**Personality Traits and Emigration Intention: The Case of Taiwan**

Dennis L. C. Weng, Ching-Hsing Wang, and Tsong-Jyi Lin

**Abstract**

Taiwanese people may not be keen to pay attention to politics, but they are not shy to vote with their feet for the better future. According to the government’s estimate, between half and one million Taiwanese technology experts have moved out of Taiwan and currently work overseas in the last two decades. While Taiwan is proud of its economic and political development, on average, over 40,000 Taiwanese people decide to move from their home country annually, which creates a puzzle: Why do people move out of Taiwan?

Previous studies on emigration concluded that the migrants are driven by either “push” or “pull” factors. We argue that individuals’ personality traits along with the economic evaluation of individual’s live experience in Taiwan, namely the “push” factor, are the key forces driving Taiwanese people to move abroad. Using the national survey data collected in December 2018, this study provides empirical evidence that two personality traits – emotional stability and openness to experience are significantly associated with individual migrate intention. Specifically, people high on openness to experience are more willing to migrate, whereas those high on emotional stability are less willing to move out of Taiwan. In addition to personality, demographic characteristics, especially socioeconomic status, also play an important role in individual immigration intention. Overall, this study demonstrates that psychological factors offer a certain level of explanatory power for individual migrating decision and attempts to provide some policy implications to mitigate the risk of losing human capital in Taiwan.

Keywords: personality traits, Big Five, immigration, emigration intention, Taiwan

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Introduction

“Our country is full; our area is full; the sector is full. We cannot take you any more!”

In April 2019, President Donald Trump spoke at a roundtable discussion in Calexico, California, where he announced his “new statement” about limiting the number of newcomers in the future. Similarly, recent research shows the negative sentiment toward immigrants was a “major” deciding factor in the Brexit referendum, and it led to the current debate in Europe about whether stricter control on immigration is needed across European countries (Meledy, Seger, and Vermue, 2017). The negative attitude and a heated concern have arisen over immigration policy around advanced western democracies toward a large number of international migrants who have come to these countries in recent years. As international migrants are competing against local workforce and occupying many positions through the current immigration systems, many people in these “receiving” countries now question whether their government should continue to welcome these individuals from abroad, developing countries, in particular. While western democracies concern about the competitiveness that came along with the increasing number of international immigrants, developing countries also worry about the increasing out-flow skilled workforce that may lead to the “brain drain” of their countries.

The “Brain drain” is a serious concern in most Asian countries as the skilled-labor force is the most valuable capital that attributed to the Asian economic miracles in the past several decades. However, there is a clear trend that Asian talents are now more likely to seek for better opportunities abroad. While there are several factors contribute to brain drain, they can be classified roughly into two main categories: economic, and personal. In this study, we investigate the effects of both conventional economic factors and individual personality on emigration intention in one of the Asian new democracies, Taiwan. Taiwan deserves a special attention because of two factors, namely the economic push force and the individual evaluation on economic prosperities. For the former, Taiwan offers one of the most successful stories of modern economic and political development that was based on human capital, rather than national resources. Last than 60 years ago, Taiwan’s GDP per capita and overall economic development level placed the island among the least developed countries in the world. Since then, the world observed the island’s economic growth and industrialization that not only transformed Taiwan into one

of Asia’s tiger economies, but also provided an economic model that has been successfully replicated by other regional economies. While other factors certainly played a role in Taiwan’s economic miracle, including effective management and economic policy, Taiwan has established itself as a dynamic and technology-oriented economy by improving its base of human capital. However, the base of human capital suffered multiple waves of brain drain when many people who had earned advanced degrees in western countries chose to leave Taiwan to work elsewhere in the past several decades. According to official statistics, the number of migration from Taiwan has remained consistently around 40,000, on average, every year. The out-flowing young professionals implied that the “economic push” force has direct impact on the intention of emigration. For the second reason, the number changed dramatically while there was potential national crisis. For instance, 191,000 people emigrated from Taiwan during the 1996 Taiwan Strait Crisis. The significant growing volume of emigrants was obviously driven by the political circumstance and hence worth more attention from researchers to study the emigration intention on the island. Conventional wisdom believed that the major causes of migration are usually justified by invoking the traditional economic argument, stating that it occurs due to geographical differences in labor force demand and supply - people choose to move to other countries due to the potential pay differences (Sotelo, and Gimeno, 2003). However, the same study also notes that most emigrants living in developed countries come from countries of medium level of economic development rather than below medium. Yet, studies on international economic emigrants also remark that some studies fail to find a direct and clear relationship between emigration and economic conditions of a country (Boneva, Frieze, 2001). These arguments point to findings that economic, social, and political factors may account for up to three-fourth of the emigration intention, but the causes of the rest final quarter remain unclear. We contend that the rest might possibly be related more to the individual subjective assessment than to the real economic or social circumstance. In other words, the second reason why Taiwan is an interesting case is because the embodied Asian culture might cultivate different individuals’ personality traits and lead to various individuals’ personal assessments.

It is reasonable to believe that people who choose to move abroad or have clear intentions to emigrate have a specific type of personality traits. Just like any other complex social phenomenon, migration cannot be grounded in economical reasoning alone as it fails to account for differences in emigration volumes in equally developed countries and reasons to explain why some people
within the same country choose to move abroad while others rather stay. Despite the fact that emigration is a social problem with various social consequences, such as diminishing of national identity, or disappointed by the political polarization, the decision to emigrate is still made by the individual. Therefore, explaining emigration solely by social, cultural, economic and political variables is inadequate, because it ignores the initial subject of the decision, namely the emigrating individual. While many existing studies focused on the individual level motivation, most of them confined themselves to socio-demographic variables such as gender, age, education level, profession, marital status and place of residence (Glytsos, 1999; Arrehag, Sjorberg, Sjoblom, 2006).

Furthermore, considerable research has also focused on economic and political processes responsible for the growing number of migrants, little research has taken into account personal factors, i.e. psychological characteristics involved in migratory behavior. However, neither individual level or aggregate level approach alone could delineate the entire picture of emigration intention. There are many questions which still remain unclear or partially answered, such as “What drives international migration in developing countries? What psychological factor determines the emigration intention? This study attempts to provide a more comprehensive approach which combine the traditional economic consideration and the individual level personality traits to explore the emigration intention in Taiwan. Currently, there are more than 2 millions of Taiwan origin live as legal migrants overseas6. Public opinion survey in recent year found that more than 50% of young people would be willing to work abroad7. In addition, various reports indicate that Taiwanese youth are less confident about future job prospects compared to previous years. The significant out-flow migrants trend makes Taiwan a justified research subject in this field. This phenomenon suggests that in addition to the conventional economic and political factors, individual’s psychological factor may play a major role in personal motives in choosing to migrate.

The arrangement of this paper is as follows. First, we will briefly expound on the theory of emigration in Section 2, which will function as an input into the empirical analysis of intentions

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6 According to Oversea Community Council, R.O.C., as of the end of 2018, there are 1.98 million oversea Taiwan live abroad. [https://www.ocac.gov.tw/OCAC/Pages/VDetail.aspx?nodeid=58&pid=492837](https://www.ocac.gov.tw/OCAC/Pages/VDetail.aspx?nodeid=58&pid=492837)

and behavior. Also, we will describe the relationship between personality traits and emigration intention in this section. Next, we will discuss our research method and data in Section 3. Section 4 contains the empirical analysis. In the present study, we focus on the case of Taiwan as this country seems to apply well to the conditions of free emigration choice and in addition, this country has shown variation in emigration numbers in the past few years for exploration. The steady outflow has left researcher in wonderment. Why leave a country where public services are extensive and the standard of living might even be the envy of immigrants from less developed countries, such as its Southeast Asia neighbors? What drive Taiwanese people, young generation in particular, move out of this island? We examine this question in this paper by using the new collected survey data in Taiwan. This study concludes by summarizing and discussing the main findings in Section 5.

**Literature Review: The Push Force**

Studies on recent migration argued that with the increasing globalization in international migration systems (Skeldon, 1997), every government is now facing significant volumes of immigration. Scholars suggest that one of the key impacts of globalization on today’s world is the increase in in-flows of all sorts, starting with finance and trade, but also ideas, ideologies, and knowledge about democratic and economic governance, cultural and media products, and more importantly, people (Castles and Miller, 2009). These flows seem to reinforce each other. Specifically, increasing trade, cross national business, communication, and international collaboration links appear to reinforce migration links and/or vice versa, at least in the short run (Schiff, 1994; Czaika and Mayer, 2011). It is therefore not surprising that the economic costs and benefits of international migration - migrating motivation was described and modelled in terms of the level of economic pressure emigrants perceived has been studied for many decades (e.g., Fairchild, 1936; Tait, 1927; Lewis, 1954). Subsequent more sophisticated models have also considered the social costs underpinning a migration decision (Massey et al. 1990, summarized in Arango, 2000).

While previous studies on migration suggest that the decision to relocate to another country can be grouped loosely into two categories, economic and non-economic (Martin and Zurcher, 2008), the factors demonstrated in previous research which actually propel a migrant to make that final move might best be concluded as: Pull and Push force. Pull force refers to the destination countries offer incentives to attract foreign immigrants and the expected economic benefits of the move is certainly positive, whereas the push force refers to the economic costs of not migrating are obvious.
To the potential emigrants in Taiwan, higher pay, better career opportunity, and living condition can be viewed as the pull factor for young Taiwanese to consider their opportunities abroad. Singapore, Hong Kong, and several major cities in China offers such incentives that generate the pull factors to Taiwan’s young professions. On the other hand, the long working hours, relatively low pay check, the competitiveness of the education system, and the political and social instability, construct the significant push forces in Taiwan.

While both the pull and push forces could influence the migration intention, this study focuses on the push forces in Taiwan due to the perceived pull incentives from foreign countries may vary from country to country. It is difficult and lack of meaningful critiria to compare the incentives across destination countries. For instance, there is no way to compare whether Singapore is the better destination than Australia or vice versa. Thus, our plan is to focus on examining the effect of push factors on immigration intention in a specific country, Taiwan. From this perspective, when the push force are strong the person possesses marketable skills and an absence of demographic obstacles to migration will be more likely to leave. To be more specific, those people are likely to be one who is relatively young with advanced degree (e.g., Graves & Linneman, 1979; Van Dalen, Groenewold, & Fokkema, 2005). While the focus of the present study is individual’s decision, it is essential that we account for other key sociological predictors of the intention to emigrate. Drawing on the prior research described briefly here, all models will include controls for the respondent’s age, sex, education level, and their political preferences in Taiwan. As we assume that push forces are associated with the migration intention, one can also imagine that every individual will evaluate it very differently to another. The economic and social costs of migrating, namely the push forces, have to be predicted and evaluated by the potential migrant. This is the key foundation of the idea that personality traits can influence migration events.

**Personality and migration**

Despite the pull and push factors could provide partial explanation to the emigration intention in Taiwan, the two factors do not account for the fact that a migration event is a decision made by an individual, and two different people in similar circumstances may make very different decisions around migration. As previous studies suggested, personality determines individuals’ thinking and plays a significant role in individuals’ interactions with the society and reactions to external circumstances. More importantly, it is widely assumed that personality traits are causally prior to any specific attitudes or behaviors (Ha et al. 2013) and have been demonstrated as important
determinants of a wide range of political attitudes and behavior in various countries, including Taiwan (Wang et al., 2019). While personality could include a variety of dimensions, previous studies have demonstrated that individuals’ personalities can be described by five basic dimensions named as the Big Five personality traits that can be summarized as follows: (1) extroversion is the tendency to be energetic and outgoing and seek stimulation and the company of others; (2) agreeableness is the tendency to be compassionate, cooperative, considerate and sympathetic; (3) conscientiousness is the tendency to show self-discipline, act dutifully, and aim for achievement; (4) emotional stability is the tendency to be calm, even-tempered, and less likely to feel tense or rattled; and (5) openness to experience is the tendency to be creative, imaginative, curious and open to new ideas (John and Srivastava 1999, Wang et al., 2019). Based on the aforementioned argument, this study attempts to explore the possible impact of personality traits on the intention to emigrate, openness to experience and emotional stability, in particular.

Moving to another country seemingly constitutes precisely the sort of new experience that defines openness to experience as a trait dimension. Also, because migration is an inherently bold move, and one that necessitates social skill and mental stability to adopt new environment and interact with strangers, we see emotional stability as of self-evident pertinence to migration. Past research has generated relevant findings, such as that people who have higher scores in openness and extraversion would be more likely to adjust their international work assignments (Huang, Chi, & Lawler, 2005). Furthermore, Bloeser, McCurley, and Mondak (2012) show that emotional stability personality helps migrants overcome cultural shock and other difficulties. Several past works have explored the broader relevance of psychology for migration. Indeed, there has been a renewal of attention to psychology and migration in recent years (e.g., Groenewold, de Bruijn, & Bilsborrow, 2012).

In the field of “migration psychology” (e.g., Fawcett, 1985), scholars examine numerous factors that may have influence on migration, including the possible psychological indicators of the decision to emigrate (e.g., Frieze & Li, 2010). Previous research regarding personality influences on international migration has consistently provided concrete evidences that personality is consequential. This research confirm our claim that personality in general, and possibly openness and emotional stability would influence migration. Winchie and Carment (1988) matched data from 102 Indian males who had applied for Canadian immigrant visas with data from 114 males in India who had expressed no intention to emigrate. In addition to limiting the analyses to males,
subjects were matched on age, education and occupational status. The authors conducted a two-
part discriminant analysis, focused largely on personality. The findings indicated strong effects for
variables such as emotional stability and preference for new experience. Silventoinen et al. (2008)
also compared migration between Finland to Sweden. In their case, extraversion was found to be
associated with the likelihood of migration. Jokela and his colleagues have followed up on that
inquiry with research regarding the influence of personality on migration within Finland (Jokela,
Elovainio, Kivimaki, & Keltikangas-Jarvinen, 2008) and the United States (Jokela, 2009).
According to the comparison, the US case is especially relevant for present purposes in that the
effects of Big Five variables were explored. According to the results, migration within the US
context was found to be influenced by extraversion, and migration both within and between states
was affected by openness to experience.
In addition to consideration of possible direct effects of the Big Five personality traits on the
decision to emigrate, a conditional effect also will be examined in the current study. In his
overview of migration psychology, Fawcett (1985) emphasizes that psychological approach on
migration intention must be situated with respect to economic and demographic factors if it is to
make an interdisciplinary contribution to our understanding of migration. Toward that end, we will
take both the personality traits and other individual level factors into consideration. Specifically,
possessing a higher level of education affords greater opportunities for migration, but whether
people act on these opportunities may hinge on personality. Also, individual’s income level, social
economic status, urban resident, may have positive influence on the immigration intention as the
cost of moving abroad is not trivial. The highest likelihood of migration might be observed among
individuals who have higher eco-social level. Taken collectively, there is a consistent finding that
Openness positively predicts intention to migrate, and some evidence that Emotional stability
predicts the opposite. However, there are a range of motivational factors driving a migration
decision, along with individual circumstance. The fact that aforementioned push factors and other
individual level variables also predict migration, hint that migration is not only a decision taken
by those wishing to broaden their horizons and experience new things. Instead, it is often an
unexpected and destabilizing but necessary undertaking in the life course. One way to disentangle
such reasons to migrate is to adopt a comprehensive approach by which the personality traits and
other possible factors are considered at the same time.
According to the literature mentioned above, this study attempts to examine several potential hypotheses regarding personality traits involved in the emigrate intention. With the data collected from Taiwan, we expect Extraversion, which pertains to an outgoing characteristic and high self-esteem (John, Srivastava, 1999), to positively correlate with intentions to migrate (H1). We expect to find a negative correlation between migratory intentions and the Agreeability and Conscientiousness traits (H2 & H3), as both are linked with organizational citizenship behavior (Borman, et. al, 2001; Neuman, Kickul, 1998), which, among other characteristics, includes following rules and procedures (Borman et al., 2001; John, Srivastava, 1999). Aluja and Garcia (2004), in a study of links between personality traits and social values, also found that Conscientiousness was associated with following order and responsibility, which, we believe, include feeling responsible for one’s country or family, both reasons for not wanting to move abroad. We therefore expect Conscientiousness to be important in the context of migratory behavior. We expect to see that Emotional stability will be negatively correlated with migratory behavior (H4), as by definition this trait is linked with unwilling to change, nervousness, anxiety and tension (John, Srivastava, 1999). The link between emotional stability and emigration would be negatively correlated. As emotional stability is considered responsible for withdrawal and avoidance behavior (Smits, Boeck, 2006), it may lead to the unlikelihood of migratory intentions among individuals scoring high on this scale, as they can be expected to avoid potentially uncomfortable situations, which moving abroad to a foreign country would undoubtedly bring more of than life in a well familiar setting. Finally, Openness to Experience, by definition, indicates curiosity and willingness to try out new experiences. We can expect a positive correlation between this trait and the intention to migrate. As a result, we formulate the following hypotheses for empirical testing (See also Table 1):
Hypothesis 1 (extraversion hypothesis): Extraversion is positively associated with individual migration intention.

Hypothesis 2 (agreeableness hypothesis): Agreeableness is negatively associated with individual migration intention.

Hypothesis 3 (conscientiousness hypothesis): Conscientiousness is negatively associated with individual migration intention.

Hypothesis 4 (emotional Stability hypothesis): Emotional stability is negatively associated with individual migration intention.

Hypothesis 5 (openness to Experience hypothesis): Openness to experience is positively associated with individual migration intention. [Table 1 about here]

Data, Measurement of Variables and Model Specification

To examine the influence of personality on individual attitudes toward emigration, we conducted a telephone survey between November 30 and December 6, 2018 in Taiwan. A total of 1,229 Taiwanese citizens aged 20 and above completed the survey. Because of missing values for the analyzed variables, the number of observations for empirical analysis is reduced to 832 in this study. Besides, the raking method is used for generating survey weights based on the distributions of gender, age, education, and residence area in the study population. After weighting, there are no significant differences in the above-mentioned demographic characteristics between the sample and population. Therefore, we apply the weights to estimate the relationships between personality traits and individual attitudes toward emigration. Next, we explain how the variables for empirical analysis are operationalized as follows.

The outcome of interest is an individual’s attitude toward emigration. Our survey asks the respondents to indicate the extent to which they are willing to settle abroad using a 4-category
ordinal scale and a higher value signifies that the respondents are more willing to settle abroad. Although Taiwanese people are dissatisfied with Taiwan’s current political and economic situation and often call it a “Ghost Island,” Figure 1 seems to suggest that the majority of Taiwanese people do not give up on Taiwan. About three-fifths (59.3%) of the respondents are either strongly or slightly unwilling to settle abroad even though they have the opportunity to do that. Only one-fourth (25.0%) of the respondents are slightly willing to settle abroad, whereas the percentage of strong willingness to settle abroad is only 13.1%. Therefore, most Taiwanese people do not want to leave Taiwan and still want to live here.

To explain individual attitudes toward emigration, this study focuses on the Big Five personality traits as measured by the Ten-Item Personality Inventory (TIPI) developed by Gosling, Rentfrow, and Swann (2003). The TIPI is proved to have high construct validity and test-retest reliability and be highly correlated with the longer versions of personality measures (Gosling et al. 2003). Furthermore, the TIPI has been translated into a number of languages including Spanish, Catalan, Dutch, French, German, Japanese, Korean, Chinese and many other languages, which demonstrates that the TIPI has been widely used to assess individuals’ dispositional attributes across the world. Scholars around the world have also employed different language versions of the TIPI to investigate the relationships between personality traits and individual political attitudes and behavior (e.g., Ha 2013; Ha et al. 2013; Tsai 2019; Wang et al. 2019). Instead of using the Chinese version of the TIPI available on Gosling’s website, this study utilizes a carefully Chinese-translated version of the TIPI used by Wang et al. (2019) to assess the respondents’ personality traits. Specifically, the respondents are asked to rate how well each personality item describes

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8 Please refer to Gosling’s website: [https://gosling.psy.utexas.edu/scales-weve-developed/ten-item-personality-measure-tipi/](https://gosling.psy.utexas.edu/scales-weve-developed/ten-item-personality-measure-tipi/).
themselves on a seven-point scale. Each personality trait is measured by two personality items and the score for each personality trait is calculated by adding, after appropriate recoding, the two items for each of the Big Five personality traits. A higher score indicates that an individual has a more prominent personality trait and each personality trait is coded to range from 2 to 14 in this study. Figure 2 shows that every two items used to measure the same personality trait are positively correlated with each other across five personality dimensions in consistency with the intent of the instrument. Thus, we are confident that the Chinese version of the TIPI used in this study should be valid.

[Figure 2 about here]

While this study puts focus on the relationships between personality traits and individual attitudes toward emigration, this study also controls for some factors that might influence individual willingness to emigrate in order to ensure the robustness of the results. On the one hand, the socio-political and economic environments are strong push factors for emigration. Accordingly, this study creates four dummy variables respectively capturing the economic, social and political push factors for emigration and name them as “working opportunity,” “quality of life,” “educational environment,” and “political stability.” That is, this study treats those who are not willing to live abroad as the reference group. On the other hand, demographic characteristics have an influence on individual willingness to emigrate. In particular, people who are younger, educated and relatively financially well-off are more likely to emigrate (Williams 2009). Therefore, this study takes into consideration demographic factors such as income, self-perception of social class, education, gender and age. Besides, given regional differences in economic development in Taiwan, this study generates a dummy variable coded as 1 if the respondents reside in the northern
part of Taiwan and 0 otherwise. Table 2 reports descriptive statistics of variables for empirical analysis.

[Table 2 about here]

To examine the relationships between personality traits and individual attitudes toward emigration, this study would employ the ordered logistic regression model given that individual opinion about emigration as the dependent variable is an ordinal variable. Specifically, this study would estimate two ordered logistic regression models: the first model simply considers the Big Five personality traits in order to understand the net effect of personality on individual attitudes toward emigration, whereas the second model enters push factors for emigration and demographic characteristics into the regression model to see if the relationships between personality traits and individual attitudes toward emigration observed in the previous model still hold.

**Empirical Results**

This study takes a first look the change in the number of emigrants in Taiwan. As displayed in Figure 3, while there has been some variation in the number of emigrants in Taiwan over the past few decades, it is obvious that there was a peak in 1996 that more than one hundred thousand people left Taiwan to settle permanently in another country. This was mainly due to the Third Taiwan Strait Crisis happening between July 1995 and March 1996 that a series of missile tests conducted by China in the waters surrounding Taiwan intended to intimidate Taiwanese people in the run-up to the 1996 presidential election that was the first direct presidential election in the history of Taiwan. Amid fears of China invasion, a large number of Taiwanese people decided to move abroad in 1996. However, the number of emigrants soon reached the lowest point in 1998, nearly eleven thousand persons. Since then, the number of emigrants had gradually increased to
about sixty-three thousand persons in 2009, although there was a fluctuation during this period. Since 2009, the number of emigrants has showed a decreasing trend and is similar to that of the early 1990s. Next, this study looks at the change in the net migration rate calculated using the difference between the number of immigrants and the number of emigrants from 1991 to 2018. When the number of immigrants is larger than the number of emigrants, a positive net migration rate occurs. By contrast, the negative net migration rate means that the number of immigrants is less than the number of emigrants. As demonstrated in Figure 4, the net migration rate is negative in most years and there are positive net migration rates only in the years of 1997, 1998 and 2006. During the period between 2006 and 2012, more than forty thousand immigrants moved to Taiwan every year. However, the number of immigrants has been less than forty thousand every year since 2013. It seems that the Taiwanese government has to put more effort in attracting foreign people to settle in Taiwan.

After briefly discussing the change in the number of emigrants in Taiwan, this study switches attention to the relationships between personality traits and individual attitudes toward emigration. First, this study estimates the ordered logistic regression model that only includes the Big Five personality traits as explanatory variables for individual attitudes toward emigration. As demonstrated in Model 1 of Table 2, emotional stability is significantly negatively associated with individual attitudes toward emigration, whereas openness to experience is significantly positively related to individual attitudes toward emigration. That is, people with higher levels of emotional stability are less willing to move abroad, but those with higher levels of openness to experience are more willing to settle abroad. These findings are in line with previous research (Canache et al. 2013; Jokela 2009; Jokela et al. 2008). On the other hand, this study finds that the other three
personality traits have nothing to do with individual attitudes toward emigration. Overall, the results lend some support to the relationships between personality traits and the intention to emigrate. Next, this study estimates another ordered logistic regression model that controls for several variables relevant to individual attitudes toward emigration. As seen in Model 2 of Table 2, emotional stability and openness to experience remain the only two personality traits that exert significant influence on the intention to emigrate after controlling for other explanatory variables. Likewise, it is found that higher levels of emotional stability would decrease individual willingness to emigrate, whereas higher levels of openness to experience would increase individual willingness to emigrate. To clearly demonstrate the substantive effects of emotional stability and openness to experience on individual attitudes toward emigration, this study further computes the predicted probabilities of the intention to emigrate varying by the levels of these two personality traits. When it comes to the effect of emotional stability on individual attitudes toward emigration, it is evident that as the level of emotional stability increases, the predicted probabilities of slight and strong willingness to emigrate decrease, whereas the predicted probabilities of slight and strong unwillingness to emigrate increase, as shown in Figure 5. Specifically, people with the highest score on emotional stability are 6.3 percentage-points more likely to be strongly unwilling to emigrate than those with the lowest score on emotional stability. Furthermore, it is a 6.7 percentage point difference in the predicted probability of strong willingness to emigrate between people who score the highest and those who score the lowest on emotional stability. In comparison with emotional stability, the effect of openness to experience on individual attitudes toward emigration appears to be more substantial. As displayed in Figure 6, with the increase of openness to experience, the predicted probabilities of slight and strong willingness to emigrate increase, but the predicted probabilities of slight and strong unwillingness to emigrate decrease. Particularly,
people with the highest score on openness to experience are 8.8 percentage-points more likely to be strongly willing to emigrate than those with the lowest score on agreeableness. More notably, the gap in the predicted probability of strong unwillingness to emigrate between people who score the highest and those who score the lowest on openness to experience increases to 10.5 percentage points. Overall, the results reveal that emotional stability and openness to experience play a role in the intention to emigrate and their substantive effects on individual attitudes toward emigration are not trivial.

[Table 3 about here]

[Figures 5 and 6 about here]

In addition to significant associations of emotional stability and openness to experience with individual attitudes toward emigration, this study also finds some key determinants of the intention to emigrate in Taiwan. First of all, the economic, social and political push factors for emigration matter. Specifically, working opportunity, quality of life, educational environment and political stability are the critical external factors driving Taiwanese people to settle abroad. Second, significant associations of personal income and social class with individual attitudes toward emigration imply that the socio-economic status of individuals predicts individual intention to emigrate in Taiwan. That is, people with higher levels of income and education are more willing to emigrate. Furthermore, people living in the northern part of Taiwan are more willing to emigrate compared to those living in the other areas of Taiwan, which indicates regional differences in the intention to emigrate. Finally, in line with prior research (Canache et al.2013), this study finds that as age increases, people would become less willing to emigrate probably because of health concerns and a greater sense of belonging.
Conclusion

International migration has been a common phenomenon in the era of globalization and various studies have been conducted to understand why people decide to move to another country. While external environmental factors affect individual intention to emigrate, this study aims to examine the role of dispositional (internal) factors in individual attitudes toward emigration. Given that past studies on the relationships between personality traits and individual attitudes toward emigration have mainly focused on non-Asian countries (Canache et al. 2013; Dalen et al. 2013; Jokela et al. 2008), this study pays particular attention to the effects of personality traits on individual intention to emigrate in Asia using the case of Taiwan. By utilizing the first-hand data in Taiwan, this study reveals that dispositional attributes come into play when it comes to individual attitudes toward emigration. Specifically, this study finds that two out of the Big Five personality traits – emotional stability and openness to experience – are significantly associated with individual attitudes toward emigration. That is, people who are higher on emotional stability are less willing to emigrate; by contrast, those who are higher on openness to experience would tend to have a strong willingness to emigrate. However, it is found that the other three personality traits – extraversion, agreeableness and conscientiousness – have no influence on individual attitudes toward emigration in Taiwan. To sum up, personality traits play some role in individual intention to emigrate. Given that individuals’ personality traits are determined in large part by heredity or their genetic makeup (Bouchard 2004; Eysenck 1960), it might be inferred that the likelihood of individual intention to emigrate is innately decided to some extent.

Of course, this study does not intend to overemphasize the role of personality in individual attitudes toward emigration. As demonstrated in this study, external environments in terms of political, economic and social situations either within an individual’s own country or abroad and
resources that an individual possesses such as money and education are also important determinants of the intention to emigrate. As a result, the findings of this study suggest that both dispositional and environmental factors matter for individual attitudes toward emigration.

This study simply addresses how personality traits affect individual attitudes toward emigration, but past studies have indicated that personality traits could also influence how people view immigrants (e.g., Dinesen et al. 2016; Gallego and Pardos-Prado 2014). Given that the number of migrant workers in Taiwan has been increasing, with an estimated population of 706,060 workers from foreign countries in 2019 (Everington 2019), it is required to understand the factors influencing Taiwanese people’s attitudes toward migrant workers or immigrants and personality traits might be able to provide some explanatory power. Therefore, this study calls for future research on the relationships between personality traits and individual attitudes toward immigration. On the other hand, this study does not discuss the mediation and moderation mechanisms that might exist for the relationships between personality traits and individual attitudes toward migration as demonstrated in previous studies on personality traits and political attitudes and behavior (e.g., Gallego and Oberski 2012; Wang 2014, 016). Thus, more scholarly efforts are needed to examine whether personality traits exert mediation or moderation effects on individual attitudes toward migration.
References


Table 1. Summary of Hypotheses

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<th>Personality traits</th>
<th>Migration Intention</th>
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<tr>
<td>Extraversion</td>
<td>+</td>
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<td>Agreeableness</td>
<td>−</td>
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<td>Conscientiousness</td>
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<td>Emotional stability</td>
<td>−</td>
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<td>Openness to experience</td>
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</tbody>
</table>

Note: “+” indicates positive influence; “−” indicates negative influence; “none” indicates no influence.

Table 2. Descriptive Statistics of Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>S.D.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude toward emigration</td>
<td>2.38</td>
<td>0.97</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Extraversion</td>
<td>8.34</td>
<td>3.27</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>10.53</td>
<td>2.14</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>10.98</td>
<td>2.37</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Emotional stability</td>
<td>9.26</td>
<td>2.93</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Openness to experience</td>
<td>10.11</td>
<td>2.63</td>
<td>2</td>
<td>14</td>
</tr>
</tbody>
</table>

**Push factors**
- Working opportunity: 0.28, 0.45, 0, 1
- Quality of life: 0.29, 0.46, 0, 1
- Educational environment: 0.12, 0.33, 0, 1
- Political stability: 0.12, 0.33, 0, 1

**Personal income**
- Less than NT$20,000: 0.17, 0.37, 0, 1
- NT$22,001-NT$40,000: 0.41, 0.49, 0, 1
- NT$40,001-NT$60,000: 0.21, 0.41, 0, 1
- NT$60,001-NT$80,000: 0.07, 0.26, 0, 1
- More than NT$80,000: 0.09, 0.28, 0, 1
- Social class: 2.66, 1.04, 1, 5
- North Taiwan: 0.31, 0.46, 0, 1
- College degree or above: 0.38, 0.49, 0, 1
- Female: 0.50, 0.50, 0, 1
- Age: 45.05, 15.62, 20, 90

N: 832
Table 3. Ordered Logistic Analysis of Individual Attitudes toward Emigration

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef. (S.E.)</td>
<td>O.R.</td>
</tr>
<tr>
<td>Extraversion</td>
<td>-0.002 (0.020)</td>
<td>0.998</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>-0.048 (0.032)</td>
<td>0.953</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>-0.039 (0.028)</td>
<td>0.962</td>
</tr>
<tr>
<td>Emotional stability</td>
<td>-0.068 ** (0.023)</td>
<td>0.934</td>
</tr>
<tr>
<td>Openness to experience</td>
<td>0.203 *** (0.026)</td>
<td>1.226</td>
</tr>
</tbody>
</table>

**Push factors**
- Working opportunity: 2.063 *** (0.226) 7.870
- Quality of life: 2.225 *** (0.225) 9.251
- Educational environment: 2.161 *** (0.265) 8.682
- Political stability: 1.494 *** (0.258) 4.454

**Personal income**
- Less than NT$20,000: 1.051 ** (0.382) 2.859
- NT$22,001-NT$40,000: 1.132 ** (0.370) 3.103
- NT$40,001-NT$60,000: 1.295 ** (0.382) 3.650
- NT$60,001-NT$80,000: 1.168 ** (0.431) 3.215
- More than NT$80,000: 0.914 * (0.417) 2.495
- Social class: 0.155 * (0.069) 1.167
- North Taiwan: 0.349 * (0.142) 1.417
- College degree or above: 0.315 * (0.156) 1.371
- Female: -0.165 (0.141) 0.848
- Age: -0.026 *** (0.006) 0.974

<table>
<thead>
<tr>
<th></th>
<th>Cutpoint 1</th>
<th>Cutpoint 2</th>
<th>Cutpoint 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>832</td>
<td>832</td>
<td></td>
</tr>
<tr>
<td>Likelihood ratio test</td>
<td>81.83 ***</td>
<td>346.96 ***</td>
<td></td>
</tr>
<tr>
<td>Pseudo $R^2$</td>
<td>0.04</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>-2×Log likelihood</td>
<td>2197.92</td>
<td>1932.79</td>
<td></td>
</tr>
</tbody>
</table>

Note: ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$. 
Figure 1. Individual Attitudes toward Emigration

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly willing</td>
<td>13.1%</td>
</tr>
<tr>
<td>Slightly willing</td>
<td>25.0%</td>
</tr>
<tr>
<td>Slightly unwilling</td>
<td>37.4%</td>
</tr>
<tr>
<td>Strongly unwilling</td>
<td>21.9%</td>
</tr>
<tr>
<td>No response</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Note: The number of observations is 1,229.

Figure 2. Correlations between Items for Big Five Personality Traits
Figure 3. The Number of Emigrants in Taiwan from 1991 to 2018

Data: National Statistics, R.O.C. (Taiwan).
Figure 4. The Net Migration Rate in Taiwan from 1991 to 2018

Data: National Statistics, R.O.C. (Taiwan).
Figure 5. The Effect of Emotional Stability on Individual Attitudes toward Emigration

Figure 6. The Effect of Openness to Experience on Individual Attitudes toward Emigration