the first secretary of the Regional Committee, G. Bogomjakov noted, "All economic sectors now are mainly composed of qualified personnel, and this personnel's dedication, training, efficiency and creativity meet modern requirements. More than 90 percent of the directors, chief specialists of enterprises, collective and state farms have higher and secondary special education. A database of specialists with higher and secondary qualifications of the region was created." (Report №14, 1977). It seems that this estimate was too high as it did not take into account the depth and size of the problem. For example, in the mid-1970s, more than a quarter of engineering positions were still occupied by workers without any special education.

One reason for the lack of engineering and technical intelligentsia was the problem of retention of professionals at the enterprises and organizations of the region. On the one hand, the government policy was aimed at the mass employment of engineers by the region's enterprises, on the other hand - there was a question of their wellbeing, providing the professionals with housing and other living conditions.

In the first years of development and functioning of oil and gas fields, the rapid growth of population was accompanied by an acute worsening of the housing problem. Pioneers of oil and gas industry lived in tents, and then for a long time in temporary premises - beams, trailers, and in private homes. Residential wood houses, which usually 'started' urban settlements, did not meet the harsh northern conditions.

Not only the level of provision of workers with housing was low, but it also did not reach a satisfactory level recommended for the northern regions; in fact, it was 3-4 times lower than the planned one. For example, provision of employees of 'Glavyumenneftegaz' enterprises with housing, at a total rate of 9 square meters per person in 1970, on average amounted to no more than 4 square meters (45% of the

norm), kindergartens - 20% of the norm, hospitals - less than 30 percent. A similar situation was observed in all the major industrial associations of Tyumen region.

For a long time, only a small part of the housing was equipped with running water, sewage, central heating. In such conditions, the population has been forced to use iron stoves, electric heaters, which resulted in frequent fires. This situation was typical not only for workers' settlements, but also for the district centers - Salekhard and Khanty-Mansiysk.

Young professionals leaving areas of the Ob North complained about the unsatisfactory level of cultural and consumer services. Especially they felt the lack of medical and educational institutions. According to "Glavyumenneftegaz", provision of childcare at the beginning of the 1970s accounted for only 20% of the norm. Out of 15 thousand children of the preschool age only a third went to pre-school institutions in Uray; schools in Surgut worked three shifts, and the district hospital with 25 beds placed 4 times more patients. The existing network of cultural institutions (cinemas, clubs and libraries) did not satisfy the needs of the population. In Nefteyugansk, where 5 thousands residents lived, there was only one "cultural corner" which could accommodate up to 50 people.

As a result, in 1966 and 1967, around 11 thousands of people resigned from 'Glavyumenneftegazstroy'. More than 700 of them were specialists with higher and secondary special education. In December 1967, Sherbina, referring to Barsukov, the head of 'Glavyumenneftegazstroy', said, "Hundreds of engineers and technicians are not properly taken care of. They leave construction projects and enterprises of the region, causing serious damage." To a certain extent, this pattern was repeated in the rural areas of Tyumen region.

The problem with the technical intelligentsia in the agricultural sector, including the northern areas of the region, was the same. In addition to housing and everyday problems, one of the reasons for such turnover of agricultural personnel was the differences in the mechanism of payroll. In 1966, the regional premium rate for the workers of oil and gas fields was 70%, while for the farm workers - only 30 per cent. As a result, middle and senior managers from the agrarian sector sought to go to work in oil and gas companies. In 1962-1965, in Khanty-Mansiyskiy Avtonomnyy Okrug, 27% of qualified agrarian specialists left the industry. The agricultural sector became the source of qualified personnel replenishment for the developing raw materials industry.

Regional authorities have repeatedly raised the issue of the need to improve housing and cultural conditions in the region. This issue was widely discussed at the XX and XXI Khanty-Mansiysk district conference (1964 and 1966). In addition, in 1967 this issue was raised at three meetings of the Bureau of Tyumen Regional Party Committee.

The problem of mass "flight" of representatives of engineering and technical intelligentsia was discussed at the XIV (1971) Tyumen Regional Party Conference. The report of the first secretary of the Party Committee, Sherbina, stated, "It is extremely important to provide workers with new clubs, kindergartens, nurseries, buses, to build new roads. Young people in villages need two days off a week. Those who think they can apply some one-dimensional fixing formula are mistaken. The formula simply does not exist."

At the turn of the 1960s-1970s, the problem of staff turnover has been the subject of local government and Party organizations' regular discussions. However, the specific mechanisms for the implementation of many decisions were absent, so the decisions were often declarative in nature.

In these circumstances, actions of the Party and government bodies in dealing with personnel issues acquired an unpopular character. The local Party and government organizations were obliged to focus on 'attaching' the staff to their workplaces. The decision of Tyumen Regional Committee of the CPSU "On the work of Khanty-Mansiysk Regional Committee of the Communist Party to 'attach' the workers, engineers and technical workers" (1968) established a procedure for moving the engineering staff in spite of the labor legislation. Dismissal of experts could only be allowed directly by business leaders and trade union committees; dismissal of the nomenclature workers was only allowed by the authority which stated their appointment in the first place; for especially difficult personnel issues in cities and towns councils of heads of enterprises, buildings, government and trade unions were created. At the same time, the Labour Code in 1966 did not require the employee to specify the reasons for the dismissal and the dismissal did not depend on whether the administration recognized the reasons as valid or not. The employees had the right to leave work on their own, regardless of consent or permission of the administration.

In addition, sanctions were toughened against party workers and business leaders who have admitted the failure of the implementation of the decisions in this area. So with the wording "extremely poor organization of work and unsatisfactory state of the living conditions of workers and employees", the Bureau of Khanty-Mansiysk district committee of the CPSU decided to dismiss the First Secretary of Oktyabrsky District Party Committee from his post. At the enterprises of Nizhnevartovsk region in 1968, 23 specialists have been dismissed for failure to do their jobs. Among them, the director of the state farm 'Konda', the head of construction management and others. At the same time, the party organs demanded a "serious" approach to identifying causes of specialists' dismissals and to develop a set of measures aimed at the elimination of turnover.

Meanwhile in the mid-1970s, engineers' turnover rates in the industry accounted for 30%, and at some enterprises, it reached 60 percent. The official statistical document states several reasons for the turnover. Among these in 1976-1980, the largest share, more than 50%, included "other reasons" which meant unnecessary movement of young professionals from one job to another, knowingly incorrect selection and placement of personnel, lack of the necessary conditions for creative work and further education, lack of housing and satisfactory living conditions, low wages. This led to the departure of young professionals from the industry. The rest of the reasons included "transfer to another job" - 33%; "unreasonable management" - 5%; "poor health" - 3 percent.

In the 1970s and early 1980s, the government has used various mechanisms to curb the alarming trends and to 'fix' various technical intelligentsia groups in the economy. In particular, this applied to managers and mid-level professionals. For example, in April 1975, the RSFSR Council of Ministers adopted a decree "On wages recommendations on collective farms." It set new, higher salaries for managers and specialists of collective farms, reducing the pay gap between the middle and top officials. As a result, the gap between the salaries of the chairman and the head of a collective farm of the same group had to be no more than 35 percent. In 1978, the RSFSR Ministry of Agriculture adopted the "Regulation on agricultural specialists working on farms and at other agricultural enterprises" which defined the status and responsibilities and rights of workers. In accordance with the "Regulations", for young professionals, distributed after graduating from high school and aiming to work in agriculture, the living area should be provided on a priority basis, on arrival at the place of work. The same group had to be no more than 35 percent. In 1978, the RSFSR Ministry of Agriculture adopted the "Regulation on agricultural specialists,

working on the farm, and at other agricultural enterprises", which defines the status, responsibilities and rights, including the provision of the preferential landscaped residential area of houses, owned economy.

4. Conclusions

As a result of decisions made in 1964, the enrollment of students in Tyumen Industrial Institute started, and in 1971, at the initiative of the regional committee of the CPSU, Tyumen Engineering and Construction Institute was founded. In 1971, technical colleges of the region educated more than 900 young professionals. In 1974, the database of specialists with higher and secondary qualifications was created in Tyumen region. However, the lack of a systematic approach in addressing the staffing issue caused a number of pathological phenomena in the organization of production and social processes, management system, such as a mass "flight" of young qualified specialists, violation of labor laws in order to "attach" the specialists to their workplaces, failure of the Party and government bodies to provide housing and the necessary social infrastructure for young specialists.

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