

# Chapter 2: Descending Mainlander-Taiwanese: social mobility of Taiwan, 1945-2012

## 2.1 Introduction

This chapter estimates intergenerational social mobility rates in Taiwan since the government of Republic of China (ROC), led by National Party (KMT), retreated to Taiwan in 1949. Taiwan accomplished land reform without confiscating the properties of the native Taiwanese elites under the Japanese occupation (1895-1945). Embracing the market economy under the KMT's authoritarian rule, Taiwan achieved universal primary schooling, industrialization and urbanization within a few decades. In the 1980s, the KMT promulgated democratic reforms which culminated in a direct presidential election in 1996<sup>1</sup>. What was social mobility after 1949 compared to the contemporary mainland China and other East Asian economies? Did social mobility increase after the democratization?

My methodology is to trace over time the changing social status of mainlanders who migrated to Taiwan as the new ruling class around 1949, and who account for 12% of the population. Today administrations don't make ethnic distinction between mainlanders and natives. But I can still infer people's ethnicity by their surnames, at least for a subsample of surnames. The 1957 population census reported surname totals by ethnic origin (native Taiwanese, mainlanders and mountain aboriginals). 300 surnames were held by mainlanders with a proportion of 0.95 and above, and their social status is the

---

<sup>1</sup> For a summary of Taiwan's socio-economic policies under KMT, see Tien and Shiau (1992)

same as for mainlanders as a whole. 30 surnames were held by native Taiwanese with a proportion of 0.98 and above. Then I trace over time the relative representation of these surname groups among top college students, doctors, and entrepreneurs, and see how quickly they regress to mediocrity.<sup>2</sup>

The primary results (table 2.1) show that in Taiwan intergenerational correlation of status (as defined in chapter 1)  $\rho$  falls within range of 0.53-0.66. This is slightly lower than in mainland China after 1949, but still much higher than conventional studies have suggested. As shown in the last column below, parent-child correlation of income, based on individual or household level, ranges from 0.17 to 0.24. The result holds for top college students, doctors and business elites. Moreover, mobility rates have not changed since the 1980s. The implication is that the way that social status is transmitted through generations is relatively unrelated to political and economic regimes, also in Taiwan.

**Table 2.1: Estimated Intergenerational Correlation of Status of Taiwan (1950-2010)**

NTU students	doctors	entrepreneurs	Individual level parent-child correlation of income from household surveys
0.55-0.66	0.53-0.65	0.58-0.62	0.17-0.23 (Li, 2011) <sup>a</sup>
			0.20-0.24 (Ueda and Sun, 2012)

<sup>2</sup> Because Taiwan and Mainland China are isolated from each other until late 1980s, the surname distribution of Taiwanese population is stable over time (shown in table 2.4). Even today students from mainland China are not allowed to pursue graduate degrees in Taiwan based university. So “mainlander” surnames that show up among the most recent elite samples are hold by descendents of “mainlander Taiwanese” rather new immigrants from mainland China.

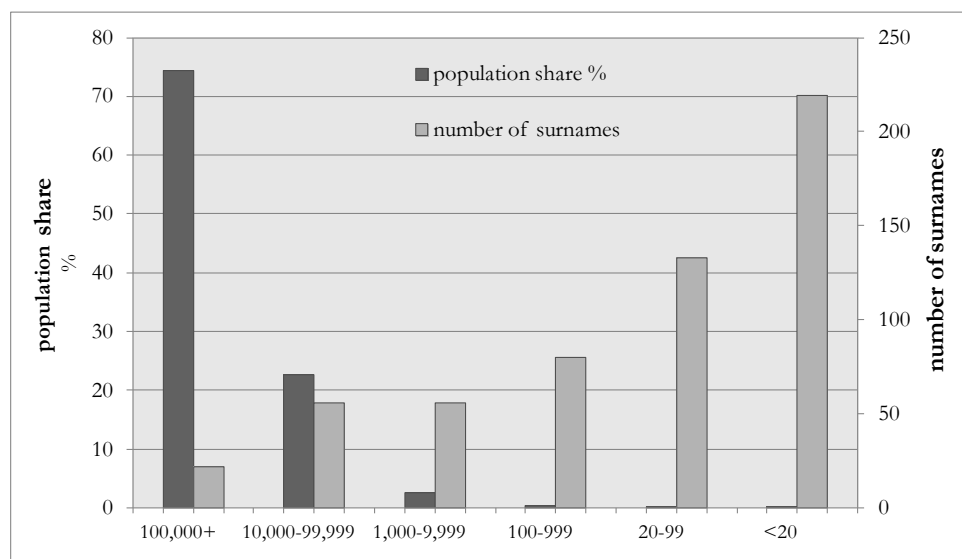
Note: a, based on 2001 National Health Interview Survey data

b, based on Pane Study of Family Dynamics (PSFD) from 2004 to 2006

## 2.2 Surnames in Taiwan: mainlanders and natives

Surnames were not a good indicator of social status in Taiwan before the influx of immigrants from mainland China after 1945. The surname distribution of the native Taiwanese (*benshengren*, 本省人) is obtained from 1956 population census as shown in figure 2.1<sup>3</sup>. The horizontal axis shows the range of population of individual surnames that fall into a group. The left vertical axis shows the population share accounted for by each group and the right vertical axis report how many surnames are within each group.

Figure 2.1: groups of surnames by population: native Taiwanese only, 1956

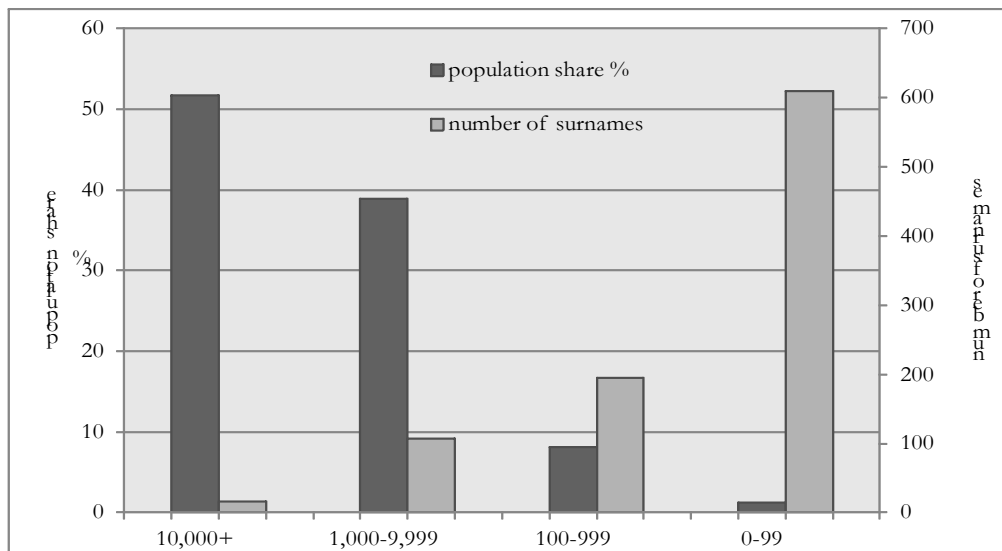


There were only 566 surnames among 8 millions *native Taiwanese*. The degree of concentration was very high. As shown by the leftmost two bins to the leftist, the top 23

<sup>3</sup> The 1956 census on 1/4 of Taiwan population reports the geographic and ethnic distribution of each surname. The native Taiwanese number includes aboriginals, as it is defined as people born in Taiwan before 1945.

surnames, each of which has population of larger than 100,000, altogether account for as much as 74% of native Taiwanese. This is because most native Taiwanese came from limited areas of Fujian and Guangdong province, where the population was dominated by a few kinships with limited number of surnames. There was lack of variation in status among native surnames during Japanese occupation.<sup>4</sup> Distinguished clans were honored as high gentry, assigned local administrative positions and acquired land and enterprises. But these clans have common surnames that have high frequency in the general population<sup>5</sup>. Today administrations only report places of birth but not places of origin. Without knowing people’s places of origin at county or township level, there is no way tracing the descendents of such kinships into the modern era.

**Figure 2.2: categories of surnames by population: mainlanders 1956**



<sup>4</sup> There were no surnames highly over-represented among native Taiwanese who earned college degrees in Japan (1920-1940), and among Taipei medical school students (1908-1945)

<sup>5</sup> Some famous examples are 雾峰-林, 西螺-廖, 屏东-阮, 鹿港-辜, 基隆-颜, etc. None of the “rare” surnames that have populations of 100 or fewer showed up among these distinguished clans.

In contrast, as shown in Figure 2.2, Surname diversity was much greater for the mainlanders, or *Waishengren* (外省人), people who followed [Chiang Kai-shek](#) (蒋介石) to [Taiwan](#) after the KMT lost the [Chinese Civil War](#) in 1949. These people included KMT officials, soldiers, merchants, bankers, executives, scientists, intellectuals, refugees, and anyone else who feared Communist rule. In 1956, there were only 0.9 million non-military mainlanders. But they can break into 861 surnames, more than 200 of which have population of more than 100. This reflects the fact that they came from a wide range of localities in China. Further I can identify mainlander-specific surnames. There were 403 surnames where 80% and above the holders are classified as mainlanders, and 311 surnames have 95% and more as mainlanders. <sup>6</sup>

**Table 2.2: Relative representation of mainlanders among “elites” after 1949**

	Taiwan Population 1956 <sup>a</sup>	Taipei population 1956 <sup>b</sup>	public sector employment 1956 <sup>c</sup>	college degree holders 1951 <sup>d</sup>	high school degree holders 1951 <sup>e</sup>
mainlander's share % (civil only)	9.83	34.24	35.17	73.43	69.31
Total (civil only)	9,276,065	890,208	118,082	68,465	184,281
Relative representation	1	3.48	3.57	7.47	7.05

Source: a,b: from 1956 population census.

c. d, e: from Luo (2001): table A2.1 and A3.1.

1. RR: calculated as mainlanders' share in specific group over its 1956 population share
2. Public sectors include central and local governments, public schools, universities and research institutes, and state-owned public enterprises

<sup>6</sup> 200,000 to 300,000 Soldiers (95% mainlanders) were not included in 1956 census.

The higher social status of mainlanders in the initial post-1945 period is illustrated in table 2.2. The last row reports relative representation of mainlanders among each group. First, mainlanders were 3.5 times more likely than general population to reside in the capital city Taipei, and 2.7 times more likely to reside in urban area. Second, mainlanders were 3.6 times more likely to be hired in the public sector. Third, mainlanders were more educated than the native Taiwanese, illustrated by the share of population with tertiary and high school degrees in 1951. About 5% of non-military mainlanders in 1951 had earned college degrees (the average for China was 0.15%; for the lower Yangzi provinces 0.35%). Another 15% of them had high school degrees. In contrast, only 0.25% of native Taiwanese had graduated from college, and 1% from high school.

It is not surprising that the incoming students after 1951 of National Taiwan University (NTU) dominated by mainlanders and their descendents. Table 2.3 shows that mainlanders account for 46.5% of NTU incoming students in the two decades after 1949. But the gap between mainlanders and native Taiwanese closed in the following decades. Overall, the mainlander's share in the top 0.5% best educated declined from 46.5% to 24.65% within 1.5 generations. It is widely observed that best students finish their college in Taiwan before they go to graduate schools in foreign country, and NTU enrolled the best high school graduates from Taiwan (Luo, 2002).

**Table 2.3: Mainlanders in National Taiwan University (NTU) Incoming Students**

Year of admission	1951-	1965-	1968-	1976-	1984-
	60	67	75	83	91

mainlander's share among NTU students %	46.42	51.21	43.62	35.10	24.65
NTU's students as share of the birth cohort	0.56	0.59	0.45	0.50	0.53

Note: calculated from Luo (2002): table 6

In 1996, identity cards and passports stopped containing an entry for native province, and it was replaced by place of birth, an endeavor to reduce the mainlander/native distinction. NTU registration stopped reporting places of origin even earlier, 1992. Even if ethnicity was still reported, it might not be correctly reported. The descendents of mainlanders, who were born in Taiwan, may have reported themselves as native Taiwanese. The mainlanders, who married native Taiwanese, may have reported themselves as Taiwanese, and the other way around. Therefore, it is impossible to trace the status of mainlanders in Taiwan using conventional sources after 1990.

**Table 2.4: Two mainlander surname groups vs. all mainlanders**

	1956 population	2007 population	1951-1965 NTU students	1956 Taipei city population
“mainlander 1”'s share % (80% pop are mainlanders)	0.78	0.96	3.56	2.55
<b>RR</b>			<b>3.71</b>	<b>2.66</b>
“mainlander 2”'s share % (95% pop are mainlanders)	0.39	0.48	1.75	1.27
<b>RR</b>			<b>3.65</b>	<b>2.65</b>
Mainlander's share %	9.83	12.43 <sup>a</sup>	46.72	34.24

	<b>RR</b>		<b>3.76</b>	<b>2.75</b>
“very native” s share %	2.82	2.75	1.34	1.85
	<b>RR</b>		<b>0.48</b>	<b>0.65</b>

Note: a: the number comes from 1990 census, when the ethnicity distinction is still made.

RR calculated using 2007 population share.

Fortunately, I can construct a subsample of the mainlanders whose ethnicities are revealed by their surnames (table 2.4). I define the 403 surnames that each has at least 80% of population from mainland as “mainlander 1”, and the 311 surnames, whose 95% of population or more are mainlanders as “mainlander 2”. By comparing them (the 1<sup>st</sup> and 2<sup>nd</sup> row) with the entire mainlander group (the 3<sup>rd</sup> row), it is clear that neither surname group was more “elite” than the 1 millions mainlanders as a whole. These surname groups thus can be good representatives for the mainlanders. Both surname groups are just as over-representative as all mainlanders among NTU incoming students after 1951-65, and among the Taipei city population.

The 1956 surname distribution is exclusive of 200,000-300,000 military veterans, most of whom were mainlanders. As a result, the 2007 census population shares of both “mainlander” surname groups increased by 25%. As we can see in column 2 of the table, in 2007 population shares of the “mainlander 1 and 2” are as 1.24 times as in 1956, whereas the entire mainlander population’s share is as 1.25 times as in 1956. Thus the “mainlander 1 and 2” surnames were just as frequent among veterans as in the non-military population. For the calculation of relative representation (RR) of mainlander



1 and 2 surnames, therefore, I used 2007 population share for all generations because elite samples of later generations also include the descendents of military veterans.<sup>7</sup>

Similarly, I construct a group of surnames that each has no more than 2% population from mainland China, named as “very native”. These surnames as a whole were generally distributed heavily in south Taiwan. As shown in the 4<sup>th</sup> row of table 2.4, they were under-representative among NTU students 1951-1965 and in the 1956 Taipei population. The population share of these surnames changed little over the last 50 years. With persistence rates of less than 1, it is expected that the RR among elites increased toward 1 for the “very natives”, but declined toward 1 for the “mainlander” surnames over the past six decades (chapter 1). Table 2.5 reports summary statistics of the surnames of the three surname groups as in 1956 census.

**Table 2.5: Summary Statistics of the Surnames of the Three Surname Groups,**

**1956**

	mean	standard deviation	Max	Min <sup>a</sup>	Number of surnames
“Mainlander 1”	180	392	4,344	4	403
“Mainlander 2”	116	255	2,620	4	311

<sup>7</sup> The population share of “mainlander 1 and 2” could have changed from 1956 to 2007. The natural growth rate of mainlanders and native Taiwanese may differ because urban population and rural population may have different fertility and death rates, and the mainlander veterans might have married late or never married. Moreover, there was migration between Taiwan and other countries with Chinese ethnicity (Hong Kong, Singapore, Thailand, and mainland China after 1978), all tend to increase the diversity of surnames in Taiwan (there was 400 new surnames in 2007 census that did not show up in 1956 census) and raise the share of “mainlander 1 and 2”. Forth, the chance of emigration to US, Japan and Europe might have been higher for mainlanders than natives. The net effect is ambiguous.

---

“Very native”	2,126	13,753	127,896	8	123
---------------	-------	--------	---------	---	-----

---

Note: a. the number of population of all surnames are factor of 4 because the 1956 census was based a random sampling of 1/4 of the population.

## 2.3 Results

### 2.3.1 NTU students

National Taiwan University was founded in 1928 by the Japanese administration named *Taiboku (Taipei) Imperial University*. In 1945, the government reorganized and renamed it *National Taiwan University* (NTU). After this, thousands of college professors from mainland China joined the NTU faculty. 1945-1950, NTU admitted students by giving exams to eligible candidates. After 1950 NTU, along with other universities, admitted students by a united entrance exam (like the college entrance exam in China, but without provincial quota). It generally admitted the students with the top scores among entrance exam attendees. The share of NTU incoming undergraduate students among each age cohort was quite stable, as shown in table 3. It recently increased to 0.8% for 1990-2000 and 1% for 2001-2010 (Luo, 2001).

The NTU student names come from the following sources. I collected NTU undergraduate student lists of 1951-1965 and 1969-1972 from NTU alumni books. After 1975, due to the unavailability of such books, I instead collected NTU graduate student list from a digital database of master Thesis and PhD dissertation at all Taiwan universities. 30% of NTU graduate students went to NTU as undergraduate students. It

may be concerned that 2000-2010 graduate students are not as exclusive as NTU undergraduate students because the best performing undergraduate students tend to pursue graduate degrees in US. So I only include graduate students from Law school, Medical school, Management school, and Engineering school.

**Table 2.6: NTU students contributed by each group**

Student lists available: by Year of degree	Generations (25 years) <sup>8</sup>	The number of students				Elite share used for simulation %
		All NTU	Mainlander 1	Mainlander 2	Very native	
1925-49	1925-49				NA	0.8
1951-64 and 1969-72 <sup>a</sup>	1950-74	13,879	485	244	199	0.5
1975-85 <sup>b</sup>	1975-99	4,766	126	60	102	0.75
2000-12 <sup>c</sup>	2000-24	9,060	129	61	222	1

**Note:** For 1950-1974 I exclude those reported as “foreign students” which include students from Hong Kong (whose places of origin might be mainland China), assuming those students don’t count as Taiwan residents. For 1975-, it is easy to exclude students from Korea, Japan and other countries, but there is no way to exclude Hong Kong students so those students are included in the sample, which thus certainly contains some surnames of mainland origin.

a. All NTU undergraduate students.

b. All NTU graduate students (masters and PhD).

<sup>8</sup> The average age of women when they give birth to a child was 26 in the 1930s and 1940s, 28 in the 1950s and 1960s, 26 in the 1970s, 25 in the 1980s, 27 in the 1990s and 28 in the 2000s. Two factors, age of first marriage and number of births given per women, change over time. For the periods of our interests, I took 25 years to be a generation.

c. NTU graduate students: Law school, Medical school, Management school and Engineering school.

I don't observe the top educated before 1951, but from fourth column of table 2.2, in 1951 mainlanders account for 73% of college degree holders which implies a relative representation of 5.97 (73% divided by 2007 mainlander population share). As argued before, “mainlander 1” and “mainlander 2” are very similar to the entire mainlanders in terms of relative representation among elites and city of Taipei population. Therefore, I applied RR of 5.97 to the 1925-1949 graduation cohorts. Since the total number of college degree holders is 68,000 in 1951, roughly 0.8% of Taiwan population, I set the elite share to be 0.8% for the first generation.

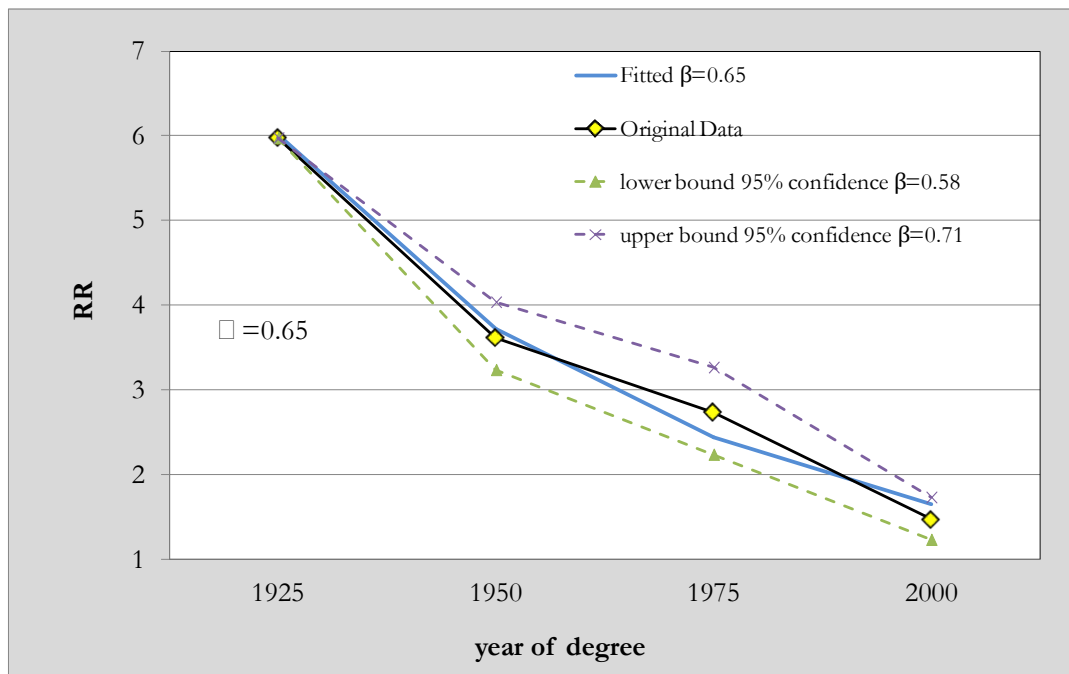
Figure 2.3 and figure 2.4 show the RR of “mainlander 1” and “mainlander 2” by year of degree. The implied intergenerational correlation of status (in context of post-war Taiwan, the rate of persistence of mainlanders), is about 0.65. Figure 2.5, on the other hand, shows the RR of “very native” by year of degree. The implied persistence rate is 0.55. But even for the most recent decade, “mainlander 1 and 2” are still 1.46 times as likely as the average surname to show among NTU students, whereas “very native” is only 0.88 times as likely as the average surname. To adjust for the sampling error (the results are driven by a few surnames), I re-sampled the 3 surname groups with replacement for 1000 times and for each bootstrapped sample, I calculated RR for each period, which allows me to construct 95% confidence intervals of RR for each period. Estimating  $\square$  for the upper and lower bound of RR gave me a range of possible  $\square$ s. Note that the range of confidence interval is the largest for 1975-99 graduation cohort,

which has the lowest elite sample size (4766) and hence the highest sampling error.

Overall,  $\beta$  s lie in the range of 0.55-0.75, except for the “very natives”. So my estimate of

$\beta$  is robust to sampling errors.<sup>9</sup>

**Figure 2.3: Relative representation of “mainlander 1” surnames among NTU students**



**Figure 2.4: Relative representation of “mainlander 2” surnames among NTU students**

<sup>9</sup> It may be concerned that 2000-2010 graduate students are not as exclusive as NTU undergraduate students. I also set elite share to be 2%, 4% and 6% for simulation. The  $\beta$  s estimated increased by 0.01, 0.02 and 0.03 respectively.

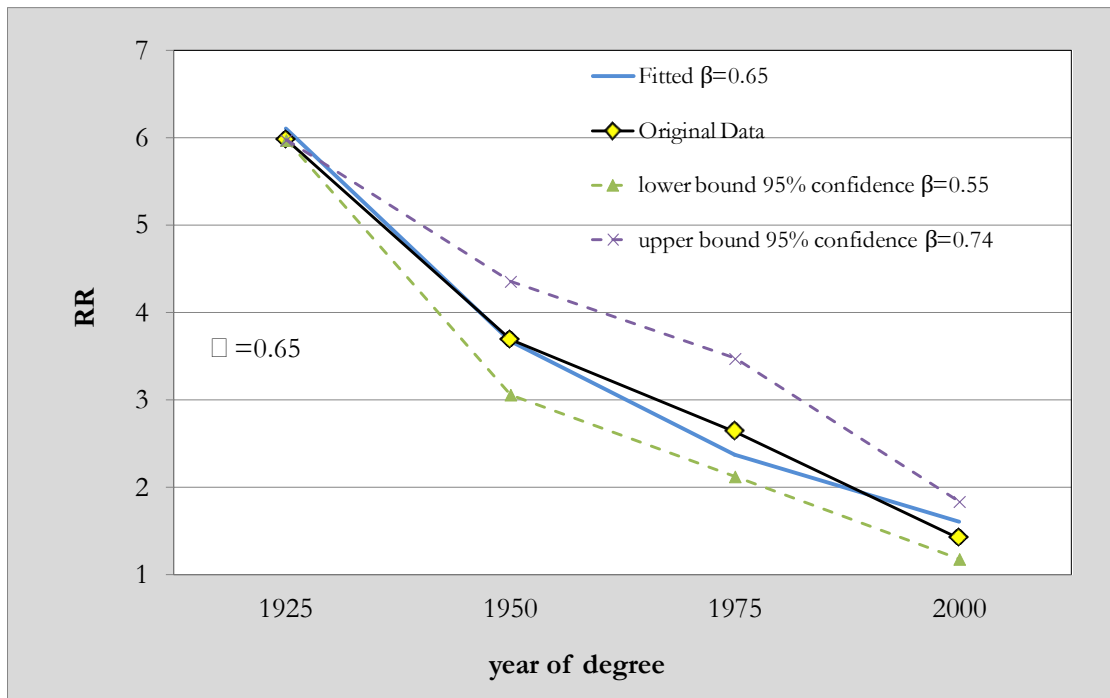
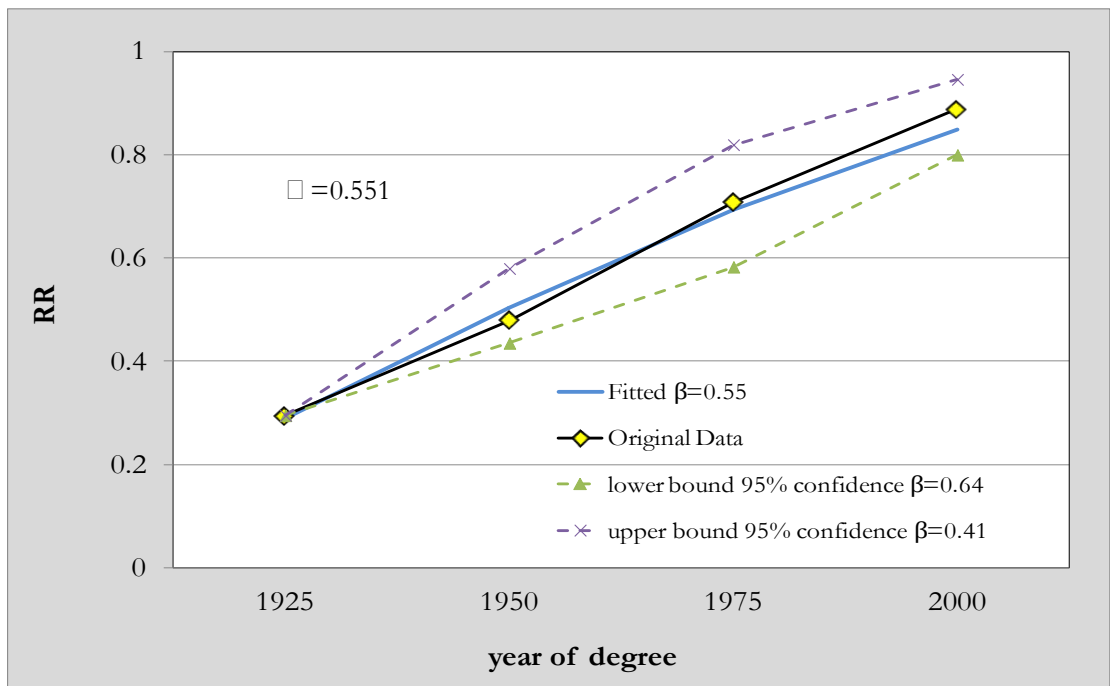


Figure 2.5: relative representation of "very native" surnames among NTU students



### 2.3.2 Results: doctors and entrepreneurs

It is observed that under KMT rule, mainlanders dominated the bureaucratic and educational elite whereas native Taiwanese have been highly successful in pursuing professional career (doctors and lawyers) and establishing small and medium-sized manufacturing businesses (Wang, 2002). Is there a different pattern of social mobility among the doctors and entrepreneurs of Taiwan?

On doctors, the conventional view is that the native Taiwanese always sent their brightest children to medical school since the Japanese occupation, because the Japanese dominated bureaucratic positions. After 1945, it was mainlanders who took over those positions from the Japanese. To attain high social status, the native families allocated their best talents to medicine. Moreover, in the late 1940s most Native Taiwanese did not speak Mandarin, so it was difficult for the mainly mandarin speaking mainlanders to practice medicine in native-dominated communities. This was a disincentive for mainlanders to invest in medical training. If this is true, there should not be overrepresentation of mainlanders among the doctors in the 1950s.

In contrast, table 2.7 shows that the initial position of mainlanders after 1949 was well above 1 although the advantage was much smaller than that among NTU students. When I observe medical students over time, the RR of “mainlander 1” declines from 1.5 to 1.15, whereas the RR of “very natives” rises from 0.69 to 0.94 (figure 2.6 and 2.7). These results indicate a  $\beta$  of 0.53-0.65, assuming the share of this elite being 1% of population<sup>10</sup>. Doctors, 0.2% of Taiwan’s population, are considered as among the most

---

<sup>10</sup> Due to small sample of medical students, the 95% confidence interval after bootstrap re-sampling is too large to give a reasonable range of beta.

prestigious occupations (Huang, 2008). The average income of doctors is as three times as income per capita in Taiwan, higher than the cutoff of the highest 5% of the income distribution.<sup>11</sup>

**Table 2.7: Summary statistics of medical students**

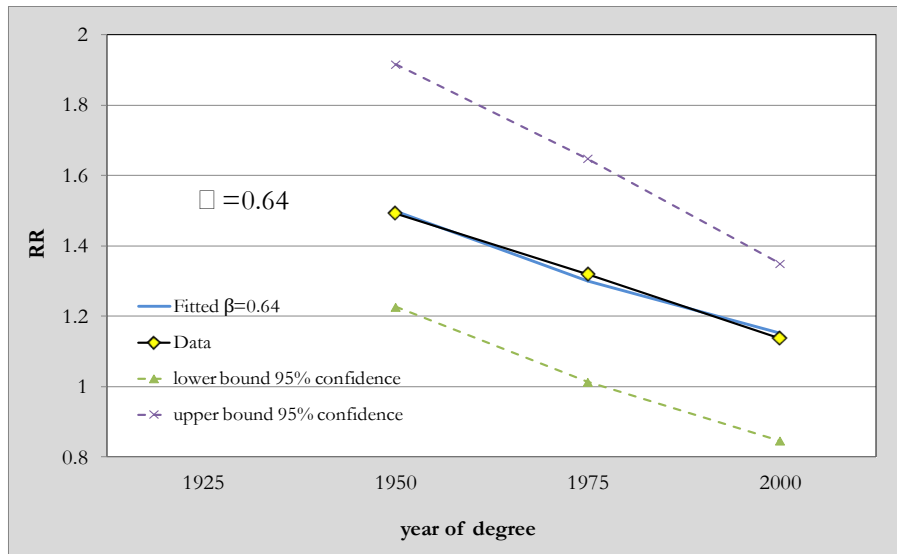
Year of degree	Generations (25 years)	Number of students			elite share used for simulation
		Medical school students	“Mainlander 1”	“Very native”	
1951-64 and 1969-72	1950-74	2584 (NTU undergraduate)	37 (1.43%)	50 (1.9%)	0.5%
			<b>1.50</b>	<b>0.69</b>	
1975-95	1975-99	2447 (all universities, graduate)	31 (1.27%)	56 (2.3%)	0.75%
			<b>1.32</b>	<b>0.81</b>	
2000-12	2000-24	5589 (top 4, graduate)	61 (1.09%)	140 (2.5%)	1%
			<b>1.14</b>	<b>0.93</b>	

Note: in (\*) are the share of surname groups among all medical students

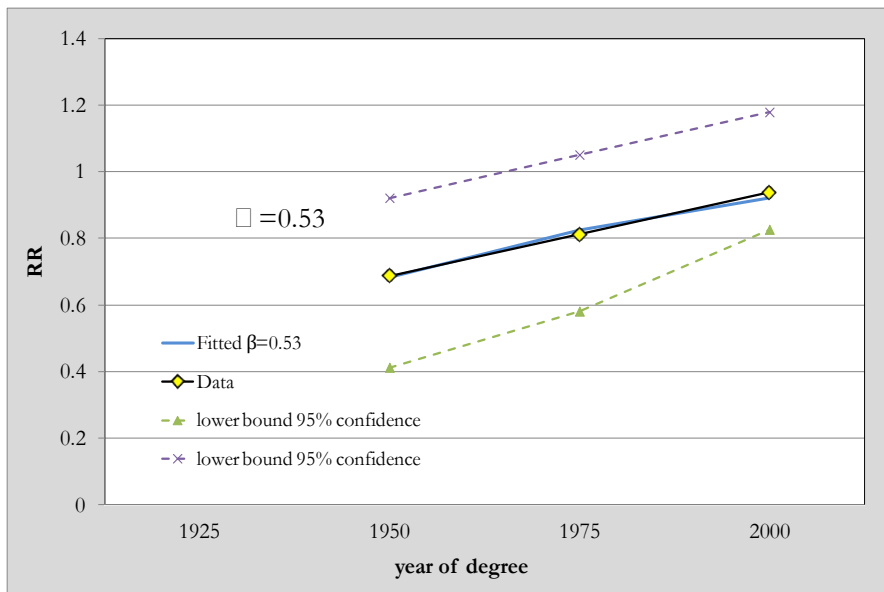
<sup>11</sup> According to Huang (2008), the rating of doctors (of western medicine) on scale of prestige is on part with university faculty and lawyers, and higher than engineers, managers and officials.



**Figure 2.6: Relative representation of “mainlander 1” among medical students**



**Figure 2.7: Relative representation of “very native” among medical students**



On entrepreneurs (table 2.8), my name list comes from *2003 Who's Who* among bosses and managers whose nationality is Taiwan. It contains over 7000 entries with names, date of birth, and asset of the associated companies. The minimum requirement on assets of companies is 1 billions of Taiwan Yuan (about 33 millions of dollars). Interestingly, for the 1926-1950 birth cohorts, the RR of mainlanders among the

entrepreneurs (2.3-2.5) is in between that of NTU students (3.6) and that of medical students (1.5) for the corresponding graduation cohort (year of degree: 1950-74). Similar pattern holds for “very native”. One potential reason, as sociologists documented (Wang, 2001), is that the native elites were little affected by the takeover of Taiwan by KMT and the land reform in the 1950s. They, along with refugee capitalists from mainland China, benefited from the export promoting policy from the 1950s to 1980s.<sup>12</sup>

**Table 2.8: RR of surname groups among business elites**

	RR			Total number of elites
	mainlander 1	mainlander 2	very natives	
1926-1950	2.47	2.29	0.77	3876
1951-1975	1.78	1.66	0.86	3562
indicated b	0.6249	0.60	0.58	

Despite the fact that the initial advantage of mainlanders and natives are different across different elite samples, the speed of them regressing to mediocrity, the implied  $\square$ , are quite similar. This is contrast to some sociologist’s view that mobility rates should be higher among business elites than educational elites, put in the following way: “Many of the mainlanders and their children held salaried positions in the labor market and

<sup>12</sup> The KMT introduced a land reform in the early 1950s, intending to consolidate the party's legitimacy among peasants and to weaken the local elite's power. The landlord class vanished but large landlords who were able to successfully transfer their capital into industry benefited from the reform. Other landlords with medium-sized farms had held white-collar jobs in rural areas, and the land reform simply accelerated their departure from agricultural activity, and many of them started up with small and median sized businesses.

therefore had less incentive to strike out on their own, while ambitious Taiwanese, cut off from public-sector positions, sought upward mobility by starting small enterprises” (Wang, 2001). Overall in section 2.3 intergenerational correlation of status ranges from 0.55-0.65, slightly lower than Mainland China after 1949, but much higher than conventional individual level studies suggest.

### **2.3.3 Results: adjusting for selective emigration**

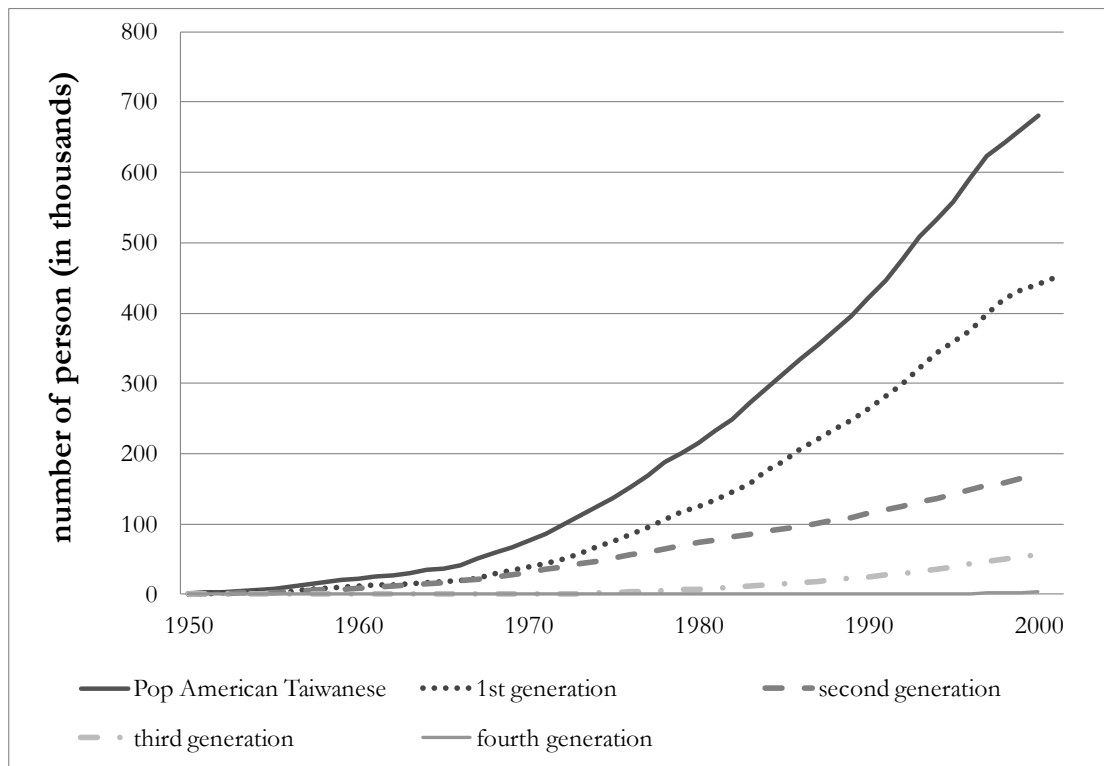
Taiwan seems to have a lower intergenerational correlation of status post 1949 than does the Communist mainland. The estimates in section 2.3, however, give lower bounds on  $\rho$  because of selective out-migration. Since mainlanders were on average more educated than natives, it is likely that mainlanders are more representative among earlier emigrants, most of whom were college students. In 1975, over 90% of first generation Taiwanese immigrants to US had a college degree. In 1990 62% of Taiwan immigrants to US were college graduates, and 92% had graduated from high school (Kao and Thompson, 2003). In 2010, 74% of Taiwan immigrants to US 25 years old or older held bachelor degrees (Ogunwole, et al. 2012). The second generation of Taiwanese immigrants stands out as the most educated group by ethnicity in US (Zhan, 2012). Since

their descendents are missing from later Taiwan elite samples, the mobility rates based on NTU students (or medical students) are biased toward finding higher mobility.

To estimate the numbers of missing mainlanders among the 1975-99 and 2000-2024 NTU students, I took the following steps. First, I estimated the numbers of descendents of Taiwan to US/Canada migrants for each corresponding cohorts in Taiwan. Second, based on the fact that mainlanders were more frequent among college students and hence emigrants, I estimated the size of mainlander migrants' descendents for the corresponding cohorts. Third, I estimate on average how many of these descendents would have entered NTU based on the survey of family backgrounds of NTU students in 2000 (Luo, 2001). Finally, I calculated the adjusted RR of “mainlander 1” after adding back those “counterfactual” descendents to NTU students.

As shown in figure 2.8, the stock of living Taiwan emigrants (including their descendents) to the US and Canada is reported yearly after 1950 and the numbers break down into first generation (born in Taiwan or Republican China, but obtained US/Canada residency), second generation and so on. I am interested in the size of descendents of emigrants who migrated after 1949, thereafter defined as TWA (American born Taiwanese).

**Figure 2.8: Stock of Taiwan-US/Canada emigrants (alive), 1950-2000**



Source: published by "Overseas Chinese Affairs Council" of Taiwan, <http://www.ocac.gov.tw/stats>

In 1950, the stock of Taiwan emigrants was only 1,400<sup>13</sup>. This means that most of the population that were born in US/Canada from 1957 to 1981, who would have entered NTU 1975-1999, are descendants of those who migrated to US/Canada from 1950 to 1981. This is shown in the upper left corner of table 2.9 (81,704)<sup>14</sup>. For those who would have entered NTU 2000-2010 (who were born in the US/Canada 1982-1992), the number was 62,942<sup>15</sup>. Since “mainlander 1” surnames are 3.6 times more likely to show among NTU students, the share of “mainlander 1” among TWA born 1957-81

<sup>13</sup> The total stock of Taiwanese descendants in the US increased to 120,000 in 1974. If there was no immigration, at a natural growth rate of 1.1% per year, the 1,400 immigrants of 1950 would have grown to 1900 without further migration, only 1.7% of the actual Taiwan emigrants and their descendants in 1974.

<sup>14</sup> = the stock of second generation TWA in 1981 – that in 1957.

<sup>15</sup> = the TWA of second, third, and fourth generation in 1992 – that in 1982

would be  $0.96\% \times 3.6$ , where 0.96% is “mainlander 1”’s population share. So mainlander 1 will account for 2,834 among the TWA of that cohort.

**Table 2.9: TWA and its “hypothesized” contribution to NTU students**

	TWA born 1957-81	Counterfactual: TWA that would be NTU students (1975-99)	Actual NTU students (1975-99)	Counterfactual: All NTU students including TWA
All TWA	81,704	7,611	55,207	62,818
Mainlander 1	2,834 <sup>a</sup>	264	1,448	1,712
RR unadjusted			<b>2.732</b>	
RR adjusted				<b>2.84</b>

	TWA born 1982-92	Counterfactual: TWA that would be NTU students (2000-10)	Actual NTU students (2000-10)	Counterfactual: All NTU students including TWA
All TW	62,942 <sup>b</sup>	8,487	36,487	44,974
mainlander 1	1,814 <sup>c</sup>	245	515	760
RR unadjusted			<b>1.47</b>	
RR adjusted				<b>1.76</b>

a.  $= 81,704 \times 0.96\% \times 3.61$ , where 3.61 is the RR of “mainlander 1” among NTU 1950-74  
b.  $= (\text{second generation}_{1992} - \text{second gen}_{1982}) + (\text{third gen}_{1992} - \text{third gen}_{1982})$   
c.  $= 0.96\% \times 2.73 \times (\text{second generation}_{1992} - \text{second gen}_{1982}) + 0.96\% \times 3.61 \times (\text{third gen}_{1992} - \text{third gen}_{1982})$

To estimate how many of them would have entered NTU, a survey of family backgrounds of NTU students in 2000 reports that 23.8% of them had their mothers who graduated from college. On the other hand, only 1.94% of the 18-22 population had

mothers who graduated from college. The numbers for fathers are 30.8% and 5.15% respectively. This means that in 1998 a student with at least one parent a college graduate was 6 to 12 times more likely than average to enter NTU.

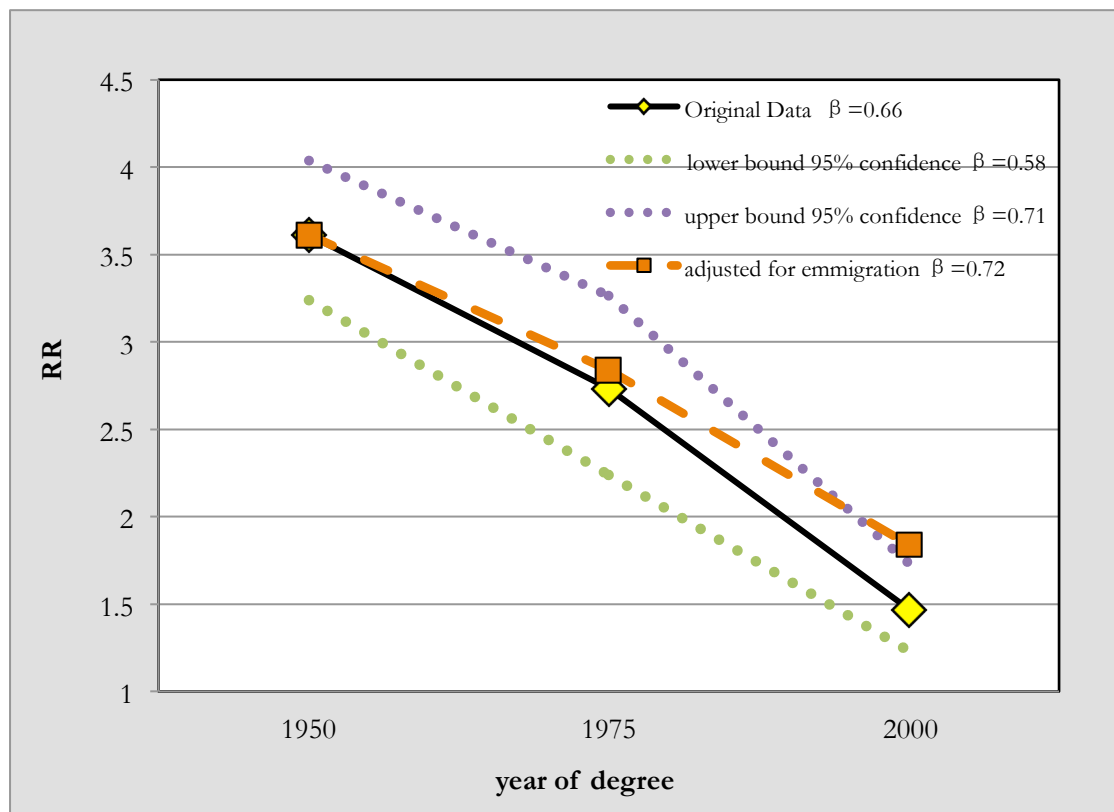
Column 3 of table 2.9 reports the estimates of the “counterfactual” NTU students contributed by TWAs in 1975-99 and 2000-10. I assume that students with at least one parent having a degree are 12 times more likely to enter NTU. For example, in 1975-1999, NTU students account for 0.75% of 18 year age cohort. There were 81,704 TWAs for the same cohort. Among them, 7,611 would have entered NTU 1975-99 ( $81704 \times 0.75\% \times 12 = 7,611$ ), because they are 12 times more likely to enter NTU whose parents were college graduates. The adjusted RR, after adding these counterfactual TWAs to the actual NTU students, is calculated as  $(264+1,448)/(7,611+55,207)$ .

The last column reports the actual numbers of NTU students and those with “mainlander 1” surnames. After adjustment, RR of mainlander 1 among NTU students increased to 2.84 for 1975-99, and increased to 1.76 for 2000-10. The implied persistence rate,  $\square$ , will be 0.70, whereas the rate unadjusted for emigration is 0.66.

The estimation above only considers those who are born in US/Canada, and did not include those who were born in Taiwan but educated in US/Canada. However, among **first-generation** Taiwan immigrants, I cannot make distinctions between those who came to US after college and those came to US before college. It is well documented that before 1980, most first-generation Taiwan immigrants had finished college before coming to the US. But after 1980, more immigrants came at younger age. Therefore,

there should be more mainlander's descendents missing from NTU students in the 2000-2010 degree cohort. The true persistence rate should be even higher. If I assume that 10% of the inflow of **first-generation** Taiwan migrants from 1982 to 2000 would have entered college 2000-10, RR of “mainlander 1” for 2000-10 would increase to 1.84. And  $\beta$  would be 0.723, which gives an upper bound of persistence rate. Actually, as shown in figure 2.9, the adjusted RR for 2000-10 was even higher than the upper bound of 95% confidence interval of RR from re-sampling. And adjusted  $\beta$  is even higher than the upper bound of  $\beta$  from re-sampling.

**Figure 2.9:**  $\beta$  adjusted for selective emigration (observed data and best-fit  $\beta$  s)





## 2.4 Conclusion

The unadjusted intergenerational correlation of status in Taiwan after 1949 is 0.55-0.71, slightly lower than mainland China after 1949, but much higher than conventional studies have suggested. The result holds for top college students, doctors and business elites, even though relative representations of “mainlanders” and “very natives” are differed across these elites. Today, mainlanders are only slightly more representative than natives among educational and business elites, and just as representative as natives among doctors.

The convergence between mainlanders and natives was not any faster after the end of KMT’s authoritative rule in late 1980s. Recent studies show that after controlling for parent’s education and place of residence, being a mainlander has no extra return on Children’s educational attainment and income (Luo, 2001; Jao and McKeever, 2006). This indicates that there is no institutional/cultural barrier keeping mainlanders from moving down or keeping natives from moving upward. And ethnic capital (Borjas, 1992) specific to mainlanders should not matter in transmission of status over generations, although it might decide the difference in the initial position of mainlanders across occupations. The speed of convergence was rather determined by socio-economic factors. Indeed, land

reform, universal primary schooling<sup>16</sup> and economic take-off were accomplished under KMT's rule well before democratization.

One question remains about whether there is a different pattern of social mobility within native Taiwanese, among whom kin networks dictates distribution of resources over kin members. Mainlanders, on the other hand, had weaker and smaller kin networks. Second, inequality between male and female was much greater for natives than mainlanders in the 1950s but was greatly reduced thereafter. Besides, there was idiosyncrasy about native elites. Most large landlords had inherited their lands during the Qing Dynasty and had diversified into commercial and industrial activities during colonial times. The largest landlord Gu Zhenfu (辜振甫), and the second largest, Lin Xiantang (林獻堂), had established factories and banks. They also acquired many assets of Japanese owners which after 1945 KMT recognized as legal. Their descendents are offered high ranked position in the government and congress, and even today they are still in charge of billions of dollars of kin-based business groups. Unfortunately, due to the very limited number of surnames among native Taiwanese, without knowing people's places of origin at county or township level, there is no way tracing the decedents of such kinships into recent decades.

---

<sup>16</sup> Taiwan's public funding of education has traditionally favored basic education and vocational schools. In 1961, primary and secondary schools received 80 percent of all public education funds. This focus continued as recently as 1990, when the majority of secondary-school students were in vocational programs. Only recently, as Taiwan's economy has become more technically sophisticated, have colleges and universities received priority.

## References

### English

- Borjas, G. J. (1992). "Ethnic capital and intergenerational mobility". *The Quarterly Journal of Economics*, 107(1), 123-150.
- Campbell, C., & Lee, J. (2008). "Kin networks, marriage, and social mobility in late imperial China". *Social Science History*, 32(2), 175-214.
- Ichino, A., Karabarbounis, L., & Moretti, E. (2010). "The political economy of intergenerational income mobility." *Economic Inquiry*, 49(1), 47-69.
- Kao, G., & Thompson, J. (2003). "Racial and ethnic stratification in educational achievement and attainment." *Annual review of sociology*, 29, 417-442.
- Jao, J. C., & McKeever, M. (2006). "Ethnic inequalities and educational attainment in Taiwan." *Sociology of education*, 79(2), 131-152.
- Li, I. H. (2011). "Intergenerational Income Mobility in Taiwan." Institute of Economics, Academic Sinica, working chapter
- Mare, R. D., & Chang, H. C. (2006). "Family Attainment Norms and Educational Stratification in the United States and Taiwan: The Effects of Parents' School Transitions." *Mobility and inequality: Frontiers of research in sociology and economics*, 195-231
- Stella U., Ogunwole, P., Drewery, Jr., and Rios-Vargas, M. (2002), "The Population with a Bachelor's Degree or Higher by Race and Hispanic Origin: 2006–2010." *American Community Survey Briefs*
- Tien, H. M., & Shiau, C. J. (1992). "Taiwan's Democratization: A Summary." *World Affairs*, 155(2), 58-61.
- Tsai, S. L. and H.Y. Chiu (1993), "Educational attainment in Taiwan: comparisons of ethnic groups." *Proceedings of the National Science Council, ROC*, 3:2, 188–202.
- Ueda, A., and Sun, F. Y. (2012). "Intergenerational Economic Mobility in Taiwan." *Waseda University working chapter*.
- Wang, H. Z. (2001). "Ethnicized social mobility in Taiwan: Mobility patterns among owners of small-and medium-scale businesses." *Modern China*, 27(3), 328-358.

Wang, H. Z. (2002). "Class structures and social mobility in Taiwan in the initial post-war period." *The China Journal*, 48, 55-85.

Zhan, C. Y. (2012). "Scholarly Culture and Educational Attainment." UC San Diego, working paper.

### **Chinese:**

Luo, M. Q., (2002). "who became students of National Taiwan University—gender, ethnic and rural-urban difference." *Taiwan Economic Review*, 30:1, 113-147. 駱明慶 2002, 〈[誰是台大學生?--性別、省籍和城鄉差異](#)〉, 《經濟論文叢刊》, 30:1, 113-147

Luo, M. Q., (2001), "Gender and ethnic difference in educational attainment." *Taiwan Economic Review*, 9:2, 117-15. 駱明慶 2001, 〈[教育成就的省籍與性別差異](#)〉, 《經濟論文叢刊》, 29:2, 117-152

Huang, Y. Z., (2008), "Measuring occupational status in Taiwan." *NTTU Educational Research Journal*, 19, 151-160. 黃毅志, 2008, 〈[如何精確測量職業地位?](#)〉, 《台東大學教育學報》, 19, 151-160

## **2. A.1 Appendix: Surname sources:**

### 1. 1956 surname distribution by population and county:

潘英, (1987), 《同宗同鄉關係與臺灣人口之祖籍及姓氏分佈的研究》, 臺灣省文獻委員會

### 2. 2007 surname distribution by population and county:

中华国内政部, (2007), 《全国姓氏要览》, 內政部戶政司編輯

### 3. 1951-1964 NTU undergraduate students:

國立臺灣大學校友會, (1964), 《臺灣大學香港校友會歷屆校友通訊錄》

### 4. 1969-1972 NTU undergraduate students:

国立台湾大学教务处, (1973), 《國立臺灣大學學生名冊》

### 5. Graduate students after 1975 (All universities and specialties):

National Digital Library of Thesis and Dissertations in Taiwan (台灣博碩士論文知識加值系統)

<http://ndltd.ncl.edu.tw/cgi-bin/gs32/gweb.cgi/login?o=dwebmge>

### 6. Taiwan entrepreneurs:

中華征信所, (2003), 《台灣地區企業經理人名錄》 (2003 *Who's Who* among bosses and managers, Taiwan)

## 2. A.2 Appendix: “mainlander” surnames (2009 Population larger than 120)

surname	Population 2009	Population 1956	mainlander share	surname	Population 2009	Population 1956	mainlander share
于	13133	4344	0.92	敖	482	140	0.97
崔	8527	2676	0.89	芮	478	176	0.91
陶	7300	2620	0.98	冼	474	12	1.00
孟	6177	2156	0.86	寇	471	160	1.00
贾	5593	1928	0.97	惠	462	108	0.96
贺	5589	1788	0.88	狄	457	168	0.95
丘	4445	1124	0.88	於	457	100	0.88
阎	3901	1216	0.98	禹	446	112	0.89
樊	3751	1324	0.80	修	443	188	0.94
鲁	3450	1076	0.86	嵇	440	176	0.95
郝	3261	1036	0.93	胥	440	96	0.88
邢	3064	1036	0.92	逢	424	140	1.00
常	2904	748	0.98	诸	422	208	0.92
耿	2837	952	0.82	师	419	188	1.00
盛	2824	1088	0.89	楚	412	208	0.85
聂	2776	784	0.96	鹿	408	128	0.94
祝	2748	884	0.87	农	399	84	1.00
曲	2678	752	0.99	戎	380	84	1.00
齐	2628	964	0.96	强	358	140	0.94
岳	2541	748	0.85	忻	357	228	0.98
应	2448	1072	0.97	帅	329	128	0.94
单	2380	728	0.94	闕	329	104	0.85
舒	2365	788	0.87	支	329	104	0.96
牛	2302	680	0.97	战	322	108	1.00
毕	2287	672	0.96	晁	315	80	1.00
翟	2259	860	0.92	濮	315	64	1.00
季	2189	648	0.90	燕	309	76	0.95
留	2145	876	0.97	郜	309	48	1.00
覃	2066	468	0.97	井	306	72	1.00

喻	2034	724	0.97	宁	299	80	0.85
项	2013	672	0.85	钮	291	156	1.00
滕	1977	580	0.94	束	291	128	0.97
焦	1968	640	0.92	上官	289	88	0.86
苗	1832	724	0.93	酆	287	120	0.80
戚	1828	692	0.98	巩	284	56	1.00
虞	1818	600	0.97	揭	280	44	1.00
牟	1765	588	0.97	慕	280	28	1.00
臧	1685	560	0.99	计	277	128	1.00
乐	1608	548	0.92	薄	276	84	0.95
棲	1562	448	0.96	麻	275	96	0.92
艾	1538	328	0.96	栗	274	100	1.00
费	1511	592	0.99	杭	270	120	0.97
尚	1419	444	0.91	富	268	184	0.93
桂	1401	548	0.93	寿	266	112	0.89
甯	1392	436	0.94	斯	265	104	1.00
官	1355	384	0.98	羊	263	64	0.94
祁	1354	400	0.98	戈	262	88	1.00
栾	1352	420	0.98	印	257	64	0.81
路	1276	472	1.00	班	250	92	1.00
刁	1266	412	0.88	邴	250	60	1.00
时	1217	328	0.99	哈	245	76	0.95
柴	1182	368	0.99	普	244	44	1.00
瞿	1157	468	0.98	门	241	100	1.00
隋	1087	400	0.99	宾	233	84	0.95
窦	1079	400	0.96	晋	231	76	1.00
邝	1049	276	1.00	漆	221	60	1.00
查	1044	372	0.87	冀	220	88	1.00
霍	1035	432	0.95	端木	216	100	0.96
闵	1030	340	0.95	衣	215	60	1.00
吉	992	312	0.88	祖	213	76	1.00
冉	986	220	0.91	綦	211	84	0.95
迟	974	212	1.00	邴	209	56	1.00
仇	953	272	0.99	矫	200	44	0.91
储	944	304	0.87	国	199	48	1.00
荣	870	320	0.90	招	194	104	0.96
匡	869	176	0.98	资	193	24	1.00
娄	865	296	1.00	仝	188	52	0.92
冷	863	252	0.97	苟	188	28	1.00
卞	844	272	0.90	达	186	48	1.00
裘	835	352	0.97	尉	185	84	0.86
晏	814	300	0.97	展	181	36	1.00
桑	810	296	0.91	水	177	72	0.94
席	768	337	1.00	诸葛	177	44	1.00

初	763	176	0.95	经	176	38	0.86
岑	761	168	0.90	索	175	52	1.00
边	740	224	1.00	扈	174	84	0.95
丛	738	352	0.99	山	172	32	1.00
郁	726	288	0.93	宓	171	76	0.84
蒙	702	164	0.90	励	169	116	1.00
区	696	236	0.95	扶	169	60	1.00
劳	688	200	0.92	海	168	84	1.00
郎	685	288	0.99	和	168	56	1.00
甄	670	144	1.00	郇	167	124	1.00
奚	669	272	0.93	衡	162	36	1.00
屠	668	312	0.99	贡	155	64	0.81
闻	664	220	0.95	伏	155	32	0.88
鞠	658	228	0.98	过	150	56	1.00
明	650	188	0.81	茹	148	56	1.00
佟	646	272	0.84	旷	147	92	0.91
荆	628	240	0.97	银	147	44	1.00
厉	624	224	0.95	邱	145	56	0.93
原	578	164	0.95	公	144	32	1.00
封	570	120	0.97	睦	143	68	1.00
党	535	132	1.00	宿	141	32	1.00
容	530	180	0.91	宇	139	16	1.00
皮	517	144	0.97	但	137	72	1.00
宣	506	216	0.97	信	134	24	1.00
竺	494	168	1.00	赫	132	64	1.00
鄢	489	100	0.96	敬	130	32	1.00
司徒	487	120	1.00	蒯	128	28	1.00
盖	483	172	0.98	习	122	40	1.00

Note: 1956 census report population of surnames from census on 1/4 population (random sample), so the numbers I report below are 4×numbers reported.