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# THE THEORIES OF THE DETERMINANTS OF MIGRATION. WHAT CAN WE LEARN FROM THE SCOTTISH EXPERIENCE?

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## Abstract

*There are many theories of migration. The human capital, search and the gravity models are among the most widely referred to by researchers. The influence of house prices, job vacancies, wage differentials on the migration decisions have widely been noted and have the expected signs. However, in a study done using the Scottish data the house price variables seem to give an opposite sign that contradicts previous findings. This could be due to the change in the determinants of migration whereby it is not just available house or accommodation that matters, it is something more than that. This finding could lead to further research on why there is a change in the determinants of migration in Scotland and what can Asians learn from the Scottish experience.*
*Keywords: Migration, house prices, real wage, job vacancy.*

## Introduction

The importance of the search process in economics was first recognised and highlighted by Stigler (1961, 1962). He relates the importance of search in the market for sellers and buyers, where both sellers and buyers need information regarding maximum and minimum prices that they preferred. The search process does involve costs and it is especially costly if the search is conducted on an individual basis. The early models on search were non-sequential because the number of (job) offers was taken as a constant known by the individual before starting search. Subsequently, and currently, the literature is dominated by sequential models that pose the "optimal stopping" problem. The optimal stopping rule suggests that under certain assumptions the job searcher will need to choose a wage which is known as the reservation wage. The optimal policy for the job searcher is to reject all offers below the reservation wage, and to accept any offer above it. Interregional movements of capital and labour play a critical role in theories of regional development and growth. The particular factor flow that we are mainly concerned with is the flow of labour. Labour migration is a more complex phenomenon than flows of capital and this may account for the many theories of migration that have been developed. The classical model stresses the importance of wage differentials between regions as the main determinant of migration. The human capital approach is of great importance since it was first introduced by Sjaastad in 1962 (Sjaastad, 1962). It considers migration as an investment in human capital. In effect it provides another mechanism through which households may increase the productivity of their human resource. This "investment", like any other, involves a sacrifice in terms of initial costs and a benefit in terms of subsequent returns. Since Sjaastad's (1962) classic contribution there have been many variations on the basic approach. The basic

concept of the human capital approach in migration is the use of discounted costs and benefits as the bases to undertake a decision.

**Methodology**

In this section we discuss the many economic theories and research findings pertaining to migration. We relate the findings of other researchers pertaining to the migration studies that we are interested in. After which we discuss our own findings using the Scottish and Rest of United Kingdom data.

**Economic theories of migration and search**

Human capital theory is one of the most commonly used explanations of how an economically motivated migration agent behaves (Sjaastad, 1962; Borts and Stein, 1964 and Pickles and Rogerson 1984). The process of migration, as we have seen, is viewed as an investment where the returns from migration, partly in the form of higher wages associated with a new job, are greater than the costs involved (both pecuniary and psychic). Hence from a neo-classical perspective, migration should then occur in response to the presence of interregional wage (and amenity) differences. However Miron (1978) stresses the importance of understanding the behaviour of potential migrants as information gatherers and decision makers. Also, it is rather unconvincing to assume that the potential migrant has perfect information about the wages and job availabilities among all the potential locations involved, and is aware of the extent to which these may reflect disequilibria, especially given that such disequilibria must presumably be changing over time.

Thus it has been argued that search theory may therefore be viewed as providing the missing link in the human capital approach by providing an explicit treatment of uncertainty. Todaro (1969) was among the first to recognise how a potential migrant would discount wages by the probability of finding a job. Some other studies also offer alternative ways for estimating the probability of securing a job. For example, Fields (1976) argued that the ratio of the new hire to the unemployment rate provides a more intuitive and better measure of the transition probability from the unemployed state to the employed state. Similarly, Gleave and Cordey-Hayes (1977) and Holt (1978), suggested the use of the ratio of vacancies to unemployment as a measure of labour market tightness, which has the advantage of directly including measures of opportunity and competition. However, some of the assumptions used were rather weak. For example the assumptions regarding how people search and compete for new jobs. In the next section, a brief review of search theory is presented.

**The search model as applied to migration**

Many researchers have extended the basic search model in order to increase its general validity and applicability in a variety of circumstances. An example of special importance here is the search model's application to the study of migration processes. As pointed out by Gordon and Vickerman (1982) the lack of attention given to the constraints on the choices faced by an individual in making the migration decision is an important source of dissatisfaction with the human capital approach. Furthermore, before a migration decision is made, an individual needs to know about the available opportunities. Relying on the human capital model alone is insufficient to explain the

process involved in migration. The human capital model also assumes that information is free, thus placing everyone in the population at risk of migration. In contrast, Gordon and Vickerman (1982) claim that an explicit treatment of the search process provides a new definition of the population at risk, which is a subset of the whole population in a region. As a consequence, Gordon and Vickerman (1982) propose the following model. They suggest that the decision to migrate can be broken down into at least two distinct stages. First, the need to decide whether to become a potential migrant (thus accepting the costs involved while searching for opportunities) or to become a stayer (that is to quit from the searching mode). Secondly, there is a need to decide whether to accept or reject a given opportunity.

**The gravity approach**

Spatial interaction is a broad term which includes any movement over space that results from a human process. It includes journeys to work, information and commodity flows, student enrolments, the utilisation of public and private utilities, migration and even the transfer of knowledge. Gravity models are the most widely used types of interaction models. They are mathematical formulations that are used to analyse and forecast spatial interactions. The gravity model has been widely used in the geographical context.

The concept of information flow in migration modelling was adapted by Plane (1981). He uses the minimum information principle (MIP) form of the gravity model to assess migration flows in the U.S. The full MIP model is in the form;

$$\hat{m}_{ij} = m_{ij}^{0} \gamma (\alpha_i / \alpha_j) e^{-\beta d_{ij}} \qquad (2.4.1)$$

where $\hat{m}_{ij}$ is the predicted flows between the two regions; $m_{ij}^{0}$ are the current (known) flows; $\gamma$ is the scaling factor and $d_{ij}$ is the distance relating factor. The parameters to be estimated are $\alpha$, $\beta$ and $\gamma$. In this model, $\beta$ can either have positive or negative values. A positive value indicates that the deterrent effect of distance has increased over time, while a negative value indicates that it has decreased. However in recent years, distance has become a less important impediment to migration (Plane 1981). Plane calibrated his model using the U. S 1965-70 migration data. Gravity models also assume spatial parameter stability; for movement out of any one origin, the parameter has been assumed to be stable across the range of destinations towards which flows are directed. It suggests that the effect of distance out of a particular origin is unmodified in spite of the diversity of places within the spatial system.

**The Todaro (1969) and Harris-Todaro (1970) migration model.**

The basic Todaro (1969) model implies migration proceeds in response to urban-rural differences in expected income rather than actual earnings. Migrants compare the various labour market opportunities that are available in the rural and urban sectors and choose the one that maximises their expected gains, should they choose to migrate. These expected gains are measure by the difference in real incomes between rural and urban work and the probability of a new migrant getting an urban job. This is how unemployment rates are introduced into the model. The Todaro (1969) model assumes that each worker has an identical planning horizon and has fixed costs of migration that

are identical to all workers. Later the Todaro (1969) model is extended to include a third sector, namely the informal urban sector (Harris-Todaro 1970). The 3 sectors model assumed the following characteristics. The rural sector is branded by low, flexible wages with full employment and job stability. Also there are no fringe benefits available to workers. While the urban informal sector is where the new migrants "reside" while waiting to be "permanently" employed in the formal urban sector. It is characterised by low, flexible wages, with underemployment and job instability. There is also no fringe benefit for workers in this informal sector. The urban formal sector is characterised by high, downwardly rigid wages and by a limit in the number of jobs. These jobs are "stable" and there is opportunity for advancement, with fringe benefits to workers. With the above assumptions, the extended migration model demonstrates that job creation in the urban formal sector could result in an increase in the urban informal sector through rural-urban migration.

According to Todaro (1969), the objective of a typical rural-urban migrant is to get a job in the urban formal sector. Since the number of jobs available in the urban formal sector is limited, in-migrants from the rural sector are thus typically employed, upon arrival, in the urban informal sector. Being involved in petty-trading is an example of an urban informal sector job. Earnings in this informal sector may be below earnings in the rural sector, but the migrants are willing to remain in that sector because of the possibility of accessing a formal sector job. The Todaro (1969) and Harris-Todaro (1970) models have been criticised for several short comings (Eaton, 1992; Willis and Fields, 1980). First, there are no clear details regarding the relationship between the urban formal and informal sectors. Second, the causes of the downwardly rigid wages in the urban formal sector are ignored, and there is no proof that such rigidity exists. Third, the mathematical formulation of the model completely ignores labour earnings in the urban informal sector. Fourth, there is an implicit assumption that the labour of rural-urban migrants is homogeneous, which is unlikely to be the case. Finally, the Todaro (1969) model lacks empirical support for its theoretical bases, and empirical testing of its implications.

**The Jackman and Savouri Model**

Jackman and Savouri (1992) model migration as a special case of job-matching, in which a job-finder in region A is matched to a job in region B. Although people can live in one area and work in another (Jackman and Savouri 1992), more often than not, such job match usually involves migration of the household. Thus migration is viewed as the result of successful job search, but not a pre-condition for it; as available information technology makes it easy for a job-finder to look for a job without having to "physically relocate" himself. Their finding suggests there will be a higher rate of out-migration from regions of high unemployment. The unemployed are more likely to move. Their model suggests that the flow of migrants from the origin to destination region is the product of total engagements in the economy, the share of unemployment in the origin region and the share of vacancies in destination region. Their simple model assumes distance is immaterial in job search. However, in practice this is not true, as people prefer to take jobs near to home, and thereby avoid all the costs associated with moving. Later they allow for discouraging effect of a distance on job search and also allow for some effects of differences between regions. People obviously prefer to apply

for high paying jobs and hence potential migrants tend to look for work in high wage rather than low wage regions. Hence, a larger number of job-seekers applying for vacancies in high wage regions will be resident outside the region and we might expect that a higher proportion of jobs in high wage regions will be filled by in-migrants rather than by local residents (Jackman and Savouri, 1992).

**The Layard, Nickell and Jackman (LNJ, 1991) Model**

The Layard *et al* (1991) model includes real wage, unemployment rate and price differentials between regions as determinants of in-migration. The emphasis is on the importance of the real wage and unemployment rate differentials in influencing migration decisions. Thus their findings suggest that the higher the real wage in Scotland relative to RUK, the fewer people migrate from Scotland to the rest of the UK. Likewise the lower the unemployment rate in Scotland relative to RUK, the less people will out-migrate from Scotland to RUK.

The Layard *et al* (1991) in-migration function is as follows:

$$\frac{M_i}{L_i} = b_1 \log\left(\frac{\frac{N_i}{L_i}}{\frac{N}{L}}\right) + b_2 \log\left(\frac{W_i}{W}\right) + b_3 \log\left(\frac{P}{P_i}\right) + b_{4i}$$

and for estimation purposes is given as,

$$\frac{M_i}{L_i} = b_1 (u - u_i) + b_2 (w_i - w) + b_3 (p - p_i) + b_{4i}$$

where p refers to house prices; u and $u_i$ are the unemployment rates in the two regions; w and $w_i$ are the real wages, and lower case indicates natural logarithm of the corresponding variable. Our regression model follows the Layard *et al* (1991) model closely as they claim their model explains much of UK regional migration.

**The Ermisch (1995) Model**

The Ermisch (1995) migration model focuses on the relative real wage and relative employment rate, lagged one period, as the main determinants of net migration between Ireland and Great Britain. He tried to explain the degree of responsiveness of migration to real wage differentials by examining the size and pattern of European migration and whether there has been convergence in real wages. He found low responsiveness to real wage differentials, which "could be interpreted as large compensating differentials." (Ermisch, 1995). Similar to many other studies he found that migration is more sensitive to unemployment differentials between regions (and countries) than real wage differentials. The coefficient on the relative employment rate (which is unity minus unemployment rate) is ten times that on relative wages suggesting strong risk aversion. His findings suggest that the unemployment rate in Ireland relative to that in the UK was the most important explanation for the large changes in Irish net migration. The high unemployment rate in Ireland relative to the UK appears to have been mainly

responsible for the large out-migration from Ireland during the 1951-1971 periods (Ermisch, 1995).

**The Stock Adjustment Model**

In the stock adjustment model we make several assumptions. The key point here is that we assume that migrants are heterogeneous and may respond quite differently in response to any given change in the variables relevant to the migration decision. People have different psychic transaction costs or may value amenities differently and so the expected net present value from migration varies, possibly significantly, among individuals.

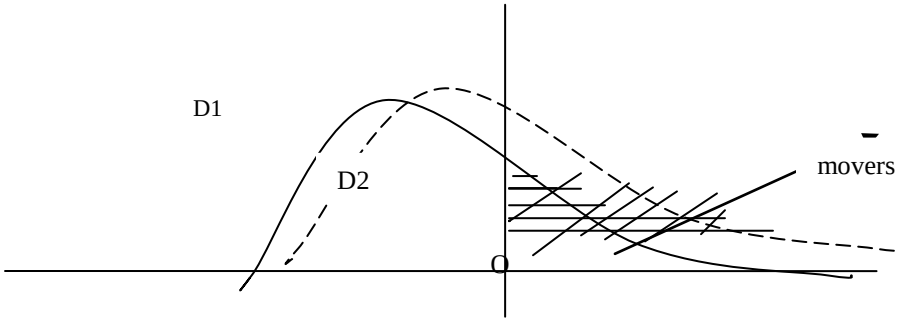


**Figure 1. Expected NPV of migration**

Suppose individuals expected net present values of migration are distributed in accordance with the solid line.as shown in figure 3.The origin, O, coincides with a zero expected net present value (NPV) associated with migration. Hence only those who are in the upper tail of the distribution of expected NPVs - above that value of expected NPV - become movers. Those whose expected NPV is below zero are stayers. When the real wage increases in the destination region relative to the region of origin, there will be a shift in the distribution from D1 to D2, with more people being movers than before, but in general there will be more stayers than movers as illustrated by the distribution. Since people are different, as wages increase in Scotland their expected net present value associated with migrating to Scotland increases. But due to the nature of the distribution across individuals not many households still wish to stay and there is a limited number of new movers as a consequence of the shift in the distribution of expected NPVs. This raises the possibility that the numbers induced to migrate may well be insufficient to restore wage and unemployment differentials, for example. This contrasts with the implications of Harris-Todaro (1970) and Layard *et al* (1991). Notice that we have not actually identified the variables that enter the computation of the expected value of NPV here. The argument is therefore valid with respect to any set of determining variables. For example, if it is wage and unemployment differentials that "matter", the argument implies that net migration flows occur here in response to the *first differences* of wage and unemployment rates, and not their *levels*. As we shall see, this apparently minor alternative specification of the net migration function may have significant consequences for the behaviour of regional economies.

**The "net-migration" Issue**

The net-migration model discussed above is not without problems. The focus of many migration studies has been on net migration flows, perhaps because of their concern for the overall impact of migration flows on labour markets. However, there is the issue of the appropriate specification of such model. In particular the argument that there is "no such thing as a net migrant" in fact can be interpreted as raising an issue of the appropriate specification of net migration functions, rather than necessarily objecting to their "netness" *per se*. For this reason in the study on the Determinants and Consequences of Regional Migration, Baba (2008) try to "correct" for the miss-specification by introducing the population ratio model.

**Results and discussion**

**The stock adjustment models**

Here we focus to report on our results using the Stock Adjustment Models of migration. Previous models are all of the flow adjustment variety, which as our analysis in (Baayah, 2008) argues, appears to be based on an implicit assumption of homogeneity among migrants. Allowing for heterogeneity, for example in the form of a distribution of expected psychic migration transactions costs, suggests that a stock-adjustment formulation may be more appropriate. The stock adjustment equations we estimate follow the following form:

$$NMGRATE^{SA} = \beta_0 - \beta_1 \Delta(rw_S - rw_{RUK})_t + \beta_2 \Delta(u_S - u_{RUK})_t + \beta_3 \Delta (p_S - p_{RUK})_t$$

*Where $\Delta$ is the first difference operator, capturing the stock adjustment specification, and the other variables are defined as follows.*

*Variables used in the stock adjustment model.*

$$(p_S - p_{RUK})_t = log(HPS/HPUK)_t$$
$$\Delta(p_S - p_{RUK})_t = (p_S - p_{RUK})_t - (p_S - p_{RUK})_{t-1}$$
$$(rw_S - rw_{RUK})_t = log(ES/EGB)_t$$
$$\Delta(rw_S - rw_{RUK})_t = (rw_S - rw_{RUK})_t - (rw_S - rw_{RUK})_{t-1}$$
$$(u_S - u_{RUK})_t = log(URATES/URATEUK)_t$$
$$\Delta(u_S - u_{RUK})_t = (u_S - u_{RUK})_t - (u_S - u_{RUK})_{t-1}$$
$$(v_S - v_{RUK})_t = log(VACU/VACS)_t$$
$$\Delta(v_S - v_{RUK})_t = (v_S - v_{RUK})_t - (v_S - v_{RUK})_{t-1}$$

Lower cases of the alphabet denote the natural logarithm of the variables.

Data from 1970 to 1994 are used in describing the pattern of migration and the testing of previous net migration models. Although most data are available earlier, the data on wages are only available from 1970. We estimate the stock adjustment models that we think can be used to explain Scottish-RUK migration data. The results are shown in Table 1.

**Table1. Dependent variable is NMGRATE. Sample period 1970-1994.**

| Variable | equation1 | equation2 | equation3 | equation4 | equation5 |
|---|---|---|---|---|---|
| Intercept | .0036 | .0041 | .0040 | .0044 | .0044 |
| | (1.88) | (3.47) | (3.42) | (3.60) | (3.78) |
| $\Delta(rw_S\text{-}rw_{RUK})$ | -.0454 | -.0561 | -.0517 | -.0681 | -.0676 |
| | (1.05) | (1.97) | (1.86) | (2.37) | (2.59) |
| $\Delta(u_S\text{-}u_{RUK})$ | .0029 | .0033 | .0024 | - | - |
| | (1.19) | (1.67) | (1.43) | | |
| $\Delta(v_S\text{-}v_{RUK})$ | .0010 | .0016 | - | .8738E-4 | - |
| | (0.42) | (0.88) | | (0.05) | |
| $\Delta(p_S\text{-}p_{RUK})$ | -.0123 | -.0132 | -.0124 | -.0134 | -.0134 |
| | (2.92) | (3.89) | (3.81) | (3.79) | (4.08) |
| $NMGRATE_{(t-1)}$ | .0944 | - | - | - | - |
| | (0.34) | | | | |
| T | -.8740E-4 | -.9998E-4 | .9602E-4 | -.1104E-3 | -.1099E-3 |
| | (1.67) | (2.79) | (2.72) | (2.99) | (3.16) |
| R-Squared | 0.74 | 0.74 | 0.73 | 0.70 | 0.70 |
| R-Bar-Squared | 0.65 | 0.67 | 0.67 | 0.63 | 0.65 |
| DW Statistic | - | 2.03 | 2.11 | 2.00 | 2.00 |
| Durbin's h-stats | None | - | - | - | - |
| S.E | .9544E-3 | .9291E-3 | .9235E-3 | .9742E-3 | .9483E-3 |
| Diagnostic Tests | | | | | |
| Serial Corr. CHI-SQ( 1) | .11395[.736] | .023031[.879] | .1581[.691] | .0242[.876] | .0297[.863] |
| Fn-tional Form CHI-SQ( 1) | .86264[.353] | .98070[.322] | .3507[.554] | 1.432[.231] | 1.323[.250] |
| Normality CHI-SQ( 2) | .13247[.936] | .009284[.995] | .7673[.681] | .1512[.927] | .1587[.924] |
| H-dasticity CHI-SQ( 1) | .65750[.417] | .7922[.373] | .9220[.337] | 1.122[.289] | 1.128[.288] |

We start by regressing the most general form of the stock adjustment model as given by equation 1 of table .1.Only the change in the price variable between Scotland and RUK is significant at the 5 per cent level but has the opposite sign to that predicted by theory. The time trend and the lagged dependent variable are both insignificant at the 5 per cent level. The $R^2$ value implies the model explains 74% of variation in the dependent variable. There is no evidence of serial correlation or functional form problems. The diagnostic test result does not reject the null hypotheses of normality and homoscedasticity in the residuals. Next we drop the lagged dependent variable from our regression. In equation 2 the result shows that the change in price variable remains significant at the 5 per cent level with a larger t-value than before. However it maintains the sign opposite to that predicted by theory. The time trend now becomes significant at the 5 per cent level. The negative sign indicates that the dependent variable tends to decrease over time.

The DW statistic is very close to 2, which implies that there is no evidence of serial correlation in the residuals. This result is confirmed by the other diagnostic test of serial correlation. There is also no evidence of serial correlation or functional form problems. The diagnostic test result does not reject the null hypotheses of normality and homoscedasticity in the residuals. Next, based on the t-values we omit the change in vacancy variable from our regression. The result is given in equation 3. The change in real wage is not significant at the 5 per cent level but has the expected sign. The change in the unemployment rate between Scotland and RUK also remains insignificant at the 5 per cent level and maintains the expected sign. The change in price between Scotland and RUK maintains to be a significant variable but still has the sign opposite to that predicted by theory.

The time trend remains significant at the 5 per cent level. The $R^2$ decreases slightly which implies the model is a worse fit. The DW statistics is greater than 2 which indicate negative autocorrelation of the residuals (e.g. Johnston 1984). This is not corroborated by the other diagnostic test for serial correlation, however. There is also no evidence of a functional form problem in the model. The diagnostic test result does not reject the null hypotheses of normality and homoscedasticity in the residuals. Next we omit the change in unemployment variable from our regression. We also reintroduce the change in vacancy variable into our model to see whether the change in vacancy will have significant effect on net out migration variable when the change in unemployment is excluded from the regression. The result given in equation 4 indicates that the real wage now becomes significant at the 5 per cent level and has the expected sign. This result supports the theory that people move from low wage to high wage regions. Thus the higher the real wage in Scotland relative to RUK fewer people will migrate from Scotland to RUK. The change in vacancy variable remains insignificant at the 5 per cent level. The house price variable remains significant at the 5 per cent level and maintains the negative sign as before. The time trend variable remains significant at the 5 per cent level with a lower standard error. The negative sign implies that the net out migration from Scotland to RUK decreases over time. The $R^2$ value implies that the model explains 70% of the net out migration flow from Scotland to RUK. The DW statistic of 2 implies there is no autocorrelation in the residuals. The diagnostic test result also implies that there is no evidence of serial correlation and functional form problems. The diagnostic test result does not reject the null hypotheses of normality and homoscedasticity in the residuals.

Finally, we omit the change in the vacancy variable from our regression. The result is shown in equation 5. The change in real wage remains significant at the 5 per cent level and maintains the expected sign. The standard error has also reduced. The change in house price variable also remains significant at the 5 per cent level and maintains the previous sign. Its standard error has also decreased. The time trend variable also remains significant at the 5 per cent level and the standard error has also decreased. The $R^2$ value remains unchanged and the corrected $R^2$ does not change very much, indicating the change imposed on the model is acceptable. The DW statistic of 2 means that there is no evidence that the residuals are not auto correlated (Johnston 1984). The standard error of the regression has decreased which means equation 5 can be a better model than equation 4. There is no evidence of serial correlation and functional form problems. The diagnostic test result also indicates that the test for normality and homoscedasticity gives affirmative result. We also conduct the parameter stability test for all our models discussed above using the CUSUM and CUSUM-SQ methods. The results provide evidence of parameter stability in all our stock adjustment models. Given the above findings we conclude that equation 4 and equation 5 are among the best statistical models that could be used to describe the net out migration flows between Scotland and RUK, although the unexpected sign on house price variable limits the genuine explanatory power of the model if we follow the old believe that cheaper house prices will encourage the move from the origin to the destination region. Perhaps the present day scenario is different, cheap housing is not an attraction (to the migrants) but comfortable accommodation is. So the fact that the house price

variable has a non conventional sign is acceptable and does show a change in the ways variables affect a migration decision.

**Conclusions**

There are many approaches to the study of why people move. The classical approach suggests wage differentials as the main determinant of migration between regions. Migration is taken to be "costless" and without risk in this approach. The human capital approach introduced by Sjaastad (1961) treats migration as an investment in human capital that involves costs and returns. The costs and benefits include both monetary and non-monetary costs. The many facets of search theories that have emerged from the basic search strategies initiated by Stigler (1961, 1962). Search theory has also been useful in the study of migration; it shows how migration decisions may involve different stages. Gordon and Vickerman (1982) focus, in effect, on contracted migration. They construct a general decision making framework in which the probability of migration taking place is expressed as the product of the probabilities discussed above. The probability of receiving an offer is simplified in the basic search model by assuming a fixed rate at which offers are generated, for example once a day. As for speculative migration, since it is considered as part of the search process it is quite difficult to differentiate it from the search process *per se*. Once an individual has decided to enter the search process he/she is effectively involved in a speculative form of migration because in the process of searching for opportunities he/she may need to move from one region to another.

Gravity models have been widely used in the study of migration processes. Their early use was highlighted by Ravenstein who argue that in studying migration stream the analyst should consider both the numbers of people in the origin and the destination locations. The basic gravity model of migration emphasises that the migration process between any pair of regions depends on the size of the population in each region and the distance attributes between the two regions. Some researchers focused on the characteristics of gravity model in their study of migration processes (Smith and Clayton, 1978; Goodchild and Smith, 1980) while others included information flows in the gravity model (Smith and Slater, 1981; Plane, 1981). Fotheringham (1980) and Eldridge and Jones (1991) add the accessibility (of a destination to other destinations) variable to the gravity models to form the competing destinations' models. The latter models allow for the existence of competitions among the destinations attracting the potential migrants. The more accessible a destination is, the less likely it will be the last stopping place for the potential migrants. While the flow model suggests that migration involves the response of homogenous individuals reacting to changes in the determinants of migration in much the same way, the stock adjustment model has rather different implications. In the stock adjustment model individuals are assumed to be heterogeneous, as reflected in a distribution of expected net present values of migration decisions across individuals. This has fairly radical implications for the appropriate specification of the net migration function. Perhaps the different sign on the effect of house prices on the migration decision between Scotland and the Rest of Untied Kingdom will shed some light on future research on migration decisions. Researches must look at migration decision beyond the normal way of thinking. Increased house price could be a positive factor as people relate to increased

price to increase standard of living. That could be the reason why people keeps flocking to New York even though they can never really afford it, but the fact that they can relate to people in the origin that they are part of New York could be the ridiculous factor that attracts people into New York for example. Hence that could explain why the house price variable has the negative sign against the normal findings in previous migration studies.

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