

## **Spatial and temporal limitations in migration research: how can we close the gaps?**

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### **Abstract**

The extant literature on migration largely ignores the link between internal and international migration and the repeatability of migration as a demographic event. For one, failure to account for the dynamics of internal and international migration pathways has led to the treatment of these two types of migration as mostly unrelated phenomena that have distinct epistemologies. Additionally, viewing migration simply as a discretized event from one point of origin to another leaves out the fact that the prior experience of migration compounds the likelihood of repeating it. This paper examines why these two major research gaps persist and how they can hinder a fuller understanding of migration as a holistic process. It also introduces the reader to some methodological developments in demographic research that could potentially address the two said gaps in the study of migration.

## Introduction

The Philippines is a country known for its strong culture of migration. The 2018 National Migration Survey (NMS), the first of its kind in the Philippines, found that 55% of Filipinos currently residing in the country ever moved, and 15% migrated just in the past five years prior to the survey (Philippine Statistics Authority (PSA) and University of the Philippines Population Institute (UPPI), 2018). Of the latter, 84% migrated only within the country, 14% moved only abroad, while 2% had both internal and international migration experience. This makes the Philippines among the top migrant countries in Asia (International Organization for Migration (IOM), 2016).

Despite the volume and richness of studies written about migration within and from the Philippines, the migration literature—both local and foreign—is still confronted with at least two major limitations that hinder a fuller understanding of migration as a process. First, internal migration and international migration are treated as mutually disjoint events, resulting in different data sources and approaches to studying migration. But as the seminal work by King & Skeldon (2010, pp. 1622) pointed out, “internal and international migrations are generated by similar forces and, despite the crossing of an international boundary as an important distinguishing feature, close linkages exist between them.” This is supported by the study of Bernard & Perales (2022), which found that internal and international migration decisions in 13 European countries are governed by the same life-cycle processes, resources, and constraints, and called for “greater theoretical cross-fertilisation” between the two forms of migration.

Another limitation of most migration studies is their treatment of migration as a singular outcome over a defined period, and most various measures of migration such as migration rates carry this basic assumption. The elephant in the room, however, is the repeatability of migration

as a demographic event. This discretization largely ignores the complexity of migration as a “holistic process occurring across space and time” (Hugo, 2016, par. 4).

Through a literature review, this paper sets out to examine why the two aforementioned major research gaps persist and how they can hinder a fuller understanding of this holistic process. It also reviews recent methodological developments in demographic research, which could potentially address these gaps in the study of migration.

## **The divergence between internal and international migration**

### ***Historical overview***

Migration is as old as Philippine history. The ancestors of Filipinos are widely believed to have come from Taiwan, rapidly spreading from Batanes and Northern Luzon and admixing with other groups in Southeast Asia (Lipson et al., 2014). Pre-colonial Filipinos cultivated rich trade networks with various cultures, primarily the Arabs, Chinese, Indians, and the neighboring settlements below Mindanao (Cruz-del Rosario, 2016). Large-scale migration, however, was largely the result of the Philippines’ colonial past and post-colonial developments. For one, today’s Filipino seafarers, the biggest seafaring force in the world, can trace their roots to ‘Manilamen’—Filipinos working in Spanish galleons who deserted and eventually settled in Mexico City, Acapulco, and surrounding areas from the 16<sup>th</sup> to the 19<sup>th</sup> century, establishing one of the first recorded modern migration networks among Filipinos (Aguilar, 2015).

The American colonization at the beginning of the 20<sup>th</sup> century saw larger streams of Filipino migrants, who came to the United States to work in plantations, factories, and hospitals, or, among the country’s local elites, to study in America and eventually return to take up colonial government positions in the Philippines (Rafael, 2018). From 1924 to the early 1960s, the



number of Filipino immigrants in America dwindled following the US government's imposition of the national origin quota system, resulting in the migration of Filipinos to Asian destinations such as British North Borneo, Sabah, and Malaysia in the 1950s (Allen, 1977; Battistella, 1995). The number of Filipino immigrants in the US climbed rapidly following the abolition of the quota system in 1965 (Allen, 1977).

It was not until the 1970s that this culture of international migration became a matter of state policy. Seeing an opportunity from the oil boom in the Middle East, the dictator Ferdinand Marcos institutionalized the Overseas Employment Program in the Philippine Labor Code, in response to massive unemployment and stalling economic growth (Battistella, 1995; Paul, 2012). While the policy was supposedly meant to be a “stop-gap measure,” the number of Overseas Filipino Workers (OFW) rose from 36,035 in 1975 to as much as 380,000 in 1983 (Battistella, 1995). Succeeding administrations maintained the policy, which has since become an all-too-crucial component of the Philippine economy. In the 2000s, President Gloria Macapagal-Arroyo set an annual target of a million Filipino workers deployed overseas (Paul, 2012). Today, it is estimated that at least two million OFWs are scattered across the globe (PSA, 2020).

More subtle was the history of internal migration in the Philippines. Early research concerned migration to Manila, which, being the center of trade and governance and owing to its commercial development, experienced in-migration in the 1930s under the Commonwealth government. Internal migration to Manila, however, started being seen as a problem during the 1960s, after migrants from the countryside flocked to the city following its post-war reconstruction and industrialization (Pernia et al., 1983). It also served as the leading out-migration area, highlighting not only its very active migration activity but also the then ongoing



process of suburbanization around the city (Flieger, 1977) that would later give rise to Metro Manila and “Mega-urban Manila” (Ortega, 2016).

Unlike their promotion of labor migration, Philippine administrations had not carried out a well-defined and nationally coordinated policy on internal migration (Abad, 1981), at least until recently. The 1987 Constitution enshrines the freedom of movement (liberty of abode and of changing the same) except in the interest of national security, public safety, or public health. Confronting a public health issue, in 2020, the government froze the short- and long-distance movement of people through community quarantine measures in response to the coronavirus disease (COVID-19) pandemic (Sabillo, 2020). The national government also reintroduced the Balik-Probinsya, Bagong Pag-asa Program in an attempt to “decongest” the National Capital Region and other congested metropolises, which have been the hotspots of COVID-19 cases in the country (Executive Order No. 114, S. 2020).

Aside from Manila-ward migration, a southward movement towards Mindanao was also noted since the early 1900s, as a result of “land hunger” and active government policies (Keely, 1973). In particular, the provinces of Zamboanga del Sur, the Cotabatos, the Davaos, Bukidnon, and Agusan were identified as in-migration areas for their vast tracts of agricultural land (Flieger, 1977). A more specific migrant stream from Iloilo to Cotabato was also noted between the 1950s and 1970s, as a result of government-initiated resettlement programs and propagandizing of Mindanao as the “land of promise,” eventually resulting in various conflicts that persist to this day (Arellano, 2006).

### *Path to convergence?*

From the foregoing historical overview, it is easy to see how the interdisciplinary study of migration within and out of the Philippines created diverging subdisciplines that have distinct epistemologies, approaches, and policy responses. Although both forms of migration are largely economic in nature, interest in the study of internal migration stems, in part, from its association with urbanization and related problems, including informal settlements, unemployment, and lack of sanitation (Keely, 1973). The bulk of research on internal migration in the Philippines has focused mostly on the dynamics and determinants of urban-rural and regional migration. At least before the 1990s, emphasis was placed on the economic push and pull factors of migration and how the movement of people can affect subnational populations' composition and growth (Abad, 1981; Flieger, 1977; Pernia et al., 1983). More recent studies shifted their focus to the factors that directly and indirectly shape migration intentions and behaviors, including age, gender, and the life cycle (Abrigo & Desierto, 2011; Gultiano & Xenos, 2004; Quisumbing & McNiven, 2006). Meanwhile, renewed interest in internal migration explores its relationship to environmental factors, including rainfall and climate change (Bohra-Mishra et al., 2014; Bordey et al., 2013; Mialhe et al., 2014; Weinreb et al., 2021).

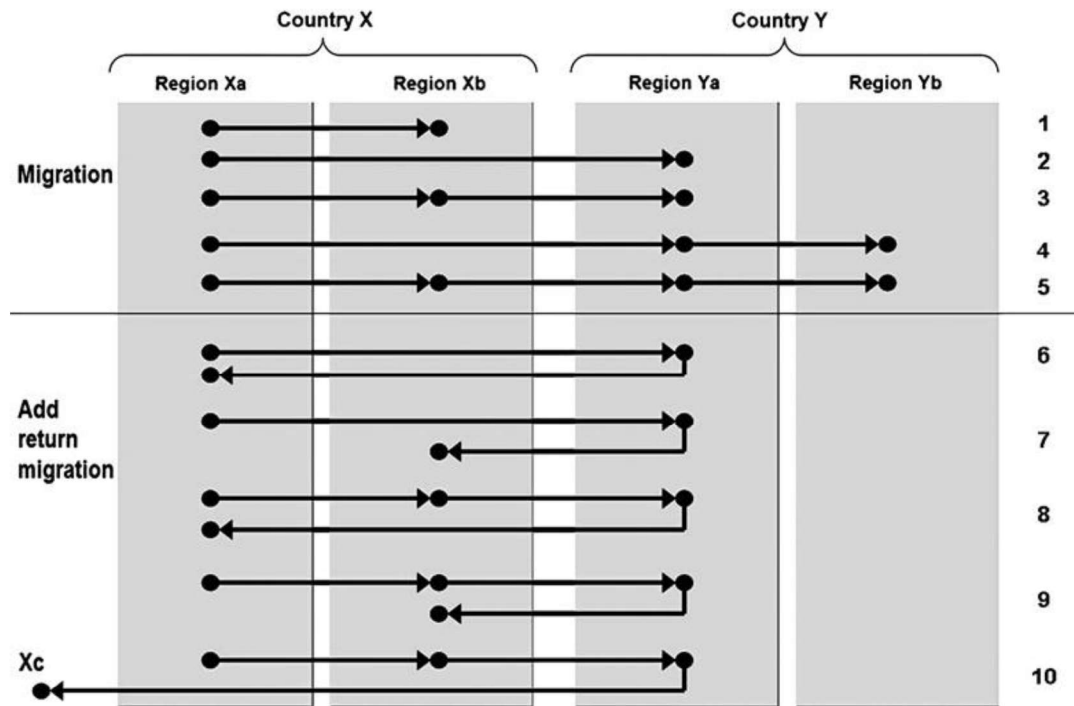
With the institutionalization of labor export beginning in the 1970s, interest in internal migration has been overshadowed by growing attention to international migration, and 'migration' has been generally taken to mean the latter (Gultiano and Xenos, 2004; King & Skeldon, 2010). Several studies have examined the push factors of international migration and its consequences on local development (Acacio, 2008; Castro-Palaganas et al., 2017). Meanwhile, a plethora of research concerns the lives of international migrants in their countries of destination, including their health (Gee et al., 2019; Maneze et al., 2016), experiences of abuse and

discrimination (Choi & Lyons, 2012; Neiterman & Bourgeault, 2015; Pacoma, 2020), and coping strategies (Bonifacio, 2009; Martinez et al., 2020; Nakonz & Yan Shik, 2008).

Without ignoring the distinct histories, political economies, and sociocultural contexts that underlie internal and international migration, there is a need to integrate the analysis of these movements and examine the many pathways that exist between them. Following King and Skeldon's (2010) typology (Figure 1), these pathways include direct migration from one's place of origin to another, either internal or international; stepwise migration, including internal migration leading to international migration, and vice versa; and return migration, which may also be done stepwise. The internal-international pathway is more widely documented, with internal migration being an important step to finance the international move (Skeldon, 2005). In Mexico, for instance, a common pattern of migration is the movement from rural areas to Mexico City, and eventually to the neighboring United States (del Rey Poverda, 2007; Roberts et al., 1999). Oppositely, Vullnetari (2012) found that international migration has led to internal migration in some areas in Albania, with migrant workers saving up capital in neighboring Greece to return and move to more costly destinations in Albania.



**Figure 1. Migration Pathways**



Source: King & Skeldon (2010)

A spatially integrative analysis of migration can shed light on other forms of migration that potentially merit attention, particularly transnational migration. In a pioneering analysis, Paul (2012) found that many Filipino migrant domestic workers in Canada engaged in step-wise migration—risking poor working conditions in “stepping-stone” countries, commonly Hong Kong and Saudi Arabia, eventually to earn sufficient capital and skills for their “dream” destinations that have more restrictive immigration policies, such as the United States and Canada. As it is, the stepwise migration of Filipinos has yet to be locally examined, but it is possible that a similar pattern persists among internal migrants. An analysis of stepwise migration patterns can provide an indication of the extent and characteristics of internal migration to the country’s metropolitan centers, where training institutions and recruitment

agencies for overseas work are located. A joint analysis of internal and international migration can also illuminate the condition of circular migrants. For example, the study of Parreñas (2010) among Filipina entertainers in Japan revealed the “loyalty” of these workers to their home country, where poor conditions push them to work abroad under recurrent, short-term arrangements.

### **“Time is everywhere and nowhere at the same time”**

Migration is best conceived as a repeatable demographic event (White & Lindstrom, 2005). This property of migration makes it reflective of changes in the life course (Tyrrell & Kraftl, 2015), but the literature generally gives little consideration to its timing and repeatability. On the one hand, this issue primarily stems from the availability and limitation of migration data. In the absence of a dedicated longitudinal or cross-sectional survey, most studies on migration rely on census data, using information such as place of birth, place of previous residence or residence at a specified year, duration of current residence and intercensal population change (Dorrington & Hill, 2013). This has the consequence of ignoring single and multiple migration events within the time period.

On the other hand, and arguably as a consequence of the former, the study of migration has been dominated by “macro”-analysis, particularly the application of concepts in neoclassical economics and its derivatives (Abreu, 2010). This is highlighted by the prominence of the ‘push-pull theory’ of migration by Lee (1954) and the ‘behavioral model of rural-urban labor migration’ by Harris and Todaro (1969). These works generally view migration as a response to economic and environmental stimuli—emphasizing the correspondence between the conditions in the point of origin and that of the point of destination. Largely absent from this framework, is time, and Halfacree & Boyle (1993) made a strong case against this particular view of migration

as a “discrete contemplative act.” They argued that migration should be considered as “a part of our past, our present and our future: as part of our biography” (Halfacree & Boyle, 1993, par. 4).

A consideration of time provides important insights into this experience. Although the prominent Rogers and Castro Model is able to demonstrate the relationship between age, migration, and the life course through the model migration schedules, they do not account for the fact, for instance, that the age at first migration can shape an individual’s migration prospects (Bernard, 2022). In this sense, it is reductive to view migration decisions as a rational-choice response to life course transitions. Griffiths et al. (2013) argued that migrant decision-making is a “flow” and not an “event”—migrants consider both their experience and the future, such as the duration of migration and prospects of return, in making decisions about their mobility.

This highlights migration as an active, rational process at the individual level. Closely related to this is the concept of the *axiom of cumulative inertia*, which posits that the length of residence generates “deeper ties”—referred to as inertia—to a location, and is hence inversely related to the propensity to migrate, holding all other factors constant (Myers et al., 1966; Lersch, 2015). It may be attributed to the life course’s “self-referential process,” i.e. the tendency of individuals to act “on the basis of prior experiences and resources” (Mayer, 2004, as cited in Lersch, 2015). Migration, therefore, is conditioned not just by the immediate push and pull factors, but by the totality of the individual’s snowballing experience.

## **Two methodological developments**

The preceding discussions provided a non-exhaustive account of the spatial and temporal limitations in migration research. The following provides a discussion of recent developments in migration research, which may point to bridging these gaps at an empirical level.



### *Event-history analysis*

There have been a few attempts at studying migrants' duration of stay in a location and their propensity to leave and come back to the host countries. These studies mostly concern the repeat and circular migration of immigrants, such as in Constant and Zimmerman (2012), who noted that repeat migration may be viewed as a means to “optimize one's economic, social, and personal situation at every period,” in that immigrants have a better idea on the home and host countries and are further emboldened by their prior experience of migration.

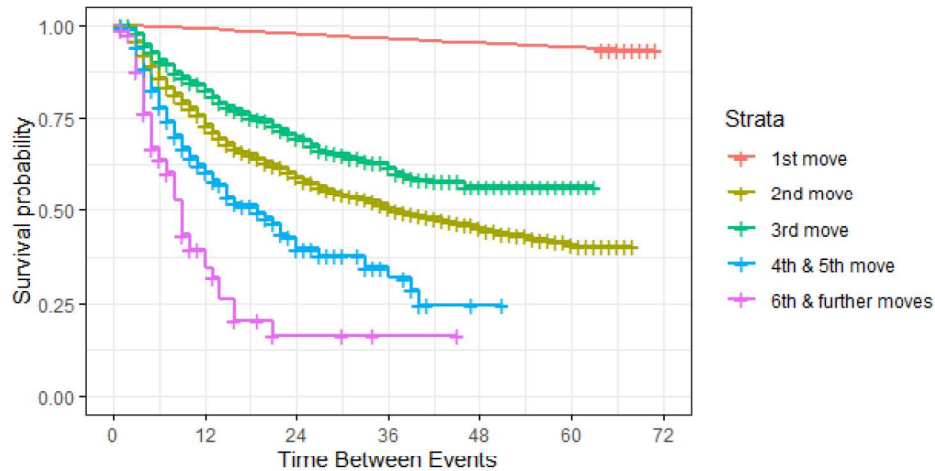
In this regard, analyzing the duration of stay in one location, or equivalently the time to migration, can provide insights into the dynamics of mobility. As such, most studies on recurrent migration use techniques in event history analysis, also known as survival analysis. As opposed to ahistorical modelling, e.g. logistic regression, the time-to-event information, i.e. the survival time, is preserved and utilized in survival analysis. Although survival analysis is a classic methodology in demography, only a few studies have applied the method to studying migration. Reed et al. (2005) used a retrospective life history calendar to examine the regional and rural-urban migration of coastal residents in Ghana. Estimating a discrete-time event history logit model, they found that migration is significantly explained by age, marital status, higher educational attainment, and prior experience of migration. They also found evidence of step migration, i.e. from rural-urban to urban-urban.

Meanwhile, Carrion-Flores (2018) generated Cox proportional hazards (PH) model with time-varying covariates to study the factors that drive the return migration of Mexican immigrants to the US. An important finding of the study is that return migration is more prevalent among those who have existing migrant networks in the US, which the author attributes to the reduction in the costs of migration, e.g. saving housing cost. Education and

marriage in the US are also found to be significant factors of return migration. A similar technique was utilized by Gundel & Peters (2008), who found higher-level skills and labor market integration to be among the key determinants of the propensity of immigrants in Germany to return to their home countries.

While these models offered promising attempts to study repeated migration, they merely used information on time to a single event; whereas a more appropriate analysis of repeated migration would be to account for multiple migration events and the duration of these events at an individual level. Wanting to gain insight on internal migrants in China, particularly their integration into cities, Tian et al. (2016) estimated a Cox PH model with gap-time approach in order to examine the amount of time between two consecutive migration events. They found that personal characteristics, as well as the companionship of family members significantly affect the likelihood of migrating again, although gender and social networks were shown to have little influence (Tian et al., 2016).

In the Philippines, the study by Afable (2021) using the 2018 NMS examined Filipinos' five-year internal migration pattern through methods in recurrent event-history analysis, specifically testing the hypothesis that the likelihood of experiencing an event is largely explained by previous experience of it (Ezell et al., 2001). Plotting the "survival" curves of each movement, the study found that after the first move, the likelihood of re-migrating increased, as evidenced by the sudden decline in survival curves. More migrants, however, stayed in their destinations after the second move, but those who had failed to do so were likely to re-migrate multiple times, as suggested by the rapidly decreasing curves after the third move (Figure 2). This could mean that the first experience of migration serves to test the waters for many migrants and inform prospects of their second move (Afable, 2021).



**Figure 1. Kaplan-Meier curves of Filipinos' internal migration in the last five years, stratified by order of move**  
Source: Afable (2021)

### *Sequence analysis*

While event-history analysis can provide unique insights into the temporal dimension of migration, it does not directly provide insight into the spatial sequencing of moves. A method largely used in DNA research, Abbot and Forrest (1986) pioneered the use of sequence analysis in a social science context to examine longitudinal data, specifically for identifying patterns or clusters in the sequencing of social states over a given period of time (Abbott & Tsay, 2000; Ritschard & Studer, 2018). Sequence analysis has since been applied to analyze various social phenomena, primarily employment trajectories (Pollock et al., 2010; Hoven et al., 2018; Simonson et al., 2011) and the life cycle (Barban & Sironi, 2018; Burgin et al., 2017; Elzinga & Liefbroer, 2007; Kleinepier et al., 2015).

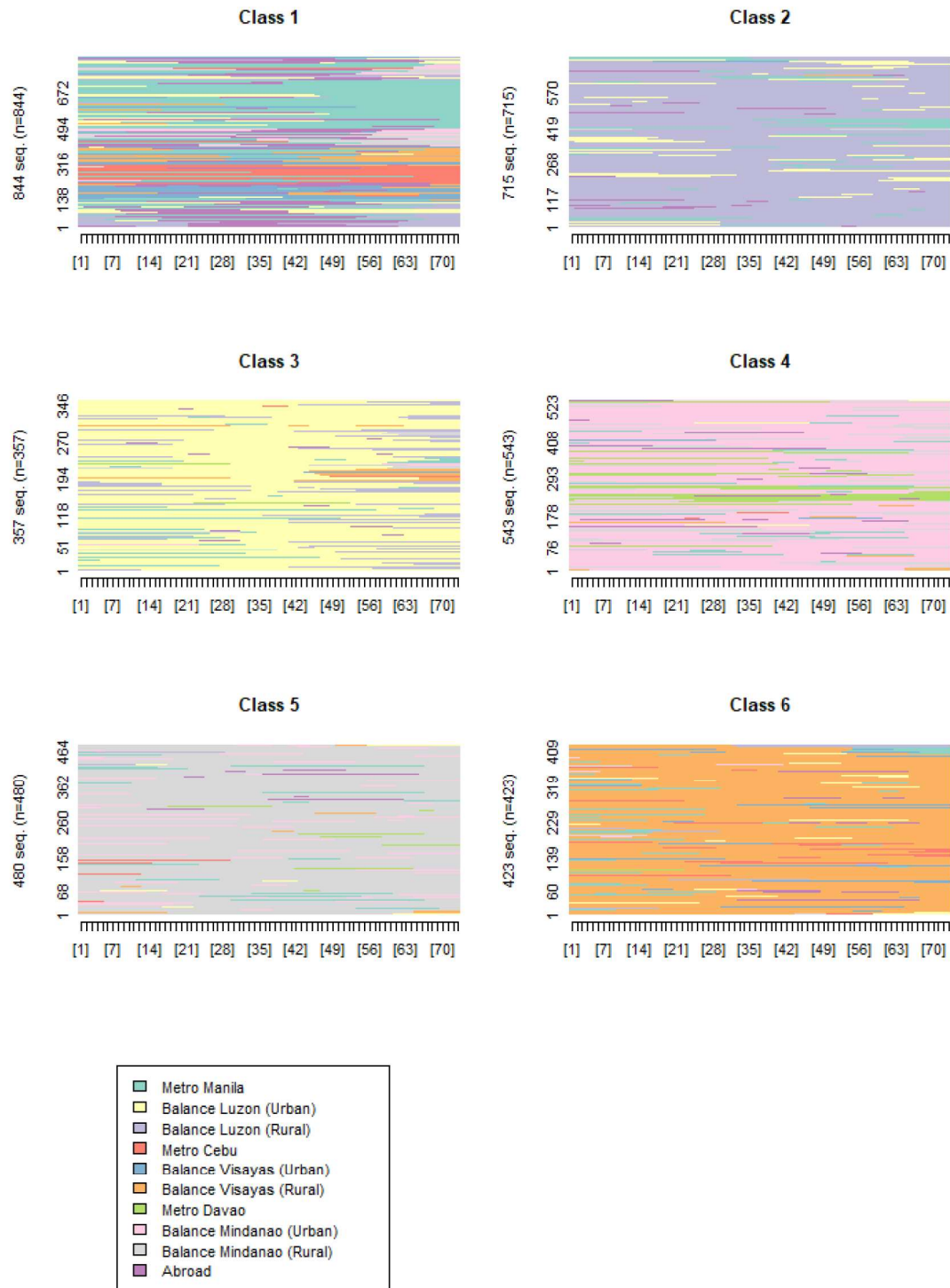
To this author's knowledge, no study has so far applied sequence analysis to the context of migration, except for Mialhe et al. (n. d.) in their analysis of the migration pathways from a



purposive sample of 1,272 respondents from one rural town in Bohol, Philippines. Using the 2018 NMS, an ongoing study by this author aims to apply sequence analysis to examine the dominant migration pathways of Filipinos and create a typology of these pathways.

Sequence analysis depends largely on how the social states are defined. For instance, using the five-year migration history from the 2018 NMS, a state corresponding to a given time point refers to where the individual was residing at the time. There is an event when there is a change of state, i.e., migration. In a preliminary analysis, this author defined ten states, residence in either of the following: 1 – Metro Manila; 2 – Balance Luzon (urban); 3 – Balance Luzon (rural); 4 – Metro Cebu; 5 – Balance Visayas (urban); 6 – Balance Visayas (rural); 7 – Metro Davao; 8 – Balance Mindanao (urban); 9 – Balance Mindanao (rural), and 10 – abroad. The choice of these categories is based on the three major island grouping in the country, each having its metropolitan center that is characterized by high economic activity (National Economic Development Authority, 2017). Various studies have explored historical migration streams in these areas and their impact on local development (Dungca, 1980; Flieger, 1977; Slater, 1982; Zablan, 1977). The rest of the barangays—the smallest administrative units—in each island group are further classified into urban or rural, as officially defined by the Philippine Statistics Authority, given the extensive literature on urban and rural migration.

The preliminary results of the analysis classify the migration pathways into seven clusters, the majority of which are characterized by internal migration within a given state. Future development of the study can revise and refine the definition of states to come up with a more meaningful typology of Filipinos' migration pathways.



**Figure 4. Index plots showing sequences of moves in six clusters of migrants**  
Note: Preliminary results, not for quotation

## **Conclusion: Towards a more holistic understanding of migration**

The local empirical literature has mostly situated migration within larger contextual forces, including economic, environmental, and population pressures. While the influence of these forces is too important to be ignored, macro-level studies do not adequately explain why people move to a particular destination or stay in their current residence in the first place and why migration is the “adaptive response to a structural imbalance, actual or perceived” (Abad, 1981, p. 139). With migrant flows as units of analysis, the dominance of a push-pull narrative in the study of migration runs the risk of overlooking migration as a holistic process at the level of the individual—a product of their agency that is shaped by various forces at play.

Zooming in on the individual entails an integrative view of migration—seeing the link between internal and international migration and the duration, timing, and repeatability of these movements. Such a view does not diminish, for instance, the subfields of internal migration and international migration, but it serves to enrich the findings from each subfield and provide a more holistic picture of migration as a process. Nor does it ignore, for example, the importance of examining period migration flows, which have consequences on population distribution and composition, but it can shed light on why some migrants are more “migratory” or “chronic migrants” than others—which can then have potential implications on improving migrant conditions and managing migration flows.

Traditional sources of migration data such as census and administrative data unfortunately do not allow for these kinds of analysis, but, as the aforementioned examples of event-history analysis and sequence analysis indicate, the first-ever NMS provides an exciting opportunity for exploring new ways of approaching the mobility of Filipinos.



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