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THE EXPERIENCES OF THE INDUSTRIALIZATION OF SLOVAKIA

SUMMARY

Submitted by the Government of Czechoslovakia

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1. The industrialization of Slovakia is one of the most remarkable examples of the development of a backward area into an industrially advanced region. Although there are some specific features, first and foremost that the area is also a national entity, many interesting and generally valid aspects of an approach to the problems of area development can be found here. The development of Slovakia has been carried out as an integral part of a policy of providing equal conditions for the two nations living on terms of equality in a socialist country and within the framework of the unitary Czechoslovak economy.
2. The study of Slovak industrialization starts with a brief survey of past social and economic history leading to economic backwardness in this area. The second part analyses the circumstances and potentials of Slovak industrialization under the Czechoslovak Socialist Republic and the main features of the economic policy that led to the country's economic advance as a part of the whole Republic. In conclusion the future prospects of Slovakia are examined, the aim being to catch up completely with the more advanced regions.
3. The historical survey of Slovakia's political and economic growth points to the prime causes of her lagging behind the more economically advanced parts of Czechoslovakia. Long after the establishment of their joint State in 1918, the economic discrepancies between Slovakia and the Czech regions showed little sign of growing less and, indeed, they persisted in large measure up to the outbreak of World War II. Slovakia was still a country of agrarian over-population, with under-developed industry, in which sectors producing for the local market prevailed. The shortage of work and low living standards forced people to look for jobs in other parts of the country, or to emigrate.
4. In socialist Czechoslovakia the economic development of Slovakia became one of the main goals of the Government's economic policy.

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5. The underlying conditions and potentialities of Slovakia's development lay in the intrinsic forces of the Czechoslovak economy, in its rapid growth which was shaped by the national economic plan. The plan took into account the natural and human resources and other economic factors, the specific targets and place of Slovakia in the overall economy of the Republic. Without this gearing of the plan for Slovakia with that for the whole country it would have been impossible to achieve the results that have been achieved.

6. A foremost aim was to make productive use of the labour power available in Slovakia. The problem stemmed from the existence of a large body of labour insufficiently used in backward agriculture, a low rate of employment among women and a high rate of population growth in Slovakia. The only solution lay in industrialization with development of new economic sectors, especially in the tertiary sector. In the course of industrialization the question of the skills of the labour force had to be faced. The present work shows how training was carried out on a mass scale, both of adults transferring from farming to industrial work and of young people in state training centres and enterprise apprentice schools; secondary vocational and university-level education were also expanded. Insofar as Slovakia lacked the necessary industrial base for practical training, valuable assistance was rendered by enterprises in the industrially advanced parts of the Republic.

7. Slovak industrialization could draw only to a limited extent on domestic sources of raw materials. The area is relatively poor in fuels and power resources. While local coal deposits and water power have been harnessed, a substantial part of consumption is met by coal and power brought over considerable distances, mainly from the Czech regions. Raw materials for the metallurgical and chemical industries are provided to a large extent by imports, and here Slovakia has the advantage of her position on the route from Eastern Europe into Czechoslovakia. Supplies of non-metallic raw materials, mainly for production of building materials and refractory materials, are plentiful and have facilitated rapid growth of these sectors. Good progress has also been made in exploiting timber resources. In general, however, it may be said

that raw material resources have played a subsidiary part in industrialization and the available labour power has been much more important.

8. Industrialization called for substantial investments in the infrastructure. The main concerns were to expand the capacity of the railroads and railway stations, to improve the existing road network, to undertake extensive construction of the power distribution network, gas pipelines, and to improve domestic and industrial water supplies. There was also considerable expansion of the non-productive infrastructure, especially of housing, health facilities, schools and cultural facilities. Industrialization was also manifested in the advance of urbanization, although there is a certain lag behind industrial development to be noted here, to be seen in the frequency of long journeys to work.

9. One of the basic problems of industrialization was to find funds for investment. A big advantage in this respect was the centralization of accumulation funds for the whole Czechoslovak national economy, enabling the national plan to channel resources according to sectors and area structure. In respect of machine parks and technical designing of new capacities, help was given by enterprises and design organizations in the more advanced areas. Without this help, the industrialization of Slovakia could not have proceeded so rapidly.

10. The results of the efforts to expand industry in Slovakia were evident in the growth in volume of industrial output between 1948 and 1965 by seven-and-a-half times. With a rapid growth rate in all sectors, especially big advances were shown by the engineering and chemical industries with up to 15 times the 1948 output. Industrialization brought marked changes in the economic structure of the area. An indication of this is that the share of industrial and building employees in the total labour force rose from 21 per cent in 1948 to roughly 39 per cent in 1965, while the share of agriculture in the labour force dropped from 60 to 27 per cent. Other sectors, mainly non-productive, showed a rise from 19 to 34 per cent.

11. Average wages and salaries of employed persons are more or less on a par with those in the Czech regions. But comparing the per capita incomes, Slovakia still lags behind the rest of the country. The differences stem primarily from the lower employment rate, especially of women, larger families dependent on the wage-earners and less intensive agriculture.
12. This study further deals with some problems connected with the industrialization of Slovakia, such as the relation between heavy and manufacturing industry, excessive diversification of production branches, concentration and specialization, location of industry in the area and the like.
13. The outlook for Slovakia's industry is linked with the future of the progressive trends now evident in economic growth. Industrial construction has hitherto followed to a large extent the lines of extensive growth through quantitative increase in the volume of fixed assets and in the size of the labour force. Nevertheless, technical progress and structural changes have played some part and in the future they should be the prime factors in advancing the dynamics and efficiency of the economy. The basic industry that has been built up to date in Slovakia - primary modern chemicals and metallurgy - provide a foundation for developing the manufacturing sectors. Favourable conditions are also afforded by the growing research base, design departments in enterprises and increase in skilled personnel. There will continue to be an ample supply of manpower, especially of young people, for whom it is necessary to ensure training and to create openings for employment.
14. The economic reform, the main measure through which the new system of management is being introduced in the Czechoslovak economy, assumes that in the coming period the basic proportions of Slovakia's economic growth will be set by the national plan, although indirect economic instruments will operate in connexion with the actual fulfilment of targets. The Czechoslovak Government aims in its economic policy to achieve further growth and integration of Slovak industry with that of the Czech regions and the progress towards a new industrial structure based on modern technological principles which will be advantageous for the whole country.

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## Introduction

1. During the past years the solution of the development of backward areas is attracting more and more attention throughout the world in developed countries as well as in developing countries. Economic growth of backward areas as one of the factors of the general acceleration of economic growth and the achievement of social stability becomes one of the aims of the economic policy of Governments and a subject of theoretic analysis of economists. Very often, however, in spite of considerable efforts, the results achieved are modest. International exchange of experiences is becoming more and more developed and a whole number of actions are being organized in search of conception as effective instruments of the policy of regional development.

2. In our study we shall try to present an image of the up-to-date course and results of the solution of such a problem in the Czechoslovak Socialist Republic (CSSR). It is the development of Slovakia, a relatively large area with a population of more than four million inhabitants on the territory of about 49 thousand km<sup>2</sup> which represents 31 per cent of the total population and 38 per cent of the territory of the CSSR. It is the territory populated by the Slovak nationals which together with the Czechs established a common State after the First World War. There are about several hundreds of thousands of inhabitants of Hungarian nationality and a smaller number of Ukrainians.

3. Economic development of Slovakia where industrialization played the decisive role represents an example of the transformation of the backwardness of one region within an industrially developed country; the solution of the development of a national region in a way corresponding to the Socialist socio-economic order and under the conditions of planned management of national economy. We think, furthermore, that in spite of these specific characteristic features of the problem, it is possible to deduce some general ideas from the course of its present solution which could be



of interest for everybody who faces a similar problem.

4. In accordance with this purpose, the study is subdivided into four chapters: The first chapter contains a brief historical summary of social and economic development resulting in deep differences in the economic structure of Czech and Slovakia regions existing even in the period after the end of the Second World War when the new political regime set goals of economic development of Slovakia as the only way to bring about equality of rights of both nations in a common State.

5. The second chapter deals with the utilization of conditions and the creation of pre-conditions for the industrialization of Slovakia, especially in labour and natural resources, accumulation resources and the ways of construction of basic funds (fixed assets), about the preparation of expert cadres and about the creation of conditions in the infrastructure.

6. The third chapter contains more detailed results of the industrialization, especially the dynamics of industrial growth, the development of the structure of industry in relation to natural resources of the region, and other factors; then the influence of industrialization on the growth of the standard of living of the population, and finally certain critical evaluation of the results achieved.

7. The last chapter brings up certain principles for further development of industry in Slovakia in accordance with the contemporary tendencies of industrial growth in the world and with the economic conditions of CSSR including the new model of management of economy.

## I. HISTORICAL SUMMARY

8. The Czechoslovak Socialist Republic is composed of two ethno-political and territorial units, Slovakia and the Czech regions which for thousands of years developed under different historical conditions. The 17th and especially the 18th century was the period of higher growth of productive forces not only in Czech regions but in Slovakia too. The Czech regions became the most developed industrially of the Austrian part of the dualistic Austro-Hungarian monarchy and Slovakia represented in the 18th and the 19th century the industrial basis of Hungary because of its relatively richer raw material resources and because of the backwardness of industrial development of Southern Hungary due especially to a long-lasting Turkish occupation.

9. The wave of the first industrial revolution in the second half of the 19th century hit Slovakia in a lesser degree and a little later than the territory of Czech regions and West European countries in general. In the 1850's and in later decades, the level of previously developed industry again declined. The new development occurred in the 1880's of the 19th century when the Hungarian industrialization law was approved. At that time the development of mechanized production in Czech regions had progressed already very far. The mechanized production was being introduced also in heavy industry. This advance of industry in Czech regions was due also to the more favourable conditions of these regions, especially as far as natural fuel and energy resources necessary for the extraction of coal, metallurgy, rail transport, engineering industry and industry in general, are concerned. In spite of certain industrial development, Slovakia lagged behind the Czech regions absolutely and relatively. This became apparent after the establishment of the Czechoslovak Republic in the year of 1918 by the very different economic, social and cultural levels of the two areas. In the new State Slovakia represented a backward macro-area with predominant agricultural production. At that time in the Czech regions, about one million people were employed

in industry while in Slovakia only 4 thousand. The Czech regions had then about three times more inhabitants than Slovakia but the employment rate in industry was about twelve times higher.

10. Under the new conditions the small and not very competitive industry in Slovakia became a ballast for the developed industry in the Czech regions. In sharp competition in which the Czech industry had to overcome also the difficulty of a narrower market (the loss of Austrian and Hungarian markets), many industrial enterprises in Slovakia were liquidated during the years 1921 to 1929 and that deepened even more the difference in economic levels of both parts of the Czechoslovak Republic.

11. Already within the framework of Hungary the population growth in Slovakia was so high that almost half of the increment could not stay at home and emigrated abroad, especially to the United States where in the year of 1920 more than 600 thousand inhabitants claimed to be of Slovak nationality. The temporary economic boom in 1926 to 1929 did not revive the industry in Slovakia but during the years of the world economic crisis (1929 to 1933 which hit Czechoslovakia extraordinarily) the situation in Slovakia worsened even more. The decline of industry in Slovakia was later only partially compensated by a certain revival of industrial activity immediately before the Second World War, especially by the construction of some engineering enterprises, artificial fibres and cement factories and some chemical enterprises. The employment in industry stayed practically on the level of 1910. The share of Slovakia in industrial production of Czechoslovakia was lower than 10 per cent.

12. The fact that also in the years 1920 to 1934 when the second emigration wave (even if lower) followed and touched Czech regions only partially shows that Slovakia was a chronically depressed area within Czechoslovakia which could not employ its increase of population in active age not only because of under-developed industry but because of agrarian over-population in the villages as well.

13. The Second World War signified a temporary liquidation of the Czechoslovak Republic. It caused enormous damages in the economy of the Czech regions and Slovakia. War damages in Slovakia amounted to 114 million crowns.

14. In 1945 after the Second World War Slovakia entered the restored Czechoslovak Republic again as a considerably backward region with a prevailing agrarian character, with high potential reserves of labour and with high population increases. So the problem of utilization of these labour resources, their activation for the achievement of the economic goals of the reconstruction of the war-damaged economy and then for the industrialization of Slovakia, the creation of optimal economic structure in the whole State and equal conditions for both nations with equal rights, Czechs and Slovaks, became one of the central problems not only in the economic development of Slovakia but in all the Czechoslovak Republic.

15. Favourable possibilities for relieving the population increase pressure in Slovakia arose in new labour opportunities in Czech regions, especially in the frontier districts already in the first years after the liberation. In this period the State supported the settlement of about 200 thousand people from Slovakia in Czech frontier districts.

16. The first programme of the Czechoslovak Government set the task of gradually balancing the economic, social and cultural levels of Slovakia with the Czech regions. The nationalization of key industries, control over the finances and the land reform created favourable pre-conditions also for a gradual introduction of central economic planning. Already the first Two-Year Plan of Reconstruction of war-damaged economy counted with the industrialization of Slovakia. The problem was not only to employ available labour but to employ them in such a way as to equip them with modern means of production. The industrial production enabled an increase in the productivity of labour, an increase in the rate of

accumulation of means for the build-up of basic funds technically corresponding to the contemporary level.

17. Further nationalization of industry and other economic branches which occurred in the beginning of 1948 enabled the transition to socialist ways of production and within their framework to the accelerated industrialization of Slovakia. That was economically the most effective way to increase the share of Slovakia in national production and national income, in domestic and international exchange of commodities corresponding more to the share of population in active age in the total number of inhabitants in all the State.

18. The Czechoslovak industry, thanks to developed industry in the Czech regions, had enough possibilities and capacities to realize an accelerated industrialization of Slovakia the basis of which was laid especially in the period of the First Five Year Plan (1949 to 1953), by the reconstruction and construction of heavy industry.

19. The introduction of co-operative ways of production in agriculture which started already in the period of the First Five-year Plan of the Development of National Economy helped in the successful course of industrialization of Slovakia. Agriculture, which was gradually mechanized, became a source of labour for the needs of rapidly growing industry.

## II. CONDITIONS AND PRE-CONDITIONS OF THE INDUSTRIALIZATION OF SLOVAKIA

20. The economic development of Slovakia was realized under the conditions of a general accelerated growth of the economy of the CSSR in the post-war period. The economic growth of the CSSR was influenced significantly by external factors, especially by the growth of foreign markets in centrally-planned economies, above all by the growth of markets for the products of engineering and consumption industries and by the import of basic raw materials and foodstuffs. The advantageous geographic location of Slovakia on the main exchange routes increased the economic attractiveness

and improved the conditions for social effectiveness of investment in metallurgy, engineering, chemical and consumption industries in this region.

21. The basic conditions and pre-conditions of the development of Slovakia rested in internal forces of the Czechoslovak economy, in its fast development determined by the State economic plan. The ethnopolitical region of Slovakia got particular attention from the beginning of planning. The plan contained the evaluation of natural and human resources, as well as economic conditions, the set development tasks and the position of Slovakia in uniform Czechoslovak economy quoted separately for Slovakia. At present, after fifteen years of experiences, we have a number of critical observations concerning such methods of planning. But that does not change the fact that without planning with free play of market forces in regional development we could not have achieved such a development of Slovakia. On the contrary, judging by the experiences from the solution of economic development in macro-areas of certain economically developed States, we could have expected the deepening of differences between developed and backward areas of the CSSR.

22. The conditions of the realization of the industrialization of Slovakia represented a number of contradictory situations which had to be evaluated. Among the basic development contradictions it is necessary to mention the wealth of Slovakia in human resources on the one hand, but a relative poverty in material natural resources on the other hand. As the beginning and the most intensive stages of industrialization in Slovakia were realized under the conditions and criteria of the end of the first industrial revolution and due to the shortage of natural resources, the choice of the direction of the industrialization was complicated.

23. In the first place, the shortage of natural resources resulted in an insufficient fuel and energetic basis which was considered the foremost pre-condition of industrialization by the criteria of that time. Already

in the years of the First Five-Year Plan, in the years of 1949 to 1953, i.e. exactly in the period of intensive industrialization of Slovakia, the Czechoslovak economy orientated its structure towards the fortification of heavy industry rather exigent on ore raw materials. In this connexion a pressing question arose, i.e. how to build heavy industry in a country without necessary raw materials resources and how to harmonize the production programmes and their material and energetic demands with the material, fuel and energetic balances of Slovakia and the whole of the CSSR.

24. The contradictions of the conditions of the economic development of Slovakia resulted also from the progressive population development, from the fast growth of potential labour force and from the inheritance of economic backwardness which decelerate the fast and productive utilization of labour resources. The pressing question of the quality of human resources and their activation in modern industry and exigent productions arose in the course of the industrialization process. Industrialization claimed massive training of labour but there was not the necessary productive background, especially in the areas without any industrial traditions. Modern industry and progressive production need scientific-research background. Such a background did not exist in Slovakia but in spite of that it was necessary to find a solution for the introduction of progressive and efficient productions.

25. Also the approach to industrialization from the point of view of the priority of constructing either the infrastructure of productive capacities and the question of the priority of their influence on the process of industrialization presented certain problems.

26. If we evaluate the conditions of the economic development of Slovakia, we see four spheres which are interesting for evaluation as factors of development. They are: labour resources; natural resources; settlement and infrastructure; and resources of financing.

Labour resources

27. The problem of the utilization of labour resources represented the central issue in the economic development of Slovakia. In the period after the Second World War the problem was the mobilization of potential labour resources and their best utilization for the achievement of economic goals of the restored Czechoslovak Republic. The considerably lower economic level of Slovakia in comparison with Czech regions and the extent of potential human reserves in Slovakia determined the methods of their utilization and their preparation for their efficient introduction in production activity.

28. The mobilization of labour resources of Slovakia was carried out in three forms: (a) by the industrialization of Slovakia, (b) by the migration to industrial agglomerations in Czech regions, (c) by long-term employment in Czech regions. The significance of these three forms of the mobilization of the population of Slovakia changed in the course of time. In the years 1945 to 1949 there was a large migration from Slovakia to the Czech regions, especially to the Czech frontier districts. In the years 1960 to 1964 the yearly average migration to Czech regions amounted to only about 5.5 thousand people. The present migration is directed mainly to mining and metallurgic agglomerations attracting people from the whole territory of the State.

29. The industrialization of Slovakia became the decisive factor in the mobilization of the increases of human resources since the year 1948. The process of industrialization continues practically even nowadays. The extent and structure of the new economic activities enabled the introduction of a large number of labour into industrial production and other non-agricultural branches which changed substantially the structure of employment and the social composition of the population.

30. The number of people active in national economy increased in Slovakia in the years 1948-1965 by 183 thousand while it increased in non-agricul-



tural branches by 639 thousand and simultaneously decreased in agriculture by 456 thousand.

Table 1

Structure of employment in national economy  
in Slovakia (in thousands of persons)

	<u>1948</u>	<u>1965</u>
Number of employed in national economy	1,526	1,709
in:		
industry and construction	324	660
other branches (except agriculture)	284	587
agriculture	918	462

31. The increase of economically active people in the region of Slovakia in the mentioned period reached about 1/5 of the all-state increase. The natural increase of population in Czech regions was fully mobilized, drawing even further housewives and a considerable part of people beyond working age into employment. The example of Slovakia and Czech regions confirmed the already known phenomenon that in economically more developed regions the tendency of stronger influence of external forces of the economy while mobilizing the development resources exists rather than in less developed regions.

32. The degree of activity of the population in Slovakia has increased but relatively it is still lagging behind that of the Czech regions. The share of non-working population in the total population in productive age decreased in Slovakia in 1948 to 1965 from 27 per cent to 18 per cent, in Czech regions from 26 per cent to 12 per cent. At present all male resources are fully utilized in Slovakia with certain female reserves among housewives. A part of the population, i.e. around 7 to 7.5 thousand yearly migrate to industrial Czech regions and around 80 to 90 thousand participate temporarily at work in these regions.

33. The balancing of regional differences in labour activity of Slovakia and Czech regions has two aspects which demonstrate the exigencies of the solution of this problem. The first one is the inherited imbalance of the activity in the starting period after the Second World War which we have already mentioned. The second one is the regional dynamics of population development - faster rates of growth of natural increases of the population which have to be introduced in the labour process. Labour opportunities in Slovakia were developing relatively faster than in other regions of the State but the progressive development of the population reproduced also relatively higher potential labour resources. So the problem of their labour activation remained always vivid.

34. The results of quantitative introduction of human resources in the labour process in Slovakia, even if lagging behind compared with Czech regions, can be evaluated positively. The total employment was growing only moderately but in industrial production and in other non-agricultural branches very progressively.

35. The number of workers in industry grew in the mentioned period by 266 thousand, i.e. 2.2 times. The weight of workers of this sector increased significantly and decreased in agriculture which changed Slovakia from a backward agrarian region into a developed industrial-agrarian region.

36. In connexion with the results of the quantitative utilization of labour resources in Slovakia it is necessary to mention the forms of organization and methods of mobilization and redistribution of labour.

37. The management of labour resources in the CSSR is realized on the basis of registration of resources and demands for labour in regions which are balanced by regional national committees and district national committees (local governments) and in the region of Slovakia by the Slovak National Council. The national committees direct the recruitment and the redistribution of labour. The recruitment in itself is carried out by respective enterprises. The regional and district national committees

in co-operation with branch managements and enterprises work out the balances of the location of youth from the basic nine-year schools. The balance determines the basic proportions among the youth for secondary schools (high-schools), in apprenticeship and in employment. As the main guidelines for the distribution of youth for their job specialization are closely connected with the perspective plan of demand for experts with university education and high school qualification and with the reproduction of skilled labour, such a balance is a proper instrument for the orientation of youth in the choice of profession for the introduction in labour process and for the orientation of the reproduction of labour force in the region in general.

38. From the position of the contemporary transformation of the model of management of national economy in the CSSR we criticize some methods of the management of labour but basically we emphasize the positive role of the plan and of the mobilization of labour resources organized by the State. It is an indisputable fact that the national committees in Slovakia contributed significantly to the introduction of labour resources into industry and other economic branches and helped efficiently to solve the shortage of labour, especially in mining, construction and metallurgy in the CSSR. The orientation of labour resources towards the satisfaction of the needs of the society according to a plan is an appropriate measure which requires, however, a more efficient support by economic instruments influencing the movement of labour. For the absence of such stimulations the effort of the national committees resulted to some extent as an administrative activity and the effect of the distribution of labour was not always adequate. The turnover of labour acquired through organized recruitment is high but the degree of stabilization is small. The cost of recruitment and stabilization of one worker in organized recruitment is disproportionally high in comparison with the final effect. Therefore, methods of mobilization and re-distribution of labour based on economic stimulations are being studied at present.

39. Slovakia had a shortage of skilled labour, technical intelligentsia and technicians with high school preparation even after the Second World War. The general shortage of specialists was felt in the first years of industrialization. Schools and other establishments could not do enough to cover the demand for such people in national economy. Already in this starting period Slovakia received substantial help from the developed Czech regions. That was the reason in the period of the First Five-Year Plan many experienced practical experts and skilled workers, especially in industry, were taking over the functions of technical-economic specialists, and gradually by studying after work, they complemented their general and specialized education. The State paid particular attention to the organization of studies after work at high schools and universities and at the same time organized the development of enterprise professional training and a system of courses. The aim of the courses was to increase the qualification of workers in the enterprises and give them the qualities and abilities for new professions. The effort to increase the qualification of workers by these methods showed remarkable results. In twelve years, i.e. since the first census of qualified experts in 1953 until 1965 the number of experts in Slovakia grew by 185 thousand, in Czechoslovakia by 634 thousand people. The number of specialists in Slovakia grew faster compared with the all-state average. Specialists with education represented:

Table 2

Share of educated specialists in 10,000 inhabitants

	<u>1953</u>		<u>1965</u>	
	<u>University</u>	<u>High school</u>	<u>University</u>	<u>High school</u>
CSSR	66.2	127.5	148.0	363.1
Czech regions	76.1	146.2	157.0	395.5
Slovakia	40.9	79.7	129.5	291.0

40. In spite of a considerable inflow of specialists from the schools in the CSSR in 1963 about 48 per cent of engineering-technical workers did

not fulfil the requirement of adequate education, in clerical staff only 63 per cent. However, mass training of workers coming to industry from agriculture took place in Slovakia. According to the last registration in 1962, 80 per cent of the total number of workers in industry were skilled qualified workers; 49 per cent of this number had the qualification certificate, i.e. the full qualification after a two- or three-year apprenticeship or from the long-term courses, the s.c. enterprise labour schools. Of this number 51 per cent passed the short-term courses for the increase of qualification. In the process of industrialization of Slovakia, specialists necessary for technically exacting productions, such as television sets, aluminium, chemical apparatuses, locomotives, ships, metallurgical production etc. were schooled.

41. Particular attention has to be paid to the development of apprentice-schools in Slovakia. In 1950 larger enterprises organized the s.c. apprentice-centers directed by them. The special training was carried out in the workshops of the plants and the theory was taught in specialized schools of the school administration. In 1952 the branches of mining, construction and engineering opened schools of State labour reserves directed by the Ministry of Labour where about 30 thousand qualified workers passed regular apprenticeship. Since 1957 the CSSR has a uniform system of apprentice-schools. The schools are subordinated to the enterprises which take care of their material equipment, recruit and prepare young people according to their needs. The pedagogical direction of the apprenticeship is provided by the school administration. This system of apprentice-schools has its great advantages because of the concrete contents of the education and training, introduction in the labour process and narrow connexion of theory with practice. From the point of view of stronger population resources in Slovakia it cannot however furnish all the youth in this region with the appropriate qualification.

42. The necessity of labour force according to education and main professions was determined under the control of the Government and central planning bodies already in the period of project and documentation preparation of the new enterprises. The investor, in most cases an enterprise from the Czech regions, organized the nucleus of the working collective for its new plant in Slovakia through recruitment in Slovakia and eventually by the transfer of foremen and specialists from the main plant. The training of the basic mass of production workers was realized during the time of putting into operation individual parts of the new plant. The schooling of leading personnel was realized in advance in the main plant. Generally the process of composing of the new staff was accomplished successfully. The help of main plants from the Czech regions is an extraordinarily positive factor in starting the operation of new plants in Slovakia. It does not mean, however, that everything always goes smoothly. It happens sometimes that the main plants did not pay sufficient attention to the training of the nucleus of the staff of the new plant. In such cases interventions from the part of the State were necessary, i.e. in many cases subsidies in the form of additional wage funds for the main plants for the training of specialists for newly built enterprises.

43. An illustrative example of a vast training programme for a new plant was the training of experts and specialists for a large metallurgical complex in Eastern Slovakia--East Slovakia Steelworks which in the course of several years needed over 10 thousand skilled workers. The training was carried out in metallurgic and other plants in the Czech regions. On the recommendation of the Government a recruiting action for 1,000 specialists from engineering plants in all the republic was carried out. Our experiences show that the training of labour and the creation of the nucleus of specialists for new plants in developing or less developed areas demands the support of the State. At least it is necessary until the developing region develops the minimum basis of

qualified labour resources and establishments giving the qualification which helps to develop further special preparation of workers for new plants. Up to the moment, Slovakia has built up a sufficient basis for the training of workers in industrial plants and therefore nowadays the training of labour for some less developed micro-regions is not a particular problem.

#### Natural resources of Slovakia

44. Unlike the rich potential human resources, the natural resources of Slovakia are relatively small. The resources for the development of fuel and energetic basis and ore raw materials are insufficient. The conditions in other mineral raw materials, forestry and water-supply are more favourable.

45. Slovakia has no significant supplies of coal, oil and gas nor has the systematic geological survey brought any important results. This fact is also considered one of the reasons for the lagging behind of the industrial development in the past.

46. Because not only Slovakia but all the CSSR does not have sufficient raw material resources and resources of coal are located mostly in Czech regions, the fuel and energy demands commanded by the industrialization of Slovakia were solved by the State partially by the utilisation of local resources but mostly by transfers from the Czech regions and by the imports from abroad.

47. Already in the first years of industrialisation of Slovakia a better utilisation of the existing resources in this field was started.

Gradual and systematic construction of new power stations on the Váh River and some other rivers was started and it is going on even now. Seventeen power stations were built and the total output increased from the original 50 thousand kWh in 1945 to 600 thousand kWh in 1965.

48. At the same time, brown coal and lignite mines were expanded so that the total output grew from 700 thousand tons in 1948 to 4 million 800 thousand tons in 1965. However, these are mostly fuels with low caloric output which are extracted under unfavourable geological conditions with relatively high costs. Relatively small reserves of subsoil gas are at present mostly used for chemical production.

49. The expansion of local fuel and energy basis could not cover by far the needs called for by the industrialization and the share of resources on the total consumption which amounted to about one-third in 1945 even decreased a little until 1965. At present about 70 per cent of primary energetic resources are ensured by a relatively long-distance transportation of more than 10 million tons of coal and by the transmission of 1,500 million of kWh of electricity from the Czech regions or by fuels and electricity imported to the CSSR from the eastern centrally planned economies (1.5 million tons of coal, 1,400 million kWh of electricity).

50. The industrialization of Slovakia could be based on its own resources of primary raw materials only in a relatively small degree; similarly by fuel energy; the decisive importance lies in imported raw materials and semi-products.

51. The resources of non-metallic minerals have a more significant position in Slovakia. The abundance of raw materials for the production of building materials - limestone for the production of cement and lime, clay for bricks, gravel and sand, building stone etc. - can be considered a very favourable condition for industrialization. That is why it was possible to increase the production of cement and lime since 1948 more than four times, of bricks almost three times and to build a new strong basis of building prefabricates so that the production in this field can cover the whole demand of basic building materials.

52. From the non-metallic raw materials it is necessary to mention the rich deposits of magnesite which laid the basis for the production of



burnt magnesite and magnesite bricks in Slovakia which represents about 10 per cent of the world production. In connexion with the development of metallurgy and also as an important export commodity, the production of these fire-proof materials increased in the past years almost seven times and the construction of further capacities is under consideration.

53. From raw materials of vegetal origin in Slovakia the foremost position belongs to forest wealth which enables the yearly production of 4.5 to 5 million  $m^3$  of wood pulp. About 40 per cent of this quantity is broad-leaf wood and its better utilization was one of the intentions of the development policy of the timber and cellulose industries. The share of its incineration was decreased from 70 per cent to 38 per cent by the construction of two large enterprises which use it in mechanical and chemical ways of production. The concentration of sawmills created better conditions for the utilization of waste, especially for the production of small construction panels. However, other parts of the trees, sawdust and other waste from the logging are not yet rationally utilized and that gives further possibilities in higher finality of products on the basis of wood pulp.

54. The water supplies of Slovakia can be counted among the potential natural resources. The geographical location of Slovakia has the result that only the streams that have their sources in its territory do flow through it. The largest rivers - the Danube and Tisa - practically only touch the territory of Slovakia. The irregularity of the distribution of precipitations and the low natural retention ability of river basins cause the irregularity of the outflow of water from our territory and large fluctuations between maximum and minimum inflow.

55. In comparison with the total condition of water streams in the CSSR, Slovakia has favourable hydrological conditions. It is influenced mostly by the Danube which has about five times more of water passage than all rivers in the CSSR together. The average yearly passage of water is somewhere around 2,200  $m^3$ /sec.

Settlement and infrastructure

56. After the evaluation of human and natural resources of the development of Slovakia we consider it necessary to mention the settlement and infrastructure as important factors of economic development. The settlement and infrastructure cannot be considered equal to human and natural resources because they are the results of the economic activity of men. The long-term development of settlement and infrastructure and also their long-term impact on the future economic development give them also a character of development resources.

57. The construction of industry in cities strengthened the urbanization of Slovakia and the transfer of population from the countryside to towns. The location of population has changed since 1930 in the following manner:

Table 3

Distribution of population in localities, 1930 - 1960 (by percentage)

<u>Locality</u>	<u>1930</u>	<u>1950</u>	<u>1960</u>
to 2,000 inhabitants	58.3	55.9	45.7
2,000 - 10,000 inhabitants	27.2	26.1	31.3
from 10,000 inhabitants	14.5	15.0	23.0
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

58. Even after considerable transfers of the population to towns, only about 35 per cent of the population at present live in urban settlements. The large transformation of economic activities and extensive re-distribution of human resources during the industrialization of Slovakia were not sufficiently used for planned direction of the development of settlement. Namely in Slovakia a vast individual housing construction took place in the countryside for people economically active in the cities resulting in a gap between the concentration of settlement and the concentration of industrial activities. This contradiction is now resulting in travelling

from villages to towns to work. At present, there is felt an urgent need to work out the conception of the development of the settlement closely related to the prognosis of the long-term development of economic activities, their arrangement in space and concentration.

59. Similarly the construction of infrastructure was not used sufficiently as an instrument of the purposeful development of Slovakia. It is almost possible to say that the development of industry and settlements eventually forced simultaneously successive building-up of infrastructure. At present Slovakia feels the imbalance of the condition and necessities for some infrastructural elements, especially transportation and some facilities of social services.

60. Slovakia has today 3,560 kms of railroads and 16,000 kms of roads. The density of roads and railroad lines is considerably lower in comparison with the developed western part of the CSSR. Inbetween the two world wars two more significant trunk lines had been built in Slovakia. After 1945 as the consequence of the development of economic relations with the USSR, a double track was built on the line connecting the CSSR with the Soviet Union and a wide-gauge track from the State frontier to the town of Košice was built for the transportation of Soviet iron ore to East Slovak steelmills. Of the total length of railroad tracks in Slovakia 450 kms were electrified after 1945 and the electrification is continued intensively.

61. The industrialization of Slovakia brought also an extraordinary increase of road and railroad freight transportation. One of the interesting indicators of the development of personal transportation closely connected with industrialization is the growth of bus transportation which has 1,377 lines of total length of 44 thousand kms in comparison with 5.1 thousand kms in 1948.

62. The road network in Slovakia is relatively dense so that it was not basically necessary to construct new routes but to renew and improve the existing ones. The shortcomings of the road network are in its profile

and orientation, the insufficient width of the roadway and the quality of its surface. The investment activity after the reconstruction of roads and road facilities destroyed by the war was directed to the improvement of these imperfections.

63. In spite of the continuous improvement of the road network, there is still about 36 per cent of dusty roadways the total length of the road network. Considering the quality, still 35 per cent of the roadways are bad.

64. The growing all-state consumption of fuel demanded an increase in imports of oil. To avoid the overburdening of railroads the oil-pipeline "Družba" ("Friendship") was built covering in Slovakia the distance of 402 kms between the frontier of the USSR and Bratislava. At present a long-distance gas pipeline is being constructed from the Soviet Union passing through the major part of Slovakia. The supplies of gas are planned mostly for chemical production. The network of internal gas pipelines is being finished.

65. Lines of very high tension were built for the supplies of electric energy from the western regions to Slovakia because the production of electric energy in thermic power stations is concentrated in the Czech regions. Slovakia had the total of 3,300 kms of such lines in the year of 1964 which represented 32 per cent of the all-state network of the extra high tension lines. Slovakia is connected through the 400 kV and 220 kV lines with the long-distance energetic network in the Soviet Union and Rumania and with the energetic network of the COMECON.

66. The telephonization of all localities was ended in 1953 and their electrification in 1960. The number of localities with public water supply and public sewerage systems increased several times. The population growth in Slovakia increased the demand for social infrastructure serving the population.

67. The exigencies of the population for sanitary facilities and medical services increased too. In this sphere Slovakia is on a relatively high level not only by the number of hospital beds but by the number of doctors as well (28,000 doctors).

68. The number of pupils in basic nine-year schools increased proportionally with the growth of population increases. An extraordinary increase occurred in the number of pupils at general secondary schools and vocational high schools. While in the year of 1938 Slovakia had only two universities with an incomplete number of faculties, in 1965 it had already eleven universities with 33 faculties, with 817 professors and associate professors and with 49 thousand students, 50 per cent of whom study at polytechnical universities. In spite of that, Slovakia feels a shortage of education capacities, above all in the sphere of basic and apprentice schools.

69. The development of economic activity created also favourable conditions for the development of culture. A few figures may be given as an example. Before the Second World War there were three permanent professional theatres in Slovakia which have been visited by 300 thousand people. In 1964 there were already 20 permanent theatres with two million spectators. The number of cinemas reached almost 2,000 in 1964 as compared with about 200 cinemas in 1937. Thirty-two radio and seven T.V. transmitters are in operation now.

#### Resources and ways of investment

70. The former model of planning in the Czechoslovak economy within which the industrialization of Slovakia was realized up to now, enabled relatively simple, without a complicated economic mechanism, accumulation of investment means for the development of industry. The utilization of the national income created in the CSSR was solved centrally by the economic plan. It determined directly the consumption fund specifically through

the plan of wage funds for all economic units. The fund of accumulation was practically concentrated in the hands of the State. The central planning and financing authorities on the basis of the plan declared a law, distributed these means to ministries with economic activities and they distributed it among individual enterprises. This method enabled very efficiently the transfers of accumulated resources between branches and regions even if on the other hand it lacked the objective criteria of efficiency and even led to wastes in the utilization of resources. The movement of means following the favourable conditions for their realization was in accordance with the interests of the national economy as a whole and simultaneously represented a significant help for Slovakia.

71. The volume of investment into industry in 1948 to 1965 was 57 billion crowns and represented about 37 per cent of the total investment in Slovakia and about 27 per cent of industrial investment in the CSSR. The share of Slovakia in the all-state volume of industrial investment reached the level of almost 30 per cent as a consequence of the location of some large investment complexes in metallurgy and chemistry in Slovakia.

72. The advantages of such a situation when an industrially less developed region is a part of an economy where other regions are industrially developed can be shown on the material contents of the realized accumulation fund for the development of industry in Slovakia. The construction of the investment was practically carried out by construction enterprises of Slovakia which in the course of past years have acquired vast experiences and are able to realize exacting constructions for different branches of industry. But as far as the machinery equipment is concerned, the engineering plants from the Czech regions played an important role. The prevailing part of the machinery equipment of the new industry in Slovakia was produced in these enterprises, assembled and put into operation by their workers who helped to train new specialists for the operation and maintenance of the equipment.

73. A significant help to the industrialization of Slovakia was supplied by the project organizations from the Czech regions, especially in the first period. Gradually, specialized project institutes for different branches of industry were founded and developed and in growing extent participate in the preparations of the building up of the industry in Slovakia and also in the Czech regions as now a certain division of labour in production is taking place within the CSSR.

74. The importance of the non-material aspect of the help of the Czech enterprises, project and research institutions to the industrialization of Slovakia is stressed even more by the fact that in a number of cases it was the construction of completely new large enterprises of a complex character. In many cases it was necessary to create an original solution of the technological project, to develop prototypes of equipment, to solve a purposeful combination of domestic and imported machinery and many other problems.

### III. RESULTS OF THE INDUSTRIALIZATION OF SLOVAKIA

75. The intricacy and the contradictions of the conditions of the economic development of Slovakia which we have already mentioned have their influence on quantitative results and structure of the economy of this region. While evaluating the results we are not concerned only with the rates of growth but above all with the fulfilment of the basic aim of industrialization, i.e. to give labour opportunities to the population of a productive age and to introduce labour resources to productive activities which accelerate the growth of all-state economy. In the final results it is a matter of evaluation how the mobilization of labour in productive activity ensures the growth of the standard of living of the population.

76. In the analysis of the forms of mobilization of labour resources we mentioned that the degree of activity of the population in Slovakia is high even if regional differences in the utilization of female labour

reserves still exist. Therefore in the evaluation of the results of industrialization we want to emphasise the problem of structural development of branches which show the directions of the utilization of human resources in more or less progressive structure of economic activity.

77. According to generally known calculations, the fastest labour mobilization of human resources, and at the first sight the most efficient, is in consumption industries which render relatively more labour opportunities for the invested means while the turnover of means invested is faster compared with heavy industry, not to speak about the differences in material exigencies.

78. From the choice of the extent of construction of heavy and consumption industries we can estimate that the structure of industrialization cannot be determined a priori according to generally apparent advantages or disadvantages of the development of heavy and consumption industries. Slovakia built up heavy industry also to a considerable extent. Its construction was determined by calculations of a broader reach. The CSSR developed first of all heavy industry, the production of the means of production for its own industrialization and for the industrialization of other centrally planned economies. As the State needed to develop above all the production of means of production, it could not avoid this necessity while constructing new enterprises in Slovakia. It was therefore necessary to find the relation between the build-up of heavy and consumption industries according to the needs of all-state economy in that period. However, the core of industrialization as far as the structure is concerned has changed roughly in the following manner:

79. The first stage was marked by the construction of a large number of new industrial plants which had been put into operation mainly in 1949-1953. They were mostly plants of the manufacturing industry. The construction of 28 new engineering plants and a number of textile, garment and timber industries plants was the most significant. They were mostly medium-size plants with the number of employees up to several thousand,

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They represented many times new production branches and in a number of cases they were located in new regions where they were a new impulse for further general development. This direction of the first stage of industrialization helped to create a great number of labour opportunities with relatively low volume of investment means and to lay a certain basis which could then develop by its own forces.

80. The following stage of industrialization of Slovakia in 1954 - 1960 fell in the period when an increased all-state effort and means were directed to the strengthening of the energetic basis as well as the raw material basis for the manufacturing industry and for the building industry. These tasks influenced considerably the direction of the industrialization of Slovakia. The number of new plants put into operation was lower and plants of energetic or primary raw materials industries were almost half of it. That increased also the investment expenditures in industrial construction so that the average annual volume of investment was by 50 per cent higher than in the past period. Also a considerable part of investment was dedicated to the enlargement of plants constructed in the first stage of industrialization.

81. The last newest stage of industrialization of Slovakia is characterized by the construction and gradual start of operation of large industrial capacities mainly in metallurgy and chemistry.

82. The quantitative results of the economic development of Slovakia can be demonstrated in a brief survey of the development of the most important branches and productions:

Table 4

Indices of the growth of gross industrial production  
(1948 = 100)

	1955	1965
Industry - total	275	753
means of production	330	988
consumer goods	230	568
In it selected branches:		
Electricity and heating	418	950
Fuels (products of coal and oil)	189	1,216

Table 4 (c nt.)

	<u>1955</u>	<u>1965</u>
Black metallurgy	233	805
Engineering and metals	433	1,494
Chemistry and rubber	304	1,549
Construction materials	282	744
Glass, china and ceramics	199	529
Wood manufacturing industry	219	390
Textiles	238	490
Garments	209	515
Leather and footwear	156	451
Foodstuffs	258	481

83. The process of industrialization of Slovakia is apparent in the growth of all branches of industry but this growth was not the same in all branches. While the total growth of industrial production was 7.5 times, the production in chemistry and engineering rose about 15 times, in extraction and manufacture of fuels 12 times, in electrical energy and heating 9.5 times, in metallurgy 8 times.

84. The total production of electric energy in Slovakia rose from 83' million kWh in 1948 to 6,716 million kWh in 1965. The consumption of electricity in Slovakia, including the transmissions from other regions, rose more than nine times in that period, i.e. considerably faster than the total industrial production. It results from the structure of the industry built in Slovakia where the very demanding branches for energy as chemistry, production of aluminum, ferrous alloys, etc. have considerable weight.

85. The development of metallurgy in Slovakia was based on the imports of basic raw materials from Eastern European countries, above all iron and nickel ores and bauxite. As the imports come to the CSSR through the region of Slovakia this was an impulse for the location of new plants for the production of aluminum and nickel and of a large metallurgic complex for the production of pig iron, steel and rolled materials in this region. This modern metallurgic complex which will produce more than four million tons of steel solves above all the problem of the structure of rolled materials for the needs of the engineering industry in the CSSR. The increased share of platinum metals will

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and the development of more progressive technologies, especially pressing and skining which will represent savings of metals and growth of productivity of labour. This enterprise will have a great significance for the region of Western Slovakia, previously very backward, as a potential pole of development which can result in other productions in the future.

86. In recent years we can see a rapid development of chemistry on the basis of imported oil and gas in Slovakia. The large refinery of oil connected with petrochemical production needs already today an input of several million tons of raw materials and it is being continuously enlarged by further new capacities for different chemical products, especially primary raw materials for the production of plastic materials and artificial fibres. Similarly a new plant for the production of nitrogen is being enlarged and a new one is under construction. New plants for artificial fibres, for plastic materials products were built, manufacturing capacities in rubber industry are being enlarged, the production of chemical protection materials for agriculture was developed.

87. Conditions for the development of manufacturing branches of industry existed in Slovakia first of all in the resources of labour and in some branches even in certain production tradition. The own basis of the region, as far as materials and semiproducts are concerned, was not significant in the beginning and started to play a more important role in latest years when the production in the primary raw materials branches had been developed.

88. From the point of view of methods and forms of industrialization of Slovakia the development of engineering industry can be the most interesting. The predominant part of its productive activity is the activity which is most demanding on the human factor, beginning with the construction, organization and technology of the production and ending with concrete work operations. The introduction of production in new regions requires the help of intellectual background of existing enterprises in this branch more than in others.

89. The new engineering plants in Slovakia were predominantly built as a part of existing enterprises in the Czech regions which in such manner enlarged their basic funds and capacity in relation with the growth of production

of different sorts of engineering products set by the plan. With the rapid growth of production of all branches of engineering in the C.S.R., also in Slovakia new capacities were being built. Together with the total growth of production also a varied assortment of engineering plants were built in Slovakia. The new plants usually started with the production of simple products on the basis of documentation from the main plants. Often it was a simultaneous production in new as well as in already existing plants. Strong co-operation relations come into being between new and old plants.

90. The gradual perfecting of the new plants, the build-up of their own development and construction basis, acquired experience and the growth of qualification of the workers, brought certain new tendencies in the development of engineering in Slovakia in the last years. The plants are passing to more exacting production programmes, to specialization of production and to the concentration of all-state production of certain products to plants in Slovakia.

91. The structure of products of Slovak engineering is still very diversified and it will be necessary to continue in the process of specialization and concentration simultaneously with the implementation of these tendencies in all-state extent.

92. Already today it is possible to evaluate positively the development in the concentration of certain branches, as e.g. the production of ball-bearings, construction cranes and other mechanisms, of radio and T.V. sets, refrigerators and washing machines, of some types of electrical meters, transformers, railroad freight cars, etc. The production profile of two large enterprises of heavy engineering is being formed through the development of certain sorts of electric and Diesel locomotives, Diesel engines, etc. So gradually the significance of Slovak engineering as a supplier of a number of investment and consumer goods on the market in the CSSR as a whole and its participation in the exports is growing.

93. In other branches of manufacturing industry in Slovakia a relatively rapid growth was registered especially in the production of garments, knitted products and footwear, also by the construction of a number of new plants. In textiles industry the development was realized more by the reconstruction of existing

productive capacities in traditional textile districts in the Czech regions so that this branch is relatively weakly represented in Slovakia (15 per cent of national production).

94. The growth of agricultural production in general and of market produce especially in connexion with the development of market relations in the countryside enlarged the basis for foodstuffs industry. Simultaneously with it this branch went through the process of concentration of production from small industrial workshops to larger technically advanced plants. Such a development existed in meat, dairy and bakery industries where a whole network of new plants predominantly located in district towns and industrial centres was built to enable coverage continuously the growing demand of the population after these staple foodstuffs in all regions. Since 1948 the dairy production grew about ten times, meat about six times and the production of bread and pastry about twice. The production of sugar grew about three times and beer about the same. The new branches are represented by canneries of meat, fruits and vegetables.

95. The realization of the industrialization of Slovakia brought significant changes in the economic structure of this region. That can be proved in the following table about the development of employment in the past 17 years:

Table 5

Structure of employment in Slovakia by sectors  
(in percentage)

	<u>1948</u>	<u>1955</u>	<u>1965</u>
Number of employed in it:	100	100	100
industry and construction	21.2%	26.4%	38.6%
agriculture	60.2	48.8	27.0
other branches	18.6	24.8	34.4

96. The transfer of labour from agriculture to industry and service sector helped to do away with the agrarian over-population. However, it is necessary to observe that the volume of agricultural production grew by 40 per cent thanks to mechanization, higher consumption of fertilizers and economies of scale.

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97. The industrialization process as an impulse of such structural changes is also interesting from the point of view of internal structure of industry.

Table 6  
Development of the share of certain branches  
in the total industrial production

	<u>1948</u>	<u>1965</u>
Extraction and production of fuels, electricity and heating	6.2	8.5
ferrous and non-ferrous metallurgy	4.6	6.6
chemistry and rubber	5.8	9.7
timber, cellulose and paper	14.3	7.5
engineering and metals	15.2	29.7
textiles, garments and footwear	17.6	11.2
foodstuffs	27.8	19.2

98. The development can be briefly characterized by the growth of weight of those branches which represent a progressive element in industrial structure. It is proved especially by the double increase of the weight of engineering and also chemistry while the weight of light and foodstuffs industries declined. Actual investment construction will bring further structural transformations in future years which will again strengthen the position of chemistry and metallurgy.

99. The more productive utilization of labour resources in Slovakia as the result of industrialization and efforts for the balancing of level with the Czech regions was reflected also in the growth of incomes and standard of living of the population in general.

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100. The CSSR has a uniform wage and price policy, the wages of more or less the same categories of workers are almost the same. The differences in average wages diminished simultaneously with the development of industry, especially of new branches more exacting for qualification. The total volume of wage funds grew in Slovakia faster than on national scale because of relatively larger introduction of the population in the labour process and faster growth of average wages. In average incomes per worker and employee the differences are insignificant.

101. As far as the income per capita is concerned, the level in Slovakia is lower. But even here we can see the process of balancing. The difference in pecuniary incomes per capita between the Czech regions and Slovakia which was about 32 per cent in 1955 decreased to 25 per cent. The differences are the results of a still lower degree of introduction of population in labour process, mainly of women, of a higher number of dependants in the households and of a lower intensity in agriculture.

102. The growth of incomes of the population was apparent in an expressive increase of consumption of staple foodstuffs and industrial goods. Since 1948 the consumption per capita grew in the following way: meat from 18 kg to 52 kg, fats from 7 to 16 kgs, milk and dairy products from 134 to 159 kgs, sugar from 19 to 36 kgs. Very significant is the increase of the absorption of industrial goods of long duration; in the last ten years the percentage of households equipped with washing-machines increased from 12 to 56, with refrigerators from 1 to 27, with radio sets from 55 to 82. Half of the households have a T.V. set. An extraordinary growth was registered in the consumption of building materials used for individual residential construction in the villages which represents around 200 thousand new apartments in the past period.

103. To conclude this chapter we consider it purposeful to make certain critical observations evaluating the exploitation of conditions and creation of pre-conditions for the industrialization of Slovakia and some of its results. If we look critically today on some of the aspects of the previous development

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We are conscious that certain errors are not errors of subjects or organs but the results of ignorance of the tendencies of the development. The aim is not to criticize what has been done but to derive conclusions how to continue. In this direction we would like to mention these problems:

104. The development of the structure of industry in Slovakia did not correspond in sufficient degree to the contemporary tendencies of industrial development in the world. The excessive articulation of the production is in contrast with the tendencies of concentration and specialization which help to decrease the costs and help to concentrate the efforts for technical progress of the production process and its products. The industrialization of Slovakia, even if it had its own specific features, was still in many aspects just an imitation of industrial structure in the Czech regions, of the structure which had been developing since the last century which would need a modern reconstruction itself.

105. Similar evaluation is valid for the regional location of industry. Without any doubt the effort for a more regular development of regions in Slovakia has brought very positive results when it led to economic and cultural growth of many backward areas sometimes with several hundred thousand inhabitants. But in certain cases it is possible to have reservations against the location of industry in small localities which make it difficult to form the industrial mentality of the population and the creation of the surroundings where the non-material factors of growth could exert influence.

106. The character of the industrialization of Slovakia was also influenced by certain negative aspects of the old model of management. The excessive articulation of the production has its roots in the autocracy tendencies of this model which were showing in all the economy of the CSSR. The fact that the growth of the volume of gross production was one of the important criteria of economic development led to excessive increase of turnover within the production with simultaneous wastes in production consumption and to relative decrease of the final product. The permanent growth of demand for raw materials, materials and energy swallowed a large part of

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accumulated means for the investment in heavy industry to the detriment of manufacturing branches of the industry, utilization of some domestic natural resources, agriculture and infrastructure.

107. This development has shown itself in the industrialization of Slovakia especiall in the last years in a relatively slower development of manufacturing branches of the industry. This brought with it some problems as the creation of labour opportunities for women, lower rentability of enterprises producing only raw materials and semiproducts, relatively high demands for the transfers of fuels and energy to the region.

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#### IV. FURTHER PERSPECTIVES OF THE INDUSTRIALIZATION OF SLOVAKIA

108. We shall not mention figures concerning the perspectives of industrial development of Slovakia as they are in the plans until 1970 and which presume further annual growth, they are characterized by a certain continuity with the present form and direction of the development. We will concentrate rather on some starting points which we are trying to establish in present works connected with the elaboration of the plan of long-term development.

109. The present stage of economic development of the CSSR is characterized by the effort to overcome the past tendencies of development based predominantly on extensive factors of growth. Preconditions are created for the strengthening of the influence of scientific-technical progress, rational organization of the production and international division of labour and structural changes for the growth of dynamics and efficiency of the national economy. This direction corresponding to present development in the world which moves the focus of attention to the exploitation of the s.c. non. material factors of growth creates new conditions for further industrialization of Slovakia.

110. The development of industry in Slovakia can base itself even further on some favorable conditions which we have already mentioned. For example the situation in labour resources will be still more favourable than in other regions of the republic. The possibility of further mobilization of female labour resources is complemented with a strong demographic wave of youth in 1965-1975. While in 1966-1970 the new labour resources in Slovakia represent about 50 per cent of the all-state resources, in the following five-year period it will be almost 60 per cent and in further five years new labour resources will practically be only in Slovakia. Even if a certain migration of labour to the Czech regions is taken into account, the solution of the problem of specialized preparation of youth and the creation of labour opportunities will be concentrated in Slovakia. Some special measures taken by the Government are directed towards this aim especially the subsidies

for the education of apprentices granted to the enterprises. Vocational schools and universities will be further developed because in new conditions the level of qualification of labour resources is more important than their quantity.

111. Hopeful perspectives for the further development of industry in Slovakia exist in chemistry and metallurgy which produce basic materials for the manufacturing industry of imported costly materials (oil, subsoil gas, ores). It is not only the question of quantity but the question of new sorts of materials which enable the development of progressive productions and technologies, the improvement of the utility of the products and the growth of productivity of labour.

112. This lays the basis for higher exploitation of raw materials. The increase of value added by manufacturing commands further adaptation of branch and products structure of the industry in such a way that the products would contain more of qualified labor. Such an orientation of industry commands further development of the scientific-research basis of the production, development and construction establishments. On the other hand this will create space for absorption of skilled labour which is being prepared in advance at vocational schools and universities.

113. It is possible to count with more favourable development on energetic situation in Slovakia. The continuing conversion of the structure of primary energetic resources resulting especially from the growing imports of oil and suboil gas and also from the programme of utilization of nuclear energy justifies the hopes that it will be possible to limit the long-distance and costly transportation of coal from western parts of the republic to Slovakia. The modern fuel basis will also help to utilize more efficiently the savings of energy and operational and investment costs.

114. In further efforts of concentration and specialization of industry it will be purposeful to proceed in two ways. First of all we should avail ourselves of investment construction which would complement existing

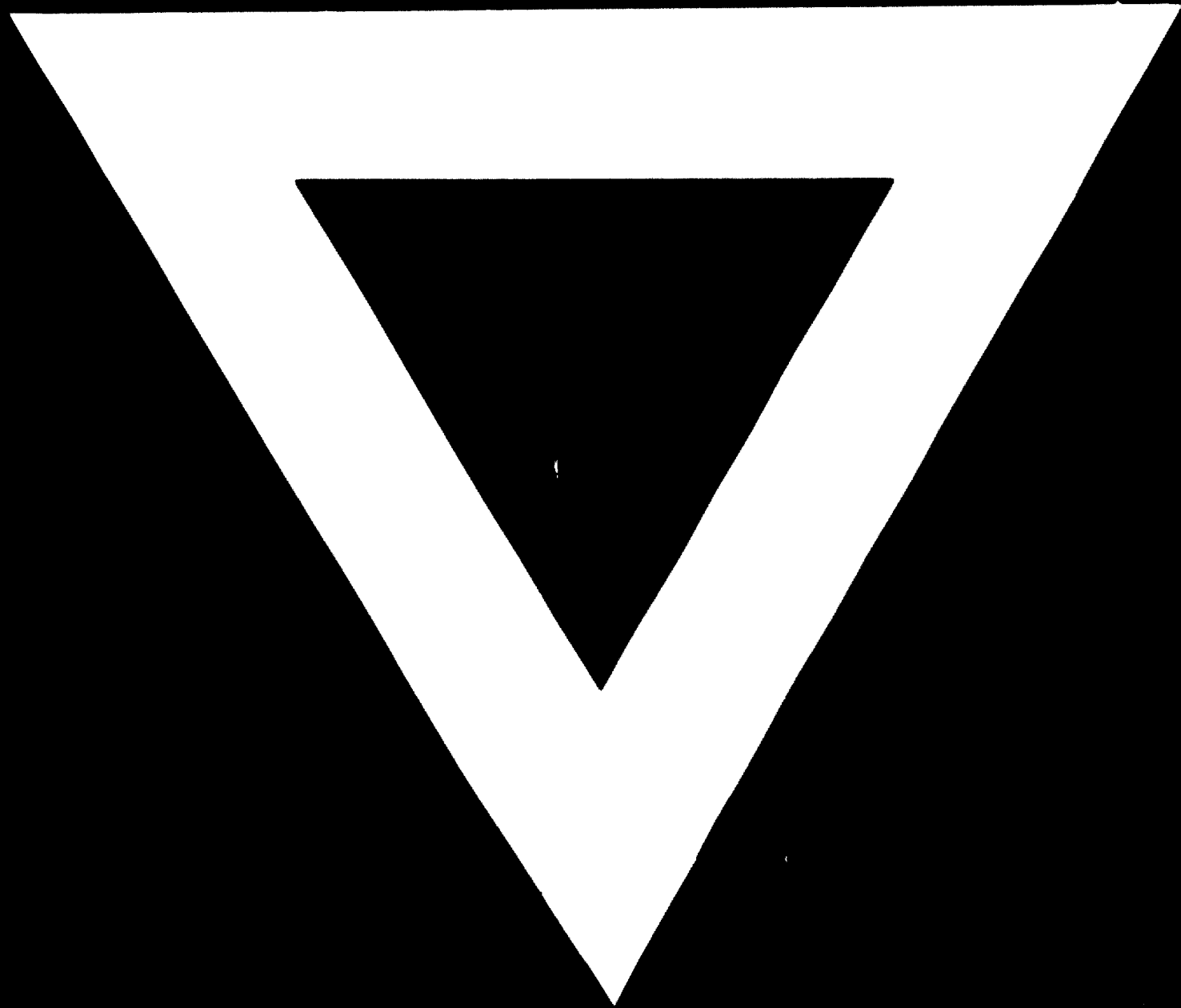
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enterprises and enlarge them to optimal capacity and new enterprises should be built in an extent corresponding to modern requirements of concentration. The second way is a more purposeful re-distribution of production programmes in existing enterprises and plants. This could have the result that even smaller production units specialized on a certain type of component parts or products would be as a part of a certain system of concentrated production a unit capable of self-sustained existence.

115. Further building up of industry will have to contribute to more rational location of industry in Slovakia. It is the question of creation of purposeful production-territorial complexes which have a number of advantages, e.g. in close co-operation relations, in common exploitation of infrastructural facilities, in the possibility of adequate professional mobility and more efficient utilization of skilled labour. The problem of changes in the structure of settlement is in close connexion with it, as it demands more effective influence on the growth of cities and suburban zones to shorten the distances between home and work and to create more favourable living surroundings. Such a model of location of production would help to solve more economically great problems in further construction of infrastructure which to a large extent is a condition of general economic growth.

116. And finally it is necessary to say that we enter the period of bringing to life the new system of management of national economy of the CSSR. It combines planned management and leaves some space for the functioning of market forces. Industrial and economic development of Slovakia in general will be ensured under new conditions in basic proportions by the state economic plan but the concrete construction tasks will be influenced in a considerable extent indirectly by the instruments of financial, tax and subsidies policies. The system of these instruments will be verified and perfected in the process of their operation.





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