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DIRECTORATE OF
INTELLIGENCE

Intelligence Memorandum

The Manpower Situation in North Vietnam

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~~SECRET~~CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
5 January 1968

INTELLIGENCE MEMORANDUM

The Manpower Situation in North VietnamSummary

A fresh appraisal of the manpower situation in North Vietnam leads to the general conclusion that reserves are adequate to meet current demands and that Hanoi could support a military mobilization effort higher than present levels.

During the past three years the North Vietnamese population has been subjected to heavy manpower demands to build up and maintain military forces and to implement countermeasures against the bombing of North Vietnam. These drains admittedly have been sufficient to bring about some tightening of overall manpower availabilities.

Local stringencies are reflected in occasional reports from some regions on the drafting of youths as young as 14. An analysis of all available evidence indicates, however, that these reports are discussing atypical situations and are often contradictory. In the more generalized case the Hanoi regime has acknowledged manpower problems and responded by an increasing use of women in the labor force. However, Hanoi's manpower reports continue to describe conditions and problems that were also characteristic of the North Vietnamese labor force before the war-induced manpower requirements were felt.

A comparison of the manpower situation in both North and South Vietnam is revealing.

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These countries present nearly parallel cases. South Vietnam, however, effectively controls a much smaller population -- 11 million to 12 million -- than North Vietnam, whose population exceeds 18 million. Yet South Vietnam has been able to maintain a full-time military force nearly 1.5 times the size that North Vietnam maintains. The disruption of agricultural production and distribution in South Vietnam is largely due to the huge refugee problem and the interdiction of normal transport routes, both reflecting VC/NVA action rather than the call-up of military manpower by Saigon. If North Vietnam were to call into full-time military service the same share of its population as has South Vietnam, the North Vietnamese full-time military force would be more than double its present size.

Despite the possibility of significant errors in the estimates of manpower resources, North Vietnam's situation does not appear critical. The agricultural labor force of 7 million by itself is such a large component of the total labor force and is so under-utilized that large numbers of workers could be drained off without significant decreases in production. In addition, other sectors of the economy are believed to contain additional slack which could be used to meet mobilization demands.

An examination of the manpower situation in World War II Germany also reinforces the judgment that North Vietnam has adequate manpower reserves.

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1. North Vietnam is a predominantly agricultural country with more than 70 percent of the labor force engaged in farming and related activities. As in virtually all underdeveloped countries, this labor force is grossly underutilized in peacetime. Most of the population has always subsisted on a very low standard of living, calculated to be less than \$100 per capita in terms of total output of goods and services. The population has been inured to hardship, having undergone famine and war over long periods in the life of most adults living today. The country is ruled by a doctrinaire Communist elite, with a revolutionary tradition and a familiarity with suffering. Manpower is relatively mobile, both geographically and with respect to work tasks, since the great bulk of labor is essentially an unskilled force.

2. North Vietnam may now be experiencing some difficulties in filling all its requirements for manpower from the prime age groups. For coastal and antiaircraft defense as well as its home reserves, North Vietnam may have to make increased use of older men and the less physically fit. However, the weight of the evidence does not support a presumption of a numerical manpower shortage. Although the air war ties up large numbers of North Vietnamese in bomb damage repair activities, most of this labor force is so engaged only part time. There are ample reservoirs of labor in agriculture, services, and handicraft industries to supply this low-skill labor force with only a negligible effect on the output of the economy as a whole.

Demographic Data

3. Estimates of the current population of North Vietnam range from 17 million to 20 million. A population of 17 million has been cited in some North Vietnamese statements, and a current population of 20 million can be derived from official North Vietnamese estimates of the annual growth rate of the population applied to 1960 North Vietnamese census data. In a country as undeveloped as North Vietnam, an accurate enumeration of the total population is impossible even

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for a highly centralized regime. [redacted]

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[redacted], North Vietnam's population at the beginning of 1968 was about 18.7 million. Of these, approximately 2.8 million are males between the ages of 17 and 35, more than half of whom are believed to be physically fit for military service. During 1968, an estimated 200,000 males will reach the age of 17, the minimum for drafting into the militia, and slightly less than 200,000 will reach the military service age of 18. Of the latter, approximately 120,000 men probably would be physically fit for military service. [redacted]

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[redacted] estimates are developed through the use of Western demographic techniques and historic demographic data on North Vietnam and provide the data used in this memorandum, although they are not assumed to be without error.

Labor Force

4. In the 15 to 64 age group, there is a potential working force of 10.4 million, of whom about 4.9 million are male. Excluding the military forces and students, the work force totals about 9.8 million, of whom about 55 percent are female. The following tabulation shows an estimate of the labor force according to major sectors of employment as of 1 January 1968:

<u>Sector of Employment</u>	<u>Thousand Persons</u>
Agriculture	7,000
Services	800
Industry (including handicrafts)	800
Transport and communications	400
Trade	300
Construction	250
Other	250
Total	9,800

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The estimates of the labor force, by occupation, are based on statements by North Vietnamese officials. Although the number of workers in each of the above categories may be subject to a substantial margin of error, the large number in agriculture and the handicraft industries has been reported with some consistency. Similarly, there is little doubt of the continued employment of a relatively large labor force in the services sector of the economy. These three sectors, in which individual productivity is low, provide a reservoir of manpower that can be tapped with little adverse effect on the total domestic production.

5. Before the bombing began in 1965 the North Vietnamese labor force was largely unskilled, underemployed, and, at least in agriculture, seasonally unemployed. Agriculture employed 70 percent of the civilian labor force and was particularly labor-intensive. Through natural increase, more than 120,000 males and almost the same number of females are added to the agricultural labor force each year. By keeping the agricultural labor force steady at about 7 million since the beginning of 1965, the regime apparently has freed a total of more than 700,000 potential agricultural workers for non-agricultural activities. Henceforth by simply drawing on the natural increase of men in the agricultural labor force and permitting the natural increase of women to replace an equal number of men, the regime would be able to obtain a large additional number of males for military or war-related tasks. In addition, the present size of the agricultural labor force could be reduced substantially without producing a proportionate decline in agricultural output because of the low marginal productivity of each farmer. For many years the regime has had a goal of reducing the number of farm workers per hectare from the present level of three workers per hectare to only one person per hectare.

6. It is possible over the longer term for North Vietnam to compensate for a considerable reduction in agricultural labor by the increased use of agricultural machinery and materials. The amount of fertilizer and equipment used per hectare is well below that of Western countries. The

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increased use of equipment, such as tractors, trucks, irrigation pumps, and harvesting machinery, would undoubtedly decrease the labor requirement per unit of rice produced. So far, however, we have seen no great emphasis by the regime on the importation of such labor-saving machinery. Alternatively, shortfalls in food production could be made up by imports from the USSR and China. Such imports are now taking place.

7. Handicraft industries account for about one-third of the total output of North Vietnamese industry and employ about 600,000 workers. This work force distributed throughout the populated areas of the country has been and continues to be a source of manpower that can be diverted with only slight adverse effects on the economy.

8. In addition to the manpower reservoir in agriculture and handicrafts, there are various smaller pools of manpower in other occupations from which men could be drawn. We have, however, little evidence of diversion of manpower from these sectors. There are estimated to be approximately 120,000 males in trades outside of the state sector, about 180,000 in consumer services and about 40,000 males in teaching. Therefore, about 340,000 males of working age and demonstrably capable of some economic activity are available for military-related work. In addition, at least 40,000 male students above the age of 15 are studying in North Vietnam and about 5,000 are studying abroad. These have not been included in the labor force. The number of students is growing, especially those studying abroad. Excessive diversions from these groups for war-supporting tasks would undoubtedly result in a decline in living standards and, in the case of students, would be counter-productive in the long run, but might be considered justifiable under the circumstances.

9. The bombing of North Vietnam's industrial facilities has freed a small number of factory workers for other activities. Industries that have been paralyzed by direct bomb damage and/or outage of electric power were primarily modern facilities using complex machinery and modern production techniques yielding higher labor productivity. It is estimated that by mid-1967 about 30,000

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workers had been put out of work by the damage to modern industry. Although the workers freed represent only about 4 percent of the industrial labor force, they have a higher degree of technical competence, skills, and industrial discipline than the average member of the labor force. They undoubtedly play a significant role in the maintenance of production by dispersed industries, in the repair of damaged facilities, and as cadre for supervising general bomb damage repair work.

10. Since early 1965, North Vietnam has had the use of some 34,000 Chinese engineering troops to repair bomb damage and to build new lines of communication in the northern areas and some 16,000 Chinese antiaircraft artillery troops to defend the two rail lines to China. These forces were introduced soon after the US bombing began. There has been relatively little change in the total numbers, although regular rotation has been carried out. Their use stems primarily from shortages of construction skills and organizational knowhow among the North Vietnamese rather than gross manpower shortages. If North Vietnam were suffering a general manpower shortage, we would expect that the number of Chinese laborers could be greatly increased.

War-Induced Manpower Requirements

11. Major war-induced manpower requirements in North Vietnam are twofold: (a) those to support the buildup of Communist military forces and to replace combat losses in North and South Vietnam; and (b) those required to repair the damage from airstrikes against North Vietnam.

12. North Vietnam's armed forces were built up rapidly from about 230,000 in February 1965 to the present force level of 480,000, or to about 3 percent of the population. This buildup has required the mobilization of less than 20 percent of North Vietnam's draft-age men, and Hanoi has not found it necessary to alter the current military service ages of 18 to 35. The rate of increase during 1967 was well below that of the two previous years. The military buildup alone has required about 120,000 persons annually during 1965 and 1966. During 1966, estimated North Vietnamese combat and infiltration losses ranged from 35,000 to 45,000 men, and during 1967 these losses were much higher. The manpower requirements

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have been met for the most part by the drafting of almost all the 120,000 physically fit males estimated to reach the draft age each year. The regime has also had to mobilize some reservists. During 1967, there has been no evidence of changes in North Vietnam's mobilization program. Unless North Vietnam sees a need for maintaining a much larger military force in the North in 1968, the number of physically fit males reaching the draft age should meet or exceed the number required for military service in South Vietnam at present loss levels.

13. The principal diversions of civilian manpower have been those required to repair and build lines of communication, to disperse industry, and to man the transport system. The services of 475,000 to 600,000, or about 3 percent of the population, have been required to offset the effects of airstrikes on North Vietnam. Of the total in war-related activities, less than 200,000 are occupied full time. The part-time civilian force is used primarily as conditions warrant. At any one time, more than one-half of the part-time workers may be engaged in the repair of lines of communication and about one-third in civil defense. In substantial portions of the country, weather conditions prevent air attacks for several days at a time. During respites from bombing, the part-time force is more actively engaged in repairing bridges, filling in craters, and stockpiling materials. For example, an article published in Hanoi in September 1967 discussed the mass use of nearly 300,000 people in the area south of Vinh for several days and nights on two separate occasions for completing road repair and road construction tasks. It is probable that the concerted activity described in this article was undertaken to capitalize on the absence of air attack during the 1967 Tet or previous bombing pauses.

Evaluation of Reports on Availability of Manpower

14. Reports that North Vietnamese youths below the age of 18 are being drafted are infrequent and of highly dubious character.

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15. The discrepancy in the minimum conscription age might be explained by the fact that youths participate in bomb damage repair work or in air defense activities under military leadership. In addition, it is also possible that youths below the draft age have volunteered and have been accepted for military service. The occasional North Vietnamese soldier captured in South Vietnam who claims to have been drafted at an early age possibly is either understating his age to obtain leniency or had originally been a volunteer. Finally, the recent reports of the very young being drafted are not new. Similar claims had been made in 1965, a period when it is generally agreed there were no serious manpower problems in North Vietnam.

16. Statements by the North Vietnamese regime during the last year which mention a manpower problem in North Vietnam are similar to complaints the regime has been making for many years and do not necessarily indicate a worsening manpower situation. An article in *Hoc Tap* of July 1965 used almost the same terms to describe the manpower situation in North Vietnam, as did an article in *Hoc Tap* of July 1967. Despite the diversion of manpower that had occurred since the bombing, Deputy Premier Le Thanh Nghi in the July 1967 *Hoc Tap* article still referred to the large labor potential of the country, the serious waste of labor, and the present great volume of idle labor. The regime has been complaining for many years

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that the North Vietnamese work force is poorly organized, that manual workers make up too large a percentage of the labor force, and that this condition must be corrected.

17. Similarly, the recent statements from Hanoi that women are participating to a greater extent in the labor force are a continuation of statements that the regime has been making for years. The current degree of participation of females in the labor force results from trends established well before the bombing started. As far back as 1962 the regime boasted that women accounted for 60 percent of the work force in agriculture and for most of the working staff in light industries.

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APPENDIX

The War Supporting Role of Manpower
in South Vietnam and World War II Germany

This appendix analyzes the manpower situations in South Vietnam and in World War II Germany to assess the extent to which these countries were able to commit their population to war supporting activities. The case of South Vietnam is very similar to that of North Vietnam, yet the government of South Vietnam, with fewer population resources, has sustained a much greater manpower commitment than has North Vietnam. Although World War II Germany cannot be directly compared with North Vietnam, it was chosen to provide some insight into the extent to which a highly industrialized state can commit its population to war supporting activities. The situations in South and North Vietnam are not completely parallel and of course the comparison of the German experience with that of North Vietnam must be a cautious exercise. Nevertheless, the experiences of other countries are of value in helping to assess the manpower drains that an economy can stand during wartime.

Manpower in South Vietnam

1. The estimated population of South Vietnam was about 16 million at the end of 1964 and more than 17 million at the end of 1967. At the end of 1964, only about 7 million people were under the control of the Government of Vietnam (GVN); by the end of 1967, the controlled population totaled 11 million to 12 million. In recent years the population available to South Vietnam to meet its manpower requirements has been equal to from 40 to 70 percent of North Vietnam's manpower resources.

2. Despite this much smaller population base, the government of South Vietnam has been able to maintain a full-time military force nearly 1.5 times that of North Vietnam. GVN military forces, including paramilitary and national police, have grown from about 610,000 at the end of 1964 to about 740,000 at the end of 1967. This force is

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nearly 6 percent of the population controlled by the GVN. North Vietnam's armed forces, on the other hand, are only about 3 percent of its population. There are, of course, differences between North and South Vietnam which make absolute comparisons questionable. However, in major ways there are parallels. For example, the industrial base which supports the war effort in both countries lies outside Vietnamese national borders -- in the United States for South Vietnam and in the USSR and Communist China for North Vietnam. Second, both Vietnams are essentially labor intensive, subsistence agricultural countries that supply most (but not all) of their food needs. Third, both North and South Vietnam have made considerable use of women in their civilian labor forces. Fourth, the war has contributed to a decline in agricultural production in both countries. Finally, foreign military engineering forces are an important bolster to the logistic supply lines within each nation.

3. South Vietnam has more men in uniform than the North, as shown in the following tabulation, but it is difficult to equate full-time military forces in South Vietnam to those in the

Million Persons as of 1 January 1967

	<u>South Vietnam</u>	<u>North Vietnam</u>
Population	10 to 11 <u>a/</u>	18.3
Civilian labor force	5.6	9.6
Agriculture	4.0	7.0
Non-agriculture	1.6	2.6
Military forces	0.7	0.5

a. GVN controlled population only, which compares with an estimated total population of 17 million as of 1 January 1967.

North. For example, North Vietnam has about a 400,000 part-time armed militia in addition to its nearly 500,000 full-time military forces.

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South Vietnam's Popular and Regional Forces resemble militia in organization, training, and mission, but they serve full time.

4. South Vietnam's success in maintaining such relatively large military forces is particularly significant in view of its greater desertion problem, the large number of casualties, and the difficulties of maintaining control over the population. The GVN armed forces have had nearly 60,000 men killed in action in the last seven years and another 140,000 to 250,000 wounded during the same period. In addition, they have experienced a desertion/defection rate of about 100,000 a year. Although some of the latter losses are not permanent, South Vietnam has had to maintain a large flow of new recruits into its armed forces. The military mobilization program has been accomplished by a government that has been much weaker than the Hanoi regime. South Vietnam has not yet drafted men below the age of 20, although it intends to. North Vietnam has fully mobilized its 18 and 19 year olds.

5. Despite the large numbers of manpower mobilized, the refugee problem, and the general insecurity in the country, economic production has not suffered drastically. Rice production in 1967 was down less than 20 percent from the relatively high level achieved in 1964. Employment in agriculture fell from 5.7 million in 1960 to 4 million in 1966. Although the loss of manpower clearly has affected rice production, numerous other problems related to the war also have contributed to the decline in output. For example, rice production would probably recover substantially if security in the countryside improved. If, in addition, the approximately 2 million refugees could be resettled and assigned to productive tasks, the agricultural manpower problem would disappear. Therefore, the existence of a 740,000-man armed force and a rapidly increasing non-agricultural labor force -- which roughly doubled from 772,000 to 1,575,000 during 1960-66 -- do not appear to have had a significant effect on agricultural production.

6. The big growth in South Vietnam's non-agricultural labor force began with the commitment of US combat forces in mid-1965 and the

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continuing need to support the increasing number of troops. Until 1967, demand for unskilled as well as skilled labor outpaced the supply. For example, there was a shortage of Vietnamese construction workers to help build airfields, bases, and storage facilities for US forces, as well as a lack of transport workers. As a result, wage rates in construction and transport rose markedly. The rapid growth of non-farm economic opportunities, along with persistent insecurity in rural areas, stimulated a large migration to urban areas. In addition, non-agricultural labor was diverted to these priority industries. South Vietnamese coastal shippers diverted their boats from hauling rice to moving supplies for US troops. Although the demand for Vietnamese labor, particularly unskilled labor, has leveled off since the end of 1966, US military and civilian agencies and their contractors still directly employ about 130,000 Vietnamese. The demand of US personnel for services and handicrafts has also created numerous new jobs for Vietnamese.

7. Although the GVN has been able to meet a considerable proportion of the demands on its manpower resources, it does have some problems and has received vital support from its allies. The United States provides manpower directly for military logistical support and for medical and other highly skilled services. The United States is also largely responsible for the construction and maintenance of roads, bridges, and other transport facilities. In addition, the US-financed import program is to some extent a substitute for domestic labor.

Manpower in World War II Germany

8. World War II Germany and present-day North Vietnam are two highly disparate economies. Germany was a highly industrialized state with its own munitions and war supporting industries. North Vietnam has an essentially subsistence agriculture economy that is almost completely dependent on external sources for the materials and munitions needed to sustain the war.

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9. The fact that the Germans sustained their massive war effort for the most part from their own resources meant that in almost every respect the German commitment of manpower to war supporting activities far exceeded that observed in North Vietnam today.

10. The German armed forces, for example, reached a peak of 10.2 million during World War II, or about 13 percent of the population. North Vietnam's full-time military forces total 480,000, or less than 3 percent of the population. Germany committed about 6 percent of its population -- 4.5 million persons -- to air defense and repair activities, compared with approximately 500,000 persons, or less than 3 percent of North Vietnam's population. The manpower drain in deaths as a result of enemy action was also proportionately far greater in Germany. An estimated total of at least 3.8 million Germans -- about 5 percent of the population -- were killed by enemy action. The manpower drain in North Vietnam as a result of enemy action through the end of 1967 is estimated to be 0.5 percent of the population, or only one-tenth of that sustained in Germany.

11. Although the German manpower commitment constituted an obviously heavier burden than that noted in North Vietnam, there is little evidence that the availability of manpower was a meaningful restraint on Germany's ability to carry on large-scale military operations -- at least up to the last year of the war. The breakdown of distribution systems, the destruction of power sources and key industrial facilities, and the loss of territories were the key factors underlining the collapse of the German war machine.

12. During World War II, more than 12 million men were taken into the German military service. Despite this mass transfer from the civilian labor force and other war-related manpower drains, Germany never fully mobilized its total manpower resources. Manpower pressures were not critical until the last months of the war, when Allied forces had already assured a total military victory.

13. Manpower pressures in World War II Germany were alleviated by a number of factors, one of the most important being the abundant use of

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foreign labor and prisoners of war. At the end of the war the use of upwards of 8 million foreigners and prisoners of war accounted for about one-fourth of the civilian labor force. They accounted, for example, for 22 percent of the agricultural labor force of about 11 million persons, which was substantially unchanged from its pre-war levels. The rest of this captive labor was used in the non-agricultural labor force, which had declined by only about 10 percent during the course of the war.

14. The failure of Germany to mobilize additional labor to offset military mobilization programs is thus explained in large part by the use of foreign labor. It is also explained by an increase of 23 percent in labor productivity from 1939 to 1944.

15. Significantly, the Germans apparently found it unnecessary to increase the use of women in industry during World War II. At the end of 1939, German women accounted for about 37 percent of the German civilian labor. The number of women employed in the German labor force remained practically unchanged throughout the war, in contrast to the increased reliance placed on them in the United Kingdom and the United States. The German experience is in even sharper contrast to North Vietnamese practice. Hanoi encourages the employment of women in all sorts of economic and war-related activities, and women may account for more than one-half of North Vietnam's labor force. If the German government had found it necessary to increase the use of female labor even to the extent that the United Kingdom did, then it could have added more than 2.5 million persons to the labor force.

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