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Predicting Internal Migration Patterns of a Province in the Philippines

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Abstract

People allegedly migrate in search of financial gain, safety, and the conviction that doing so will allow them to achieve their goals and objectives. Several reasons show different migratory patterns, including those from rural to urban, urban to rural, rural to urban, and rural to rural. This study was set up to predict internal migration patterns of Zamboanga del Norte, a province in the Philippines. The analysis was grounded on Adjusted Harris-Todaro Model. According to the survey, Katipunan town had the lowest HT

score out of all the Zamboanga del Norte locales, while the municipality of Siayan had the highest. It predicts that additional migrants are expected to relocate to Siayan Municipality. The municipality of Katipunan, on the one hand, is expected to send more migrants to the other areas of the province. On the other hand, the cities of Dipolog and Dapitan are anticipated to send migrants to the province's municipalities.

Keywords: Migration Determinants, Employment, Unemployment, Wages

1. Introduction

Migration still significantly impacted people's ability to pursue their livelihoods. Where greater chances are available, people are more likely to relocate domestically or abroad. Due to the availability of jobs, accessibility to housing, services, and activities—but most importantly, the assurance of respectable employment—some people have preferential access to metropolitan regions. It can be claimed that people move for economic gain, security, and the belief that their needs and aspirations may be satisfied through migration.

According to Castelli (2018) ^[1], migration always results from a complex interaction of macro, meso, and micro factors. Ando (2018) ^[2] noted that the economic component is one of the macro factors influencing either internal or international migration. Thet (2014) ^[3] added that internal and international migration frequently happens due to inter- and intraregional inequities, a lack of employment opportunities, and low living standards among various socio-economic groups. As a result of the sending locality's low economic development prospects, it has been proven that migration helps a receiving location expand with more good opportunities (Yadav *et al.*, 2018) ^[4].

Similarly, Andini and Rao (2017) ^[5] theorized that rural areas' lack of economic possibilities is the primary cause of population migration from rural to urban areas. However, whereas the majority of migration has focused on people moving from rural to urban regions, Chamberlin, Sitko, and Jayne (2018) ^[6] argued that considerably less is known about rural mobility as internal migration, including its scale, motivations, and implications for agricultural growth. Rural-rural migration is another aspect that is frequently ignored, according to Sirili and Simba (2020) ^[7]. However, rural-to-urban and rural-to-rural migration have become both a blessing and a curse, according to Andini and Rao (2017) ^[5].

With this in mind, the province of Zamboanga del Norte served as the starting point for a better internal migration landscape. As a geographic advocate, the researchers chose Zamboanga del Norte as the location for the study to look into potential population movements from municipalities to cities, cities to municipalities, cities to cities, and municipalities to municipalities. The study highlighted migration patterns from rural to urban, urban to rural, urban to urban, and rural to rural. Notably, the research findings may be a foundation for provincial officials to expand economic prospects for immigrants and locals.

2. Theoretical and Conceptual Frameworks of the Study

This study was based on Kuhnt's (2019) ^[8] "Theoretical Framework of Determinants of Migration," which postulates that factors at the macro, meso, and micro levels influence people's perceptions and migration ambitions, as well as the context in which they decide to relocate. It clarifies that migration intents, as opposed to migration ambitions, refer to more specific moving plans. In contrast, a person's migratory desires and capacities influence their mobile

aspirations. According to Castelli (2018) ^[1], a person's decision to immigrate is ultimately controlled by a combination of macro-elements, which are mainly independent of the individual, meso-elements, which are more closely related to the individual but not entirely within their control, and micro-elements, which are primarily personal traits and attitudes. The study's theoretical framework, which the researchers adapted from Castelli (2018) ^[1], is shown in Fig 1.

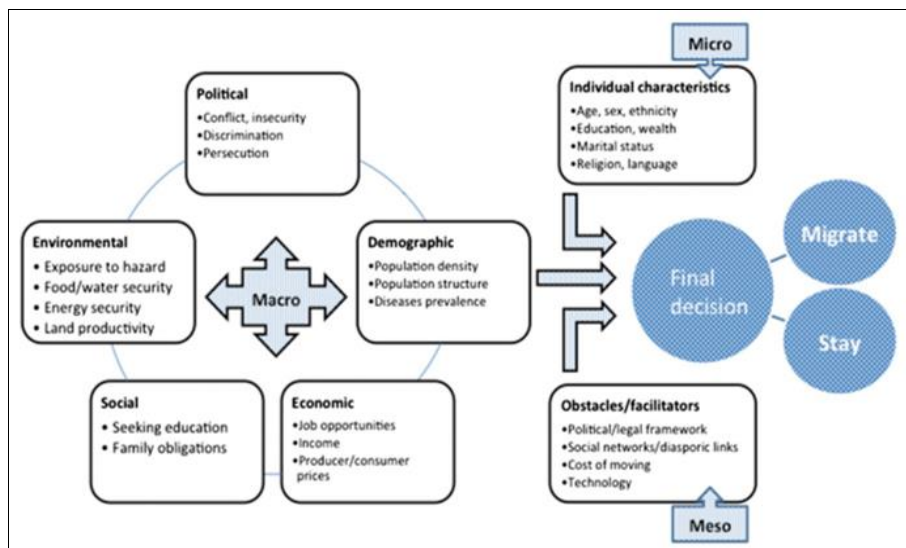


Fig 1: The Theoretical Framework of the Study

The macro factors determine why individuals are drawn and pushed away from one area and toward another. When considering these aspects, a person's primary motivation for relocating is the political climate in a given place, which affects their ability to find employment (Kuhnt, 2019) ^[8]. Additionally, the population makeup of the area contributes to the difficulty or impediment of having enough sources of income. Although the atmosphere in one's home influences why a person selects a safe and welcoming environment, migration is primarily influenced by the socioeconomic circumstances in one's place, such as poverty and inadequate income caused by a lack of possibilities (Castelli, 2018) ^[1]. However, meso variables indicate how people are being pulled away from one location and pull back towards it (Kuhnt, 2019) ^[8]. Technology, for instance, is crucial for communication with other locations. In relation to the opportunities available in another place, it influences people's choice of lifestyle. Additionally, significant media attention influences people to select other locales, especially if they offer more significant possibilities than other places. The diasporic connection also aids motivation because it demonstrates a person's relationship with people from other regions and influences their choice to relocate to another area (Castelli, 2018) ^[1].

Micro variables are another factor that is closer to an individual's disposition. In this aspect, a person's decision to relocate to another area is influenced by their current situation (Kuhnt, 2019) ^[8]. For instance, education is crucial since it determines whether a person must stay in their current situation or whether their educational accomplishments merit a more substantial chance outside their community. Religion is still another. It is crucial in determining where one stays and whether one lives close to

employment. Another influential aspect is a sizable group of people who share one's religious identification.

Similarly, a person's marital status impacts a personal choice. Given their youth and energetic bodies, single men or women may explore. Married people may also choose to relocate, mainly if doing so will improve their family's quality of life. Furthermore, one's perspective and choice of whether or not to relocate are influenced by their attitude about migration.

People in Zamboanga del Norte have been spotted chiefly searching for economic opportunities like work to support their families. The hypothetical situation supports Capozzi's (2019) ^[9] claim that employment encourages economic growth. Workers produce top-notch goods and services and are compensated with salaries to support their families. The payout of more goods is also possible with increasing levels of labor. Many families in the province are built on the foundation of employment, which also influences the economy and migration.

The theoretical model of determinants of migration generally shows how macro, meso, and micro influences drive people's decisions to relocate. It demonstrates how various factors can lead to internal or international migration, including individual circumstances and life experiences. It further highlights how migration is a byproduct of local activity and contributes to the area's development.

Therefore, the researchers believed that the theoretical framework of "determinants of migration" is a good theoretical framework for comprehending migration in its entirety. However, because it is at the macro level that the economic factor has led people in the province to travel within the country, the authors specifically tried to evaluate

the internal migration trends in Zamboanga del Norte at that level solely.

Additionally, the Adjusted Harris-Todaro Model is the foundation for the migratory trends in Zamboanga del Norte (Sanders & Brown, 2011) ^[10]. The model notably assisted in the analysis of migration in the province from municipalities to cities, cities to municipalities, cities to cities, and municipalities to municipalities. The Adjusted Harris-Todaro Model requires the residents' job and unemployment status and the minimum wage they made as critical criteria (Sanders & Brown, 2011) ^[10]. Minimum wage and employment status are macroeconomic factors reflected in

the theoretical framework of factors that influence migration (Kuhnt, 2019) ^[8]. The central premise of the model is that migration decisions are not solely based on pay differences but also account for predicted income differences between rural and urban locations. It suggests that internal migration might be economically sensible in an environment of high local unemployment if the projected area income is higher than other areas (Kuhnt, 2019) ^[8]. Hence the decision to relocate.

The conceptual structure of the inquiry is depicted in Fig 2. The variable that was considered in the investigation is presented in the paradigm.

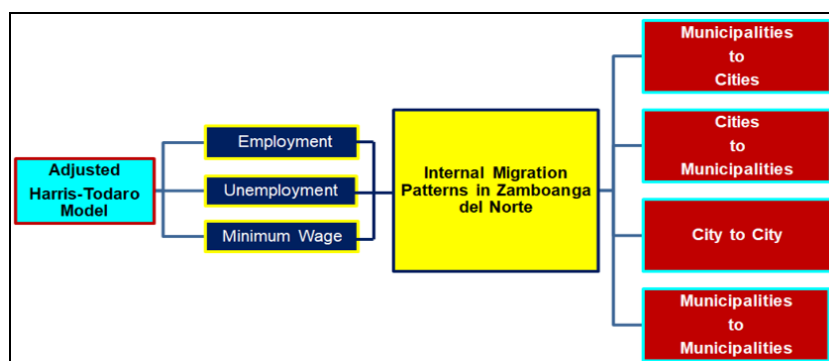


Fig 2: The Conceptual Framework of the Study

The Adjusted Harris-Todaro Model by Sanders and Brown (2011) ^[10] was used in the study to assess and explain the internal migration patterns in Zamboanga del Norte as (a) municipalities to cities, (b) cities to municipalities, (c) city to city, and (d) municipalities to municipalities migration. The Adjusted Harris-Todaro Model was utilized in conjunction with the Geographic Information System approach in Sanders and Brown's (2011) ^[10] study. The accuracy of the Adjusted Harris-Todaro Model was determined by comparing the data produced by the two techniques. The algorithm accurately detected migration between urban and rural areas (Sanders & Brown, 2011) ^[10]. Similar to this, Busso *et al.* (2020) ^[11] found that the Harris-Todaro equilibrium relationships are more frequently observed in cities that are, relative to other cities, larger and more specialized in manufacturing and where the associated rural area is situated at relatively shorter distances, is more specialized in agriculture, and has a population that is demographically more prone to migration.

In addition, folks in the person's home rural area were forced to move owing to unemployment (Lyu *et al.*, 2019) ^[12]. The availability of work in a location, most frequently in urban regions, draws more immigrants. Jobs require additional workers, and the area offers opportunities in various areas (The Migration Observatory, 2020). It is closely related to the role that the minimum wage rate plays. Therefore, locations with greater minimum wages than others draw migrants (Boffy-Ramirez, 2013) ^[14]. Although the study's primary focus is on localities with the same minimum wage, it can also be related to the possibility that migrants from the province may not move to a region in the nation where the minimum wage is lower or higher but not significantly different enough to draw people from the province. Since employment, unemployment, and income rates play a role in migration patterns, the model is the inspiration for the current study, which identifies internal movement in the province.

The internal migration patterns in Zamboanga del Norte were described by Sanders & Brown's (2011) ^[10] Adjusted Harris-Todaro Model in the study's conceptual framework. Three parameters are necessary for the model to run. The model primarily classified each locality as either rural or urban. Each locality has three characteristics to consider: employment, unemployment, and the status of the minimum wage. These parameters provide supplemental information for the model's operation.

Tracking the migratory pattern in the province was made possible by comparing the HT scores generated for each locality's urban and rural components. The municipality and city depict regional population mobility. When someone moves from a municipality to a city, they move from the rural to the urban. Moving from urban to rural areas is referred to as moving from cities to municipalities. Moreover, city-to-city refers to the movement of individuals between cities. Rural to rural refers to transferring people from one rural area to another.

3. Materials and Methods

The study combined a secondary research approach with a secondary data analysis strategy. Secondary research, also referred to as desk research, is a study method that uses previously gathered data (Bouchrika, 2020) ^[15]. Interviews were also employed qualitatively to add more authenticity to the data under study. The interview is a primary research technique that facilitates data collection from lone subjects or small groups of people (Bouchrika, 2020) ^[15]. The researchers used interviews to get informants' opinions about the factors contributing to internal migration in Zamboanga del Norte. In this context, the reasons for internal migration in Zamboanga del Norte were identified, and strategies relating to the economy were suggested in light of the results.

The study employed secondary data to evaluate the internal migration trends in Zamboanga del Norte. The employment

rate, unemployment rate, and wage rate are among the secondary variables that are important considerations when analyzing the province's migratory patterns. Each province's municipal planning and development council (MPDC), or city planning and development council (CPDC) in the case of Dipolog and Dapitan, was the source for the first two characteristics. Since the office, as mentioned above, is responsible for creating integrated plans for economic, social, physical, and other forms of development, including those of the development of Local Government Units (GovPh, n.d.), it was chosen as the interview respondent. The wage rate, on the other hand, was based on the national government established rates for each region of the nation. It was obtained from the Department of Labor and Employment website, which lists the various wage rates by country region and the most recent update date for each.

However, key informant interviews were also carried out to confirm the accuracy and legitimacy of the data examined. The results of the Adjusted Harris-Todaro (HT) Model used in this study served as the foundation for choosing the respondents who would be interviewed. Potential responders were drawn from the areas with the highest and lowest HT scores. The researcher selected two or more individuals, ideally from the MPDC and CPDC, from a locality with the lowest or highest HT score to respond to the open-ended interview questions.

The study's instruments, which were composed of two sets, were used. Each was handled uniquely. The first was addressed directly to the local government unit (LGU) office. The Harris-Todaro model requested the employment and unemployment data rates for analysis. The minimum wage rate, on the other hand, refers to the amount that the national government has set in each of the nation's regions. One of the provinces of Region 9, or the Zamboanga Peninsula, when using the region's set rate, is Zamboanga del Norte.

On the other hand, the second tool was an open-ended interview questionnaire. After examining the data from the first instrument, it was used to choose respondents from each LGU with the lowest and highest HT scores. This instrument supported the expected direction of migration as determined by the HT model. Castelli's (2018) [1] and Kuhnt's (2019) [8] variables affecting migration served as the foundation for the interview questions.

In this research, the adjusted Harris-Todaro (HT) model analyzed people's movements in the province. It was done by determining each locality's HT score, rural (municipality) HT score, and urban (city) HT score using the formulas below.

For a rural area, an HT score is equal to

$$\frac{1_{re}}{1_{rs}} W_r$$

Where: 1_{re} is the employment rate in the rural area; 1_{rs} is the unemployed or job seekers rate in the rural area; and W_r is the minimum wage rate in the rural area.

For an urban area, an HT score is equal to

$$\frac{1_{ue}}{1_{us}} W_u$$

Where: 1_{ue} is the employment rate in the urban area; 1_{us} is the unemployed or job seekers rate in the urban area; and W_u is the minimum wage rate in the urban area.

The two computed HT scores, the HT score for the rural area and the HT score for the urban area, were compared to reveal the movement of people and classify which locality is the possible receiver and the sender of migrants. Rural-to-urban migration is expected when

$$\frac{1_{re}}{1_{rs}} W_r < \frac{1_{ue}}{1_{us}} W_u.$$

The HT (Harris-Todaro) score in the rural area is lesser than the urban HT (Harris-Todaro) score. In a similar vein, urban-to-rural migration is expected when

$$\frac{1_{re}}{1_{rs}} W_r > \frac{1_{ue}}{1_{us}} W_u.$$

The HT (Harris-Todaro) score in the rural area is greater than the urban HT (Harris-Todaro) value.

Moreover, the movement of people in the province was described as in the equilibrium state, signifying no significant difference in values when

$$\frac{1_{re}}{1_{rs}} W_r = \frac{1_{ue}}{1_{us}} W_u.$$

4. Results and Discussion

4.1 Employment Profile

Employment and unemployment data were obtained to determine the function of particular municipalities or localities in the province of Zamboanga del Norte. The most recent employment and unemployment rate data for the province's municipalities ranged from 2015 to 2020, except for Katipunan and Sindangan, where the most recent statistics were from 2010 and 2014, respectively.

Table 1: Employment Profile of Localities in Zamboanga del Norte

| Localities | Employment Rate (%) | Unemployment Rate (%) | Region IX Minimum Wage in Pesos |
|---------------------------|---------------------|-----------------------|---------------------------------|
| Dapitan (2017) | 92.83 | 7.17 | 309.5 |
| Dipolog (2017) | 57.59 | 42.41 | 309.5 |
| Godod (2017) | 57.50 | 42.50 | 309.5 |
| Gutalac (2017) | 80.00 | 20.00 | 309.5 |
| Jose Dalman (2015) | 59.88 | 40.11 | 309.5 |
| Katipunan (2010) | 37.73 | 62.27 | 309.5 |
| La Libertad (2017) | 55.58 | 45.00 | 309.5 |
| Manukan (2015) | 61.31 | 38.69 | 309.5 |
| Polanco (2020) | 93.03 | 6.97 | 309.5 |
| Pres. Manuel Roxas (2017) | 62.00 | 37.95 | 309.5 |
| Rizal (2020) | 97.93 | 2.07 | 309.5 |
| Siayan (2017) | 99.84 | 0.16 | 309.5 |
| Sibutad (2020) | 96.76 | 3.24 | 309.5 |
| Sindangan (2014) | 45.00 | 55.00 | 309.5 |
| Sirawai (2018) | 93.49 | 6.51 | 309.5 |

Table 1 shows the employment profiles for a few municipalities and two cities in the province of Zamboanga del Norte. According to the report, Siayan municipality had the most remarkable employment rate, at 99.84 percent. It could be because only 34,966 people lived in the municipality (DLIG Census, 2015). In contrast, the Local Government Unit (LGU) encouraged residents to develop employable skills. The LGU additionally provided an agricultural-level support system, enabling farmers to concentrate on their regular tasks.

Second place went to the municipality of Rizal, which had a 97.93% employment rate. It was also believed that the municipality's small population was one of the main reasons for its high employment rate. Compared to Siayan, the DILG Census (2015) ^[17] counted 14,021 individuals, a considerable decrease. The municipalities of Sibutad, Sirawai, and Polanco came closely behind with employment rates of 96.76 percent, 93.49 percent, and 93.03 percent, respectively. Similar to those previously discussed, the factors contributed to the higher employment rate in the municipalities mentioned above. A significant contributing element was the lower population in these locations (17,645, 28,799, and 39,347, respectively).

The lowest employment rates among the locales were found in the municipalities of Katipunan (37.73%) and Sindangan (45.00%). The city of Dipolog (57.59%) and the towns of Godod (57.50%) and La Libertad (55.58%) were just a little behind. On the other hand, a high unemployment rate is indicated by a low employment rate.

4.2 Wage Profile

The Adjusted Harris-Todaro Model required the minimum wage rate and employment and unemployment statistics to operate. The minimum salary for Region 9 was collected to meet the abovementioned standards. On July 30, 2018, the decided daily minimum wage rate for Region IX went into effect (DOLE, 2022) ^[18]. Two crucial sectors each have a minimum wage rate set in Region IX. Non-agriculture was the first one, and it cost PHP 316.00. The second one was for farming, and it cost PHP 303.00. The two statistics were averaged to get the single regional pay range. The province of Zamboanga del Norte was consequently included in Region IX, with a daily minimum wage of Php 309.5. As a result, the minimum wage was the same in all cities and municipalities in Table 1.

4.3 Migrants of Dipolog City

Table 2 lists the municipalities in the Zamboanga del Norte province most likely to send migrants to Dipolog City. The presentation of the table was made based on the final HT scores for each locality. These areas consisted of a city and municipalities. On HT, Dipolog City scored 428. However, the table showed locations below Dipolog with HT ratings. It suggests that rather than sending citizens to Dipolog City, these local governments (Katipunan, Sindangan, La Libertad, Dapitan, Polanco, Sirawai, and Godod) sent migrants. The city's abundance of diverse businesses may be the reason for migration. In answer to an interview conducted there, a resident of the municipality of Katipunan stated that the accessibility of construction work in the city of Dipolog was the driving force behind their decision to leave.

Table 2: Migrants' Municipalities of Dipolog City

| Localities | Employment Rate (%) | Unemployment Rate (%) | Region IX Minimum Wage | HT Score |
|-------------|---------------------|-----------------------|------------------------|----------|
| Katipunan | 37.73 | 62.27 | 309.5 | 190 |
| Sindangan | 45.00 | 55.00 | 309.5 | 254 |
| La Libertad | 55.58 | 45.00 | 309.5 | 386 |
| Dapitan | 92.83 | 7.17 | 309.5 | 412 |
| Polanco | 93.03 | 6.97 | 309.5 | 412 |
| Sirawai | 93.49 | 6.51 | 309.5 | 412 |
| Godod | 57.50 | 42.5 | 309.5 | 418 |

Respondent B: *“Among mga silingan sa amoang palibot, mga panday man sila. Mag mason. Naa man pod silay kuan pod skill. Pareho anang ni Engr. Magtuba naa man na syay kuan construction, ah, contractor man na sya. so nag hire sya sa among mga silingan tua paingog dapitan, ang uban pod tua paingog dipolog kay naa man syay mga project didto.”* (Our immediate neighbors are involved in construction. When Engineers hire them, their talents will help. They are taken to Dapitan or Dipolog, depending on where there are active projects.)

Given the structure of the city, construction projects are frequent. Construction of buildings, roads, and bridges is prevalent in cities like Dipolog. With it, contractors are motivated to recruit people from various locations eager to participate in the specified trade. As a result, Dipolog can attract migrants from municipalities that have created jobs of this nature. It is true among cities because it is expected to expand, and construction-related jobs may continue to attract job seekers from municipalities (Adhikari & Deshingkar, 2015) ^[19]. However, the city's abundance of commercial companies provides options outside of blue-collar work. These facilities could be commercial, industrial, or another type. According to one interview, people from other province-wide localities relocate to Dipolog City for the same reason.

Respondent B: *“Kasagaran, ang uban nga mo gawas diri sa Dapitan, adtog Dipolog, naa didto, kay mas daghan ang commercial, ah, establishment, naay uban industriya.”* (People typically relocate from Dapitan to Dipolog because of the industrial facilities.)

Establishments provide both labor and relaxation. People will therefore move to cities to obtain employment and be close to facilities that will make their lives more comfortable (Schade *et al.*, 2018; Florida, 2017) ^[20, 21]. Dipolog City anticipates the tendency to persist in the future. It must, however, plan for the worst-case scenario. The number of job seekers would keep growing, resulting in rising unemployment in the city. Due to the intense rivalry and inability to accommodate more personnel, this has happened (Mondal, n.d.).

On the other hand, there is the risk of social and environmental elements. With the ongoing development in population, a pile of people and their actions might seriously negatively affect the surrounding area (Oliveira *et al.*, 2017; Kuddus *et al.*, 2020) ^[23, 24]. The municipalities of Katipunan, Sindangan, La Libertad, Dapitan, Polanco, Sirawai, and

Godod would also continue to lose some of their workforces if the trend persisted. Losing employees hurt the community's productivity and economy.

4.4 Migrants of Dapitan City

Table 3: Migrants' Municipalities of Dapitan City

| Localities | Employment Rate | Unemployment Rate | Region IX Minimum Wage | HT Score |
|-------------|-----------------|-------------------|------------------------|----------|
| Katipunan | 37.73 | 62.27 | 309.5 | 190 |
| Sindangan | 45.00 | 55.00 | 309.5 | 245 |
| La Libertad | 55.58 | 45.00 | 309.5 | 386 |

The Zamboanga del Norte province's municipalities most likely to contribute migrants to Dapitan City are listed in Table 3. Based on the final HT score for each locality, the presentation in the table was created. These places are all municipalities, unlike Dipolog. Dapitan City scored 412 on the HT. The locations with HT scores lower than Dapitan are displayed in the table.

Consequently, these towns were senders of migrants to the city. The causes of this movement were very similar to those that led people to migrate to Dipolog City, as cited earlier. Opportunities relating to various businesses and construction are common, despite the city being less crowded than Dipolog.

Workers from different municipalities are drawn to the city's construction projects. As a result, contractors are more likely to hire workers from other municipalities to work in Dapitan. On the other hand, this employment opportunity is close to the person's need to support and care for their family. Being at work with the family is also considered in one interview response.

Respondent A: *“Pananglitan gekan sa katipunan ngadto sa Dapitan, naa silay pamilya didto dayon tua poy ilang panginabuhian didto, mao nang mo balhin sila didto.”* (For instance, a resident of Katipunan is more likely to move to Dapitan if they have family and employment there.)

Although moving closer to the family is a concern for migrants, work may be their top priority. Filipinos are very family-oriented. Therefore, they prefer to stay close to those who can keep them motivated (Diversity, 2016) [25]. Aside from that, this finding is consistent with the city's percentage compared to the rest of the province's localities when it increased by 5% in the same year as Dipolog (GovPh, 2020) [26]. Only the first score is higher than the one mentioned.

Given that, it inspires improving one's career and quality of life. Additionally, cities are more likely to continue receiving immigrants because they provide decent employment opportunities. The following warning is for the municipalities that would still be overrun with employees. Low employment opportunities will accelerate this trend and have a negative long-term effect on the local economy.

4.5 Migrants of Municipalities

The migrants of the municipalities in the province of Zamboanga del Norte are shown in Table 4. The city of Dapitan sent migrants to the municipality of Godod, which obtained an HT score of 418 based on the computed HT ratings of municipalities. Given that there was no direct

difference between Dapitan's HT ratings for Polanco and Sirawai (412), it was believed that this did not substantially impact the flow of migrants leaving Dapitan City. Despite having only 17 barangays and a small population, the municipality of Godod's economy grew steadily from 2012 to 2016 and reached about 72.5 million in regular yearly income (PhilAtlas, n.d.). It is true, despite a decline in population up until 2015. It is encouraging, given the higher anticipated spending on projects for fewer people. The country's youthful population also promises future economic vitality. Most people in its 2015 census were young, with a greater concentration in their early 20s (PhilAtlas, n.d.).

Table 4: Migrants of Municipalities

| Cities | Employment Rate | Unemployment Rate | Region IX Minimum Wage Rate | HT Score |
|--------------------|-----------------|-------------------|-----------------------------|----------|
| Dapitan | 92.83 | 7.17 | 309.5 | 412 |
| Polanco | 93.03 | 6.97 | 309.5 | 412 |
| Sirawai | 93.49 | 6.51 | 309.5 | 412 |
| Godod | 57.50 | 42.5 | 309.5 | 418 |
| Dipolog | 57.59 | 42.41 | 309.5 | 428 |
| Jose Dalman | 59.88 | 40.11 | 309.5 | 465 |
| Manukan | 61.31 | 38.69 | 309.5 | 485 |
| Pres. Manuel Roxas | 62.00 | 37.95 | 309.5 | 506 |
| Sibutad | 96.76 | 3.24 | 309.5 | 1,002 |
| Gutalac | 80.00 | 20.00 | 309.5 | 1,240 |
| Rizal | 97.93 | 2.07 | 309.5 | 1,519 |
| Siayan | 99.84 | 0.16 | 309.5 | 1,535 |

On the other hand, migrants tend to leave Dipolog City for some of the province's municipalities. These towns included Jose Dalman, Manukan, Pres. Manuel Roxas, Sibutad, Gutalac, Rizal, and Siayan. Considering that the municipalities received HT scores of 465, 485, 506, 1,002, 1,240, 1,519, and 1,535, respectively, it was a victory for these localities. Also, migration from one city to another was an option. Rural areas, on the other hand, offered peace and opportunities despite the comparatively prosperous condition of cities (Johnston, 2013) [29]. As the Jose Dalman municipality achieved more than 80 million in regular annual income in 2016, it demonstrated a consistent growth of its local economy (PhilAtlas, n.d.).

Similar developments occurred in Manukan, Pres. Manuel Roxas, Sibutad, Gutalac, Rizal, and Siayan had sustained growth in their local economies and attained regular annual incomes of 113 million, 129.5 million, 58.5 million, 130 million, 3 billion, and 134 million, respectively. Given both of those factors and the stark differences in HT scores across the province's cities and municipalities, it is anticipated that the latter will substantially impact the exodus of residents from cities. As a result, migrants frequently search for another location for investment where visitors would keep coming. On the other hand, the bustling cities of Dipolog and Dapitan may eventually see a fall in their workforce and employment possibilities if the migration of people continues for an extended period.

4.6 Pattern of Internal Migration in Zamboanga del Norte

Based on the information in Table 4, the researchers examined the internal migration pattern. The table showed that the regions with the highest HT scores were predicted to

get a more significant influx of migrants than the other regions. Conversely, those with the lowest HT values were foreseen to move migrants in a different direction. Therefore, the municipality of Siayan was anticipated to attract the most significant number of migrants from the rest of the province among those areas with the highest HT scores. However, immigrants from the rest of the province were anticipated to come to the municipality of Katipunan, Rizal, Gutalac, Sibutad, and Pres. Manuel Roxas were also among the areas that were among the top migrants' destinations.

Furthermore, given its numerous economic successes that might draw people, Siayan was anticipated to be the most migrant-receiving municipality. On the other hand, given the countless obstacles surrounding the possibility of finding a job in the area, it was anticipated that the municipality of Katipunan would send the most migrants. The scenarios were elaborated on in the conversations that followed.

4.6.1 The municipality of Siayan as the Most Recipient of Migrants

The high employment rate in the municipality of Siayan, which put it at the top of the list for most significant HT scores, may have substantially impacted the score. The workforce must also be considered when determining a location's desirability. During one meeting with a respondent from the neighborhood, as mentioned above, the researchers found that Siayan supplied its personnel with a lot of agricultural support. On the other hand, the Local Government Unit (LGU) training program provided would secure their people's employability.

Respondent A: *"Ah, sa atoa karon sir, ang TESDA, in partnership diri sa LGU, nag offer ug mga skills training. Dayon gi tagaan ni sila ug mga scholarship, o, kay aron, makatrabaho gyud sila kay naa man ni sila mga kit ipanghatag paghuman ug graduate nila."* (For the time being, the LGU and TESDA have cooperation that provides skill training. Locals were granted scholarships for them to find employment. After they graduated, TESDA also provided them with several kits.)

People in their place are trained due to the collaboration between the local administration of Siayan and the Technical Education and Skills Development Authority (TESDA). They receive training to improve their employability. The local government also offers scholarships to support this training. The most critical factor in someone's employment is their skill set. Many organizations, local or distant, want candidates to possess the fundamental skills before hiring them. The free livelihood training programs offered in the municipality of Siayan helped locals find employment.

Agriculture is the main activity in the Municipality of Siayan. Given this, agricultural provision is essential for the location's ability to produce agricultural products reliably. In addition to being necessary for cultivating the land, the agricultural provision also motivates farmers to labor in agriculture by relieving them of the burden of searching for seedlings. The local government has been crucial in assuring the satisfaction of their farmers.

Respondent A: *"...ang agriculture namo nag hatag mi*

ug kining mga seedlings... ang kining mga taga barangay ibaligya nila diri sa LGU, paliton sa LGU, dayon kadtong mga para itanum bale bayran sa LGU para mao napod toy ilang ipatanum... Libre na sya pa hatag nga pack lang plus bayran pa gyud ang kada tanum adto nila." (We gave our agriculture seedlings, and the LGU purchased the produce from each barangay. Farmers receive every pack of free seedlings they are supposed to buy.)

Respondent B: *"Diri sa LGU tagaan silag slot... ug maoy ilang hilig nga kuan so didto sila ibutang. Dayon naa poy sa office works, ana... kanang sa Casava stalks bitaw nya, LGU moy nag provide. So sila igo nalang sila mananum... ang among mga pangkabuhayan centers naa silay daro, naay kabaw, gihatag gikan sa atong probinsya, through LGU."* (Depending on the jobs they are qualified for, residents were assigned slots by the LGU. Hence, there are also office tasks. The LGU provided the casava stalks for residents to plant solely. It is consistent with the pangkabuhayan facility, where the LGU also offers agricultural supplies. It occasionally originates from the provincial government.)

The provision and assistance from the local government to their agriculture sector are established from the answers given above. As a result, the farmers received seedlings without hesitation. In turn, farmers are free to use their resources, whatever they see fit, to produce goods. The local government will also be the ones to purchase these goods. The province government also provides help in addition to the local government.

The economy of the municipality of Siayan has experienced a significant improvement. The community's 34,966 residents and 22 barangays may have impacted the local economy's steady growth, which in 2016 surpassed 134 million in yearly income (PhilAtlas, n.d.). In addition, it is essential to note that the number of households in the area started to decrease in 2015, and the majority of its residents are young, with the majority falling between the ages of 19 and 20. A vibrant workforce and fewer dependents are promised as a result. The scenario validates the HT score indicator's claim that the area is promising. The municipality anticipates drawing immigrants from other province-wide communities as a result.

4.6.2 The Municipality of Katipunan as the most Sender of Migrants

The high employment rate in Katipunan, the municipality with the lowest HT score, may have substantially impacted the municipality's ranking. The workforce must also be considered when determining a location's desirability. As mentioned above, a respondent from the community discussed numerous causes of migration from their area. One example is how the political system and supporter system, which are pervasive in many places, affect job seekers while they are young. The second is when one's safety from opponents and authorities is at stake.

Respondent A: *"Pero murag mostly adto nila siguro adtong during that time is kadto rang mga, kadto bitawng mga young nga mga tawo... Political, dayon kanang backer nimo, wala jud kay saktong backer."*

Then money, kay ug wala kay sakto nga backer, wala kay money nga e kuan, bayaran under the table, wala gihapon di gihapon ka, wala kay connection.” (Young people make up the majority of migrants at that time, possibly due to political reasons or a lack of support. Also, money is necessary since it is only possible to get ahead or make contact with it.)

Being young is given as the justification for moving in this response. Young workers are more prone to leave their hometowns and look for opportunities elsewhere. Politics was also listed as a factor because it could impact a person's employment prospects, particularly when it comes to the requirement for having a supporter to acquire a job. Together with that, there is the matter of money, which is vital for making contacts and getting the job one wants.

Respondent A: *“Akong nakita is, kanang kuan sya wanted sya. Mao mo balhin sya sa lain. Naa syay mga kontra diring dapita mao nang mo adto nalang sya didto mo puyo. Apil pod ang panarbaho, tua didto ang trabaho, tua didto iyang pamilya, maong didto na sya.”* (What I observe is that when authorities seek after someone, they will relocate. That might also happen if you have an opponent. Another is the possibility of finding employment elsewhere.)

In this response, eluding the law is given as the motivation for migration. Those who are wanted by the law are pushed to move to live normally in a different location where the threat of arrest is absent or at a minimum. Threats from opponents can also force someone to leave their current location because it would interfere with their ability to live normally there. Jobs may be available in a more promising place than the company's current location.

Respondent A: *“Political issue. Hahaha. Mismo sa inyo, sa Education, mao man gihapon na, ug wala kay sakto nga backer di man gyud pod ka basta-basta makasulod. Diba? Ing-ana man gyud mga rason karon.”* (Political issue [laugh]. Even in DepEd, the supporter system still controls who is hired.)

The interviewee discusses the "fire effect" of political turmoil in this response. He made light of the fact that political issues still have a significant impact on hiring practices across organizations. A hopeful worker from their region may finally decide to migrate to another place or locality if the issue can impair their ability to obtain a decent job, according to beliefs that political leaning and connections have a significant impact on landing a job.

Respondent A: *“Dayon sa mga infra pod...by season lang. For example ug naay mga project diri pariho sa mga drainage kana, sa mga karsada. Pero not totally nga mao na gyuy ilang permanent work kay seasonal raman sya.”* (Infra works, such as drainage or road construction, are temporary. Hence, they can be categorized as seasonal labor.)

Workers who have just lost their jobs may also need to obtain employment to prevent them from being temporarily unemployed. The respondent stressed in this statement that skilled professionals like masons in their community remain

jobless after an infrastructure project is finished or if it is temporarily suspended. Workers are thus left to search for new employment on their own. Also, if they relocate to an area where their talent is in demand, they will likely find another work.

The population of the municipality of Katipunan decreased from 2015 to 2020, with a negative annual population growth rate of 0.43% (PhilAtlas, n.d.). It is likely related to a decline in mortality. Nonetheless, it can be deduced from the economy that between 2013 and 2016, when the municipality's yearly regular income started at 13% and concluded at 9%, it saw a fall. This decline can be viewed in relation to one another, given how the population affects economic activity. Population can influence a place's development and economic output (Fengler, 2010) ^[32]. The evidence mentioned above supports the HT model's conclusion. Migration to the other areas in the province, where economic activity and output are continuing to increase, can also be used to explain why the population of Katipunan decreased.

Hence, the push and pull effects from the localities will substantially impact the migration pattern in the province of Zamboanga del Norte. Migration will be pushed and pulled by those with the highest and lowest HT scores. Migration is concentrated in the municipality of Siayan since it has the highest HT score. Nonetheless, given that the Katipunan municipality had the lowest HT score, migrants would probably avoid this area. There are also the anticipated interactions between cities and municipalities. One municipality and one city may not necessarily exchange residents. Yet, this indicates that some municipalities will welcome immigrants from the Dipolog and Dapitan cities. The migrants moving from municipalities to Dipolog and Dapitan cities are the same. Dipolog is the city with the highest migrant population. Godod, Sirawai, Polanco, La Libertad, Sindangan, and Dapitan would be where this exodus would originate.

Moreover, Dapitan sent migrants to Dipolog. On the other hand, the city of Dapitan would welcome migrants from Katipunan, Sindangan, and La Libertad. The municipalities of Polanco, Sirawai, and Godod, on the other hand, will welcome immigrants from Dapitan. Migrants from Dipolog City would be received by the municipalities of Jose Dalman, Manukan, Manuel Roxas, Sibutad, Gutalac, Rizal, and Siayan.

Surprisingly, mobility between rural and urban areas is one of many types of migration in the province. According to this discovery, urban areas also send migrants to rural areas. In addition to the previously mentioned rationale, this is because most communities in the province are close to one another. As a result, moving from one location to another would be simple for migrants.

5. Conclusions

The municipality of Siayan obtained the highest HT score out of all the Zamboanga del Norte areas. It asserts that more migrants are anticipated to move to the municipality. On the other hand, it is predicted that the municipality of Katipunan will send more migrants to the province's other localities. Migrants from the municipalities are also forecasted in Dipolog and Dapitan. In contrast, it is projected that the two cities will send migrants to the province's towns. Overall, the migration patterns in Zamboanga del Norte view Kuhnt's (2019) ^[8] micro, meso,

and macro reasons for migration because the factors are also seen in the province.

6. Recommendations

Based on the migratory patterns established in this research and interview responses gathered, the following are recommended:

1. The system for addressing the needs of the province of Zamboanga del Norte's localities should be considered for evaluation and implementation.
2. Due to the seasonal nature of employment, the local government must develop strategies to accommodate agricultural and construction-related workers so they can continue to make a living and not relocate.
3. Also, it must work to attract investors to the area. Construction and oil firms were among the organizations picked because they could hire numerous people and keep them in their hometowns.
4. The Local Government Units must undertake skill-related training and offer openings for employment in various areas for unskilled people, whether office work or agriculture.

7. References

1. Castelli F. Drivers of migration: Why do people move? Oxford Academic, 2018.
2. Ando K. Rural-urban migration and rural depopulation in Ayeyarwady region: A case study of three villages in Pyarpon township, 2018. Retrieved from: <https://www.semanticscholar.org/paper/Rural-urban-migration-and-rural-depopulation-in-a-Ando/3188316f7ac6d701a2e0adadd1d5b0b33cd72a0c>
3. Thet KK. Pull and Push Factors of Migration: A Case Study in the Urban Area of Monywa Township, Myanmar, 2014. Retrieved from: <https://www.semanticscholar.org/paper/Pull-and-Push-Factors-of-Migration-%3A-A-Case-Study-%2C/2a5f1804aea79ac313dedd6fa9b49005ae7f724d#citation-papers>
4. Yadav A, Sharma G, Gangwar R. Determining factors for migration in Uttarakhand. International Journal of Agricultural Science and Research (IJASR) ISSN (P), 2018, 2250-0057. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3172063
5. Andini V, Rao S. Analysis of socio-economic conditions and migration patterns of migrant settlements in Bengaluru, 2017. Retrieved from: <https://www.semanticscholar.org/paper/Analysis-of-Socio-Economic-Conditions-and-Migration-Andini-Rao/3c805f867181257054c400df1b6fb445c073080f>
6. Chamberlin J, Jayne T, Sitko N. Rural-rural migration, land and labor markets in Zambia. IDEAS, 2018. Retrieved from: <https://ideas.repec.org/p/ags/iaae18/277404.html>
7. Sirili N, Simba D. Understanding the rural-rural migration of health workers in two selected districts of Tanzania. Advances in Public Health, 2020. Doi: <https://doi.org/10.1155/2020/4910791>
8. Kuhnt J. Why Do People Leave Their Homes? Is There an Easy Answer? A Structured Overview of Migratory Determinants. ECONSTOR, 2019. Retrieved from: <https://www.econstor.eu/handle/10419/205249>
9. Capozzi C. The importance of employment & workplace in the society, 2019. Retrieved from: <https://bizfluent.com/info-8296076-importance-employment-workplace-society.html>
10. Sanders SR, Brown DL. The migratory response of labor to special economic zones in the Philippines, 1995–2005. Population Research and Policy Review. 2011; 31:141-164. Retrieved from: <https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=5774&context=facpub>
11. Busso M, Chauvin JP, Nicolás Herrera N. Rural-Urban Migration at High Urbanization Levels. Research Department, Inter-American Development Bank, 2020. Retrieved from: https://www.jpchauvin.com/wp-content/uploads/2020/04/BCH_Rural_Urban_Migration_at_High_Urbanization_Levels.pdf
12. Lyu H, Dong Z, Roobavannan M, Kandasamy J, Pande S. Rural unemployment pushes migrants to urban areas in Jiangsu Province, China. Palgrave Communications. 2019; 5(1):1-12. Retrieved from: <https://www.nature.com/articles/s41599-019-0302-1>
13. The Migration Observatory. The labour market effects of immigration, 2020. Retrieved from: <https://migrationobservatory.ox.ac.uk/resources/briefings/the-labour-market-effects-of-immigration/>
14. Boffy-Ramirez E. Minimum wages, earnings, and migration. Springer, 2013. Retrieved from: <https://izajodm.springeropen.com/articles/10.1186/2193-9039-2-17>
15. Bouchrika I. Primary research vs. secondary research: Definitions, differences, and examples in research. Guide 2 Research, 2020. Retrieved from: <https://www.guide2research.com/research/primary-research-vs-secondaryresearch>
16. GovPh. Office of the Municipal Planning and Development Coordinator. Retrieved from: <https://quezon-nviscaya.gov.ph/offices/general-public-services-sector/office-of-the-municipal-planning-and-development-coordinator/>
17. DILG Census. Region IX total population by province, city, municipality and barangay. DILG, 2015. Retrieved from: <http://region9.dilg.gov.ph/index.php/lgu/2015-census-of-population>
18. DOLE. Summary of current regional daily minimum wage rates by region, non-agriculture and agriculture, 2022 April. Retrieved from: <https://nwpc.dole.gov.ph/stats/summary-of-current-regional-daily-minimum-wage-rates-by-region-non-agriculture-and-agriculture/>
19. Adhikari J, Deshingkar P. How migration into urban construction work impacts on rural households in Nepal, 2015. Retrieved from: https://assets.publishing.service.gov.uk/media/57a08992e5274a31e000015e/WP27_Adhikari_Deshingkar_2015.pdf
20. Schade M, Piehler R, Müller A, Burmann C. How cities can attract highly skilled workers as residents: the impact of city brand benefits. Journal of Product & Brand Management, 2018. Retrieved from: <https://www.emerald.com/insight/content/doi/10.1108/JPBM-10-2017-1605/full/html>
21. Florida R. When it comes to skills and talent, size matters. Bloomberg CityLab, 2017. Retrieved from:

- <https://www.bloomberg.com/news/articles/2017-07-06/a-big-advantage-of-bigger-cities-more-skilled-workers>
22. Mondal P. The causes of unemployment at urban areas in India. Your Article Library. Retrieved from: <https://www.yourarticlelibrary.com/unemployment/the-causes-of-unemployment-at-urban-areas-in-india/4705#:~:text=Mass%20migration%20is%20an%20important,%2C%20thus%2C%20causing%20mass%20unemployment.>
 23. Oliveira GM, Vidal DG, Ferraz MP. Urban lifestyles and consumption patterns. *Sustainable Cities and Communities*, 2020: 851-860. Retrieved from: https://bdigital.ufp.pt/bitstream/10284/8485/1/Oliveira2019_ReferenceWorkEntry_UrbanLifestylesAndConsumptionP.pdf
 24. Kuddus A, Tynam E, McBryde E. Urbanization: A problem for the rich and the poor? *BMC Public Health Reviews*. 2020; 41:1. Retrieved from: <https://publichealthreviews.biomedcentral.com/articles/10.1186/s40985-019-0116-0>
 25. Diversity. Understanding the importance of family to your Filipino workforce. (2016, August 23). Retrieved from: <https://diversifyoss.com/newsroom/understanding-the-importance-of-family-to-your-filipino-workforce/>
 26. GovPh. LGU percentage, 2020. Retrieved from: <https://cmci.dti.gov.ph/provprofile.php?prov=Zamboanga%20del%20Norte&year=2020>
 27. PhilAtlas. Godod, province of Zamboanga del Norte. Retrieved from: <https://www.philatlas.com/mindanao/r09/zamboanga-del-norte/godod.html#sectionEconomy>
 28. PhilAtlas. Jose Dalman, province of Zamboanga del Norte. Retrieved from: <https://www.philatlas.com/mindanao/r09/zamboanga-del-norte/jose-dalman.html#sectionEconomy>
 29. Johnston I. Human brain hard-wired for rural tranquillity. *The Independent*, 2013. Retrieved from: www.independent.co.uk/news/science/human-brain-hardwired-for-rural-tranquillity-8996368.html
 30. PhilAtlas. Siayan, province of Zamboanga del Norte. Retrieved from: <https://www.philatlas.com/mindanao/r09/zamboanga-del-norte/siayan.html>
 31. PhilAtlas. Katipunan, province of Zamboanga del Norte. Retrieved from: <https://www.philatlas.com/mindanao/r09/zamboanga-del-norte/katipunan.html>
 32. Fengler W. Can rapid population growth be good for economic development? World Bank, 2010. Retrieved from: <https://blogs.worldbank.org/african/can-rapid-population-growth-be-good-for-economic-development> <https://academic.oup.com/jtm/article/25/1/tay040/5056445>