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Social Mobility under Labor Market Segmentation in Brazil¹

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The literature on market segmentation has recently emerged as a reaction against the popular human capital theory. According to this new approach, the human capital theory has, at minimum, overstated the role of education in the economic and social performance of the individuals and society. The market segmentation theories argue that the "true" causes of one's performance ought to be sought not in the individuals but, rather, in the labor market. Economic and social progress, at the individual level, would be determined more by the demand than by the supply forces (Cain, 1976).

This literature, despite its youth, has already become quite diversified. At least three lines of thought can be identified in the area of market segmentation (Lima, 1980). The first, and also the pioneer theory tends to stress the interaction between market and personal factors and, as a final result, gives primacy to individual forces in the determination of both wage and mobility. Doeringer and Piore (1971) probably best illustrate this position. According to them, primary markets are those which offer the best jobs in terms of pay, security, and mobility; the secondary markets offer the reverse. These two markets recruit different individuals. By being more

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modern and productive, the primary segment tends to recruit well-educated people and to acculturate them in terms of discipline and efficiency. By being more traditional and less productive, the secondary segment plays the opposite role, in which individual deviant behavior, such as absenteeism, undiscipline and low productivity, is accepted. These "problems" are considered functional aspects of the secondary market. This functional complementarity is a key reinforcing mechanism of the dual labor market picture (Doringer and Piore, 1971).

Another perspective places full responsibility on labor demand. Labor markets are only segmented as a reflection of the industrial structure. Capital intensive firms enjoy a privileged oligopolistic position in the market. They are the "core" and, as a consequence, are in a better position to support a primary and unionized labor market that offers jobs with good pay, security, and promotion. The remainder is the "periphery," which is formed by labor intensive firms with low productivity and less desirable jobs. This dichotomy is purely a result of the nature of the firms and has nothing to do with individuals (Bluestone, 1968).

A third position argues that dualism is a result of longer and deeper historical forces. Market segmentation is a product of capitalist evolution and a reflection of the class structure: The primary segment is a proxy for the *bourgeoisie* whereas the secondary market is a proxy for the *proletariat*. Along the way, a few groups were able to establish capital intensive firms that offered good jobs with good prospects. The other groups were excluded by the same process and forced into a secondary market that employed the proletariat (Bowles and Gintis, 1976).

There has been a rapid theoretical diversification of the segmented labor market approach. Rather than being in competition, these different views seem to have moved toward a convergence. They all place a high priority on the market itself, and they all see the effects of education as being highly affected by the nature of the labor market. Individual economic and social performance are a result of the interaction between market and personal forces. In this respect, these views may soon cause substantial changes in prevailing views of stratification and social mobility (Beck *et al.*, 1978, 1980).

As a result of their theoretical diversification and of their growth, segmented labor market approaches vary substantially in terms of operational definitions and measures. The literature shows labor market divisions that are based on several individual factors (race, education, age, occupation, etc.) and characteristics of firms (core versus periphery, capital intensive versus labor intensive, modern versus traditional, etc.). The proliferation of many different criteria seems to indicate that we are, indeed, in a very formative phase of these theories.

This chapter explores a labor market division that has high empirical relevance to the Brazilian economy—the formal versus informal. The conventional primary versus secondary dichotomy seems to be legally blessed in Brazil. People who work in the primary sector have a sophisticated and *formalized* contractual labor relationship, whereas the others are *informally* related to their jobs and employers. Moreover, this formalization–informalization dichotomy splits the labor world into two very distinct segments. People in the formal sector have an immense range of benefits in comparison to those in the informal sector.

This chapter is exploratory, its purpose being to describe the market division of the labor force by examining two relationships that are crucial for stratification theories. First, we will see how market segmentation, based on that typology, is related to sector, age, and sex. Second, we will examine how market segmentation is related to stratification and mobility variables in Brazil.

Labor Market Participation in Brazil

This chapter focuses on the antecedents and the consequences of labor market participation in Brazil. It has been pointed out that participation in the formal or informal sectors of the labor market is directly associated with legal categories in Brazil. Whoever participates in the formal sector has a series of economic and social benefits that are guaranteed by law. For the reader who is unfamiliar with this dualism in Brazil, a brief description of the situation is necessary.

There are three basic ways of obtaining access to labor law benefits. The first way is to be a *registered worker*. Registered workers carry a *labor card* for identification that proves that they are entitled to all the benefits of labor legislation. They are employed in the private sector, and their names are recorded with the Ministry of Labor. The employee's discharge benefits are generous and, for this reason, employers are sometimes reluctant to hire new workers or to release those they have already hired.

The second way to gain access to legal benefits is to be employed by a governmental agency. At all levels of government, public servants share benefits of labor legislation that are at least as good as those just described, if not better. They cannot be discharged unless they have been convicted in an administrative or criminal process.

The third way of gaining labor law benefits is to be an employer or a self-employed professional. These people have access to most of the benefits of registered workers and public servants. Technically they do not have

legally protected job security, but most of them are protected by the relatively high demand for their services.

Job security, as one of these benefits, deserves a short commentary. It is practically impossible to discharge or to temporarily lay off a civil servant. Turnover is practically nonexistent in Brazilian civil service. To a lesser degree, the same remains true for those employees of private firms who are registered workers under the employee benefits program. Those workers who are discharged are likely to be forced into the informal sector. The less education and experience they have, the more likely it is that they will move downward in the labor market. On the other hand, most turnovers occur within the formal sector so that vacancies in the formal sector are normally occupied by "formal workers," rather than by newcomers.

Looking at the situation from the market perspective, it is very costly to fire public servants or registered workers, particularly if they are qualified to perform special tasks. At the same time, it costs little or nothing to fire and replace unskilled or semiskilled workers who are not registered. Generally, lower ranked public servants and registered workers without special occupational qualifications are privileged in comparison to others who are unregistered and have similarly low levels of qualification. Unlike the latter, those in the formal labor market have passed through a port-of-entry. Thereafter, they can be expected to retain their jobs for much longer periods and to advance in their careers. If such a worker learns new and unique skills on the job, he may quit one firm to work for another in the formal sector that offers him a better wage with equal job security. Those who are not in the formal sector have no security and no chance of upward mobility.

Given this rigid division between the "haves" and the "have-nots," the Brazilian labor market seems to provide a good case for empirical explorations based on market segmentation theories. Before continuing, we will specify the detailed benefits and costs of participating in the formal and informal labor sectors.

A signed working contract under the labor legislation provides the following guarantees for the employee: (a) retirement; (b) medical care for oneself and one's family; (c) access to credit facilities for housing and emergencies (FGTS)²; (d) participation in profit and dividends (PIS)³; (e) monthly allowances for children and spouse; (f) a bonus of 1-month's salary paid at the end of the year; (g) 20 working days of vacation every 12 months; (h) a salary increase every 6 months based on the inflation rate; (i) a real salary increase once a year based on bargaining and productivity and; (j)

² FGTS: *Fundo de Garantia por Tempo de Serviço* (Guarantee Fund for Time in Service).

³ PIS: *Plano de Integração Social* (Social Integration Plan).

1-month of grace-period in case of dismissal from the job.⁴ These rights are for all contractual workers who have a working card (*Carteira Profissional*) issued by the Ministry of Labor and signed by the employer. This card is a crucial document for credit in general, for a new and better job, and for identifying the worker as a "reliable person" in judicial cases. The civil servants have a better system in many respects. (Government of Brazil, 1977).

From a social standpoint, the formal contract in Brazil is an opportunity to participate in the most secure jobs in the labor market. Job stability and wages tend to be higher for most occupations in the formal sector; working conditions tend to be more hygienic and safe; unions are active; and housing and education are more accessible. A contractual relationship seems to contribute toward a higher standard of living and social stability for the family.

The benefits that are provided by a formal contract are costly to the firm and to society as a whole. A worker costs 85% more under a formal contract. Whereas a formal contract is very expensive to the firm and to society, noncontractual employment is very costly to the worker and to his family. Informal employment relationships are based on oral agreements between the employer and the employee. They can be broken at any time with no cost to the firm. They provide little or no security to the worker and this insecurity is heightened with an oversupply of labor in many regions of Brazil. For this reason, formalization tends to increase in developed regions and among better educated people, who are still in short supply. Informal employment dominates the poorer regions and uneducated people, particularly women and children.

It is not a simple task to appraise the role of labor legislation in Brazil. When one looks at the difficult situation of those who work in the informal sector, a positive reaction toward the labor legislation is immediate. When one analyses the cost of labor in the formal sector and the oversupply of people in the informal sector, one becomes skeptical of this legislation. In other words, labor legislation helps very little in the passage of people from the informal to the formal sector. As long as labor is abundant, particularly at the lower levels, people are willing to work without a signed contract. There is no question that the law is very humanitarian in its purposes-but it is unlikely that the Brazilian "caste system" will change through the use of a legal instrument alone. Actual changes in the labor market and, to some extent, in the stratification system, will depend on investments that create jobs as well as on well-balanced interregional development. The existing economic and social discrimination that is connected to the informal labor

⁴ This is a partial list of benefits. The complete one includes an additional 10 benefits.

market simply reflects the impotence of the economy and a biased style of development. It is doubtful whether labor legislation has the power to change this tendency.

Inequality and Social Mobility in Brazil

It is widely known that Brazil's income distribution is one of the most unequal in the world (Jain, 1975; Cromwell, 1977). Most of the recent studies on economic and social inequality in Brazil concern the widening gap between the rich and the poor. Nearly all available analyses are based on several types of intercensal comparisons of income distribution, usually broken down into deciles (Fishlow, 1972; Langoni, 1972; Fields, 1977; Costa, 1977). The most common conclusion of these comparisons has been that income differences have increased in the past two decades while, at the same time, all social groups have gained in average income.

These comparative cross sectional analyses reveal a great deal about inequality in Brazilian society. There is another aspect, of at least equal theoretical importance, that has not been covered by economic studies—the evolution of Brazilian workers through time. This type of research has been carried out by sociologists under the labels of stratification dynamics and social mobility (Sewell and Hauser, 1975; Otto and Haller, 1979). These sociologists have analyzed the evolutionary status of individuals or groups of individuals through time; synthetic cohorts (Featherman and Hauser, 1978) may also be used for this purpose. That is, sociologists have attempted to describe the social trajectories of persons from the lower-, middle- and upper- classes. In order to do this, they use several measures of socioeconomic status to assess upward and downward mobility. For occupational mobility, retrospective data on the father's job and one's first job have proven useful (Blau and Duncan, 1967; Featherman and Hauser, 1978).⁵ The comparisons are normally made through social status transition matrices for sons and their fathers or for the same individuals at different points in their careers.

Recent analysis shows that Brazil has been a reasonably dynamic society in terms of both intergenerational and intragenerational mobility. Empirical evidence from the 1973 PNAD sample shows that about 58% of the males ($N = 58,286$) had moved into a stratum higher than that of their fathers (Pastore, 1979). Of these, about 80% were upwardly mobile, whereas 20% were downwardly mobile. This evidence indicates that: (a) most Brazilian

⁵ Economists interested in the Brazilian distribution of income have just begun to consider these possibilities (Morley, 1978).

TABLE 6.1
Intergenerational Occupational Mobility, Employed Male Heads of Families, Aged 20–64

Son's status in 1973	Father's status						Total (N=44,307)
	Elite	Upper middle	Middle middle	Lower middle	Urban lower	Rural lower	
Elite	29.8	15.2	8.6	3.8	3.2	1.0	3.5
Upper middle	22.5	28.7	14.3	8.7	7.4	2.5	6.3
Middle middle	27.1	28.7	36.2	21.6	20.7	13.1	18.4
Lower middle	12.5	15.5	18.9	46.3	35.4	21.1	23.8
Urban lower	5.0	6.1	10.5	14.9	23.8	17.4	16.0
Rural lower	3.1	5.8	4.5	4.7	9.5	44.9	32.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total, father's status	2.0	3.1	13.8	9.3	6.9	64.9	100.0

sons do not stay in the positions of their fathers and; (b) most mobile sons are better off than their fathers were (see Table 6.1).

In examining the same phenomenon in more detail (see Table 6.1), the data show that about 55% of the sons from the rural lower-class had moved up to higher levels of the social structure. Among those born in the urban lower-class, about 67% had moved up to higher levels. The data also show that most men who were born in the lower strata are better off than their fathers, in terms of social status. The Valle Silva⁶ (1974) scores are sensitive to income differences. Hence, it would appear that many of the last generation's poor have improved their lot whereas few of those whose fathers were well off have fallen on harder times.

The analysis of intragenerational social mobility (Table 6.2) shows practically the same picture. Again, about 58% of the male heads of families were mobile in terms of their own career, when their 1973 job status was compared with the status of the first job they had in the labor market. Of these, about 93% were upwardly mobile and only 7% fell. The data show that almost 53% of the individuals whose first job was in a rural lower-class occupation had moved to higher levels.

⁶ See Methodological Appendix.

TABLE 6.2
Intragenerational Occupational Mobility, Employed Male Heads of Families, Aged 20-64

Individual's status in 1973	Initial status (first job)						Total (N=53,704)
	Elite	Upper middle	Middle middle	Lower middle	Urban lower	Rural lower	
Elite	72.8	24.9	16.7	2.8	4.0	0.7	3.4
Upper middle	14.2	47.3	24.8	7.3	9.0	2.6	6.5
Middle middle	9.6	19.4	45.0	17.1	24.6	13.4	18.7
Lower middle	1.2	6.3	8.8	59.5	34.0	18.7	24.7
Urban lower	1.9	1.3	3.9	10.3	22.1	17.0	16.7
Rural lower	0.3	0.8	0.8	3.0	6.3	47.6	30.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total, initial status	0.6	0.7	6.9	7.3	25.2	59.2	100.0

Among those who started in an urban lower-class occupation, the mobility rate was still higher. 78% were mobile, and of these, 72% rose. Assuming that those in the two bottom strata were in poverty, about 59% of those who started in poverty were still at that level in 1973 while 41% had moved up and out of that class. A full 22% had moved to the lowest middle level, which is only a notch above poverty. On the other hand, only 19% of those who had started out above the poverty level had fallen back into it. (These percentages were calculated from the cell frequencies, which are not presented here.)

However, lower-classes are still very large in Brazil as a whole, and economic data (Fishlow, 1972; Fields, 1977) show that the distance between lower- and upper- classes is increasing. In fact, Brazil has one of the most acute cases of fast growth with increasing inequality. Are these well-known high levels of inequality compatible with the high rates of inter- and intra-generational mobility? Obviously, there is no denying that Tables 6.1 and 6.2 show the existence of considerable mobility, and economists have clearly demonstrated that Brazil's income distribution is comparatively unequal (Jain, 1975; Cromwell, 1977). For a better understanding of the simultaneous occurrence of mobility and inequality one has to raise the following question: Are all social classes progressing at the same pace? The answer

is no. It has been shown that the great bulk of upward mobility has been structural, has occurred in the rural and urban lower-classes, and has been of a short distance (Pastore, 1979). Conversely, the smallest volume of upward mobility took place in the middle-classes and covered long distances. This is the main reason why high mobility rates coexist with a high inequality level in Brazil. Let us illustrate this point.

Most of the upward intergenerational mobility of rural and lower-classes traversed only one or two levels. About 32% of the upwardly mobile rural lower-class men (agricultural workers) moved to the urban lower-class (urban carriers, shoeshiners, cleaners in general, street vendors, etc.). About 38% of the upwardly mobile, rural lower-class men entered the lower middle-class, particularly in the skilled manual occupations, working as masons, electricians, plumbers, and carpenters, as well as barbers, drivers, mailmen, security guards, and so forth. In terms of social distance, the 32% in the first group went up only 1.14 points on the status scale; the 38% in the second group went up 4.77 points.⁷ This is to say that most mobile men (about 70%) moved up very little, and the remaining few moved substantially in terms of social distance.

Nonetheless, it would be instructive to find out who occupies the bottom rungs of Brazil's social ladder. The available data show that a great many of the new lower-class positions are filled by women and children. Sex and age, therefore, seem to be important discriminatory factors in job placement. Let us examine the evidence.

MALE AND FEMALE MOBILITY PATTERNS

The previous analysis focused exclusively on males who were heads of families. When one compares male heads of families with female heads of families, there are great social differences and, not surprisingly, they favor men. Table 6.3 shows a much larger proportion of females, relative to males, occupy positions at or near the bottom of the social pyramid. About 75% of Brazilian women occupy lower level urban or rural positions whereas 48% of the men have similar positions.

This differential reflects an even larger sex difference in the composition of the urban lower stratum. Only 16% of males are in this stratum as compared to 51% of females, who are generally house maids. Except in the middle stratum (15.4%), where there are a large number of school teachers, female participation above the urban lower stratum is negligible. Clearly, women are disproportionately confined to the urban lower stratum.

⁷ Based on a social status scale which varies from 1.14 to 88.75 points (see Pastore, 1979).

TABLE 6.3
Occupational Status Distribution by Sex, Employed Heads of Families, Aged 20-64

Occupational status	Males	Females
Elite	3.5	0.8
Upper middle	6.3	4.2
Middle middle	18.4	15.4
Lower middle	23.8	4.1
Urban lower	16.0	50.8
Rural lower	32.0	24.7
Total	100.0 (44,307)	100.0 (3,068)

The mobility rates among males and females are not drastically different. Among males, the reader will recall that 58% were mobile; among females, about 50% are mobile. Of the mobile, about 80% of males and 75% of females move up. The intergenerational mobility matrix for female heads of households is presented in Table 6.4.

A comparison of the percentages of females and males who moved up out of the rural and urban lower strata makes it obvious that the lower stratum males were more likely to be upwardly mobile than were the females. Altogether, about 38% of the employed male heads of families whose fathers were in the rural lower stratum escaped both the rural and urban lower strata by moving upward from these levels. Only 13.3% of comparable female heads escaped. Similarly, close to 67% of male household heads whose fathers were in the urban lower stratum, were themselves above that level by 1973, whereas only 29.7% of the corresponding women were so fortunate. Clearly, the best jobs seem to be "reserved" for the male heads of families and the worst ones for the females. This type of segmentation can be interpreted, in a sense, as a compliment of high rates of net upward mobility among men. In another sense, it can be interpreted as a conservative force that has maintained the general pattern of inequality in the Brazilian social structure.

ADULTS AND YOUTH IN THE BRAZILIAN SOCIAL STRUCTURE

Children and youth frequently take lower status jobs. Indeed, all persons 10 years of age or older are considered to be potential members of the labor

TABLE 6.4
Intergenerational Occupational Mobility, Female Heads of Families, Aged 20-64

Individual's status in 1973	Father's status						Total (N=3,068)
	Elite	Upper middle	Middle middle	Lower middle	Urban lower	Rural lower	
Elite	6.2	2.6	2.7	0.7	0.5	0.3	0.8
Upper middle	21.5	17.1	12.0	7.1	5.0	1.2	4.2
Middle middle	53.8	40.9	36.4	19.4	17.3	8.4	15.4
Lower middle	6.2	6.6	3.9	6.7	6.9	3.4	4.1
Urban lower	12.3	28.9	37.7	63.5	66.8	52.0	50.8
Rural lower	0.0	3.9	7.3	2.6	3.5	34.7	24.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total, father's status	2.1	2.5	13.3	8.7	6.6	66.8	100.0

force. The Brazilian labor market thus seems to contain several niches. Table 6.5 shows that working age males, especially heads of families, have the best chances to get the better jobs. Those few elderly men who were still working also had quite good chances, despite the fact that most (59.2%) were on the very bottom. Youths, 86.2% of them, tended to be concentrated in the two lower strata. Over 70% of the working age women were also concentrated in the lower two strata. Over 52% of the men who were not heads of families were in these strata. This percentage dropped to 48% for male heads of families.

The data from which Table 6.5 was constructed were also compiled in terms of stratum composition. The results, presented here only in the text, are informative. The elite stratum is made up mostly of working age males (86.3%), together with women who are not heads of families (9%) and elderly men (3.2%). Male heads made up over half of the stratum (51.3%). Altogether, female heads of families and youths made up less than 1.5% of this stratum. The upper-middle and middle-middle strata were made up mostly of working age men, and women of this age who were not heads of families (upper-middle: 93.2%; middle-middle: 85.8%). Male heads of families were especially prominent in both strata (upper-middle: 42.7%; middle-middle: 31.7%). Four-fifths of the lower-middle stratum were working age men, 53.3% male heads of households, and 26.2% males who were not heads. Youths and working age men and women who were not heads

TABLE 6.5
The Status Composition of Employed Minors, Elderly People and Working-Age People, by Sex

Occupational status	Youths (Aged 10-19)		Elderly people (Aged 65 and over)		Working-age people (Aged 20-64)			
	Girls	Boys	Women	Men	Not heads of families		Heads of families ^a	
					Women	Men	Women	Men
Elite	0.0	0.1	0.3	2.7	0.7	3.4	0.8	3.5
Upper middle	0.3	0.3	1.8	5.3	3.8	6.2	4.2	6.3
Middle middle	8.9	6.0	7.4	15.3	20.5	20.9	15.4	18.4
Lower middle	2.3	8.9	1.5	6.0	4.0	16.9	4.1	23.8
Urban lower	52.7	28.9	35.8	11.5	46.7	24.8	50.8	16.0
Rural lower	35.9	55.8	53.2	59.2	24.3	27.8	24.7	32.0
Total (155,202)	100.0 (14,054)	100.0 (21,739)	100.0 (1,077)	100.0 (3,585)	100.0 (36,751)	100.0 (30,621)	100.0 (3,068)	100.0 (44,307)

^aFrom TABLE 6.3

of families made up three-quarters (73.9%) of the urban lower stratum and two-thirds (66.4%) of the rural lower stratum. In other words, the best emerging jobs in the professions, manufacturing, and the service sector, have tended to be filled by mature males, especially heads of families. These men have managed to move up in the social structure, leaving their fathers' positions and their own starting points behind. The openings they left as they moved up, as well as the new low status jobs, largely in personal services and mostly in urban areas, were taken primarily by women. The leftovers, marginal jobs in rural and urban pockets of poverty, were filled by the youth.

Unfortunately, the present data do not allow within-family analyses. That which follows must remain conjecture: One can suppose that all three phenomena have often occurred within the same nuclear families. Within such a family, the male head would have moved up one or two notches. His wife would have taken one of the openings left by an upwardly mobile man, or possibly she filled a newly created job at the bottom of the system. Their children would have taken odd jobs to help their parents. Most of the wives of the men who moved up long distances in the social structure probably would not be working and their children would be in school. Mobility must have a quite different meaning for the middle- and lower-classes. The new middle-stratum job opportunities allow substantial upward mobility for a few male heads of families, freeing the rest of the family members from work. For the lower strata, new job opportunities in the urban areas have induced short distance upward mobility for the males and enabled the females and children to take remunerative employment. As we have seen, most Brazilian families have experienced mobility. Clearly, that mobility has been easier for those in the middle and elite strata and more painful for those in the lower strata. A shrinking rural labor market has forced rural workers to move to the cities. Males entered the urban lower stratum or the lower-middle stratum, about 32% and 38% respectively, for those whose fathers had been in the rural lower stratum. The wives and children of these men took whatever jobs they could obtain. The urban middle-class male (particularly the lower-middle) took advantage of new urban opportunities without involving the rest of the family. Lest we paint this picture of mobility in colors that are too rosy, it is noteworthy that 19% of those whose fathers were in the middle or elite strata fell back into the rural or urban lower strata.

Market Segmentation and Social Mobility

It was pointed out that market segmentation will be studied herein in terms of the individual's participation in the formal or informal sectors.

Also, it was stressed that the purpose of this chapter is to describe how market segmentation is related to individual and structural variables and also to identify the type of relationship between segmentation and mobility.

THE RELATIONSHIPS BETWEEN INDIVIDUAL AND STRUCTURAL VARIABLES AND SEGMENTATION

Many social scientists tend to argue that informal working relationships are still pervasive in Brazil because women and children are entering the labor market in large numbers. This might very well be true, yet in the nation as a whole, more than 40% of the male heads of families in 1973 were still working under informal conditions (see Table 6.6). Informal employment is even more common in the poorer regions. Northeastern males have a 63% probability of working under informal and precarious conditions. This falls to only about 14% in Brasília. In Rio and São Paulo, about one-fourth of the male leads of families are in the informal sector. In other words, the formal-informal ratio follows regional disparities fairly closely: the richer the region, the higher the participation in the formal labor market.

The formal-informal ratio is also related to the employment status of the individual. Table 6.7 shows that informal working relationships are particularly high among the self-employed. Self-employed males had a probability of .79 to be working without a legal contract. For those employed in the private sector, this probability falls to about .34, and for employers or those in the public sector, it is zero.

Self-employed people include the great majority of the rural laborers plus street vendors, shoe shiners, gardeners, masons, and painters, among other kinds of urban workers. Presumably, many of these would be absorbed into

TABLE 6.6
Labor Market Segment by Region, Employed Male Heads of Families

Labor market segment	Region						
	Brazil	Rio de Janeiro	São Paulo	Brasília	Other southern states	Other eastern states	Northeastern states
Formal	58.8	77.6	74.5	86.2	51.0	48.8	37.4
Informal	41.2	22.4	25.5	13.8	49.0	50.2	62.6
Total	100.0 (48,964)	100.0 (6,461)	100.0 (8,671)	100.0 (5,239)	100.0 (8,133)	100.0 (6,405)	100.0 (12,055)

TABLE 6.7
Labor Market Segment by Employment Class, Employed Male Heads of Families

Labor market segment	Employees			
	Private sector	Public sector	Employers	Self-employed
Formal	65.8	100.0	100.0	21.0
Informal	34.2	--	--	79.0
Total	100.0 (24,446)	100.0 (7,076)	100.0 (5,115)	100.0 (17,078)

private companies under formal contract if costs were lower or labor were less abundant.

However, it is difficult to draw conclusions at this point. The great bulk of informal work is in the rural areas. This fact calls for the separation of rural and urban jobs in our analyses. Table 6.8 shows that informal employment is far more common in rural occupations than in urban occupations. The dichotomous labor market segmentation tends to reflect this rural-urban dichotomy. The data show that an individual with a nonagricultural occupation has an 82% chance of being in the formal sector and about an 18% chance of being in the informal sector. Conversely, the individual with an agricultural occupation has a 9% chance of being in the formal sector and 91% of being in the informal sector. Occupational marginality, measured by the proportion of people working without labor constraints, is very low among male heads of families in urban areas—much

TABLE 6.8
Labor Market Segment by Agricultural Employment, Employed Male Heads of Families

Labor market segment	Agricultural occupations	Non-agricultural occupations
Formal	8.9	81.7
Informal	91.1	18.3
Total	100.0 (15,419)	100.0 (33,545)

lower than many researchers anticipated. However, it is very high in the rural areas. This means that the labor legislation passed in 1964, presumably extending to rural workers a large portion of the job guarantees available to the urban labor force, is still a dream in most Brazilian rural areas.

What is the market segmentation situation among the urban male heads of families? Table 6.9 provides an approximate answer to this question. The proportion of people in the informal labor market drops drastically when only urbanites are considered. For urban Brazil as a whole, about 82% of males had formal employment contracts. The developed regions had higher rates of formal employment. In fact, the only case that deviates from this is the northeast, where about 71% of males are in the formal market. Presumably, most of the women and children were in the informal labor market. From other tabulations, not presented here, we find that only 14.8% of the employed youths and 18.5% of the employed working age women possessed valid work cards. Thus, most youths and women were primarily employed in the informal sector.

THE RELATIONSHIP BETWEEN SEGMENTATION AND MOBILITY

The data available support the general hypothesis that participation in the formal labor market induces upward mobility whereas participation in the informal market tends to impede it.

Table 6.10 shows the impact of market segmentation on mobility patterns of male household heads in Brazil as a whole, and in each of six regions. For the country as a whole, one had a 65% chance to move upward if he was in the formal sector. In fact, most of those in the formal sector were upwardly mobile, whereas most of the people in the informal sector were

TABLE 6.9
Labor Market Segment by Region, Urban Employed Male Heads of Families, Aged 20-64

Labor market segment	Region						
	Brazil	Rio de Janeiro	São Paulo	Brasília	Other southern states	Other eastern states	Northeastern states
Formal	81.7	81.9	81.8	88.1	85.0	80.3	71.3
Informal	18.3	18.1	18.2	11.9	15.0	19.7	28.7
Total	100.0 (33,545)	100.0 (5,983)	100.0 (6,227)	100.0 (5,108)	100.0 (4,571)	100.0 (4,852)	100.0 (5,877)

TABLE 6.10
Labor Market Segment and Intergenerational Mobility by Region, Male Heads of Families, Aged 20-64

Labor market segment and mobility patterns	Region						
	Brazil	Rio de Janeiro	São Paulo	Brasília	Other southern states	Other eastern states	Northeastern states
<u>Formal sector</u>							
Upward	65.4	58.8	65.5	69.3	70.7	64.2	64.2
Immobile	22.8	24.2	23.1	18.1	20.5	24.3	26.3
Downward	11.8	17.0	11.4	12.6	8.8	11.5	9.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Informal sector</u>							
Upward	20.1	41.4	35.2	60.9	11.7	14.7	16.2
Immobile	69.6	39.3	52.5	24.4	79.0	75.1	75.4
Downward	10.3	19.3	12.3	14.7	9.3	10.2	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

immobile; informally employed men were in the same situation as their fathers. It is noteworthy that the regional level of development seems to interact quite strongly with mobility patterns. In fact, people in the informal sectors of the most developed regions (Rio de Janeiro, São Paulo, and Brasília) were substantially more likely to experience upward mobility than those working in the poorer regions (south, east, and northeast).

What is the role of employment class in mobility patterns? Table 6.11 shows that the highest rates of upward mobility are found among self-employed people working in the formal sector, including most of the professionals. The probability of upward mobility is about the same for employees in the private and public sectors and for employers.

Conversely, the self-employed people in the informal sector have an extremely high probability of remaining in the same position as their fathers (.74) and very little chance of moving up the social ladder. The same occurs with the employees in the private sector, but to a lesser degree.

The rural-urban dimension is important here, too. What are the mobility patterns of people working in the two segments when broken down into

TABLE 6.11
Labor Market Segment and Intergenerational Mobility by Employment Class, Male Heads of Families, Aged 20-64

Labor market segment and mobility patterns	Employees		Employers	Self- employed
	Private sector	Public sector		
<u>Formal sector</u>				
Upward	65.4	64.6	64.5	70.6
Immobile	20.9	21.8	28.2	22.0
Downward	13.7	13.6	7.3	7.4
Total	100.0	100.0	100.0	100.0
<u>Informal sector</u>				
Upward	32.6	--	--	15.5
Immobile	56.4	--	--	74.2
Downward	11.0	--	--	10.3
Total	100.0	--	--	100.0

rural and urban occupations? Table 6.12 shows that people with rural occupations have a very high probability of being immobile, whereas people in urban occupations are likely to be upwardly mobile regardless of market segmentation. The previously mentioned rural-urban dualism is also present in the determination of social mobility. For this reason, it is useful to examine the urban sector separately, as we did earlier in Table 6.9. Two alternatives may be followed. One is to examine the mobility of all males working in urban occupations, including those who are sons of rural laborers. The other is to examine only those who are sons of urban workers. These two alternatives, of course, provide quite different results. The first shows that much upward mobility is due to the low starting point (father's occupational status). The second excludes the large number of men who were automatically upwardly mobile because they left the rural lower stratum to enter urban strata. (This tends to underestimate the total amount of intergenerational mobility, of course.) Let us examine both alternatives.

Table 6.13 covers all male heads of families presently working in urban areas, including the sons of rural laborers. The data show that the difference

TABLE 6.12
Labor Market Segment and Intergenerational Mobility by Agricultural Employment, Male Heads of Families, Aged 20-64

Labor market segment and mobility patterns	Agricultural occupations	Non-agricultural occupations
<u>Formal sector</u>		
Upward	14.2	69.0
Immobile	85.3	19.4
Downward	--	11.6
Total	100.0	100.0
<u>Informal sector</u>		
Upward	8.5	70.4
Immobile	91.5	14.8
Downward	--	14.8
Total	100.0	100.0

in upward mobility between market segments decreases drastically and, in some cases, is reversed. In fact, the upward mobility of urban men working in the informal sector is slightly higher than that of men in the formal sectors of São Paulo, Brasília, the east, and the northeast. This is certainly affected by the low status of their fathers. For this reason, it is interesting to examine Table 6.14, which excludes the sons of rural laborers. It answers the following question: What are the mobility patterns of urbanborn people who now live in urban areas and are presently working in the formal and informal segments of the six different regions? In other words, what are the mobility patterns of the "urbanites"?

This tabulation shows two important facts. First, the rates of upward mobility drop drastically when one compares Table 6.13 and 6.14, due to the elimination of those of rural origins. This is another way of saying that a large part of the high rate of upward mobility of those in the Brazilian labor force is determined by the cityward migration of large numbers who came from rural lower-class families. Second, the data in Table 6.14 indicate some substantial differences in the mobility patterns of those in the formal

TABLE 6.13
Labor Market Segment and Intergenerational Mobility by Region, Urban Currently
Employed Male Heads of Families, Aged 20-64

Labor market segment and mobility patterns	Region					
	Rio de Janeiro	São Paulo	Brasília	Other southern states	Other eastern states	Northeastern states
<u>Formal sector</u>						
Upward	60.2	69.7	70.6	75.8	67.5	69.2
Immobile	23.0	18.9	16.8	15.4	21.0	22.2
Downward	16.8	11.4	12.6	8.8	11.5	8.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
<u>Informal sector</u>						
Upward	57.9	70.6	72.3	72.4	71.5	75.3
Immobile	21.6	15.2	11.7	12.1	15.7	12.4
Downward	20.5	14.2	16.0	15.5	12.8	12.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

and informal segments of the labor market—differences that practically disappear in Table 6.13. The poorer the region, the greater the differences. For example, an “urbanite” working in the formal market of the northeast has twice the chance of moving upward as does an “urbanite” working in the region’s informal segment. This difference is about the same in the east. In the south the difference is three times greater. In Rio, the ratio is about 1:7. In São Paulo and Brasília, it is about 1:9.

Thus, it is clear that those who were in the formal sector were more likely to be upwardly mobile than were their fellows in the informal sector. The data are consistent with the hypothesis that chances of upward mobility are enhanced by obtaining a position in the formal sector, and though we have not presented them here, analyses of intragenerational mobility show the same patterns.

A critic may fairly ask whether the data and the hypotheses are consistent with each other because participation in the formal labor market tends to induce mobility, or whether some other process yields these results. Some might argue that the true causal process is the reverse, that upward mobility holds job registration as one of its rewards. Also, our findings could be an

TABLE 6.14
Labor Market Segment and Intergenerational Mobility by Region, Male Heads of Families,
Aged 20-64, Born in and Presently Working in Urban Areas

Labor market segment and mobility patterns	Region					
	Rio de Janeiro	São Paulo	Brasília	Other southern states	Other eastern states	Northeastern states
<u>Formal sector</u>						
Upward	38.8	42.8	38.0	41.8	35.4	31.0
Immobile	35.3	35.7	35.5	36.9	41.6	49.7
Downward	25.9	21.5	26.5	21.3	23.0	19.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
<u>Informal sector</u>						
Upward	23.1	22.5	19.2	13.8	18.9	15.9
Immobile	39.5	40.0	34.1	37.8	44.7	42.3
Downward	37.4	37.5	46.7	48.4	36.4	41.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

artifact of the association between current occupational status, on one hand, and both mobility and registration, on the other hand. That is, more desirable, higher status jobs are more likely to be registered. Since men with higher status destinations are more likely to have experienced upward mobility, men in formal employment may be more likely to have experienced upward mobility. In the present analysis, we cannot choose among these competing explanations, which can only be resolved by a prospective research design. Still we are convinced that our hypothesis is essentially correct—that participation in the formal market induces mobility. There is a strong rationale for this prediction, which was developed from our knowledge of Brazil’s labor market, its work force, and the theory and practice of its labor legislation.

Consider the signed work card—the operationalization of formal labor market participation—in its context. Legally, each worker 12 years of age or older must obtain an official work card from the government, and the employer is supposed to sign it. If the employer does so, he will be called upon to pay the costs of the legally specified benefits to which the holder of a signed card is entitled. But in the real world employers are not required

to sign workers' cards. Many cannot afford to, and those who can, do not necessarily want to. Actually, in the public sector, equivalent benefits are authorized and it appears that they are indeed provided, though in other ways. It is the employee in the private sector whose card may or may not be signed.

The Brazilian private sector may be thought of as composed of many small, poor enterprises and a relatively small number of large, stable firms. The former consist of vast numbers of farms and of the small shops of vendors and tradesmen. Some of the large firms are manufacturing plants, national and multinational, commercial establishments, including chain stores, and plantations. Usually, the small employers simply cannot afford to sign workers' cards, for then they would have to be ready to cover the costs. Evidently, their workers understand this. So the workers settle for what they can get—unprotected jobs that provide a more or less steady income that is competitive within the local labor market. In contrast, the large firms are in a position to decide when it is to their advantage to sign a worker's card. To them the question is whether a given employee would be valuable enough to warrant the investment. The work cards of new employees will not be signed until they have proven themselves to be productive and reliable. Given the uncertain quality of Brazil's poorly educated work force, this is a serious matter to large scale employers. With a large supply of labor, the companies can afford to try people out. Thus, a signed work card is evidence that a critical employer has judged a worker to be effective. The card demonstrates his or her value to the company, and its competitors understand this—particularly so because the card includes information about the worker's special skill. As the need arises, such a company will advance and even provide specialized training for workers with signed cards. If such workers want better jobs, they can simply go to another company and offer themselves for work. The card signed by their former employers proves that they are tested and capable. So employees with signed cards have the best chances for upward mobility.

Final Comments

As was pointed out in the beginning of this essay, labor market segmentation hypotheses are appealing, despite the conceptual confusion that often prevails. The tendency of most recent studies (Beck *et al.*, 1978, 1980) is to make ambitious paradigmatic claims while, on empirical grounds, insisting that predictions of the segmentation theories are "robust," even though the evidence adduced to date shows sector effects that are, at best, weak (Hauser, 1980).

The present analysis suggests that certain kinds of labor market segments may, in fact, be rather powerful. This would be expected of a segmentation variable which unambiguously classifies all workers into a specific segment that provides distinctive rights, privileges and obligations for those in it.

The Brazilian labor legislation provides a legal basis for just such a segmentation variable. As we have seen, workers who are properly registered with the Ministry of Labor have a whole set of prerogatives that add up to personal and job security. By being registered, workers hold jobs under contract. Unregistered workers have no such protection. The variable is a dichotomy. An unambiguous indicator is available to measure these variables: whether the subject does or does not have a valid labor card signed by an employer.

Intergenerational mobility provides a sociologically informative dependent variable with which to test whether market segmentation has predictable effects. This chapter shows that location in the formal or informal market is indeed strongly associated with social mobility in Brazil. The data leave little room for doubt that those in Brazil's formal labor market are much more likely to have risen above their fathers' status than those who are in the informal labor market.

Methodological Appendix

THE DATA

Data for this chapter were taken from the 1973 National Household Sample Survey (*Pesquisa Nacional de Amostragem Domiciliar: PNAD, 1973*), a probability sample designed to allow the estimation of national parameters. These data consist of 40 basic variables appropriate for demographic and social mobility research taken from each person 10 years of age or older ($N = 279,212$) in the more than 90,000 households that fell within the sampling frame. Data are available on detailed occupations of the subject at the time of the interview and at the time of his or her first job. The same type of occupational data are available for father's occupation at the time of the subject's first job. Age, sex, marital status, residence, birth state, income, education, employment status, and other information are available. In the present analyses, we usually employed a subset of the sample consisting of all employed male heads of families age 20–64 ($N = 58,286$). Unless otherwise specified, this is the subsample used herein. In defining each as "employed," we mean that each had a regular job at which he or she worked 40 or more hours per week. In defining each as "head of family," we mean that each lived with at least one dependent who was related to

him or her by blood or marriage. Because of missing data on one variable or another, the actual number of cases present in any one table may be smaller. For other purposes, female heads of families were added ($N = 3068$). Similarly, data on employed minors are presented. These youths consisted of all boys and girls aged 10-19 who indicated that they had a regular job ($N = 30,236$; boys: 64.2%; girls: 35.7%).

THE VARIABLES

Formal and Informal Labor Markets

We have presented the conceptual distinctions between the formal and informal sectors in the body of the paper as they apply to Brazil. Their operational definitions are straightforward.

1. A person is considered to be in the *informal* labor market under these conditions: (a) if he or she is self-employed but not a professional (i.e., not a doctor, lawyer, engineer); or (b) if he or she is an employee but does not have a signed labor card—an unregistered worker.
2. A person is considered to be in the *formal* labor market under the following conditions: (a) if he or she is employed in public service; (b) if he or she is a registered worker with a signed labor card (*carteira profissional*); (c) if he or she is an employer; or (d) if he or she is a self-employed professional (i.e., doctor, lawyer, engineer).

Social Mobility

The basic technique for summarizing social mobility is based on a typical mobility table. Each person in the sample who reported an occupation under any of three occupational questions (present job, first job, father's occupation when the subject took his first job) was assigned an occupational status score for each occupational title reported. The scores were taken from a composite age-standardized occupational status score based on the mean education and mean income of each person in each age bracket of each specific occupation. These are called *Valle scores* (Valle Silva, 1974). Each of the three resulting occupational status variables was subdivided into five hierarchical strata. The bottom, or lower, stratum is further subdivided into the urban and rural lower strata. Hierarchically, these do not differ much, although the urban is slightly higher. In terms of normal educational requirements and approximate earnings, these approximately fit the descriptions to be noted later. The Brazilian system defines wages in terms of the number of minimum wages (*salários mínimos*) each worker earns. Informally, these are referred to as "one *salario*, two *salarios*," and so on. For 1973, the average value, in current dollars, of the minimum wage in Rio de Janeiro was \$50.90

TABLE 6.15
Occupational Strata of Male Heads of Families, Aged 20-64

Stratum	Valle scores	Percentage distribution			
	Boundaries (Midpoints)	Typical occupations	Subject's father's job ^a	Subject's first job	Subject's present job
Elite	40.06 - 88.75 (63.71)	Large farmers and industrialists, engineers, architects, physicians, etc.	2.0	0.6	3.5
Upper middle	24.72 - 38.57 (30.84)	Meteorologists, nurses, translators, high school teachers, social workers	3.1	0.7	6.3
Middle middle	9.77 - 23.22 (17.01)	Farm managers, hotel and boarding house owners, linotypers	13.8	6.9	18.4
Lower middle	6.18 - 12.99 (9.47)	Motor mechanics, electricians, radio technicians, chauffeurs, telephone operators, barbers	9.3	7.3	23.8
Urban lower	1.81 - 7.65 ^b (5.84)	Tailors and seamstresses, sausage stuffers, tile makers, cooks and waiters	6.9	25.2	16.0
Rural lower	2.50 - 4.79 ^b (4.70)	Hoemen, tractor drivers, gardeners, fishermen	64.9	59.2	32.0
Total			100.0	100.0	100.0

^aAt the time the subject took his first job.

^bThe Valle scores for these two categories overlap. All unskilled agricultural jobs were placed in the bottom category. The upper lower category includes only the lowest non-agricultural jobs.

per month (Pfeffernan and Webb, 1979). These are the names of and rough descriptions of the strata: *elite*: 10 or more *salários*, university graduates; *upper-middle*: 5–10 *salários*, high school or university graduates; *middle-middle*: 2–4 *salários*, junior high school or high school graduates; *lower-middle*: 1–2 *salários*, basic literacy usually required; *lower*: usually no more than 1 *salário*, no education required (Pastore and Haller, 1977). The operational definitions of these strata are presented in Table 6.15.

A few observations may be useful. First, the elite is very small. Only 2% of the fathers and 3.5% of the subjects were in the elite. The rural lower stratum was formerly the majority. Most fathers were from that stratum (64.9%) and most of the subjects started out in it (59.2%). By 1973, the percentage of these men had shrunk considerably, to 32%, as they moved into the urban areas. By 1973, 28% of these men were in one of the top three strata with only 8.2% starting out there and only 1.3% (0.6 plus 0.7) starting out in one of the two top strata. From father to son, there has been a substantial shift upward in the structure and, from the first to the present job, a great many of these men have risen in status.

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7

A Revised Socioeconomic Index of Occupational Status: Application in Analysis of Sex Differences in Attainment¹

DAVID L. FEATHERMAN and GILLIAN STEVENS

Duncan's Socioeconomic Index (SEI), a widely used indicator of occupational ranking, is based on education and income data from the 1950 United States Census. The major purpose of this chapter is to offer a more contemporary version of this index. There are several reasons for doing so. Not only has the occupational classificatory scheme been altered, but the educational and economic characteristics of the American labor force and of specific occupational groups have changed since 1950. There may also have been a shift in the relations between the educational and economic attributes of an occupational grouping and its social standing or prestige. Also, the construction of the original SEI rested on the characteristics of the male labor force, rather than those of the total labor force. Finally, in the process of updating the index, we illustrate how certain arbitrary decisions (dictated by data limitations) in the construction of the Duncan SEI served to vest the socioeconomic index with some artifactual properties.

In the production of an updated version of the socioeconomic index, we use three approaches. First, we experiment with differing measures of the income and educational criteria. Second, we reconstruct the dependent variable, occupational standing, to provide a better approximation of the prestige measure used by Duncan (1961). Third, we consider the attributes of both the male and of the total labor force in generating contemporary indexes

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