

# Ethnic Capital and Self-employment: A Longitudinal Study of Recent Male Immigrants to New Zealand

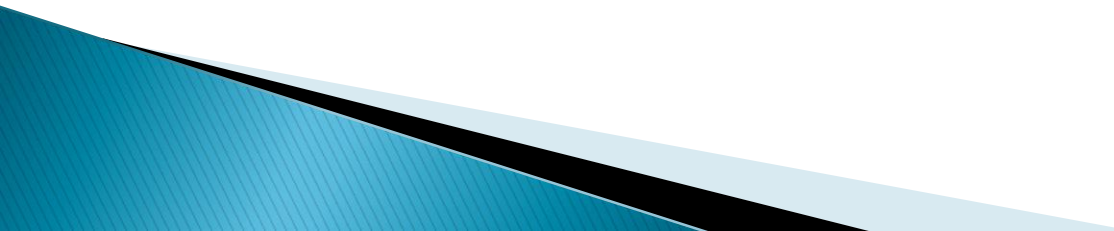
Xingang (Singa) Wang & Sholeh A. Maani

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    - motivation
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  - ▶ **Data**
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# Introduction— Background

- New Zealand is traditionally a country of immigrants.
- Immigrants' economic performance largely influences New Zealand's economy and business development, and it is therefore, of special analytical and policy interest.
- Rate of self-employment among New Zealand natives was around 17%
- About 14% of immigrants were self-employed  
(2006 Census)

# Introduction-- Background

- ▶ Disadvantages of immigrants in the local labour market (Chiswick, 1978):
  - Lack of language skills,
  - Absence of social networks,
  - Less knowledge of customs,
  - Lack of information about the local labour market,
  - Lack of firm-specific training

# Introduction— Background

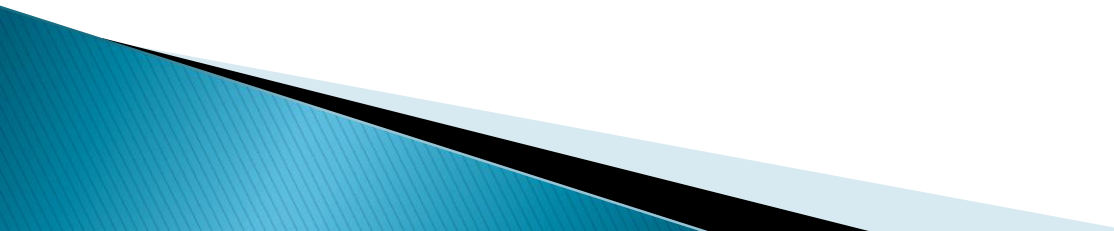
- New immigrants (whose first language is not English) may face higher barriers to finding a job in the wage/salary sector
- It may take a long time for them to be economically assimilated
- Self-employment provides immigrants with another niche for employment and economic assimilation
- Thus, it is argued immigrants are more inclined to self-employment.
- There is an increasing number of immigrant-owned businesses in countries that traditionally accept immigrants (e.g. Light and Sanchez,1987).

# Introduction— Background


▶ Key determinants of immigrant entrepreneurship:

- Educational Attainment,
- Labour Market Experience,
- Economic Requirements,
- Marital Status,
- Industry and Occupation Factors,
- Ethnicity Factors\*

# Introduction— Background

- ▶ Economists hypothesise that immigrant-owned enterprises are more effective in serving the market demands of immigrants (the protected market).
  - ▶ The requirements for self-employment are much higher than those for finding a job in the wage/salary sector for immigrants.
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# Introduction— Motivation

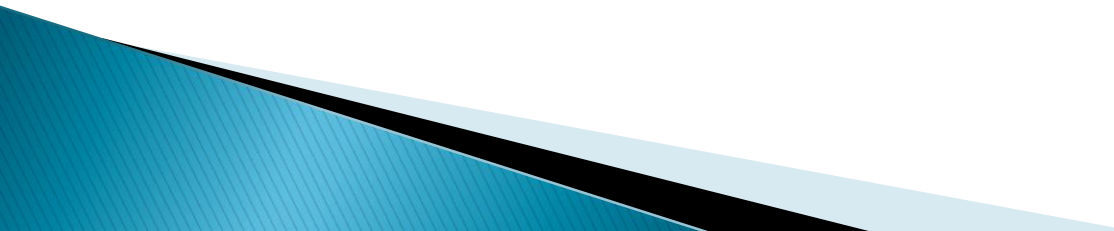
- New Zealand is a country of immigrants.
  - Before 1987: “Occupational Priority List” (OPL)
  - 1987, “traditional source countries” was replaced by stream approach
  - Immigration Amendment Act 1991: “Point System”
  - In 2003, it was supplanted by the “Skilled Migrant Category” policy
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- ▶ 2006 Census:
  - ▶ 22.9% of usually residents are foreign born
  - ▶ 18.9% of immigrants are Asian
  - ▶ 14.4% of immigrants are Pacific Islanders
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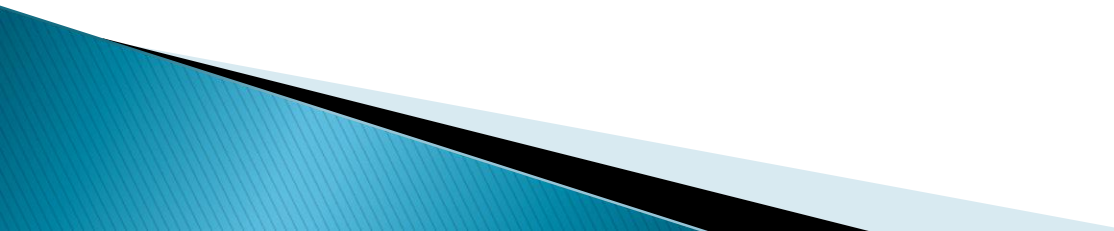
# Introduction— Motivation

- Compared with European and Australian immigrants, Asian immigrants are disadvantaged when they try to set up businesses in an English-speaking host country
  - However, “ethnic capital” provides assistance to immigrants in establishing their own business, which is particularly helpful for the low-skilled and less English literate Asian immigrants
  - “Ethnic capital” may help immigrants with less proficiency in English located in the large ethnic enclave to be self-employed
  - Immigrant businesses may be more attractive to immigrants, which enlarges the ethnic enclaves, and amplifies the effect of ethnic capital
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# Introduction— Motivation

- ▶ In addition, previous studies have assumed that individuals' labour market performance data is independent and identically distributed (i.i.d.).
  - ▶ However, one may consider whether individuals within ethnic groups **influence on each other** and their labour market **performance is correlated** to some extent.
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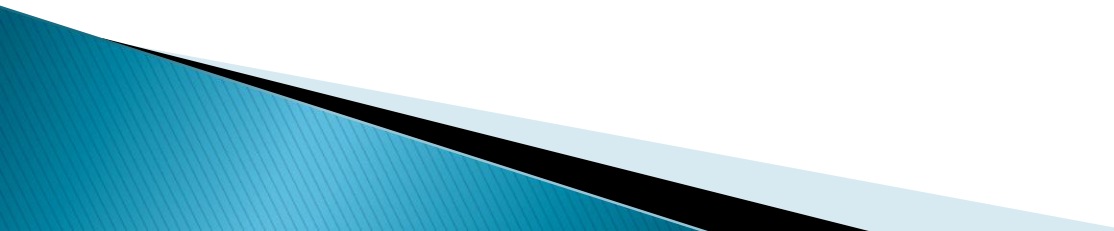
# Introduction— Motivation

- ▶ Core questions:
  - ▶ Why and how **ethnicity** is important for immigrants' self-employment decisions?
  - ▶ How immigrants' economic performances are **linked** with each other?
  - ▶ In order to answer these questions related to “**ethnicity**” we use “**ethnic capital**” as a key concept to answer it and to fill the literature gap.
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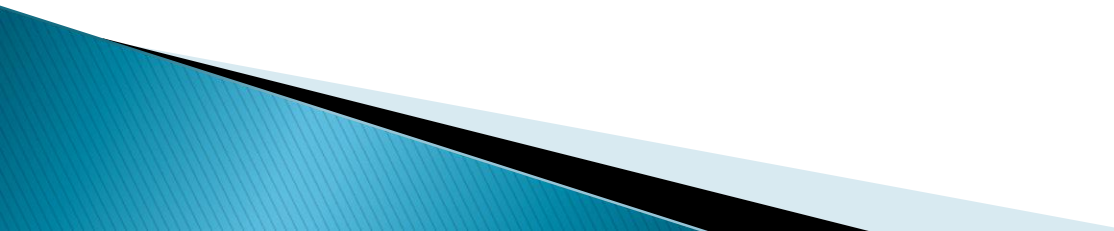
# Ethnic Capital

- ▶ Ethnic capital is a form of **social capital**, and it was first put forward by Borjas (1992) in the context of economics of immigration.
- ▶ Ethnic capital is the **inherent trust** and **advantages** which stem from, and belong to, a certain ethnic group. As a result, ethnic capital can offset those disadvantages of immigrants to a certain extent.
- ▶ It can refer to the average skill level, the language proficiency, the average income level, **network** and the **geographical concentration (ethnic enclave)** for an ethnic group.

# Ethnic Capital–network effects

- ▶ Proxy for network for immigrants in previous studies:
  - ▶ **Ethnic Concentration/Enclave** (e.g. Aguilera, 2009; Damm, 2009; Edin, Fredriksson, and Aslund, 2003; Toussaint-Comeau, 2008).
  - ▶ **Linguistic Concentrations** (Bertrand, Luttmer, & Mullainathan, 2000; Chiswick & Miller, 2002).
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# Ethnic Capital–network effects

- ▶ In this study, we construct a **spatial network** variable--the endogenous “**ethnic spatial lag**” ;
  - ▶ “Ethnic spatial lag” represents the individual’s network of economic resources in addition to ethnic concentration
  - ▶ To **separate** the spatial network specific effect
  - ▶ We hypothesize that both **ethnic networks** and **ethnic concentration** influence immigrants’ economic performance.
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# Ethnic Capital–network effects

- ▶ Informal financial sector to provide start-up financial capital (Lofstrom ,2002)
  - ▶ Necessary management skills (Van Auken & Neeley ,1998)
  - ▶ Provides support through culture and tradition (Aldrich, Jones, & McEvoy, 1984)
  - ▶ Business opportunities within the ethnic enclave (e.g. Wilson and Martin ,1985)
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# Ethnic Capital–Ethnic Concentration

## “Complements” vs. “Substitutes”

- ▶ **Complement:**
  - ▶ “protected market”
  - ▶ demand for ethnic-specific good and services
- ▶ **Substitute:**
  - ▶ “effect of limiting entrepreneurial opportunities”
  - ▶ compete for scarce employment opportunities
  - ▶ jobs from main-stream economy
- ▶ Previous studies observed both **positive** (e.g. Boyd, 1990) and **negative** (Clark & Drinkwater, 2000) effects of ethnic concentration.

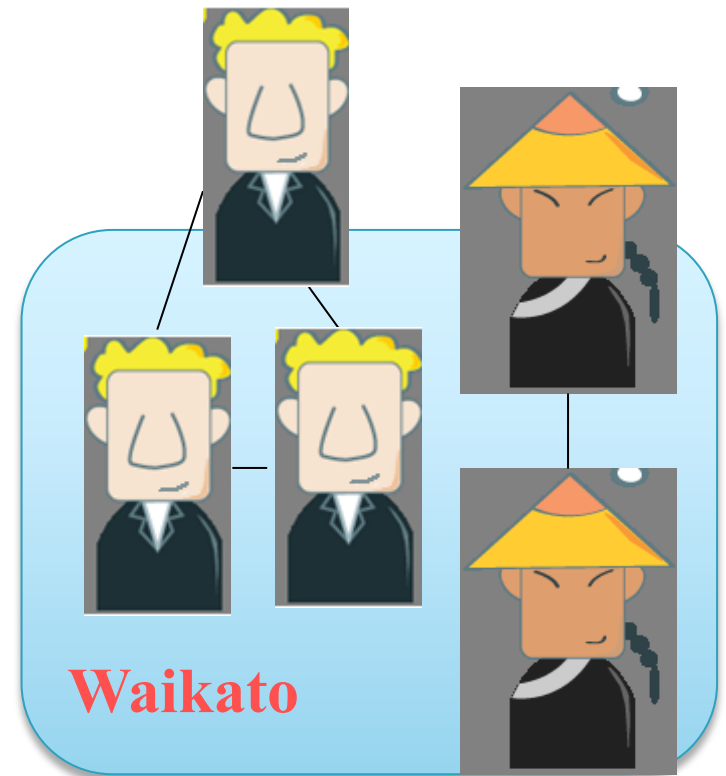
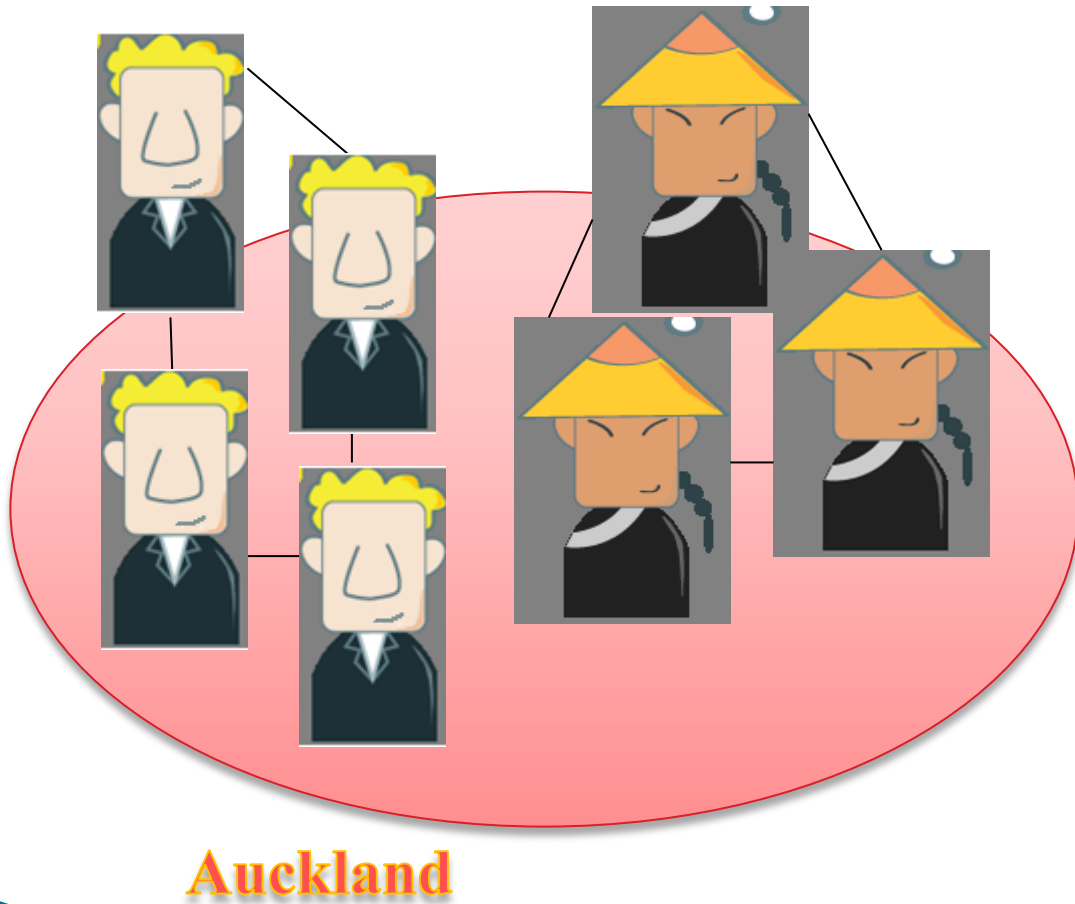


## Models–Basic model

$$\log\left(\frac{S.E.}{1-S.E.}\right) = X_j\beta$$

- ▶  $X_j$ : a vector of explanatory variables (e.g. years of schooling completed, marital status, and years of labour market experience)
- ▶ By the logit model, the natural log of the odds ratio of self-employment to wage/salary sector employment is explained by a linear function of human and social capitals  $X_j$

# Ethnic network– example



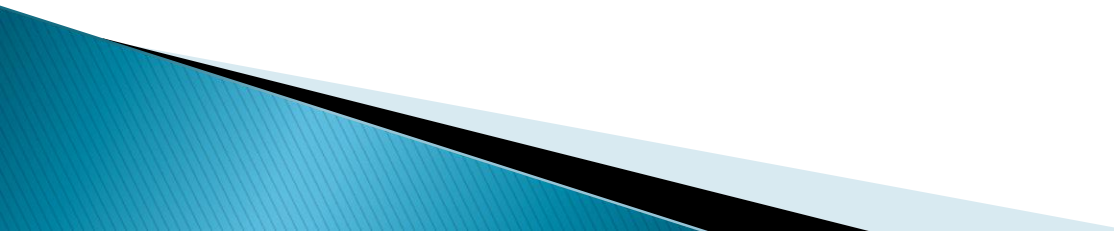
# Ethnic Spatial Matrix

- first-order ethnic-spatial neighbourhood matrix  $E$  is:

$$E = \begin{pmatrix} & P1 & P2 & P3 & P4 & P5 & P6 & P7 \\ P1 & 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ P2 & 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ P3 & 0 & 0 & 0 & 0 & 1 & 0 & 1 \\ P4 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ P5 & 0 & 0 & 1 & 0 & 0 & 0 & 1 \\ P6 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \\ P7 & 0 & 0 & 1 & 0 & 1 & 0 & 0 \end{pmatrix}$$

- "ethnic spatial weight matrix":  $W = \begin{pmatrix} & P1 & P2 & P3 & P4 & P5 & P6 & P7 \\ P1 & 0 & 0 & 0 & 1 & 0 & 0 & 0 \\ P2 & 0 & 0 & 0 & 0 & 0 & 1 & 0 \\ P3 & 0 & 0 & 0 & 0 & 1/2 & 0 & 1/2 \\ P4 & 1 & 0 & 0 & 0 & 0 & 0 & 0 \\ P5 & 0 & 0 & 1 & 0 & 0 & 0 & 1 \\ P6 & 0 & 1 & 0 & 0 & 0 & 0 & 0 \end{pmatrix}$

# Dynamic ethnic network

- ▶ “Spatial Lag Matrix” is based on the three conditions
  - ▶ 1) ethnic group
  - ▶ 2) region of residence
  - ▶ 3) year of survey
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# Models–Spatial Autoregressive Model (SAR)


$$y = \alpha l_n + \rho W y + \gamma M eth + \beta X + \varepsilon$$

$$\varepsilon \sim N(0, \sigma^2 I_n)$$

- ▶  **$W$** :  $n \times n$  ethnic spatial weight matrix, shows the first-order ethnic and geographical relationship among individuals;
- ▶  **$Wy$** : endogenous “ethnic spatial lag”;
- ▶  **$M$** : ethnicity matrix;
- ▶  **$eth$** : represents ethnic concentration;
- ▶  **$X$** : socio-economic variables and personal characteristics of individuals;
- ▶  **$\rho$** : the correlation of earnings among “ethnic neighbours” and also the size of the effect of the network in a specific region.
- ▶  **$\gamma$** : reveal the effect of ethnic concentration.
- ▶  **$l_n$** : an identity vector of ones and associated with the parameters  $\alpha$  and  $\beta$ .

# Data

## Longitudinal Immigrant Survey: New Zealand (3 waves)

- ▶ It was based on consecutive surveys of the same group of new immigrants in New Zealand for three years.
  - ▶ The Wave 1 interview was conducted between 1st May 2005 and 30th April 2007.
  - ▶ It contains comprehensive information about immigrants, which allows controlling for personal characteristics, family and skill (e.g. education gained in New Zealand).
  - ▶ Employed male immigrants aged **20 and 55 years old** have been tested.
  - ▶ **Sample size: 6,735**
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# Data summary

	Foreign-Born	UK & Ireland	China	India	Pacific Islands	Others
Age (Mean)	36.11	38.45	32.52	32.79	34.88	37.53
Potential Years Since Migration (Mean)	6.48	6.66	7.39	5.28	7.31	6.11
Potential Experience (Mean)	15.92	18.03	11.35	11.7	16.57	17.28
Currently Married (%)	47.1	45.9	40.4	45.4	51.8	48.2
Proficiency in English (%)	90.3	99.7	71.8	96.2	67.0	89.7
Advanced Vocational Qual (%)	16.7	15.7	19.1	26.1	10.8	15.5
Bachelor Degree (%)	20.4	17.3	35.0	25.0	5.0	23.3
Higher Degree (%)	13.1	17.3	16.6	21.2	0.9	11.7
New Zealand Post-School Qual (%)	16.2	3.8	52.2	30.2	10.3	9.7
Has Own House/Flat (%)	27.8	54.7	19.2	9.3	14.0	26.6
Has Kids (%)	37.9	38.7	20.5	28.0	43.2	44.2
<b>Self-Employed (%)</b>	<b>12.2</b>	<b>12.6</b>	<b>16.7</b>	<b>9.3</b>	<b>4.5</b>	<b>15.1</b>
Business Category (%)	5.0	1.6	13.3	1.1	2.5	7.5
General Skills Category (%)	2.7	1.6	0.6	8.2	1.0	2.9
Skilled Migrants Category (%)	60.2	66.4	67.1	73.6	16.3	65.4
Talent Category (%)	3.9	8.2	1.9	0.5	0.5	4.6
Family Category (%)	19.3	21.4	15.8	15.9	30.5	15.9
Manager and Professional (%)	55.0	64.8	64.1	54.1	23.4	60.6

Based on unweighted counts.


# General Case

	(1)	(2)	(3)	(4)
<b>Ethnic Capital</b>				
Network Effect	/	/	<b>1.196***</b>	<b>1.233***</b>
	/	/	(0.232)	(0.233)
Ethnic Concentration Effect	/	<b>-0.405</b>	/	<b>-0.081</b>
	/	(-0.058)	/	(0.058)
<b>Human Capital</b>				
Potential Experience	<b>0.382***</b>	<b>0.381***</b>	<b>0.375***</b>	<b>0.374***</b>
	(0.026)	(0.026)	(0.025)	(0.025)
Potential Experience -squared	<b>-0.007***</b>	<b>-0.007***</b>	<b>-0.007***</b>	<b>-0.007***</b>
	(0.001)	(0.001)	(0.001)	(0.001)
Self-employment Experience (origin)	<b>0.168***</b>	<b>0.168***</b>	<b>0.171***</b>	<b>0.171***</b>
	(0.022)	(0.022)	(0.022)	(0.022)
Self-employment Experience-squared (origin)	<b>-0.008***</b>	<b>-0.008***</b>	<b>-0.008***</b>	<b>-0.008***</b>
	(0.001)	(0.001)	(0.001)	(0.001)
Advanced Vocational Qualification	<b>-0.170</b>	<b>-0.168</b>	<b>-0.170</b>	<b>-0.17</b>
	(0.123)	(0.123)	(0.122)	(0.121)
Bachelor Degree	<b>0.187</b>	<b>0.185</b>	<b>0.154</b>	<b>0.15</b>
	(0.121)	(0.121)	(0.121)	(0.12)
Higher Degree	<b>-0.543***</b>	<b>-0.546***</b>	<b>-0.551***</b>	<b>-0.56***</b>
	(0.15)	(0.15)	(0.148)	(0.148)
New Zealand Post School Qualification	<b>0.314**</b>	<b>0.318**</b>	<b>0.276**</b>	<b>0.284**</b>
	(0.133)	(0.133)	(0.132)	(0.132)
<b>Personal Characteristics</b>				
Potential Years Since Migration (YSM)	<b>0.352***</b>	<b>0.352***</b>	<b>0.337***</b>	<b>0.336***</b>
	(0.025)	(0.025)	(0.025)	(0.025)
YSM-squared	<b>-0.01***</b>	<b>-0.01***</b>	<b>-0.01***</b>	<b>-0.01***</b>
	(0.001)	(0.001)	(0.001)	(0.001)
Married	<b>0.657***</b>	<b>0.657***</b>	<b>0.642***</b>	<b>0.642***</b>
	(-0.068)	(-0.068)	(0.067)	(0.067)
Children	<b>-0.437***</b>	<b>-0.437***</b>	<b>-0.425***</b>	<b>-0.423***</b>
	(0.106)	(0.106)	(0.105)	(0.105)
English Proficiency	<b>-1.116***</b>	<b>-1.125***</b>	<b>-1.065***</b>	<b>-1.082***</b>
	(0.147)	(0.147)	(0.146)	(0.147)
Own Dwelling	<b>-0.020</b>	<b>0.0008</b>	<b>-0.020</b>	<b>-0.015</b>
	(0.095)	(0.095)	(0.095)	(0.095)
Manager & Professional	<b>1.178***</b>	<b>1.178***</b>	<b>1.175***</b>	<b>1.171***</b>
	(0.1)	(0.1)	(0.099)	(0.099)
Business Category	<b>8.345***</b>	<b>8.348***</b>	<b>7.968***</b>	<b>7.965***</b>
	(0.402)	(0.402)	(0.401)	(0.397)
General Skills Category	<b>3.351***</b>	<b>3.356***</b>	<b>3.17***</b>	<b>3.169***</b>
	(0.392)	(0.392)	(0.387)	(0.384)
Skilled Migrant Category	<b>3.052***</b>	<b>3.046***</b>	<b>2.893***</b>	<b>2.871***</b>
	(0.339)	(0.339)	(0.334)	(0.331)
Talent Category	<b>2.613***</b>	<b>2.611***</b>	<b>2.451***</b>	<b>2.436***</b>
	(0.496)	(0.496)	(0.491)	(0.489)
Family Category	<b>3.862***</b>	<b>3.858***</b>	<b>3.729***</b>	<b>3.713***</b>
	(0.347)	(0.347)	(0.341)	(0.338)
Observations	6735	6735	6735	6735
Log likelihood	-11230.50	-11230.295	-11219.70	-11217.87
Wald Chi(2)	1668.35	1667.98	1758.53	1779.09

Note: (1) Standard errors in parentheses

(2) \* p<0.10 \*\* p<0.05 \*\*\* p<0.01



- ▶ “Years since migration” and labour market experience works as a “stock” for recent immigrants in New Zealand
  - ▶ Overseas self-employment experience results in a positive change of log of odds
  - ▶ Low skilled immigrants are more likely to be self-employed
  - ▶ New Zealand post-school qualifications significantly increase the propensity for immigrants to be self-employed
  - ▶ Negative effect of language proficiency (consistent with Yuengert, 1995)
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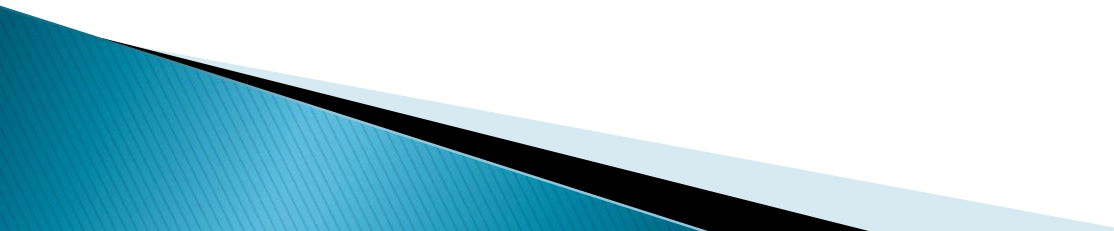
- ▶ Immigrants' **network effect** is **positively** correlated with recent male immigrants' self-employment decisions in New Zealand.
- ▶ We still cannot observe any significant effect of ethnic concentration in the general case.

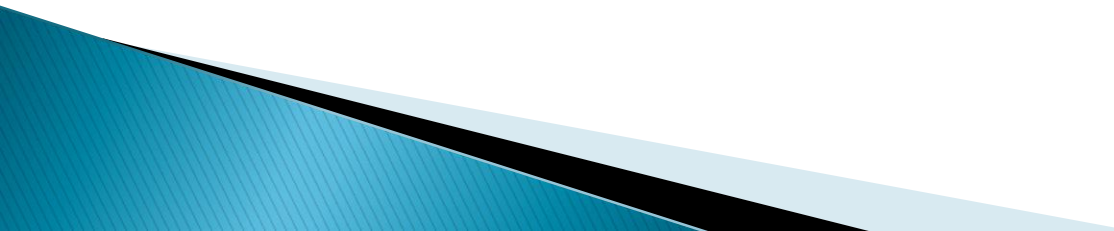
# By Country of Origin

	United Kingdom & Ireland	China	India	Pacific Islands	Rest of World
<b>Ethnic Capital</b>					
Network Effect	<b>2.268***</b> (0.657)	<b>-0.532</b> (1.531)	<b>4.57***</b> (1.671)	<b>9.858***</b> (2.894)	<b>0.035</b> (0.282)
Ethnic Concentration Effect	<b>-0.057</b> (0.343)	<b>0.733**</b> (0.287)	<b>-0.764***</b> (0.248)	<b>-1.115***</b> (0.349)	<b>-0.403***</b> (0.092)
<b>Human Capital</b>					
Potential Experience	<b>0.49***</b> (0.054)	<b>0.817***</b> (0.101)	<b>0.28***</b> (0.09)	<b>1.242***</b> (0.316)	<b>0.399***</b> (0.044)
Potential Experience -squared	<b>-0.009***</b> (0.001)	<b>-0.023***</b> (0.003)	<b>-0.003</b> (0.002)	<b>-0.024***</b> (0.007)	<b>-0.008***</b> (0.001)
Self-employment Experience (or	<b>0.244***</b> (0.037)	<b>0.248**</b> (0.114)	<b>0.762***</b> (0.208)	<b>-0.582**</b> (0.285)	<b>0.127***</b> (0.033)
Self-employment Experience-sqr	<b>-0.012***</b> (0.002)	<b>-0.005</b> (0.007)	<b>-0.043***</b> (0.014)	<b>0.020</b> (0.014)	<b>-0.005**</b> (0.002)
Advanced Vocational Qualificati	<b>-0.118***</b> (0.225)	<b>2.152***</b> (0.423)	<b>0.952*</b> (0.523)	<b>0.389</b> (1.259)	<b>-0.463**</b> (0.208)
Bachelor Degree	<b>-0.308</b> (0.226)	<b>0.011</b> (0.478)	<b>2.039***</b> (0.5)	<b>-40.322</b> (1.34E+06)	<b>-0.045</b> (0.185)
Higher Degree	<b>0.100</b> (0.241)	<b>-4.658***</b> (1.08)	<b>1.12*</b> (0.595)	<b>-41.959</b> (2.27E+06)	<b>-1.043***</b> (0.26)
New Zealand Post School Quali	<b>0.773***</b> (0.292)	<b>-0.793**</b> (0.432)	<b>-0.834*</b> (0.485)	<b>0.066*</b> (1.047)	<b>-0.503**</b> (0.246)
<b>Personal Characteristics</b>					
Potential Years Since Migration (YSM)	<b>0.267***</b> (0.034)	<b>2.134***</b> (0.288)	<b>1.241***</b> (0.223)	<b>0.878***</b> (0.275)	<b>1.249***</b> (0.093)
YSM-squared	<b>-0.006***</b> (0.001)	<b>-0.118***</b> (0.017)	<b>-0.047***</b> (0.012)	<b>-0.038***</b> (0.012)	<b>-0.062***</b> (0.005)
Married	<b>0.836***</b> (0.118)	<b>0.956***</b> (0.242)	<b>0.875***</b> (0.302)	<b>-0.954**</b> (0.515)	<b>-0.045</b> (0.113)
Children	<b>-0.692***</b> (0.174)	<b>-1.907***</b> (0.547)	<b>-2.086***</b> (0.539)	<b>0.958</b> (0.966)	<b>0.190</b> (0.168)
English Proficiency	<b>/</b> (0.394)	<b>-2.128***</b> (0.394)	<b>1.959*</b> (1.026)	<b>0.887</b> (0.92)	<b>-1.46***</b> (0.213)
Own Dwelling	<b>0.593***</b> (0.155)	<b>-1.855***</b> (0.517)	<b>0.404</b> (0.586)	<b>2.762**</b> (1.094)	<b>-0.489***</b> (0.168)
Manager & Professional	<b>0.587***</b> (0.17)	<b>3.06***</b> (0.446)	<b>1.795***</b> (0.408)	<b>7.007***</b> (0.985)	<b>1.111***</b> (0.161)
Business Category	<b>6.784***</b> (1.332)	<b>2.141</b> (1.439)	<b>0.406</b> (1.935)	<b>7.363***</b> (1.802)	<b>6.576***</b> (0.744)
General Skills Category	<b>1.290</b> (1.179)	<b>1.582</b> (1.837)	<b>-2.823*</b> (1.698)	<b>-46.641</b> (1.22E+06)	<b>2.302***</b> (0.734)
Skilled Migrant Category	<b>1.413</b> (1.067)	<b>-3.773**</b> (1.504)	<b>-3.356**</b> (1.665)	<b>-2.00</b> (1.231)	<b>2.073***</b> (0.665)
Talent Category	<b>-0.673</b> (1.298)	<b>-4.602**</b> (2.073)	<b>2.852</b> (2.814)	<b>-40.262</b> (4.65E+06)	<b>2.24***</b> (0.822)
Family Category	<b>2.389**</b> (1.074)	<b>0.433</b> (1.444)	<b>-0.365</b> (1.682)	<b>0.572*</b> (0.995)	<b>1.92***</b> (0.684)
Observations	1587	781	913	1112	2384
Log likelihood	-4101.94	-1144.44	-857.80	-316.23	-4218.58
Wald Chi(2)	418.84	193.83	133.98	151.01	722.48

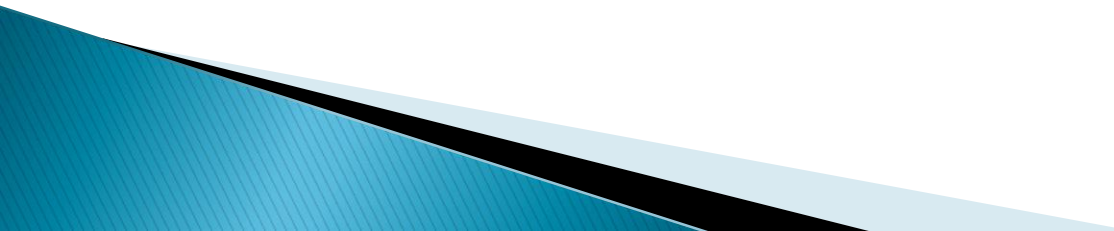
Note: (1) Standard errors in parentheses

(2) \* p<0.10 \*\* p<0.05 \*\*\* p<0.01

- ▶ Recent immigrants tend to share resources through their own ethnic network
  - ▶ (e.g. financial resources, “protected market”, business opportunities, and local market information)
  - ▶ Positive network effect on immigrants from UK, India, and Pacific Islands.
  - ▶ The ethnic network is **more important** for **non-traditional immigrants** (immigrants from other regions except the United Kingdom)
  - ▶ Ethnic concentration only strongly increases the propensity for self-employment for Chinese immigrants in New Zealand
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- ▶ The **negative** effect of **ethnic concentration**
  - ▶ It does not necessarily mean ethnic concentration or ethnic capital has a negative effect on immigrants' labour market performance
  - ▶ The opportunity for self-employment within the ethnic enclave is limited
  - ▶ Immigrants can still find employment in the wage/salary sector
  
  - ▶ With the growth of the ethnic enclave, the immigrant market becomes a non-neglected market in the host country
  - ▶ Local businesses would also like to hire immigrants to serve and develop the immigrant market.
  - ▶ More other job opportunities from “protect market” and “main-stream”
  - ▶ As a result, ethnic capital increases the employability of immigrants as more job opportunities are offered to immigrants from both the mainstream economy and the immigrant economy.
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# Conclusion

- ▶ The empirical findings of this study strongly suggest that an ethnic network promotes self-employment among recent immigrants to New Zealand.
  - ▶ Non-traditional immigrants (e.g. Indian, and Pacific Islanders) are more dependent on their ethnic network.
  - ▶ Chinese entrepreneurs derive greater benefit from ethnic concentration in a specific region in New Zealand.
  - ▶ Immigrants with better English communication skills are more likely to be employed in the wage/salary sector and might be unwilling to take the risk of operating their own businesses.
  - ▶ Immigration policy : the propensity for self-employment for immigrants from the “Business Category” is the highest among all categories
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# Conclusion

- ▶ Summarized and developed the theory of Ethnic Capital.
  - ▶ New approach to construct ethnic network
  - ▶ Separate the effect of network from ethnic concentration
  - ▶ Examine the effect of ethnic capital in New Zealand
  - ▶ Estimate the coefficient of ethnic network (spatial lag) by large sample; while the current Stata programme only able to estimate the sample with no more than 3,000 observations.
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