Labour Mobility

- Consider inter-regional migration first:

❖ **Theories**

▪ **Competitive model**

- Very restrictive set of assumptions e.g. no barriers to migration, perfectly flexible wages and perfect information about wages

- Allocates workers to firms to maximise VMP_L

- Mobility is simply in response to current wage differentials
– continues until wages are equalised

- But it doesn't explain actual movements very well

⇨ Actual migration flows are far more complex
– see Tables 1 to 3 which show gross and net migration for UK regions

◆ Neither has migration brought about a convergence in UK wage levels

- Could relax some of the assumptions:

◆ Migrants incur costs when migrating
– pecuniary and non-pecuniary (Sjaastad, 1962)
– both types increase with distance => most moves are short distance (Table 4)
– higher income households will be better able to meet the financial costs
– repeat and educated migrants may be better able to deal with the psychic costs

- Migration is selective
– highest amongst younger workers (Table 5)

⇨ Migrants respond to higher lifetime earnings rather than to current earnings

▪ **Human Capital Model**

- Incorporates these features
– includes costs
– allows for the longer time that younger workers have to recoup any losses

- Potential migrants are assumed to weigh up all of the costs and benefits of migration:

$$R_{ij} = \sum_{t=1}^{N} \frac{w_{jt} - w_{it}}{(1+r)^t} \; ; \; C_{ij} = \sum_{t=1}^{N} \frac{C_{jt} - C_{it}}{(1+r)^t} \; => PV_{ij} = R_{ij} - C_{ij}$$

Table 1

Net migration of working age males between regions of Great Britain: 1960-91[1]

	1960-61	1965-66	1970-71	1975-76	1980-81	1985-86	1990-91
Northern	-4.4	-0.5	-0.5	1.1	-2.6	-2.3	0.8
Yorkshire & Humberside	-2.2	0.7	-5.3	-2.9	-3.5	-4.9	-1.2
North West	-1.7	-0.5	-4.1	-4.7	-8.1	-7.5	-2.0
East Midlands	3.0	4.4	2.6	3.0	2.7	4.6	1.5
West Midlands	2.2	-0.6	-2.7	-5.3	-4.4	-4.6	-1.5
East Anglia	0.6	3.4	6.2	6.0	3.8	7.2	3.8
South East	9.2	-5.2	0.3	-7.7	7.4	-0.6	-10.6
South West	5.1	5.3	8.4	8.2	7.2	13.0	6.6
Wales	-1.9	-0.3	0.1	1.7	-0.7	1.0	0.5
Scotland	-9.7	-6.7	-5.1	0.5	-1.9	-5.9	2.0
Peripheral Regions[2]	-17.9	-7.9	-17.5	-9.5	-21.1	-24.2	-1.3
Conurbation Regions[3]	7.5	-5.6	-11.8	-20.6	-8.6	-17.6	-15.3

Source: Gordon and Molho (1998), data are based on the Census and National Health Service Central Register (NHSCR)

Notes: 1. Figures are in thousands.
2. Consists of the North East, North West, Yorkshire & the Humber, Wales and Scotland.
3. Consist of the South East (including London), East Midlands, North West and Yorkshire & the Humber.

TABLE 2

Interregional movements: 2006

Destination	Region of origin											
	NE	NW	YH	EM	WM	E	L	SE	SW	W	S	NI
North East	_	6	9	3	2	3	4	5	2	1	4	1
North West	6	_	18	9	12	7	13	12	7	8	7	2
Yorkshire and the Humber	9	18	_	16	8	8	10	11	6	3	4	1
East Midlands	3	9	17	_	15	18	13	17	7	3	3	1
West Midlands	2	12	7	14	_	8	12	14	12	8	3	1
Eastern	3	7	7	14	7	_	63	26	9	3	4	1
London	5	12	11	11	13	31	_	55	16	5	6	1
South East	4	11	9	14	13	29	95	_	33	7	6	1
South West	2	9	6	9	16	13	23	43	_	10	4	1
Wales	1	10	3	3	9	4	6	9	10	_	2	.
Scotland	5	8	6	4	4	5	8	9	5	2	_	2
Northern Ireland	1	2	1	1	1	1	2	2	1	1	3	_

Sources: NHSCR, General Register Office for Scotland and the Northern Ireland Statistics and Research Agency.

TABLE 3

Inflows and Outflows of migrants from regions of the UK: 1981-2006

	Inflow					Outflow				
	1981	1986	1991	1997	2006	1981	1986	1991	1997	2006
North East	31	37	40	39	40	39	46	41	45	39
North West	79	90	96	107	100	103	99	105	118	104
Yorkshire and the Humber	68	79	85	93	93	73	91	85	100	94
East Midlands	77	102	90	108	107	72	85	81	97	99
West Midlands	67	87	83	93	93	79	95	88	104	101
Eastern	121	145	122	145	144	104	128	113	125	127
London	155	183	149	167	168	187	232	202	222	247
South East	202	243	198	230	225	166	204	185	206	201
South West	108	149	121	144	136	88	103	99	112	108
Wales	45	55	52	59	57	42	50	47	54	49
Scotland	47	44	56	55	50	48	58	47	53	44
Northern Ireland	7	9	13	10	13	10	15	9	13	11

Sources: NHSCR, General Register Office for Scotland and the Northern Ireland Statistics and Research Agency.

Note: Figures are in thousands and are based upon patients re-registering with NHS doctors in other parts of the UK.

TABLE 4

Distance of migrants' moves in the UK: 2000-1

Distance of move (km)	Percentage of total migrants
0-4 km	53.54
5-9 km	12.12
10-19 km	8.73
20-49 km	7.07
50-99 km	5.33
100-149 km	3.66
150-199 km	2.85
200 km and over	6.69
Percentage migrating in the UK (all ages)	11.44

Source: Sample of Anonymised Records from the 2001 Census of the Population

Note: Migrants are defined as residents who have a different address in the UK one year before the Census.
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TABLE 5

Percentage of migrants by age group in the UK: 2000-1

Age group	Percentage of age group who are migrants
16-19	16.27
20-24	33.44
25-29	25.73
30-44	12.46
45-59	5.38
60-64	4.12

Source: Sample of Anonymised Records from the 2001 Census of the Population

Note: Migrants are defined as residents who have a different address in the UK one year before the Census.

⇨ Migrate if $PV_{ij} > 0$

- Discount rate incorporates the influence of the migrant's time preference

- This model can also explain perverse migration

➢ But maybe too successful in predicting migration as it includes all costs and benefits

- Can be extended by introducing other non-labour market variables
– uncertainty and attitudes towards risk

- *Main defect* => doesn't deal with process whereby individuals acquire information
– fundamental to migration behaviour

- **Search Models**

- Treats the migration process as a series of sequential decisions from a given set of opportunities

- Migration is viewed as the outcome of a series of search decisions

- Very complex because of the number of possible destinations to choose from

- Probability of individual h migrating from region i to region j is given by: $P_{hij} = A / B$
– A is the pull of region j and B is the countervailing pull of all other regions

- Optimal stopping rules are important
– formulated in terms of *reservation wages*
– an individual can either accept or reject an offer

- Migrant chooses the region with the highest reservation wage net of costs

- Distinction between speculative and contracted migration is important

- Can incorporate other important features:
– the hiring behaviour of employers
– unemployment
– time lags

➢ The latter may be important in explaining why regional differentials have not been eliminated because:
– *information* has to get from the prosperous region to the potential migrant
– of the *response* of the potential migrant to the information received and forming expectations of elsewhere
– of the *adjustment* in the reaction to the expectations they have formed

- **Others**

  - *Random utility models*

    - The utility function is partitioned into two components:
    – the behaviour of rational individuals
    – a random variable representing individual idiosyncrasies and factors which cause individuals to deviate from the representative person
    $\Rightarrow$ $U_{hin} = V_{in} + \varepsilon_{hn}$

    - Can then work out the probability of moving to a certain location: $P_{hij} = \dfrac{\exp(V_{ij})}{\sum_n \exp(V_{in})}$

    - Integrates an explicit formulation of the error term into an individual's decision

    - Main advantage => recognises heterogeneity is a part of life
    – explains the complexity of observed migration behaviour

  - *Gravity (spatial interaction) models*
    – typically used in the geographical literature

    - Based on Newtonian physics
    – push and pull of certain areas: $M_{ij} = A_i B_j f(D_{ij})$

    - Only explains aggregate flows rather than individual decisions

    - Can be extended to include economic variables

  - *Psychological models*
    – include variables such as stress which economic models ignore

- **Characteristics of British migrants**

 - Migrants tend to be young, have qualifications and have no dependant children

  - Housing tenure is also important
  – private renters are most likely to move
  – owner occupiers could become locked-in
  – council tenants are the least likely to be long distance movers

  - Migration for job reasons is highest for the unemployed

- **Family migration** (Mincer, 1978)

- Most migration decisions not made by single workers but by families or households

- Migration will only occur if the whole of the household is better off (Fig. 1)

- Family will migrate if $PV_H^j + PV_W^j > PV_H^i + PV_W^i \implies \Delta PV_H + \Delta PV_W > 0$

Fig. 1: Tied movers and tied stayers
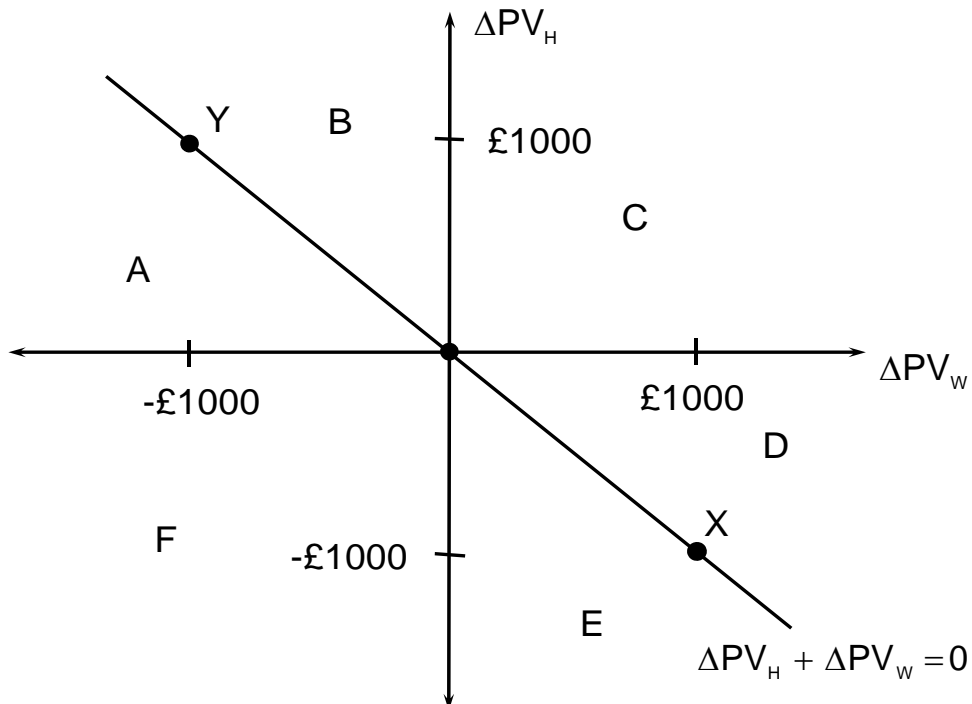
- Not all family members need to have positive private returns to move
– explains why some migrants move even though they wouldn't have on their own

⇨ Produces tied movers and tied stayers

- Tied mover
– an individual moves even though they would personally suffer an income loss

- Tied stayer
– an individual stays even though they would personally be better off moving

- Rise in the married female participation rate has had several effects:
– the migration rate of families with two wages is lower than singled waged families
– prospective employers can help with spouse's job search
– could have increased marital instability

- In terms of international migration, remittances are important (Stark, 1991)
- the household might decide which members should migrate e.g. those with the highest earnings potential

❖ **International migration**

- Previously assumed there were no government barriers to migration but governments may want to restrict the flow of migrants from overseas

- Fairly free flow of immigrants in the early part of the Twentieth Century

Fig. 2: The immigration surplus
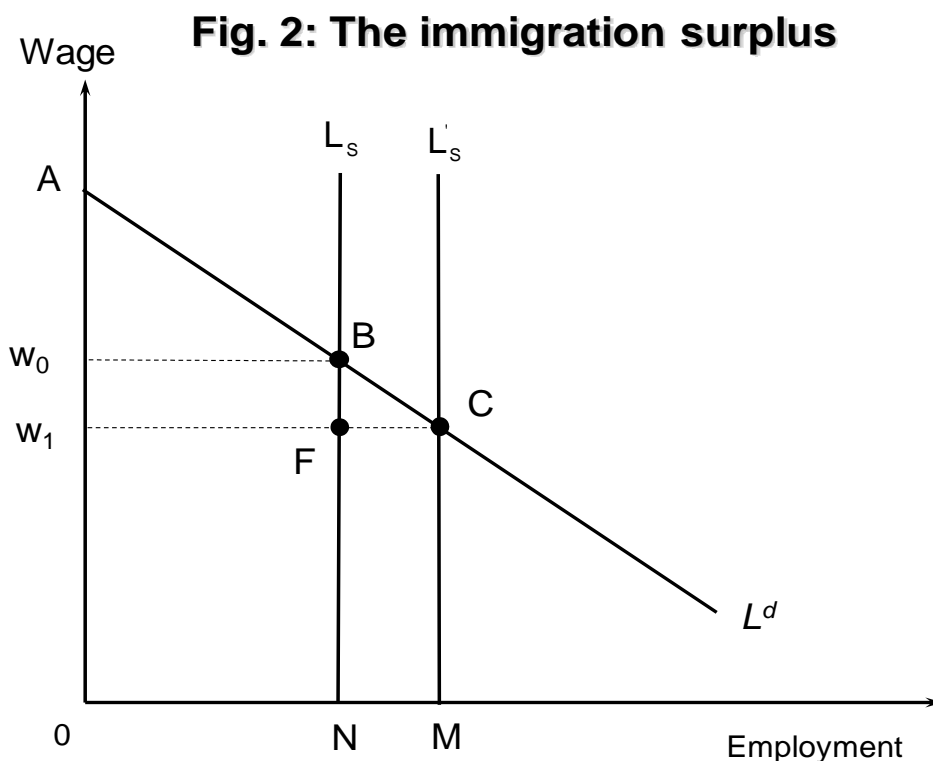
⇨ Host country should gain (Fig. 2)
- due to the immigration surplus (Borjas, 1994)
- but may lead to increased unemployment during recessions

◆ UK:
- open immigration policy until 1905 but emigration was much more important
- arrival of Caribbean migrants in the 1950s in response to labour shortages
- followed by an inflow of Asian groups
- huge influx of migrants from Central and Eastern Europe (especially Poles) following EU enlargement in 2004

- US:
  - mass movement of European migrants between 1900 and 1920
  - declined in the 1930s to very small levels
  - increased steadily in the second half of the 20th century

- Europe:
  - experienced considerable migration in the post-war period
  - guestworker system was operated by some countries e.g. Germany

- Immigration controls have got increasingly strict (for non-EU nationals)

- UK:
  - British Nationality Act of 1948
  - Commonwealth Immigration Act of 1962
  - Immigration Act of 1971
  - Asylum and Immigration Act of 1993 => further tightened since
  - EU nationals can move freely (even following 2004 enlargement) but restrictions imposed on Bulgarians and Romanians in 2007

- US:
  - national-origins quota system in 1920s
  - introduced the Immigration Reform and Control Act (IRCA) in 1986

- European countries have generally followed suit
  - some have bilateral and quota agreements with sending countries

⇨ Restrictions have led to a rise in illegal immigration

- **Labour Market Performance of Immigrants**

- *Early US literature* (Chiswick, 1978)
  - used cross sectional data
  - optimistic view => the earnings of immigrants would eventually overtake those of natives since they are self-selecting
  - overtake after 14 years in US and would earn 10% more than natives after 30 years
  - lower initial wages since they lack country specific skills
  - steeper age-earnings profile as immigrants become *assimilated* (Fig. 3)

- *Later US studies* (Borjas, 1985)
  - stress importance of *cohort effects*
  - later groups of immigrants may be very different from earlier groups
  - may have lower age-earnings profiles (Fig. 4)

Fig. 3: Age-earnings profiles of immigrant and native men in a cross section
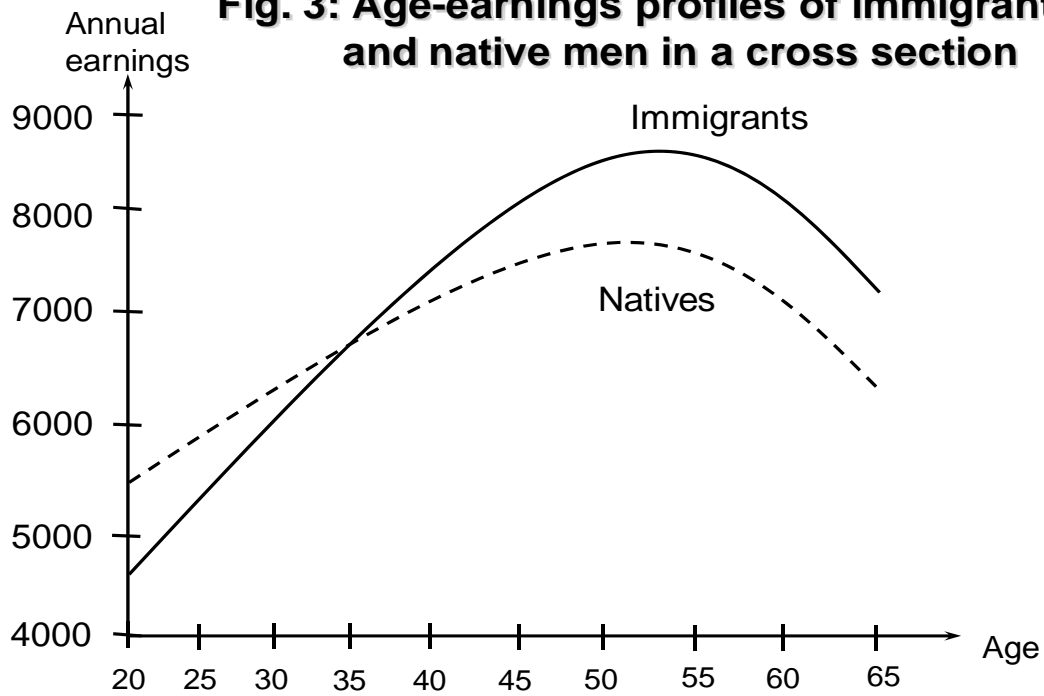
Fig. 4: Cohort effects and immigrant age-earnings profiles
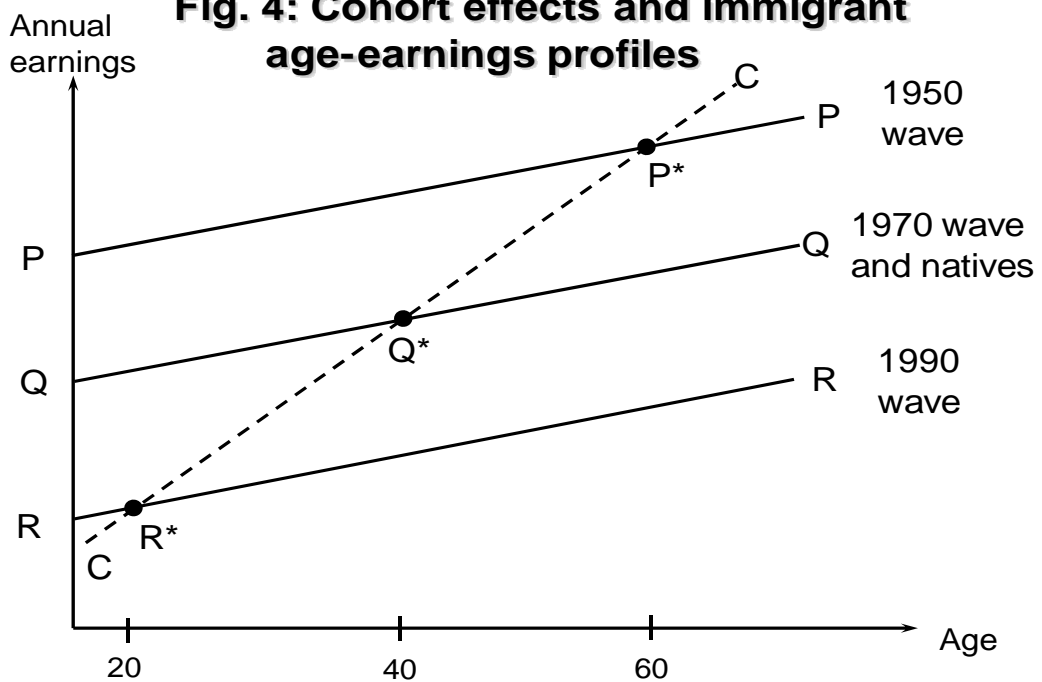
◆ Cross sectional data only shows one point on the age-earnings profile
– makes inferences about how earnings evolve over time from a single snapshot
– makes immigrants' age-earnings profiles steeper than they should be

➢ More recent cohorts typically earn less

• Schaafsma and Sweetman (2001) find a negative correlation between age at immigration and earnings in Canada:
– work experience in the home country yields virtually no return in Canada
– younger immigrants get a much higher return to education

• *UK Evidence*

◆ Chiswick (1980) finds that white immigrants had similar earnings to white natives
– but non-white immigrants earned much less => low returns to education and exp.

◆ Bell (1996) reports lower initial earnings for immigrants than natives for non-whites
– assimilation takes place even after controlling for cohort effects
– for whites, immigrants initially have higher earnings but this declines over time

➢ But Drinkwater *et al.* (2006) note that recent Polish migrants have low earnings
– tend to have poorer English language skills and stay for shorter periods

◆ Shields and Wheatley Price (1998) find that most immigrant groups have lower returns to schooling obtained in the UK
– educational attained abroad is less valuable for all immigrant groups than that obtained in the UK
– labour market experience obtained in the UK is much more valuable for all groups than that obtained in the country of origin
– no significant reward for labour market experience from the home country
– non-whites are less well rewarded for their schooling and experience

◆ Clark and Lindley (2006) report some evidence that non-white immigrants entering the UK at times of high unemployment have lower earnings

Key References
Borjas, G. J. (1985), "Assimilation, changes in cohort quality and the earnings of immigrants", *Journal of Labor Economics*, Vol. 3, pp. 463-89.
Borjas, G. J. (1994), "The economics of immigration", *Journal of Economic Literature*, Vol. 32, pp. 1667-1717. (
Jackman, R and Savouri, S. (1992), "Regional migration in Britain: An analysis of gross flows using NHS central register data", *Economic Journal*, Vol. 102, pp. 1433-50.
Mincer, J. (1978), "Family migration decisions", *Journal of Political Economy*, Vol. 86, pp. 749-73.
Molho, I. (1986), "Theories of migration", *Scottish Journal of Political Economy*, Vol. 33, 396-419.
Pissarides, C. and Wadsworth, J. (1989), "Unemployment and the inter-regional migration of labour", *Economic Journal*, Vol. 99, 739-55.
Sjaastad, L. (1962), "The costs and returns of human migration", *Journal of Political Economy*, Vol. 70, 80-93.

Shields, M. and Wheatley Price, S. (1998), "The earnings of male immigrants in England: Evidence from the quarterly LFS", *Applied Economics*, Vol. 30, pp. 1157-68.

Additional References:
Bell, B. (1996), "The performance of immigrants in the United Kingdom: Evidence from the GHS", *Economic Journal*, Vol. 107, pp. 333-44.
Chiswick, B. R. (1978), "The effect of Americanisation on the earnings of foreign-born men", *Journal of Political Economy*, Vol. 86, pp. 897-921.
Chiswick, B. R. (1980), "The earnings of white and coloured male immigrants in Britain", *Economica*, Vol. 47, pp. 81-7.
Clark, K. and Lindley, J. (2006), "Immigrant labour market assimilation and arrival effects: Evidence from the UK Labour Force Survey", IZA Discussion Paper No. 2228.
Drinkwater, S., Eade, J. and Garapich, M. (2006), "Poles apart? EU enlargement and the labour market outcomes of immigrants in the UK", IZA Discussion Paper No. 2410.
Gordon, I. and Molho, I. (1998), "A multi-stream analysis of the changing pattern of interregional migration in Great Britain, 1960-81", *Regional Studies*, Vol. 32, pp. 309-23.
Schaafsma, J. and Sweetman, A. (2001), "Immigrant earnings: Age at immigration matters", *Canadian Journal of Economics*, Vol. 34, No. 4, pp. 1066-99.
Stark, O. (1991), The Migration of Labor, Blackwells, Oxford.