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A Preference for Migration

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Contents

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A Preference for Migration

Abstract

At least to some extent migration behavior is the outcome of a preference for migration. The pattern of migration as an outcome of a preference for migration depends on two key factors: imitation technology and migration feasibility. We show that these factors jointly determine the outcome of a preference for migration and we provide examples that illustrate how the prevalence and transmission of a migration-forming preference yield distinct migration patterns. In particular, the imitation of a migration-favoring preference yields migration scenarios that would not have taken place absent the imitation.

Preferencje migracyjne

Streszczenie

Zachowania migracyjne wynikają, przynajmniej do pewnego stopnia, z preferencji w stosunku do migracji. Wzorzec migracji wynikający z preferencji w stosunku do migracji zależy od dwóch kluczowych czynników: mechanizmu imitacji oraz możliwości zaangażowania się w migracje. Wykazujemy, że kombinacja tych dwóch czynników determinuje to, czy preferencje w stosunku do migracji przełożą się na rzeczywiste działania oraz podajemy przykłady ilustrujące, w jaki sposób wykształcają się określone wzorce migracji. W szczególności, imitowanie preferencji pro-migracyjnych prowadzi do scenariuszy migracyjnych, które w przeciwnym razie nie miałyby miejsca.

1. Introduction

Preferences play an important part in determining behavior. Heterogeneity in preferences is a major reason for variation in behavior across individuals. Stating that an individual behaves in a particular manner because the individual prefers that manner may plausibly sound tautological. But distinguishing the role of preferences from the role of other variables that impinge on a concrete behavior, inquiring into the acquisition of preferences, and tracking the way in which the transmission of preferences gives rise to conduct that would not have arisen absent the transmission, are anything but tautological.

The preference-propelled behavior studied in this paper is migration. In a way, the migration literature is all about preferences and not at all about preferences. For example, when an individual responds to a wage differential by migrating, the individual can be said to exhibit a preference for a high wage. But it can also be the case that the individual who responds to a high wage by migrating is the one who possesses an underlying preference for migration; the wage differential merely unearths and facilitates the preference-prompted behavior.

2. Analysis

Consider an overlapping-generations economy. An individual lives for two periods: childhood and adulthood. Preferences are acquired in childhood through the imitation of adults. By the time adulthood is reached, migration preferences are fully formed. Adults can either have preferences that favor migration or preferences that resent migration. The initial distribution of adults between those who are inclined to migrate and those who disfavor migration is historically given. At the beginning of each period, N individuals are born. Each child has one parent and each parent has one child. Individuals acquire their tastes and preferences only during their childhood, and work only during adulthood. Individuals die at the end of the second period of their life. If migration takes place, it occurs at the beginning of the adult period. The “technology” of preference formation is

imitation of adults within the economy. For the moment, the technology is not characterized further, except for pointing out that it is exclusive - preferences are acquired only through imitation, and precise: if the adult whom the child imitates favors migration, the child will also favor migration; if there are no adults who favor migration, no child will favor migration upon becoming an adult. The assumption that children imitate only adults who are present in the economy draws on the idea that visibility is a critical input into the imitation process. Adults who migrated and who are not visible to the preferences-forming children cannot be imitated; invisible adults do not serve as role models.

Suppose, first, that nearly all the adults have preferences that favor migration, yet none leaves; there is an exogenous shock that determines whether all, some, or none of those favoring migration can actually become migrants. Consider a case wherein the initial realization of the shock precludes migration. In this case nearly all the young acquire migration-favoring preferences and, should the exogenous environment subsequently allow free migration, there will be migration by approximately N individuals. Thereafter, there will be no more migration because the next young generation will have only those adults who do not favor migration to imitate. Hence, the migration sequence is 0, N, 0, 0, … . Alternatively, suppose that the initial realization of the shock is such that all the adults who favor migration can and do leave. None of the young will acquire migration-favoring tastes and all migration will cease after the initial, approximately N-strong, migration. In this case, the migration sequence is N, 0, 0, 0, … . The result we derive is that given the process of transmission and the formation of preferences, the inability of the first cohort to act upon its migration preferences does not affect the overall magnitude of migration, only its intertemporal structure.

Suppose, alternatively, that a sufficiently large proportion, π, of the adults are favorably inclined to migrate, but that only a fraction, p, find it possible to do so. Left in the economy are $(1-p)\pi N$ adults with migration preferences, and $(1-\pi)N$ who do not favor migration. If the imitation technology is also such that preferences are replicated exactly proportionately, the new cohort of adults will have

$\frac{(1-p)\pi N}{(1-p)\pi N+(1-\pi)N}N$ migration-favoring individuals. If all those who are favorably inclined to migrate can now migrate, migration will be rising in time in the short run (this follows from π being sufficiently large) and the complete pattern of migration will become $p\pi N$, $\frac{(1-p)\pi}{(1-p)\pi+(1-\pi)}N$, 0, 0, … . The economy generates more migrants under this scenario than if all those who could have migrated at the outset were to do so; $p\pi N+\frac{(1-p)\pi}{(1-p)\pi+(1-\pi)}N>\pi N$. What appears to propel migration is the evolution of a migration-favoring preference. Indeed, and quite interestingly, with a sufficiently large π (close to 1), a larger number of migrants is generated upon and along with preference transmission than if all the adults were to favor migration and to migrate at the outset.

The same outcome can hold if there is an exogenous capacity constraint such that the per period number of adults who can be let out as migrants is a constant $\overline{M}$, where $\overline{M}$ is smaller than the initial number of adults with a preference for migration, that is, $\pi N>\overline{M}$. In such a case, the periodic numbers of the remaining adults favoring migration are $(\pi N-\overline{M})=a_1$, $(\frac{\pi N-\overline{M}}{N-\overline{M}}N-\overline{M})=a_2$, $(\frac{a_2}{N-\overline{M}}N-\overline{M})=a_3$, … . Since $\pi<1$, these numbers decline, and after a finite number of periods it must be the case that all those with a migration-favoring preference are able to leave; the constraint does not bind anymore and migration ceases. If the number of the migration-occurring periods that elapse until and including the period during which the constraint ceases to bind is greater than $\left[\frac{N}{\overline{M}}\right]$, the imitation process leads to more migration than that which would have taken place had there been no constraint to begin with, and had all members of the initial population been of the migration-favoring type.

Under imitation and an exogenous capacity (absorbing) constraint, even when successive generations decline in size on par with migration, there are no fewer migrants from the economy than when the constraint does not bind (and all those favoring

migration leave at the outset.) To see this most vividly suppose that the size of a cohort is equal to the size of the previous cohort less the number of migrants, $\overline{M}$, and that $\frac{\pi N}{\overline{M}}$ is a natural number. Migration will cease after *n* cohorts where the *n*-th cohort is the cohort in which the number of migration-favoring adults is exactly equal to $\overline{M}$. With proportional imitation, the numbers of migration-favoring adults in successive generations are πN, $\pi N - \overline{M}$, $\pi N - 2\overline{M}$, … , $\pi N - (n-1)\overline{M}$, 0, 0, … . Absent a constraint, πN leave at the outset yielding a migration sequence πN, 0, 0, … . Under the constraint, the migration sequence is $\underbrace{\overline{M}, \overline{M}, \overline{M}, \ldots, \overline{M}}_{\text{n times}}, 0, 0, \ldots$. Since the last episode of migration occurs in the generation in which all those favoring migration leave, that is, generation *n*, adding $n\overline{M}$ to $\pi N - n\overline{M}$ gives the total number of migrants under a constraint cum imitation, πN.

Suppose, alternatively, that children acquire preferences by imitating only their parents. If the migrating parents take their children along and if all those who are initially predisposed to migrate can do so, migration (by $2\pi N$ individuals) will cease after one period. If, however, there is an exogenous periodic constraint, $\overline{M}$, that allows only $\overline{M} < \pi N$ of the initial πN adults favoring migration to leave, $\overline{M}$ children of the $\pi N - \overline{M}$ adults who could not migrate but wanted to, will do so subsequently (upon becoming adults themselves). As before, even though the adults who favor migration but could not migrate die at the end of the second period of their life, their predisposition to migrate (their "migration legacy") is carried on, through imitation, by their children. Assuming that the children of migrants are not counted in the migration "quota" and that $\frac{\pi N}{\overline{M}}$ is a natural number, migration will take place for $\frac{2\pi N}{2\overline{M}}$ periods (with the total size of migration summing up to $2\pi N$).[1]

[1] The assumption that each child has one parent and that each parent has one child can be relaxed without affecting the argument. Suppose that parents come in pairs and that each pair of parents has two children. Parent couples can be one of three possible types: both parents favor migration; "mixed couples" where one parent favors migration and one parent detests migration; and both parents detest migration. If

Note that there is a sharp difference between the preference for migration perspective of migration and the wage differential model of migration, not only with regard to explaining what prompts migration but also with regard to predicting its termination. In the first case, migration ceases upon the departure of all *n* individuals with a preference for migration. This termination is unrelated to elimination of the wage differential between destination and origin, which defines the stopping rule in the second case. The preference for migration perspective thus provides an explanation of the widely observed coincidence of an absence (termination) of migration, non-depletion of the population at origin, and a positive wage differential between destination and origin, an explanation that does not hinge on the somewhat diffused concept of "migration costs." [2]

3. Conclusions

The main idea of this paper is that at least to some extent migration behavior is the outcome of a preference for migration. This idea contrasts with the usual approach that attributes migration to economic and social variables such as wage differentials, risk aversion, and relative deprivation. The pattern of migration as an outcome of a preference for migration depends on two key factors: imitation technology and migration feasibility. These factors jointly determine the outcome of a preference for migration. Deriving results pertaining to migration behavior and patterns requires making ad hoc assumptions with regard to the imitation technology and the migration feasibility, and the results obtained are sensitive to these assumptions. We have provided examples that illustrate

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children imitate only their parents and the parents are a "mixed couple," both children can acquire a migration-detesting taste thereby reducing the proportion of the population with a migration-favoring taste *without* selective migration by the migration-favoring type. However, if marriage is purely (positively) assortative, there will not be "mixed couples" and the imitation of the two parents by their two children will entail a perfect intercohort replication of preferences, exactly as in the case in which one child imitates one parent. While mating may not be based on migration preferences, it could be guided by tastes that correlate closely with these preferences thereby excluding the possibility of the formation of mixed couples.

[2] The prevailing explanation as to why migration stops short of the level required to bring about equalization of wage rates across labor markets is that migration is impeded by migration costs. The difficulty with this explanation is that quite often the direct (pecuniary) costs of migration are relatively low, which suggests that the impeding costs are psychological or nonpecuniary. This reasoning appears to come quite close though to associating nonmigration with absence of a preference for migration.

how the prevalence and transmission of a migration-forming preference yield distinct migration patterns. In particular, the imitation of a migration-favoring preference yields migration outcomes that would not have taken place absent the imitation.

We have argued that preferences are transmitted through imitation, but we have not explained where the preferences originate in the first place nor why upon a particular configuration (realization) of migration it is removed from the population quite easily. (Savvateev and Stark (2005) provide a rigorous explanation of the evolutionary edge of the inclination to migrate.) Plausibly, a preference for migration was formed during human evolution when a change of location conferred survival edge and reproductive fitness upon populations who faced dwindling food supplies in given locales.[3] Nowadays, as the link between shifting location, survival, and the maximization of offspring is no longer significant, the grip of the preference on a population may be tenuous, and it should not be all that surprising for the preference to dissipate. It is also plausible that at a given point in time, different populations are on different rungs of the evolutionary ladder. Thus, in the case of populations that are at relatively earlier stages of their evolutionary path, the preference for migration may still be hard-wired and will likely be transmitted genetically rather than culturally. In the case of the population we have in mind, where the link between a preference for migration and the chances of survival has been severed, transmission is wholly cultural; presence of the preference in adults will be replicated by presence of the preference in children if the adults are present but not if the adults are absent. In the case of populations of the former type, the migration preference is akin to a taste for sweet and rich foods (formed when food was scarce, hence concentrated sources of calories were valuable for survival and reproduction). In the case of the latter population, the migration preference is akin to a taste for playing the piano.

The idea that the preference for migration is transmitted intergenerationally suggests

[3] Populations differ in the extent to which their survival and wellbeing are attributable to their migration experience. Consider populations that over the millenia engaged in nomadic practices, or in shifting cultivation, or in exchange, commerce, and military pursuits closely associated with extensive movement across space. Conceivably, when the long run migration experience of a population had contributed significantly to its survival and wellbeing, the population could have developed a widespread and deeply rooted proclivity for migration.

interesting dynamics not only over time but also across economies. Suppose that individuals who are motivated by a preference for migration move into economy E that is devoid of such a preference. If, as assumed before, preferences are acquired in childhood through the imitation of adults, children in E will exhibit a preference for migration and, assuming that migration is feasible, will migrate. If, alternatively, the preference for migration is acquired by imitating parents and the migrants marry locals, children of the mixed couples could exhibit a preference for migration and, assuming that migration is feasible, will migrate. Thus, migration into E will be followed by migration from E not because the migrants push out the locals from their jobs but because the migrants inflict the locals with a preference that the locals did not have. However, the preference for migration could attenuate upon migration. The stronger the attenuation, the less likely the population in E will acquire and subsequently act upon a preference for migration.

Reference

Savvateev, Alexei and Stark, Oded (2005). "An Evolutionary Foundation of the Propensity to Migrate." CORE – Center for Operations Research and Econometrics, Louvain-la-Neuve, Belgium, Discussion Paper 2005/38.