9 The Distribution and Return of Social Capital in Taiwan

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INTRODUCTION

This chapter examines how social capital is distributed among individuals in a society, how it is accessed, and how and to what extent it affects status attainment. This study defines social capital as resources accessed through one's social networks. The cliché, "It's not what you know but who you know that matters" prescribes social networks as a panacea for many things, from everyday problems to securing better jobs. The nature and effects of social capital have been extensively studied in the literature in which empirical evidence was initially drawn from community studies before being extended to national samples (Lin 1999; Lin and Dumin 1986; Lin, Ensel, and Vaughn 1981; Marsden and Hurlbert 1988; De Graaf and Flap 1988).

This study is based on data from a national survey conducted in Taiwan in 2004, modifying the measurement methodology in advancing the concept of social capital, and thus contributing to this ever-growing field of study. The chapter begins with a review of social capital as a concept and theory, its conceptualization at the micro- and macrolevels, followed by its measurements and the many processes of its production and returns for individual attainment.

Social capital is in vogue in contemporary social sciences. Over the past two decades, it has come to prominence as a theoretical perspective that captures the contributions of social relations and presciently explains a wide variety of individual and collective behaviors, ranging from life chances and well-being of individuals to economic growth and political participation in societies (see reviews in Portes 1998; Woolcock 1998; Lin 1999, 2001a). Originally it was a concept that described the relational resources embedded in personal ties useful for the development of individuals in community social organizations (Jacob 1961; Loury 1977). That concept was then applied to a wide range of social phenomena, including family relations (Coleman 1988), social mobility and labor markets (Lin, Ensel, and Vaughn 1981; Marsden and Hurlbert 1988), relations and performance of firms (Burt 1992), and public life in contemporary societies

(Putnam 1993). As the research enterprise of social capital grew, it gained manifold varieties of theoretical perspectives and practical applications. As such, scholars were concerned that the concept had become the Wild West of academic work or a catch-all and cure-all symbol (Burt 2005; Lin 2000; Portes 2000).

The central proposition of social capital theory is that networks of relationships constitute valuable resources, providing their members with "the collectivity-owned capital, a 'credential' which entitles them to credit, in the various senses of the world" (Bourdieu 1986, p. 249). Social capital refers to the social relations and resource advantages of both individuals and communities (Coleman 1988; Portes 2000). However, the research enterprise of social capital is seriously divided depending on whether individual or collective advantage is the focus. At the individual level, social capital refers to returns that emanate from individual network connections. A transition occurs as the concept transforms from an individual asset to a community or national resource. This refers to an attribute of the community itself. This conceptual stretch, initiated by Putnam (1993, 1995), focuses on the "stock" of social capital possessed by communities and even nations, and the consequent effects on their development. Thus, work focused on communal social capital has been based on the assumption that connections between actors promote public goods to the benefit of the entire network.

As a result, social capital has been conceptualized at both the micro- and macrolevels, i.e., an individualistic approach and a collective or communal approach. Insofar as the individualistic approach is concerned, Lin points to a network theory of social capital and defines social capital as "resources embedded in social networks accessed and used by actors for actions" (2001b. p. 25). On the other hand, for the macrolevel approach, Putnam (1993, p. 167) sees social capital as a collective asset: "Social capital here refers to features of social organization, such as trust, norms, and networks, which can improve the efficiency of society by facilitating coordinated action." Despite their diverse origins, analysis levels and styles of accompanying evidence, there is a point of general agreement between these two representative perspectives. Social structure defines a certain kind of capital that can create advantages for individuals or groups pursuing their own ends. Furthermore, individuals and their relations form the basis of social capital, which may have microconsequences both for individuals and for collectivity.

This study takes an individualistic approach and aims to identify the differential access and returns of social capital. Research programs carried out in North America, Europe, and East Asia have demonstrated that social capital significantly affects labor market outcomes. Yet there remain a number of questions that necessitate assessment and clarification. This chapter targets two critical questions: (a) the inequality of access to social capital (who has access to better or poorer embedded resources); and (b) the

return from access to social capital for individual attainment. Further, how can these relationships be tested for possible mutual causations or reciprocal effects? These questions represent some of the cutting-edge issues to be examined in this chapter.

HOW SOCIAL CAPITAL WORKS: ACCESS AND MOBILIZATION

Social capital is the resources embedded in social networks. There are two theoretical approaches describing the process of how social capital is expected to generate returns in the process of status attainment. One process focuses on the access to social capital—i.e., resources accessed in one's general social networks. In this process, social capital is conceived in terms of its potential capacity—the pool of potentially mobilizable resources embedded in one's social networks, which along with human capital (education, experiences) and initial positions (parental or prior job statuses) are expected to affect attained statuses such as earnings, occupational status, employment sectors, or authority positions. Another process focuses on the mobilization of social capital in the status attainment process—the use of a specific social contact and its resources. In this process, social capital is defined in terms of its actual use—the mobilization of a particular contact and its resources. The assumption is that contact status, along with human capital and initial positions, will have important impact in the status attainment process (e.g., the job-search process; Lin 2001b).

Accessed social capital and mobilized social capital are two independent types of social capital in the process of status attainment. One interesting question is the extent to which accessed social capital influences the mobilization of higher social capital. If at all possible in current research, both types of social capital should be measured and closely examined, because neither is perfectly adequate for capturing the linkage between social capital and status attainment.

The problem with regard to data concerning accessed social capital lies, on the one hand, in imperfect measurements of the pool of resources of the entire networks of social capital. On the other hand, relying on data on a particular tie (say, in the job-searching process) is even riskier because it misses much of the invisible returns to social capital (Lin forthcoming). For example, in job-search research, the strength of the tie that leads to a job cannot alone predict attributes of that particular job. One has to know the whole network in which the job seeker is embedded (Montgomery 1992; Granovetter 1995). Aggregate measures of personal networks, such as constraint (Burt 1992) or heterogeneity and extensity (Lin 2001b), better capture a network's capacity to transfer nonredundant information and exert influence. It is the nature of social resources embedded in a network, instead of a particular tie or its bridging property, which conveys advantage

and reaches someone with the type of resource required for one to fulfill his/her instrumental objectives (Lin et al. 1981). Granovetter (1985) also emphasizes the need to examine one's overall embeddedness in a relevant network to understand his or her ability to undertake an economic action.

Therefore, for developing cross-sectional and standardized measures of social capital, it is more straightforward to focus on measuring the potential access of individuals to social capital (Van der Gaag and Snijders 2004). This study measures social capital within the access perspective, and thus defines social capital as the collection of all potentially available resources embedded in one's networks. In this respect, the measurement of access to social capital has been pursued following several methodological paths, including name generator, position generator, network size, and resource generator. To focus on the distribution of individual social capital and its returns on status attainment, this study employs the position generator methodology to measure social capital embedded in wider networks beyond the few close ties where people are safely and intimately embedded.

Measures of Social Capital: The Position Generator

The position generator, initiated and continually refined by Nan Lin and associates (Lin and Dumin 1986; Lin, Fu, and Hsung 2001), measures a person's access to a sample of structural positions (mainly occupations, or authorities, work units, class, or sector) through social relationships. Respondents are asked whether they know anyone in each of a set of hierarchical positions ranging from high to low, and to indicate contacts, if any, in each of the positions. In the literature, occupation is mainly used as an indicator of structural positions in position-generator methodology. This approach is theoretically meaningful because occupation plays a dominating role in modern societies and serves as a good indicator of one's social status, role, and resources. For example, from the position-generating responses one can construct measures of (a) *extensity* or heterogeneity of accessibility to different occupations (number of occupations accessed); (a) *range* of accessibility to different hierarchical occupations (the distance between the highest and lowest accessed occupations); and (a) *upper reachability* of accessed social capital (the highest prestige occupation accessed; Lin 2001b; Lin, Fu, and Hsun 2001).

As reviewed by Lin (1999), there has been consistent evidence that social network resources are positively correlated with labor market outcomes such as job prestige and income. That is, the results of social capital models suggest that individuals with better social capital do better in the labor market. However, it deserves a closer examination to determine whether this result reflects causality or merely social homophily (the tendency for similar people to associate with each other). Mouw (2003) criticizes the measurement of social capital on the grounds that much of the effect (i.e.,

any association between the contact's occupational status and respondent's postcontact attained occupational status) is due to the homogeneity effect, not the contact's influence. That is, Mouw argues that it is the similarity between the contact's occupation and the respondent's attained occupation—the selection of the contact, rather than the contact's superior status, that is positively affecting respondent's superior attained status.

Although research has already shown that the position generator is strongly related to important causes and consequences, there is sufficient room for modification in its measurement and operationalization. To ascertain the causal sequence of social capital in the process of status attainment, the time framework of the contacts needs to be specified. For this research project, two sets of position generator items were included in the survey: (a) occupations accessed in the present time, to capture current social capital, and (b) occupations accessed prior to the time the respondent took the present job, to capture social capital prior to the current job. This study focuses on the latter—*prior social capital*—to measure one's accessed social capital at the time when he/she started his/her current job. As a result, the possible temporal sequence of social capital and current job attainment can be ascertained and the causal relations assessed.

DATA AND MEASUREMENT

Data used in this study were drawn from the thematic research project "Social Capital: Its Origins and Consequences" sponsored by Academia Sinica, Taiwan, through its Research Center for Humanities and Social Sciences, and the Institute of Sociology. This project called for a two-wave, three-site survey to be conducted between the periods 2004 to 2005 and 2006 to 2007. The three sites selected were Taiwan, mainland China, and the United States. These sites were selected to capture two different political regimes (state socialism in mainland China and capitalism in Taiwan and the United States) and two different cultural groups (Chinese in Taiwan and mainland China and Anglo-Saxons in the United States). A panel design allowed some preliminary tests of alternative causal and reciprocal effect.

This study investigates data from that part of the project's Taiwan survey conducted in 2004. Instruments of that survey were administrated in interpersonal interviews with respondents in an islandwide stratified (levels of urbanization) probability (by district and household) sample of adults between the ages of twenty-one to sixty-four. The total sample size was 3,281, of which 13 percent were housewives, 8 percent were either unemployed or students, and 4 percent were retired. The study sample consisted of 2,292 respondents, including those who were currently employed with complete answers on all measurements in the analysis, and excluding housewives, those retired, or those not currently participating

in the labor force. Table 9.1 presents the summary of sample characteristics. Because this study focused on those who were currently employed and excluded those who were outside the labor market (with housewives the largest deleted group, consisting of 13 percent of the respondents), the study sample consisted of more men than women (59 percent to 41 percent). The respondents' average age was forty, with an average of ten years tenure with current job. Regarding education, 44 percent of the respondents had advanced degrees (associate college or higher), and only 23 percent received secondary education or lower. The average monthly income was in the range of NT$30,000 to NT$40,000 (about US$900 to US$1,200).

The key position-generator question used in this study was: "At the time when you were starting your current job, did you know anyone that had one of the following jobs?" Twenty-two occupations were sampled from a full list of all occupations to represent different levels of occupational prestige, for which this study followed the Standard International Occupational Prestige Scale (SIOPS) constructed by Harry B. G. Ganzeboom and Donald J. Treiman (1996). The sampled occupations have prestige scores ranging from 85 (legislator) to 20 (hotel bellboy) and can be roughly grouped into three hierarchical groups: the upper class (high-status professionals such as professors, lawyers, CEOs, legislators, and production managers), the middle class (middle-level professionals such as middle school teachers, personnel managers, writers, nurses, computer programmers, administrative assistants, accountants, and policemen), and the lower class (farmers, receptionists, operators in a factory, hairdressers, taxi drivers, security guards, janitors, and hotel bellboys). These positions and their relative rankings are shown in Table 9.2.

Three indexes were constructed from the position-generator items: (a) extensity, number of positions accessed; (b) range, the difference between the highest and lowest prestige scores among accessed positions; and (c) upper reachability, the prestige score of the highest accessed position. These were indicators of social capital capacity. As shown in Table 9.2, the average number of accessed positions was 7.4 out of twenty-two sampled positions, with the highest prestige score among accessed positions being 62 and the average range of prestige scores between the highest and lowest accessed positions about 35. A comparison between men and women shows that there was no statistically significant difference between men and women in terms of these three indexes. Unlike China, where men had significantly better social capital than women on all three dimensions of social capital (Lin 2001b; Lin this volume), Taiwan is shown to be a more equal society in terms of gender difference in the access to social capital (see also Lin, Fu, and Hsung 2001).

The most accessible position was farmer (59 percent of the respondents), followed by accountant, operator in a factory, and personnel manager. The next cluster of accessed positions included hairdresser, middle school

Table 9.1 Summary of Sample Characteristics (Percent or Mean)

	Total (N = 2,292)	*Men (n = 1,352)*	*Women (n = 940)*	*Significance Test*[a]
Age	40.17	40.84	39.22	0.000
Age[b]	32.73	33.12	33.18	0.016
Education				
Secondary or lower	22.7%	22.4%	23.2%	0.054
High school	33.2%	35.4%	30.2%	
Associate college	21.2%	20.8%	21.7%	
College and graduate	22.9%	21.4%	24.9%	
Tenure (years)	9.5	10	8.7	0.000
Urban degree				0.026
Core	26.7%	24.9%	29.4%	
Town	58.5%	59.99%	57.4%	
Rural	14.8%	15.9%	13.2%	
Voluntary org. participation	46.6%	49.9%	41.9%	0.000
Voluntary org. participation [b]	25.4%	25.7%	25.0%	0.719
Occupational status [c]	0.000			
Self-employed	18.3%	22.2%	12.8%	
Service class	15.2%	16.9%	12.8%	
Others	66.4%	60.9%	74.5%	
Occupational status [b]	0.000			
Service class	10.3%	11.3%	8.7%	
Self-employed	5.1%	6.5%	3.0%	
No previous job	20.1%	20.7%	19.1%	
Others	64.6%	61.5%	69.1%	
Monthly income of present job (20 groups) [d]	6.47	7.05	5.64	0.000
Ethnic group				0.009
Minnan	75.8%	73.52%	79.0%	
Haka	14.0%	15.5%	11.8%	
Mainlanders	10.3%	11.0%	9.1%	
Supervision in present job				
No supervision	64.2%	57.7%	73.6%	
Supervising someone who did not supervise	20.3%	23.2%	16.2%	
Supervising someone who supervised	15.5%	19.2%	10.2%	

[a]The significance levels for t tests or chi-square tests for males and females. [b]ATT: at the time of finding the current job. [c]Service class, including professionals, administrators and managers; higher-grade technicians; supervisors of nonmanual workers. [d]The monthly income in the questionnaire has 20 categories (in Taiwanese NT$): (1) no income; (2) under 5,000; (3) 5,000–10,000; (4) 10,000–20,000; (5) 20,000–30,000; (6) 30,000–40,000; (7) 40,000–50,000; (8) 50,000–60,000; (9) 60,000–70,000; (10) 70,000–80,000; (11) 80,000–90,000; (12) 90,000–100,000; (13) 100,000–120,000; (14) 120,000–140,000; (15) 140,000–160,000; (16) 160,000–180,000; (17) 180,000–200,000; (18) 200,000–250,000; (19) 250,000–300,000; and (20) 300,000 and more.

Table 9.2 Position Generator and Differential Access to General Social Capital (Prior to Current Job)

Position (Standard International Occupational Prestige Scale)	*Respondent Accessing*			
	Total (N = 2,292)	*Men (N = 1,352)*	*Women (N = 940)*	*Significance Test**
Legislator (85)	13	15	10	0.000
Professor (78)	25	25	26	0.791
Lawyer (73)	16	18	13	0.000
CEO (70)	25	26	24	0.133
Production manager (63)	28	32	23	0.000
Middle school teacher (60)	44	44	44	0.744
Personnel manager (60)	48	48	48	0.843
Writer (58)	6	7	5	0.248
Nurse (54)	39	34	46	0.000
Computer programmer (51)	36	37	35	0.258
Administrative assistant (49)	33	33	32	0.469
Accountant (49)	53	50	57	0.000
Policeman (40)	38	40	34	0.001
Farmer (38)	59	62	55	0.001
Receptionist (38)	29	28	29	0.465
Operator in a factory (34)	52	55	47	0.000
Hairdresser (32)	46	38	59	0.000
Taxi driver (31)	30	34	25	0.000
Security guard (30)	39	42	34	0.000
Housemaid (23)	27	22	33	0.000
Janitor (21)	30	30	32	0.242
Hotel bellboy (20)	27	33	17	0.000
Summary indices				
Extensity				
Mean	7.43	7.55	7.27	0.206
SD	5.22	5.37	4.99	
Range of scores	0–22	0–22	0–22	
Range				
Mean	35.47	36.12	34.52	0.059
SD	20.34	20.32	19.59	
Range of scores	0–65	0–65	0–65	
Upper reachability				
Mean	62.07	62.56	61.38	0.150
SD	19.23	19.46	18.88	
Range of scores	0–85	0–85	0–85	

*The significance levels for t tests on the equality of means for men and women.

teacher, security guard, nurse, policeman, computer programmer, and administrative assistant. The third cluster, accessed by less than one-third of the respondents, included janitor, production manager, receptionist, taxi driver, professor, housemaid, hotel bellboy, CEO, lawyer, and legislator. The least accessible position was writer, accessed by only 6 percent of the respondents (Table 9.2).

Although there appears to be no significant gender difference in the three indexes of social capital, gender difference in accessing certain positions exists and reveals a discernible pattern. Although women had better access to female-dominated occupations like nursing, accounting, hairdressing, and domestic services, men in the power structure had overall advantage in accessing both privileged positions (e.g., legislators, production managers, and lawyers) and male-dominated occupations (e.g., policemen, farmers, factory operators, taxi drivers, security guards, and bellboys). Thus, men had an advantage in reaching positions similar to or better than those acquired in the prestige hierarchy. Women who were disadvantaged in accessing many of the positions were probably compensated by the traditional household roles played, such as health care for family members, personal beauty care, and housework. Such roles and the social resources they accessed may well have been useful for their individual well-being, but may not have been as useful for gains in the labor market. Thus, it is important to make a separate gender analysis of the sources and returns of social capital if possible.

Table 9.3 Factor Structure of Access to General Social Capital (Prior to Current Job)

Factor	*Sample (N = 2,292)*	*Men (n = 1,352)*	*Women (n = 940)*
I	2.509	2.583	2.601
II	.311	.316	.304
III	.098	.100	.095
Factor loadings on Factor I*			
Upper reachability	.919	.919	.918
Extensity	.900	.897	.905
Range	.967	.966	.969
Factor scoring on Factor I*			
Upper reachability	.355	.356	.353
Extensity	.348	.347	.348
Range	.373	.374	.372

*Principal Component Analysis and varimax rotation

To assess whether the three measures of social capital can be considered as a cluster of a single dimension of "access to social capital," the factor analysis yielded a single factor solution and almost identical patterns and coefficients for men and women (Table 9.3). The results strongly suggest a single dimensionality among the three indices for access to social capital. When restricting solutions for factors with eigenvalues greater than 1, the factor loading of the three variables on the single factor were all very high (.96, .91, and .89). As a result, a factor score was computed with differential weights assigned to the three indices (.35 for extensity, .37 for range, and .36 for upper reachability). Because separate factor analyses for males and females result in identical patterns, the same scoring weights were used to construct a general social capital score for all respondents.

Research Design

This study formulates two conceptual models: one for access to social capital and another for returns to social capital. Human capital, associational activities, and socioeconomic environment (urbanization degree of one's residence) are hypothesized to significantly contribute to the production and return of social capital. For returns to social capital, this study examines three dimensions of labor market outcomes: occupational positions, authority in the workplace, and economic well-being.

The occupational structure, people's mobility in terms of occupation, is the key to an understanding of social stratification and class differentiation. The occupational status reflects the position of the individual within the system of work organization and economic structure. This study refers to the well-known Erikson, Goldthorpe, and Portocarero (EGP) class schema commonly used in cross-national research on social stratification (Erikson, Goldthorpe, and Portocarero 1979; Erikson and Goldthorpe 1992), collapsing its class schema into a three-category occupational classification as follows: (a) service class consisting of professionals, administrators, managers and high-grade technicians, and supervisors of nonmanual workers; (b) self-employed (petty bourgeoisie), referring to small proprietors with and/or without employees; and (c) workers, including farmworkers, manual and nonmanual workers. The EGP class schema is based on occupations and on the employment relations of industrial employment structure. The starting point of the division of social classes is threefold: employers, self-employed workers, and employees. Starting from this threefold hierarchical classification, professional workers with specialized knowledge and expertise are described as members of the "service class," who exchange not only effort for wages but make a much more diffuse commitment to service to their employers for a more general and long-term prospect of compensation and career development. In the advanced capitalist economies this "service relation" was secured largely through the institutions of the hierarchical corporation, the internal labor market, and the bureaucratic career (Goldthorpe

1982, 2000). This study considers this threefold class schema as a reflection of important social cleavages in Taiwan.

Conceptually, EGP class schema is not constructed around any single hierarchical principle from which a regular ordering of the classes could be derived. However, it is possible, for particular analytical purposes, to produce an ordering by reference to external criteria such as SIOPS and a number of occupational scales. Erikson and Goldthorpe (1992) conducted a mapping between the categories of the occupational scales and those of the EGP class schema. They showed that the service class consistently ranked above all others, and those of nonskilled workers in industry and agriculture consistently ranked below all others. As such, the service class is considered to be a valid indicator of occupational attainment in social status.

In addition to occupational positions, this study examines the effects of social capital on being a supervisor and earning a higher wage in the labor market. As discussed in the previous section, the social capital was measured at that juncture when respondents were starting their current jobs; thus a temporal sequence was imposed between social capital and the variables of labor market outcome.

After constructing a social capital score for all respondents, the factors that facilitated or hindered access to social capital were scrutinized. Several groups of structural variables were identified to help explain the production and returns of social capital, including age, gender, education, ethnicity, occupational status, urbanization of residence, participation in voluntary associations, and current job tenure. First, education as a key feature of human capital enhances one's labor market opportunities and consequently affects one's access to social capital. Schools are an important source for building lifelong connections and friendships, on which social capital is based. This is particularly applicable to those who attend university or MBA programs where identification with their alma mater and dynamic alumni networks are vital sources of social capital. In this study, education was measured on a four-level scale (secondary or lower, high school, associate college, and college and graduate). Second, employment reflects the respondent's social status and the opportunities for further social contacts in daily life. This study used occupational status as an indicator that was categorized into four groups: service class, self-employed, other jobs, and no previous job. Ethnicity in Taiwan used to play a key role in social cleavage; previous studies on social stratification in Taiwan suggested that ethnicity channeled people into different employment sectors (i.e. whether public, private, or self-employed). Mainlanders in Taiwan (those who themselves or whose parents or grandparents fled mainland China in 1949 following the Nationalist defeat in the Chinese Civil War) presumably have a narrower kinship network than native Taiwanese, who usually have a wider kinship network through their extended families. Thus, "kinship capital" as a result of ethnicity may affect one's access to social capital.

The urbanization of residence, reflecting the socioeconomic environment in which the respondents were situated, was categorized into three levels: core cities, town, and rural areas.

Age is included in the analysis representing general life experience and accumulation of social skills. In this study, age refers to the respondent's age when he/she started his/her current job. Research findings indicate that wages increase with age up to a point (usually in the mid- to late thirties) and then decrease as ages rise. This may well be true when it comes to accessing social capital as well. For those who are active in work, family, and social life, social capital may rise and fall with age, peaking in mid-life (Erickson 2004). Thus a variable of age-squared is included to test whether social capital or income will increase with age, albeit at a decreasing rate. A control variable in this study is whether the respondents were participating in voluntary associations, both when they started their current jobs and when they were interviewed. One-fourth of the respondents reported that they participated in one or more voluntary associations when they started their current jobs, and 47 percent were currently participating in voluntary associations when interviewed. Such associational activities might be important in providing diversified contacts that differ from those accessed at work and in schools. Indeed, this variable may independently contribute to one's access to social capital. Finally, gender is included because in social life men and women may function under different social norms and, thus, be offered different opportunities that affect their access to social capital. Marital status and having young children in the household were originally included in data analyses, but revealed no significant effects on access to social capital and attainment; they were thus not included in this study.

INEQUALITY IN ACCESS TO SOCIAL CAPITAL

Table 9.4 shows the parameter estimates of the determinants of access to social capital, for the whole sample and separately for men and women. In these models, social capital, age, and participation in voluntary associations were measurements at the time when the respondent was starting his/her current job. Taking into account other variables in the model, there was no gender difference in access to social capital; urbanization of residence was also not related to access to social capital. A related study in China shows that men and those who worked in state-administered cities had better access to social capital (see Lin et al. this volume). Additionally, ethnicity had no significant effect on access to social capital. For both men and women access to social capital was contingent on age (with a curvilinear pattern, i.e. a diminishing effect), education level, participation in voluntary associations, and having a previous job. Education and participation in voluntary associations were two powerful

sources of social capital, verifying that school experiences and association activities led to numerous contacts with diversified others. Access to social capital was hindered for those who did not change jobs, because there were fewer chances to know a diverse range of contacts.

Men and women differed on one factor relating to access to social capital. Men benefited from having previous service-class jobs (e.g., executive/

Table 9.4 OLS Estimates of the Determinants of Access to General Social Capital (Prior to Current Job)

	Total	*Male*	*Female*
Age [a]	.069***	.066***	.087***
Age squared [a]	–.001***	–.001**	–.001**
Ethnic group (ref: Minnan)			
Haka	.100+	.086	.109
Mainlanders	–.027	–.025	–.013
Education (ref: High school)			
Secondary or lower	–.473***	–.350***	–.656***
Associate college	.386***	.346***	.438***
Bachelor degree and above	.629***	.580***	.675***
Male gender	.062		
Participation in voluntary association [a]	.236***	.231***	.234***
Previous occupational status (ref: Other jobs)			
Service class	.152*	.204*	.090
Self-employed	.119	.172	–.060**
No previous job	–.201***	–.176**	–.203**
Urbanization of residence (ref: Rural)			
Core cities	–.061	–.056	–.074
Town	–.041	–.002	–.077
Constant	–1.646***	–1.592***	–1.914***
Observations	2292	1352	940
Adjusted R^2	.201	.172	.249

Note. OLS = Ordinary Least-squares.

+$p < 0.1$. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

[a]ATT: At the time when R acquired the current job.

professional jobs), and women did not. Women with previous self-employed jobs were in a relatively disadvantageous position for access to social capital. This suggests that executive/professional networks only facilitated men's access to social capital, and self-employed jobs further hindered women's access to social capital. It is also worth noting that women relied more on education than men in gaining better access to social capital.

Differential Returns to Social Capital

The next analytic issue assesses the effects of social capital on social inequalities, namely inequalities of social status, power, and economic well-being. In correspondence, three indicators were used in this assessment: (a) holding a service-class or self-employed occupation, (b) authority in the workplace, and (c) monthly income. These variables were taken as a sequential set of status attainment and labor market outcomes: an individual first entered an occupational group, occupied a job position in a given hierarchical structure, and earned an economic return. The analyses focused on each of these attainment variables as endogenous (dependent) variables in the sequence.

The first analysis mainly assesses the effects of capital and control variables on landing in one of the occupational groups, which are categorized into three classes: (a) service class, accounting for 15 percent of the respondents, and includes professionals, administrators, managers, and high-grade technicians, and supervisors of nonmanual workers; (b) self-employed (petty bourgeoisie), accounting for 18 percent of the respondents, referring to small proprietors with and without employees; and (c) workers/farmers, accounting for 67 percent of the respondents, including farmers, and manual and nonmanual workers. Because there are three groups, multinomial logistic regressions were employed to estimate the odds-ratio likelihood of being a particular occupational class given these exogenous variables. It follows from Table 9.5 that, given the control that other variables exert, social capital significantly enhanced the chances of being in the service class, relative to being workers/farmers. That is, net of the other variables in the model, the chances of holding a service-class occupation rose with social capital. Likewise, all the human-capital variables increased the chances of holding a service-class occupation. Education (particularly holding a university or graduate degree), experience in the present job, and prior service-class working experience all accompanied greater chances of being employed at the service-class level. Age, ethnicity, and urbanization of residence were not significantly related to being in the service class relative to being in the farmers/workers class, whereas gender (being a man) significantly enhanced the probability of entering the service class. Taking into account other variables in the model, participation in voluntary associations showed no significant effect on being

in the service-class level, but significant effect on being in self-employed occupations relative to being in the workers/farmers class. Thus, on the whole, the impact of social capital on moving on to the service class was substantial, even after careful controls for human capital, age, ethnicity, residence urbanization, and gender.

Table 9.5 Parameter Estimates of Multinomial Logistic Model for Determinants of Occupational Status

	Service Class	*Self-employed*
Age	1.100	1.365***
Age squared	.999	.997***
Tenure (logged)	1.323**	1.214**
Ethnic group (ref: Minnan)		
Haka	.658+	.782
Mainlanders	1.181	1.168
Education (ref: High school)		
Secondary or lower	.091***	1.118
Associate college	3.268***	.700*
Bachelor degree and above	9.974***	.778
Male gender	1.642**	1.912***
Participation in voluntary association	1.062	2.003***
General social capital [a]	1.317**	1.067
Previous occupational status (ref: Others)		
Service class	18.98***	3.256***
Self-employed	1.978	2.364***
No previous job	2.684***	.732+
Urbanization of residence (ref: Rural)		
Core cities	1.266	1.028
Town	1.301	.940
–2LL	1028.646***	
Observations	2292	
D.f.	32	

Note. The reference group for outcome variable is "workers/farmers." Because there are zero cells in some variable categories, equations for men and women separately are not applicable.
$^{+}p < 0.1$. $^{*}p < 0.05$. $^{**}p < 0.01$. $^{***}p < 0.001$.
[a]ATT: At the time when R acquired current job

The second indicator of labor market outcomes is authority in the workplace. Authority in the workplace is one form of power that identifies the relative ranking between any pair of positions. This study uses supervision in the workplace as an indicator of authority. The questionnaire asked the respondents: "At your current job do you supervise someone?" If the answer was positive the next question pertinently inquired: "Do any of those under your supervision supervise someone else?" The respondents were then accordingly grouped into three categories: (a) upper-level supervisors, supervising someone who also supervised others; (b) lower-level supervisors, supervising someone who did not supervise anybody; and (c) those who did not engage in supervision of any sort. Although this is an ordinal variable to which ordinal logistic regressions can be applied, some regression models violated the parallel regression assumption, and thus multinomial logistic regressions are used (Long and Jeremy 2003). Table 9.6 shows the results pertaining to being upper-level supervisors and lower-level supervisors (relative to no supervision), indicating that gender, social capital, human capital, and urbanization of residence had substantial effects on authority in the workplace. Holding other variables constant, the chances to become an upper-level supervisor rose with being a man, his/her social capital, education, current job tenure, and living in an urbanized area, whereas the chances of becoming a lower-level supervisor were not significantly related to the urbanization of residence and advanced degrees (associate college and above). Age, ethnicity, participation in voluntary associations, and previous occupational status were not related to one's authority in the workplace.

Table 9.6 also shows the equations for men and women separately and revealed noteworthy results. For both men and women, social capital and current job tenure significantly facilitated one's chances of being a supervisor in the workplace. Education, however, benefited men and not women. Being a supervisor in the workplace was mainly contingent on social capital and current job tenure for women, whereas for men education played an additional important role.

Finally, Table 9.7 presents the estimates of the determinants of income. The measure of income includes twenty categories of current personal average monthly income, coded from 1 to 20. The lowest income group is "no income," and the highest income category is "NT$300,000 or more," so all monthly incomes above NT$300,000 are top coded. As presented in Table 9.7, controlling for other variables in the model, mainlanders tended to make more money than Minnan, and men tended to earn more than women. When samples for men and women were examined separately, few differences revealed themselves between men and women as to the variables contributing to one's income. The factors that had no significant effects on income for men and women include being Haka (relative to Minnan) and participation in voluntary associations. Both men and women's incomes rose with age until mid-life and then leveled off. All human-capital variables

Table 9.6 Parameter Estimates of Multinomial Logistic Model for Supervision

	Total		*Men*		*Women*	
Supervisors	*Upper Level*	*Lower Level*	*Upper Level*	*Lower Level*	*Upper Level*	*Lower Level*
Age	1.106+	1.054	1.124+	1.065	1.041	1.075
Age squared	.999+	.999	0.999	0.999	0.999	0.999
Tenure (logged)	1.543***	1.480***	1.656***	1.552***	1.539**	1.41**
Ethnic group (ref: Minnan)						
Haka	1.026	1.043	1.088	1.091	0.904	0.945
Mainlanders	1.300	1.376+	1.377	1.415	1.155	1.328
Education (ref: High school)						
Secondary or lower	.510**	.665*	0.41**	0.596*	0.81	0.888
Associate college	2.960***	1.252	3.713***	1.278	1.756+	1.232
Bachelor degree and above	2.637***	1.225	3.15***	1.474+	1.943+	0.886
Male gender	2.539***	1.891***				
Participation in voluntary association	1.074	.987	1.2	1.123	0.997	0.791
General social capital [a]	1.997***	1.438***	2.145***	1.403***	1.812***	1.552***
Previous occupational status (ref: Others)						
Service class	1.189	1.032	1.426	1.053	0.795	1.149
Self-employed	.932	.777	0.757	0.68	2.28	0.964
No previous job	.772	.911	0.851	0.85	0.504+	1.091
Urbanization of residence (ref: Rural)						
Core cities	1.748*	1.183	1.673	1.076	1.942	1.408

(continued)

Table 9.6 Parameter Estimates of Multinomial Logistic Model for Supervision (continued)

	Total		*Men*		*Women*	
Supervisors	*Upper Level*	*Lower Level*	*Upper Level*	*Lower Level*	*Upper Level*	*Lower Level*
Urbanization of residence (ref: Rural) (continued)						
Town	1.712*	1.140	1.612	1.148	1.995	1.098
–2LL	447.922***		326.697***		90.86***	
Observations	2292		1352		940	
D.f	32		30		30	

Note. The reference group of the outcome variable is "those who are not supervisors."
$^{+}$ $p < 0.1$. $^{*}p < 0.05$. $^{**}p < 0.01$. $^{***}p < 0.001$.
[a]ATT: At the time when R acquired current job.

increased income: higher educational levels, current job tenure, and current employment in service class or self-employment (relative to farmers/workers) all went with higher income. Nevertheless, women tended to benefit more from education than men in income attainment, whereas men tended to benefit more from current job tenure and social capital than women in income attainment. Living in urban core cities improved men's, but not women's, incomes.

Table 9.7 OLS Estimates of the Determinants of Income

	Total	*Men*	*Women*
Age	.260***	.302***	.189***
Age square	–.003***	–.004***	–.002***
Tenure (logged)	.433***	.585***	.218***
Ethnic group (ref: Minnan)			
Haka	.115	.068	.293
Mainlanders	.356*	.387+	.339+
Education (ref: High school)			
Secondary or lower	–.985***	–1.021***	–1.02***
Associate college	.640***	.500**	.845***
Bachelor degree and above	1.229***	1.051***	1.422***
Male gender	1.173***		
Participation in voluntary association	.159	.162	.173
General social capital[a]	.430***	.482***	.335***
Occupational status (ref: Others)			
Service class	1.418***	1.558***	1.264***
Self-employed	.867***	.929***	.688***
Urbanization of residence (ref: Rural)			
Core cities	.520***	.698**	.270
Town	.323*	.320+	. 031+
Constant	–1.311+	–1.103	.196
Observations	2292	1352	940
Adjusted R-squared	.363	.315	.350

Note. OLS = Ordinary Least Squares.
+$p < 0.1$. *$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.
[a]ATT: At the time when R acquired current job.

Most important, access to social capital significantly affected current income levels. That is, holding other variables in the model constant, better social capital consequently caused higher income for both men and women. As noted in the previous section, the measure of social capital in the model was measured at the time when the respondent started his/her current job, with a temporal sequence followed by labor market outcomes (income, occupational status, and supervision). Therefore the significant causal effect of social capital on income can be asserted.

DISUSSION AND CONCLUSION

This study first examines a critical issue in social capital research—inequality in social capital—investigating the extent to which social capital is unequally distributed across social groups in Taiwan. It used position-generator methodology to measure social capital and yielded informative findings from surveys conducted in Taiwan. It found that there is no gender difference in access to social capital. That is, in Taiwan, men had no significant advantage over women in the average number of accessed positions, the highest prestige among accessed positions, and the range of prestige scores between the highest and lowest prestige scores of accessed positions. Even taking into account other variables, the regression model showed that gender is not associated with access to social capital. Nevertheless, gender differences in accessing certain positions do exist and reveal a discernible pattern. Although women had better access to female-dominated occupations, men had overall advantage in accessing both privileged positions and male-dominated occupations. It is most likely that women who were disadvantaged in accessing many of the positions were compensated by the traditional female-oriented positions better accessed by women. Thus, men and women have different "kinds" of social capital because of their advantage or disadvantage in structural positions and social networks. That is, despite different kinds of positions accessed by men and women, the three indicators (extensity, range, and upper reachability) amounted to similar quantitative scores for men and women overall.

A previous study in Taiwan also found that although men tended to access more positions, there was no significant difference between men and women in terms of upper reachability (the highest prestige score) and the range of scores (Lin, Fu, and Hsung 2001). Compared with studies conducted in China where males had significantly better social capital than females on all three indicators (Lin 2001b; Lin et al. this volume), the overall inequality in social capital is not associated with gender in Taiwan. This may imply that Taiwan has a more open and diversified society that allows women to access just as many social positions as men. Despite the fact that positions accessed by men and women are qualitatively different, their prestige scores are not quantitatively different.

The key determinants of access to social capital are human capital and networking activities. It is clear that human capital induces social capital because better-educated individuals tend to move in social circles rich in resources. Education facilitates access to social capital, probably because schools teach students valuable social skills, including language and communication abilities, which are crucial for networking abilities. Also, friendships made during school are usually long-lasting and tend to become one's core source of social capital. It is also noteworthy that college education brings far better returns to social capital, whereas high school education also helps with accessing social capital. This tends to suggest that social capital is acquired and accumulated earlier in one's schooling experience. Following one's school life, early experiences in civic engagement (participating in voluntary associations) further improve the acquisition of better social capital that may not be accessible in the workplace and through one's kinship ties.

Following the issue of access to social capital, this study examines the extent to which inequality in social capital contributes to social inequality across social groups. To ascertain the causal sequence, a time framework is specified for the contacts by identifying social capital accessed at the present time and social capital accessed prior to the current job. With the position-generator instrument and three attainment variables—occupational groups, authority in workplace, and monthly income—this study explores these mechanisms for attainment in the labor market in Taiwan. Taking other variables into account, social capital, indeed, affects one's chances of moving into the desirable service class (professional and managerial occupations), taking supervisory positions in workplace, and earning a higher income.

This fundamental finding confirms that social capital exerts a profound effect on status attainments beyond that accounted for by personal resources. Thus, this study makes a contribution to knowledge in the ongoing research of social stratification and social mobility, and to the theory of social capital itself where research in this field has been carried out in multiple political economies in North America, Europe, and Asia and have involved scholarly theses from academics emanating from diversified nations and cultures.

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