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THE BRAZILIAN EDUCATIONAL SYSTEM

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Part I: General Analysis of the Brazilian Educational System

The key to understanding the Brazilian educational system lies in the recognition of the dual nature of the Brazilian economy. Each of the states can be regarded as the composite of two different economic realities: the "traditional" economy is characterized by small scale commercial and subsistence farmers, impoverished plantation and home handicraft workers, while the "modern" section is based on advanced technology, mechanized factories, and wage labor.

The contrast between the dynamism of the "modern" sector and the poverty and backwardness of the "traditional" sector is obvious in every state in Brazil. In the South Central states, the modern sector dominates in both the urban areas and the mechanized farms. In the Northeast, the "traditional" sector has only recently begun to decline with the growth of modern industry.

The process of Brazilian development can be seen as the expansion of the "modern" sector and the gradual replacement of the "traditional" elements. It is the growth of the modern sector which is the motor of the visible progress in the Brazilian economy, creating unforeseen positions and requiring unanticipated tasks in new industries. Migrants propelled from the traditional countryside and pulled toward the cities find themselves at first in the "traditional" sector within the cities doing marginal jobs and faring little better than prior to their migration.

But once in the city, the migrant now has the chance of being drafted into the modern sector. The new industries need workers and train their skilled labor force. The construction teams demand foremen and tradesmen as well as unskilled manpower. While there is considerable question as to the benefits of the cities' poorest compared to the rural peasant, it is the urban worker and his family who at least have the chance to leap into the "ring" of higher-paying occupations. In the city, the peasant has joined the influx of those bidding for jobs in the modern factories, and failing "to enter the modern sector", he may remain on its fringes by working in marginal jobs and in petty commerce.

What are the migrants' chances of getting a job in the modern sector? Indeed, how do the growing industries select men for their labor force? How does a worker enter the modern sector from the ranks of the unemployed and underemployed? Once inside, how does he advance?

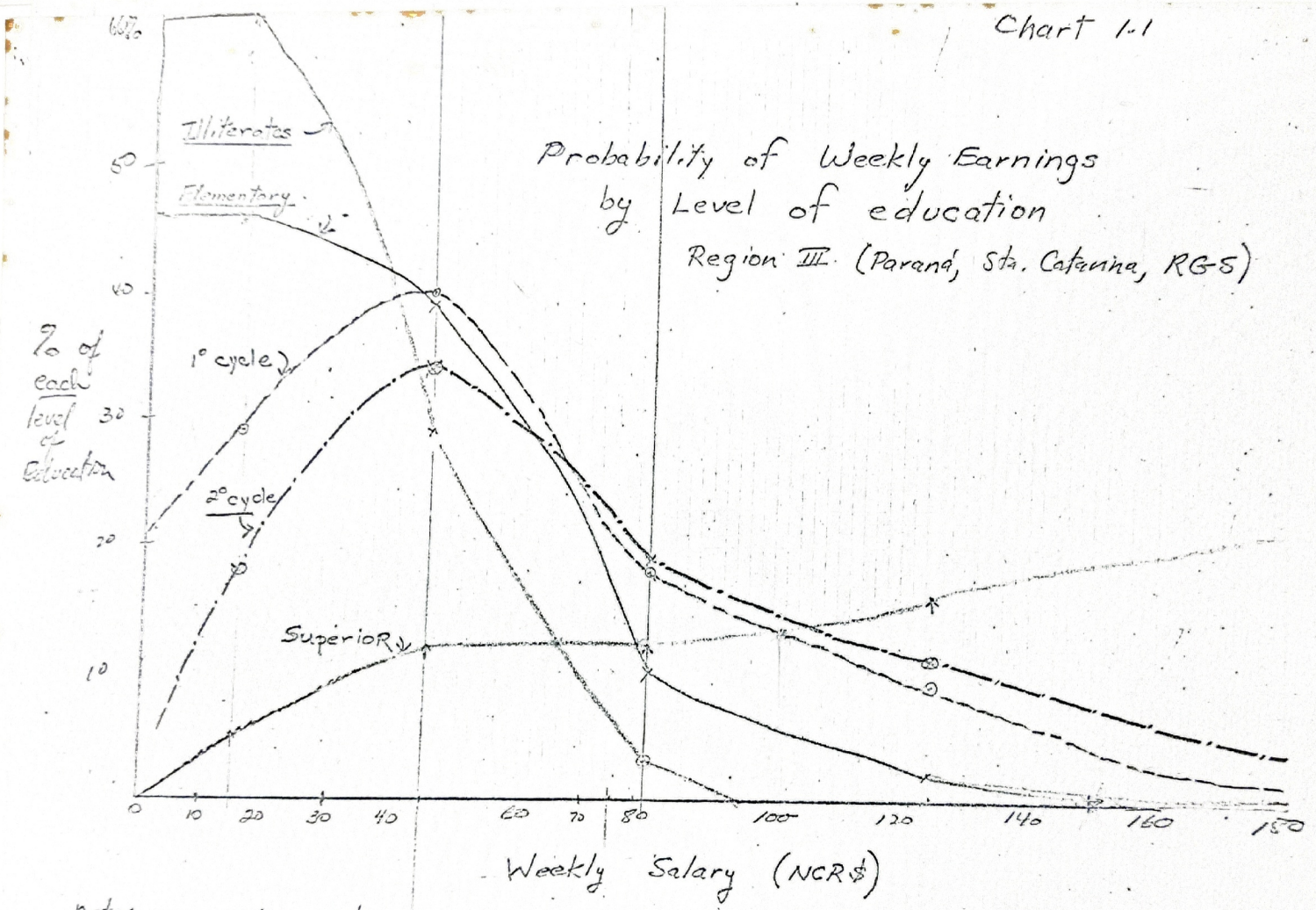
Formal education in Brazil has been used as a major factor which serves to "regulate" access to the modern sector. Depending on the degree of industrialization and the condition of the labor force, the modern sector requires a minimum "threshold" level of discipline -- an acceptance of the rules of cooperative workmanship and basic learning skills--upon which the enterprise can build in training a productive worker. In the less industrialized states of the Northeast, the minimum "ticket of entry" for the modern sector might involve a few years of primary school which help implant basic social attitudes and behavioral rules and which instill at least the rudiments of literacy. In the more advanced states of South Central Brazil, completion of primary school and some intermediate level education may be a bare minimum to gain admission to the circle of jobs in the efficient modern industry.

The basic point is simply that the expanding modern sector "selects" only a small proportion of the surplus labor which is overflowing from the traditional sector. Those workers who have had the benefits of some formal schooling and who have achieved some of the elements of socialization necessary for an industrial labor force -- will be drawn into and retained in the modern sector. On the other hand, those who have never had access to some of the basic lessons of formal schooling, and have never achieved the "threshold" of learning experience required to hold a position in the modern sector, are likely to be condemned to the traditional sector with its low incomes and negligible chance for improvement.

What is the minimum threshold for entry into the modern sector? What evidence do we have?

In Charts 1.1 and 1.2, we have plotted the distribution of earnings by levels of schooling for employees in the Southern region which includes the states of

Chart 1-1



note: area under each curve = 1.00

Source: Table 4.2. "Salário", Homens, "Empregados, por grau de instrução, segundo o sexo e grupos de Salário semanal (somente em dinheiro)," p. 36, Pesquisa Rep. por Amostra

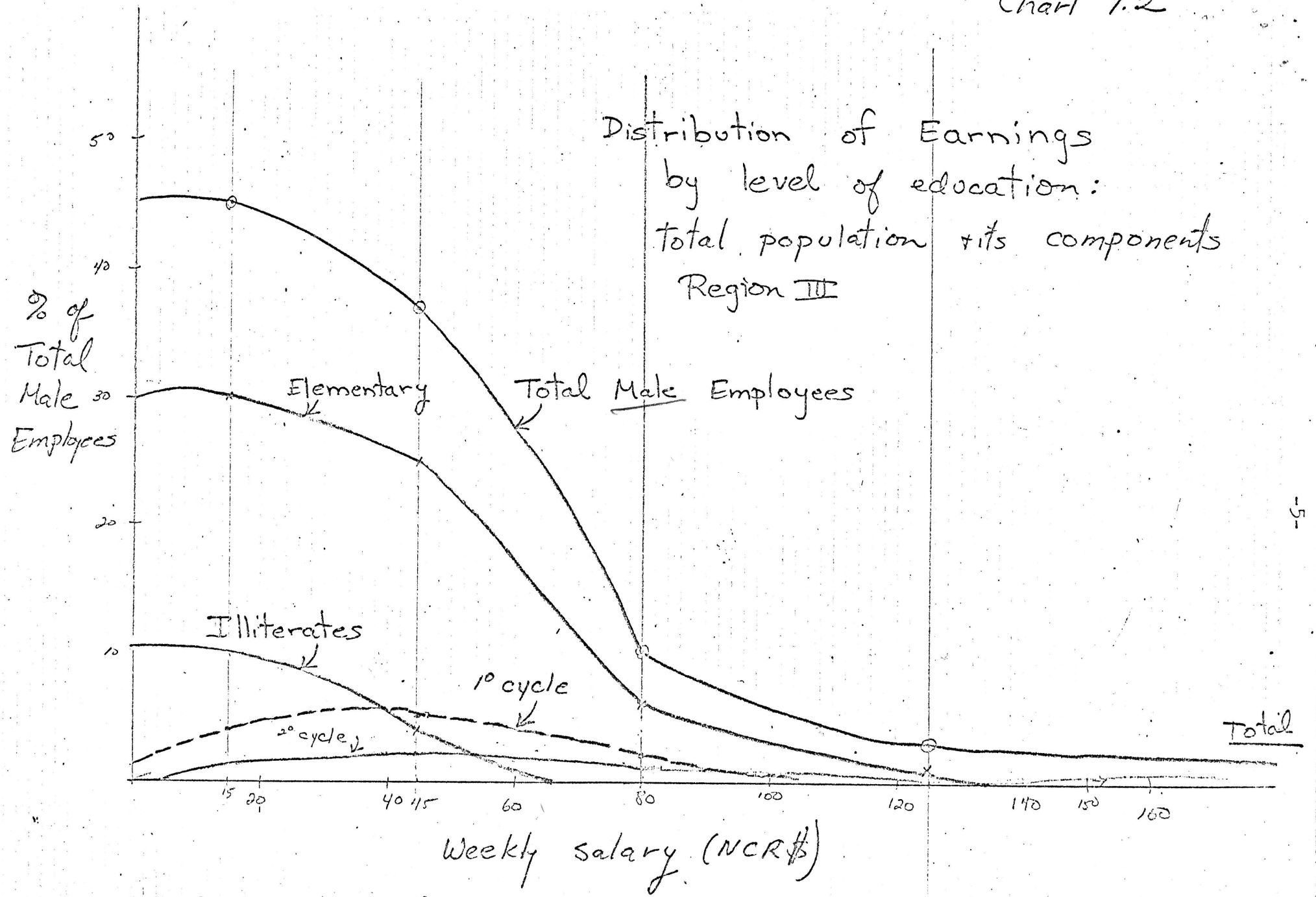
Parana, Santa Catarina, and Rio Grande do Sul. From the curves in Chart 1.1, we have evidence of the probability distribution of earnings attained by workers of different levels of education. For example, practically all of the illiterate employees have incomes of less than NCr $80 per week, and the greatest percentage of illiterates fall in the lowest wage category of NCr $15 per week. A much larger fraction of those workers with some elementary education had salaries over NCr $80 and many had extremely high salaries.

A more noticeable change in the shape of the curves in Chart 1.1 occurs in the earnings distribution of workers with some first cycle intermediate schooling (ginasio). In this group, a relatively small fraction are in the lowest earnings level (NCr $15). Most are located in the NCr $45 level, and a considerable proportion are actually earning above NCr $80 per week. The earnings distribution of workers with some years of colegio is shaped very similarly but a larger proportion of workers are in the higher income groups. The second major difference in "earning probabilities" occurs for those who have some university ("superior") schooling. The bulk of this distribution lies above the NCr $80 level.

Again, we must emphasize that the "break" between the earnings of illiterates and those with some elementary education on the one hand, and the workers who attended some years of secondary school on the other hand, applies only to the region studied. Indeed, in this South Central region with a longer tradition of public education, primary schooling has reached more of a mass base. The data suggests that access to the "ring" of modern sector positions might be reserved for those who have completed both primary school and a few years of secondary.

In Chart 1.2, the distribution of earnings for all male employees is presented so that the relative importance of each type of educated labor can be seen. As suggested above, the largest component is first, the type of employee who has some years of elementary school and, second, the class of illiterates. We note that the fraction of those with some First or Second cycle education is relatively minor,

Chart 1.2



Source: Table 4.2, (IBGE) Pes. N. A D., 3° Tr. 1968, Reg. III.

and the number of university achievers is so low that it fails to appear on the chart! The region is, as the differential earnings suggest, relatively rich in workers who have attended some elementary school (as well as illiterates), and relatively poor in those who have gone to high school.

The importance of regional differences in earnings by level of schooling, cannot be overemphasized. The different Brazilian regions have very different educational needs and endowments.

A similar graph of the Northeast would reveal an overwhelming proportion of illiterates and a significant earnings premium for those with some elementary schooling. An educational program for Brazil should study the current endowments and needs region by region, using the earnings of employees who have achieved various educational levels as indicators of the rewards that the economy is actually placing on schooled manpower.

Which level of education would be the best investment? Which level of schooling yields the biggest payoff? The answers, of course, will vary region by region, and require much more calculation and slightly more information than we have assembled in this report. In addition to the differential earnings data which the IBGE has collected, we must know the age distribution of these workers and the age of entry into the labor force. Since earnings of workers over their lifetime tend to be very similar for many countries (see S. Bowles, Planning Education for Economic Growth, Harvard University Presss, 1969, for earnings profiles of U. S., Greece, Nigeria, and India), it should be possible to "borrow" the pattern of lifetime streams from a similar economy.

Calculation of "highest rates of return" to educational investment or crude benefit-cost ratios are simply a matter of discounting the differential stream of earnings between the various levels of schoolings and then comparing the "rewards" to the "costs" of the increment in education. This type of calculation can be carried out region by region, using the differential earnings revealed in the IBGE Family Surveys, and the costs of different levels of schooling which we estimate

later in this report.

In our opinion, the most valuable uses of our numerical research on educational expenditures (which we report in Section II) lie first in the calculation of benefit-cost ratios for various levels of education by state, and second, in the testing of the realism of enrollment and budget goals in Brazilian educational programs.