

How to gain brain for Suriname

by

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Abstract:

This paper investigates whether high skilled migrants of Surinamese origin would be willing to return to the home country if they were offered a remigration benefits package. We surveyed 209 highly educated individuals of Surinamese origin who live in the Netherlands. A quarter of them is willing to return to Suriname if they were offered a house, land property, and easy access to credit. Eliminating political interference in profession would even attract the majority. The willingness to accept the offer diminishes over time. The offer mostly attracts engineers to return to Suriname. Offering funds for research and innovation attracts health professionals as well. We also explore some other proposals and discuss the policy implications.

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Keywords: migration policy, return migration, brain drain, brain gain, high skilled, tertiary education.

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1. Introduction

Acknowledging the importance of high skilled workers for a nation's welfare and economic development, global competition for enticing the best and the brightest the last two decades has increased. Whilst many OECD countries have taken several measures to facilitate high skilled immigrant workers in their countries with emerging countries such as China, India and South Africa following their footsteps, developing countries, the greatest sufferers of brain drain, in general have remained passive. Political debate on facilitating Surinamese diaspora has started only recently (Government of Suriname, 2012). In 2014 the National Assembly of Suriname passed the PSA act¹, with the aim to strengthen the bond between Surinamese in diaspora and Surinamese in the home country² by providing the Card of Origin (PSA card) to the foreigners of Surinamese origin. Holders of this card³ are allowed to stay in Suriname for six months and to work in Suriname without a permit. Although this is a stepping stone to ease access to Suriname, legislation or policies aimed at attracting the high skilled migrants of Surinamese origin are absent.

Governments in general follow two strategies to attract the highly skilled. The first one is easing the access through law making and the second is actively recruiting the high skilled by facilitating them and offering them enticing packages, such as housing, subsidies and higher salaries. The diaspora option, encouraging knowledge transfers between the non-residents and residents of the home country, is another option that many countries follow. The amount of physical presence and face-to-face contact in the latter case might not be sufficient to attain the desired level of development in the home country (Mahroum et al., 2006).

The world's best and brightest are drawn towards advanced economies, in particular because of education and career opportunities, technological progress, higher income, and good life quality. Inasmuch as these virtues are scant in developing countries, governments here should try harder to entice the high skilled expatriates⁴ to their country rather than only offering them a Card of Origin.

¹ PSA stands for Personen van Surinaamse Afkomst and means: Persons of Surinamese origin.

² In this paper Suriname is referred to as the home country or country of origin and the Netherlands as the host country or destination country.

³ The extension of the stay duration is possible in Suriname itself. The fee for the card is €100 for Europeans US\$120 for other citizens of other countries. The card is valid for five years.

⁴ We use the terms Surinamese in diaspora, migrants of Surinamese origin, Surinamese expatriates or Surinamese in diaspora interchangeably and all these terms refer to individuals who were grown up in Suriname and migrated to a foreign country at a later point in time.

This paper studies the feasibility of one attempt to do so by Suriname. We base our proposed policy on the incentive policies that South Korea introduced in the 1960's, and on similar policies of other Asian countries. Previous research (Dulam & Franses, 2014, forthcoming) has shown that high skilled migrants are drawn towards Suriname because of the family members living there, pleasant weather conditions and the willingness to own property in the country of origin. They are pushed away mainly because of better work environment, education and career opportunities, and higher salaries abroad. The main areas of improvement needed to attract Surinamese migrants are: adequate work environments and salaries, and the improvement of the quality of higher education, including research and development and technological advancement, and facilitating household members along with the returning migrant (Dulam & Franses, forthcoming). Regarding these areas of improvement we surveyed high skilled migrants of Surinamese origin living in the Netherlands to measure the potential of some policy measures. Because of the strong historical and cultural ties Suriname has with the Netherlands we restrict our research group to residents of the Netherlands who are of Surinamese origin.

2. Literature review

Educated and skilled labour, also referred to as human capital, is the key element to foster economic growth. Without it, the other two elements, capital investments and technological advancement, would have been inconceivable. Advanced economies offer world class education and attract the best and brightest from all over the world. The human capital formation of migrants then benefits the destination countries. Home countries may benefit through return migration of the highly skilled or through diaspora networks. Many countries have put up special schemes to actively recruit skilled expatriates (brain gain) and/or to foster diaspora networks (brain circulation).

South Korea experienced severe brain drain in the past. It was estimated that 80 to 90 percent of Korean students, scientist and engineers emigrated in the early 1960's, especially to the United States of America (Yoon, 1992). In 1966 the government of South Korea, under President Chung-Hee Park, systematically started to repatriate their skilled nationals by establishing the KIST (Korea Institute of Science and Technology) and by making large investments in the industrialization sector. Additionally, the government offered the returning scientists and engineers a package of material benefits, which included relocation costs (e.g. travel costs; also for the immediate family members), luxurious housing for free, subsidies for

the education of their children, and subsidies for local transport (Yoon, 1992). The government also made large funds available for the KIST research projects on industrial innovation (Saxenian, 2005). Following the government, private companies also started to recruit Korean expatriates by especially offering them low interest (even no-interest) long term loans.

Some other countries followed similar strategies. The upswing of Bangalore and Hyderabad as hi tech cities in India in the 1990's attracted skilled Indians from abroad. But the state also offered them incentives such as tax rebates, upscale residential communities, financial support in establishing business, and high salaries (Chacko, 2007; Khadria, 2004).

To attract outstanding scholars, China set up the 100 Talents Program in 1994. The initial goal of this program was to recruit 100 outstanding scholars by the end of the 20th century. The program, which continues today, offered scholars a chance to win 2 million Chinese Yuan (around 300,000 US dollars). Winners also received “new housing, a new laboratory, imported equipment, and a research team composed of graduate students and talented research staff with a home-based PhD” (UNDP, 2007, p. 9). The returnees were also offered professorship at universities in China notwithstanding their position overseas (UNDP, 2007). Other incentives provided by the Chinese government are: “housing discounts, imported cars, computers, free office or factory floor space, jobs for wives, special schools for the children, and residence permits for foreign passport holders, which allows them to come and go freely, without having to relinquish their foreign citizenship” (UNDP, 2007, p. 9). Another program in China is the Yangtze River Scholar Scheme and the One-Thousand-Talents program (Gafner & Loehr, 2010). In this program individuals with a “full professorship or the equivalent in developed countries” are offered one million Chinese Yuan (around at 150,000 US dollars) to work in home country.

The establishment of the Hsinchu Science Park in Taiwan in 1980 attracted high technological companies and skilled return migrants. Low interest loans, income tax breaks, renewed R&D equipment, and low cost land, were among the financial incentives given to high skilled return migrants (UNDP, 2007). However according to Saxenian (2005) large investments in the capital venture industry were necessary to bridge the gap between highly skilled return migration and economic development when the Hsinchu science park experienced slow growth.

Malaysia's government likewise provides an incentive package to their returning nationals. The package includes tax relief on personal properties, education incentives for the migrants' children and permanent residency or citizenship including for the spouse and children (UNDP, 2007). Usually the spouse of the expatriate is also highly educated and in

employment abroad, which is why it is important to make work permits available for both spouses in the home country (Papademetriou and Sumption, 2013).

The pitfall of facilitating returning migrants generously is that non-migrants may feel discriminated or that they would also may want to emigrate in order to enjoy the benefits of return migration. To avert the first dilemma it is important to inform the nation's citizens of the advantages of skilled migration and what the deliberations behind the return migration policies are. Secondly, if the recruitment policy encourages others to emigrate as well, the home country will benefit from higher skilled returning migrants. Moreover the government can limit the generous return migration packages only to the best and the brightest, who may (such as the 100 Talents program) win remigration packages on the basis of the most innovative ideas on research and development. Furthermore it is expected that the presence of highly skilled workers will create positive externalities (e.g. improvement in education, health, industrial sector) which will be to the benefit of the whole population of Suriname.

3. Migration policies of Suriname and the Netherlands

The relationship between Suriname and the Netherlands dates back to 1667 with the acquisition of Suriname from the British by the Dutch naval commander Abraham Crijnssen. Yet the Surinamese citizenship originated 40 years ago on the Independence Day, the 25th of November 1975. Suriname and the Netherlands signed the "Toescheidingsovereenkomst", a convention which regulated the citizenship of the residents from Suriname on this day. Article 5, sub 2, stipulated that Dutch citizens of Surinamese origin may return to Suriname at any point in time, that this group would be treated equally as Surinamese, and that by residing for two years in Suriname they would be granted the Surinamese citizenship. This last clause implied the renunciation of the Dutch citizenship. As the citizens risked becoming stateless, since the second half of the 1980's the second sub of article 5 was no longer used by neither governments (Staten-Generaal, 1995). In 1994 this clause was withdrawn from the convention to much disgruntlement of the Association of Surinamese Dutch (Vereniging van Surinaamse Nederlanders, abbreviated as the VSN). The VSN surmised that this article would have provided Surinamese diaspora easier access and facilitation, such as land property entitlements, to live in Suriname (VSN & SP, 2009). Since 1980 citizens of both countries are required a visa to enter each country's territory (Tractatenblad van het Koninkrijk der Nederlanden, 1980). As of 25 November 2011 the visa to enter Suriname for the purpose of family or tourist visit has been replaced by the Tourist card, which can be bought without much ado at the

Schiphol airport for 25 US\$ or 20 Euro's. A visa is still required for visits with other purposes. In 2014 the Surinamese parliament enacted the PSA law enabling foreigners of Surinamese origin to enter Suriname without a visa and/or a work permit⁵.

Meanwhile the parliament of Suriname reckons to grant foreigners of Surinamese origin who are considered to be of national interest the country's citizenship. When adopted, the new bill "Wet aanstelling personen om redenen van staatsbelang" may result in double citizenship for a specific individuals of Surinamese origin (Surinaamse Voetbal Bond, 2014; Starnieuws, 2014). Although the bill might also be applied to high skilled persons, it is primarily aimed at attracting Dutch professional footballers to play the World Championship for Suriname⁶ in the future. As for the rest no particular policy or law has been adopted to attract highly skilled migrants to Suriname.

The Netherlands on the other hand encourages the entrance of high skilled migrants and researchers from around the world in several ways. Since 2004 a high skilled immigrant, defined as an individual with a minimum gross year income of €46,541 (or €34,130 if younger than 30 years) who obtained a work contract with an employer in the Netherlands, may enter the Netherlands without a work permit. Under a fast procedure the Dutch Immigration Naturalisation Service (IND) grants high skilled migrants a residence permit within 2 weeks (which normally may take to 2 months) and the migrants' immediate family members may come along. Moreover the income criterion does not apply to individuals who have a PhD or postdoctoral position at a research or education institute (OECD, 2008). The Netherlands Organisation for Scientific Research, the government's institution in charge with the implementation of policies regarding the movement of researchers, provides support to international researchers. The support includes facilities, subsidies (such as the Visitors Travel Grant to finance to foreign researchers' stay in the Netherlands), and social and cultural support (such informing and guidance through internet) for international researchers. Furthermore under the 'zoekjaar afgestudeerde' and the 'regeling hoogopgeleiden' arrangements international students and graduates are allowed to look for a job in the Netherlands for a whole year after obtaining tertiary education in the country (Nuffic, 2013).

⁵ A decree of 1984 already stated that foreigners of Surinamese origin did not need to apply for a work permit to work in Suriname (Decreet Werkvergunning Vreemdelingen, 1981).

⁶ This draft bill is quite disputable as accepting the Surinamese citizenship might result in the relinquishment of the Dutch citizenship according to the Dutch jurisdiction (Brinkman, 2015).

4. Skilled labour shortage in Suriname

The last three censuses of Suriname were held in 1980, 2004 and in 2012. According to the 2012 census only 6% of the population of Suriname (of 15 years and older) is highly educated⁷ (ABS, 2013), compared with 5% in 2004 and 4% in 1980 (see Appendix). By comparison this percentage was 28% for the Netherlands in 2012 (cbs.nl).

In 1980 there were 178 doctorate degree holders in Suriname (ABS, 1980). Although this statistic cannot be found in the later censuses, anecdotal evidence suggests that the current number of doctorates in the country is much lower. The estimate for the number of lecturers with a doctorate degree at the university of Suriname anno 2015 is around 20, which is less than 10% of the total number of university lecturers. In 2013 the Faculty of Social Sciences of the University of Suriname only had 12 doctorates (Leeuwin, 2013), while the university had much more professors and doctorate degree holders in the past (see for example Werners (1995), Oostburg (1995), and Sedney (2005)).

Recent information on the supply and demand of skilled labour in Suriname is not available. An extensive study was carried out in the early 1990's by Stichting Planbureau Suriname and in 2002 by Jack Menke. According to Stichting Planbureau Suriname (1996) in the period 1980-1995, 40% of the highly educated civil servants, 20% of the medical specialists, and 43% of the trained teachers of Suriname left the country. Brain drain entails skilled labour shortage in the home country. Using robust econometric analysis Ooft (2012) found that the university graduation ratio⁸ of Suriname did not have a significant effect on its economic growth. One explanation might be that emigration has a negative effect on the graduation rate of the university (Dulam & Franses, 2015).

Menke (2002) surveyed 186 companies and organizations of Suriname to assess their need for high skilled labour. 42.5% expressed their need for high skilled labour. The average number of needed skilled personnel was 3.5 per institution while 13% of the institutions needed 5 or more skilled personnel. The most demanded were occupations in economics and management (42% for companies and 23% for NGO's, the government and the university). 17% needed technical skilled labour (19% of the private sector and 10% of the non-private sector). 11% needed biological or medical skilled labour and 26% needed skilled labour in social sciences.

⁷ A highly educated individual here is defined as an individual who has completed university of higher vocational education (in Dutch: Hoger Beroeps Onderwijs (HBO)).

⁸ The university graduation ratio in this thesis was the number of yearly graduates divided by the tertiary schooling population.

According to the health sector plan 2011-2018 of Suriname (Ministry of Public Health, 2011, p. 68) there is shortage of certain medical specialists (anaesthesiologist, surgeons and specialists in disciplines such as trauma, infectious diseases or geriatrics). The report states (2011, p. 69): “The loss of skilled labour due to out-migration has been significant, with the Netherlands remaining the preferred destination. The external migration of skilled professionals is affecting several sectors of the society, particularly health and education, resulting in acute shortages of human resources and the deterioration of some public services.” The report also acknowledges that human resource training in the health sector is deficient as there is “no strategic health manpower planning or dialogue between the supply (the university) and the demand side (Ministry of Health)”. The medical faculty of the university admits only 30 students per year. According to Marthelise Eersel, the executive director of the Ministry of Public Health of Suriname, there is a shortage of medical specialists. The emergency room of one of the hospitals needs 25 medical doctors and 60 medical specialists. The shortage is temporary filled in by physicians from the Philippines and the Netherlands (Pinas-Agodeba, 2015). Skilled labour shortage is also present in the oil and mining sector (Country Intelligence Unit, 2012). In present day the need for recruitment policies to attract the highly skilled has become indispensable.

5. Methodology

5.1 Subjects for study

To measure the potential of policies to reverse brain drain we carried out an online survey, entitled: Brain gain policy survey. Our population consisted of individuals of Surinamese origin who completed secondary education (high school) between 1976 and 2006 in Suriname, have at least some tertiary education, and now live in the Netherlands. In the first week of February 2015 we pretested the survey. After some corrections we distributed the survey in the second week. We were able to track down around 700 former high school students of Suriname. At first our target group was to survey the former top students. We sent the survey to the 110 former top students who also took part in our previous survey (Dulam & Franses, 2014, forthcoming). After two weeks this group received a reminder to fill in the survey. The response was 46, a rather high response rate but not in absolute terms. Hence we expanded the target group to not only former top students, but simply to former students who graduated from a high

school in Suriname. We invited⁹ additionally 600 individuals to take part in the survey. Some respondents disseminated the survey in their network, though it was not possible to assess the exact number of eligible invitees. In the end we received a response rate of 209.

5.2 Survey design

The survey includes questions on the background characteristics of the respondents. These are: gender, age, migration duration, ethnicity, education level, country of birth, citizenship, occupation, whether the respondent has a partner and/or children, and the main migration motive. Table 1 presents the relative frequencies for the categorical variables and Table 2 the descriptive statistics for the quantitative variables.

The most important questions in the survey are:

Offer 1:

“Imagine that the government of Suriname offered you a luxurious house in a gated community in Greater-Paramaribo (capital) or in the surrounding area, full education subsidies for your children up to and including high school in Suriname (with the option to choose between the Surinamese education system or the Dutch one), and parental care for your or your spouse’s parents, would you return to Suriname?”

Offer 2:

“Imagine that in addition to the previous offer the government would provide you free land (1600 square meters) in Greater-Paramaribo or in the surrounding area, a mortgage of up to 80,000 (eighty thousand) EURO’s with an interest rate of up to 7%, would you return to Suriname?”

The answering options for these questions were at ordinal level, namely: 1) no, I do not want to return at all, 2) no, these provisions are not appropriate, 3) maybe, 4) yes, I would definitely return then, 5) I want to return, but these provisions are not necessary for me, and 6) other opinion. With hindsight the latter two options did not fit between the rest of the ordinal

⁹ In the third week of February 2015 the majority of the target group received an invitation to accept a friendly request to fill in a survey on the social network website: LinkedIn. In one month around 200 individuals accepted the request.

categories and hence were excluded from the forthcoming regression analysis, thus reducing the number of observations.

Apart from these we included a set of 11 propositions where on a 7 point scale respondents could indicate the extent to which certain provisions offered by the government would be decisive for them to return. Preceding these and the earlier mentioned two questions we asked the respondents on a 5 point scale how important several aspects were for them in order to return to Suriname. Table 3 contains the relative frequencies for these perceptions. Table 4 and Table 5 respectively present the willingness to accept the offers and the extent that certain proposals might be decisive for the migrants to return.

Next we added questions to assess whether respondents are acquainted with the PSA law that was enacted in 2014 in Suriname. Since Suriname's independence from the Netherlands in 1975, this is the first time a law was passed with the purpose to ease migration flows from the Netherlands to Suriname. Furthermore the survey contains questions on how much and what kind of contact the skilled migrant has with the residents of the home country. Analogous to Gibson and McKenzie (2010) we included a set of 19 polar questions about whether respondents are involved in certain activities connected with Suriname, and a set of 7 open questions for respondents to indicate the value of the activities concerning money transfers. Our purpose with these questions is to measure the extent of diaspora networking and brain circulation (i.e. knowledge and other transfers from the destination to the home country) between the residents of the two countries. Table 6 presents the survey results concerning these activities.

5.3 Data-collection method

Every year the names of the graduates from the high schools of Suriname are published in the local newspapers. To construct our sampling frame, that is, the names of high school graduates of Suriname between 1976 and 2006, we made use of newspaper archives, the internet and a commemorative book. The forty years commemorative book of Mr. Dr. J.C. de Miranda Lyceum contains all the names of their graduates in the period 1976-2006.

As full names were not always available in the newspapers, we also made use of social network websites (mostly LinkedIn and Facebook). LinkedIn members often publish their curriculum vitae on the website, including the name of the high school and university they attended, and the name of the country and city they currently live in. LinkedIn groups related to Suriname were useful as well in our exploration for more names.

Using the internet we managed to trace back at least a third of the former high school graduates. Most of them were on LinkedIn and Facebook. To take part in the ‘Brain gain policy’ online survey at Thesistools.com, we invited the former high school students of Suriname, who continued their tertiary education and currently live in the Netherlands¹⁰,

5.4 Ethics of research design

We first explained the research goal to the survey invitee and asked whether s(he) would be willing to fill in the survey. Furthermore we ensured the respondents that the survey data will be held confidential. After the data collection all identifiable information was removed to safeguard the privacy of the respondents.

6. Results

6.1 Background of the respondents

We managed to survey 209 high skilled migrants of which 51% is female and 49% male. In terms of age, ethnicity, and education, the sample seems representative (see Table 1). 7% of the respondents are Chinese, 16% Creole, 37% Mixed (Multiracial), 35% Hindustani, 2% Javanese, and the rest (mostly Caucasian) 2%. We compare the ethnicity distribution with population data. Although the ethnicity distribution of tertiary educated Dutch citizens with a Surinamese background is not available, using the municipalities’ registers¹¹ Oudhof & Harmsen (2011, p. 51) assessed the ethnicities of individuals from the younger age group (25-35 years) and using the surnames they assessed the ethnicities of individuals from the older age group (45-55 years). The sample distribution does not differ much from the population distribution¹², except that the percentage for Creoles in the population is much higher (43%), which is not odd as in general many Creoles are also considered Mixed or vice versa. Furthermore we were unable to survey Maroons, but the percentage of this group in the population is very low (2.4%).

¹⁰ Around one in the fifteen traced former high school graduates live in North America and one in the thirty live in the Netherlands Antilles. A few live in Singapore.

¹¹ Gemeentelijk Basisregister (GBA)

¹² The population distribution of ethnicity was: 6.2% Chinese, 43.4% Creole, 38.5% Hindustani, 5.3% Javanese, 2.3% Maroons, 2.2% other ethnicity, and 2% unknown.

All respondents have at least some tertiary education. 95% of the respondents has completed their tertiary education. The Erasmus University Rotterdam and Technical University Delft are the most preferred universities (see Figure 1). We surveyed engineers, medical doctors, business managers, consultants, and other professionals (see Figure 2). Their net-income ranges between 1000 and 22000 Euro's per month. The average net-income is 3680 Euro's per month (N=159; standard deviation=2433), while the median income is 3000 Euro's (Table 2).

77% of the skilled migrants was born in Suriname, of which 87% now has the citizenship of the Netherlands. 82% of the respondents live in an owner-occupied house ('koopwoning'), while 18% live in a rented house. Almost half of the respondents live with their partner and children in the house. Only one or two respondents have their parents living with them.

The main reason to go to the Netherlands was for studying purposes. 86% of the respondents went to the Netherlands to study. Some 6% emigrated because their parents or partner moved to the Netherlands. Around 5% left because of the political situation in the 80's in Suriname¹³. Some also left because the University of Suriname was closed for one year after the December murders in 1982.

6.2 Response to the first and second offer

The main goal of the survey was to find out whether the high skilled migrants would be willing to return to Suriname if they were offered hypothetically a remigration package. As explained in section 5.2, there were two main offers proposed. The results to these questions are in Table 4. Firstly, if the government of Suriname offered the high skilled migrants, a luxurious house in a gated community, education subsidies for their children and parental care for accompanying parents (offer 1), then 22% of them would definitely want to return to the home country. 39% indicated that they would possibly accept the offer and thus return. This implies that the majority of the respondents perceived the first offer as a reasonable offer. 12% does not want to return at all. 11% of the respondents indicated that this offer is not appropriate. Their return decision depends more on broader social, economic, and political factors and for

¹³ Military coup led by the Desi Bouterse on 25th February 1980, followed by protests and the closing of the university in 1981 and the murders of 15 prominent Surinamese (most of them highly educated) on 8-9 December 1982.

some their career opportunities. 12% indicated that they do want to return, but that the offer was not needed for them to make them return.

Secondly, if additional to the first offer the government offered the high skilled migrants a piece of land (of 1600 square meters) in Greater-Paramaribo or in the surrounding area, and a mortgage of up to 80,000 (eighty thousand) EURO's with an interest rate of up to 7% (offer 2), then 18% of them would definitely want to return to Suriname. 38% indicated to possibly accept the offer. We see here similar responses as to the first offer. However the second offer seems less appealing than the first one. An interest rate of 7% in the present day might seem too high for Europeans, but in Suriname this is the lowest interest rate and is applied to social groups.

6.3 Response to the remaining proposals

Here we briefly analyse how the respondents perceived the 11 separate proposals. We assessed whether certain provisions offered by the government would be decisive for the migrants to return Suriname (see Table 5).

A quarter of the respondents would be willing to return if the government offered the respondents luxurious housing, land property, easy access to mortgage, or education subsidies for the children's education. Around 20% would return if the government offered funds for research and innovation, or if salaries paid in Suriname were at least 70% higher than what non-migrants would normally earn. However the most important action that the government of Suriname could take would neither cost the country money nor time: if the government could guarantee that no political interference would take place in performing one's job the majority (55%) of the high skilled migrants would return to Suriname.

When adding up the last three answering categories (last three columns of Table 5) we observe that with respect to luxurious housing in a safe environment, land property, mortgage, and funds for research and innovation attract the majority to Suriname. That is around 100 high skilled return migrants. Guaranteeing that no political interference would occur when doing one's job, even 71% might return. Paying the travelling and relocation costs for the skilled migrants and their close family members, and parental care, are not very important in the return decisions of the majority.

6.4 Other conditions

We asked the respondents the open-ended question which other conditions were necessary in order to return to their home country Suriname. One respondent wrote: "for me progressiveness in the field of technology and education for the entire population is much more important than privileges for highly skilled returnees". Career opportunities are one of the most important elements to consider (in our survey for 92% of the respondents). The same applies for the life partner of the migrant as most of the time the life partner is also highly educated. Available post-graduate education and public transport for the children to attend school were also among the recommendations made by the respondents.

The highly educated migrants also relate the possibility of their return to prospective assurances, such as accumulated pension and adequate health insurance. Referring to local news about health care in Suriname, one respondent stated: "I must not think about getting sick in Suriname". The hospitals in Suriname alarmed the government in March 2015 that it could no longer pay its bills and that certain basic drugs were not available (Starnieuws, 2015). Optimal health is one of the basic necessities for many high skilled migrants. The same applies to safety and security, that is, crime prevention as well as traffic safety. The quality improvement of the health sector is important for 90% of the respondents when considering return migration and almost everyone indicated that a safe living environment is important.

Although no questions were asked about political or ideological beliefs, some respondents remarked that due to his past, the incumbent President of Suriname, D. Bouterse, is not the appropriate person to represent Suriname internationally.

With respect to the corruption perception index Transparency International ranks Suriname on the 100th place among a list of 175 countries and territories. While the Netherlands is among the top 10 (8th place). Unsurprisingly respondents also mention the fight against corruption as an important condition. One respondent was also concerned about the deforestation and the negative implications of gold mining in the interior of Suriname.

"Moving to a country like Suriname and not prepared to compromise, stay rather where you are", according to one opinion. The highly skilled migrants are aware that their compatriots may not be excited to welcome them and that creating beneficial packages for the remigrants might create animosity between the two groups. Yet some respondents do not see this as problematic. The highly skilled migrants may bring a wealth of knowledge and experience along as they have been working for years in a well organised work environment, which may benefit the home country as a whole. Surinamese in diaspora can also make use of their network

in the Netherlands to bring positive change in Suriname. Hence both groups (Surinamese in diaspora and Surinamese) can support each other in favour of the development of Suriname, but the will and acceptance of both groups is essential.

To avoid falling prey to cronyism, political interference and bureaucracy, one respondent remarked that government interference in remigration should be avoided at all and that the government should instead support the private sector to ease the recruitment of the high skilled. Apart from the material benefits, immaterial virtues are also decisive for return migration. Attracting high skilled migrants to Suriname might succeed when the rule of law is strong in the home country.

6.5 Brain circulation

Brain circulation refers to the circulation of knowledge between the expatriates and the home country's citizens through short visits or via digital communication. For instance Indian and Chinese immigrants working in Silicon Valley, who make up a quarter of the scientist and engineers in that region, temporarily return home to establish business relationships, invest, transfer knowledge, to promote technology, or to serve as policy advisors to the government (Saxenian, 2005).

Table 6 gives an overview of the activities connected with Suriname in which the respondents are involved. Only 3% of the respondents never went back to Suriname. 42% (N=201) visits the country at least once a year and 30% once every two years. 11% of the skilled migrants travelled to Suriname for their work. 58% travelled for other reasons, most probably to visit family or for holidays. On average the holiday lasts three weeks.

A quarter of the respondents took part in congresses organized by the Surinamese in diaspora in the Netherlands, which demonstrates their interest in Suriname. 16% took part in events or congresses organized in Suriname. Furthermore, 22% of the respondents advised Surinamese about studying abroad, especially in the Netherlands, and 20% advised Surinamese about working in the Netherlands or abroad.

To attract foreigners of Surinamese origin, the government of Suriname introduced the PSA card in 2014. 24% of the skilled migrants is not acquainted with the card at all, while 35% has heard about it, but is not acquainted with it. No one yet holds the PSA card. Only 20% of the Dutch citizens of Surinamese origin intends to apply for the card, while the rest neither holds the card nor intends to apply for it. When asked whether the respondent believes that the PSA card brings extra opportunities for Suriname, a quarter of the skilled migrants responded

positive. Easier access to the home country is the most prevalent advantage that was stated. Some wrote that access to acquiring land property may become easier and that working in Suriname or exchanging knowledge (consulting and education) may become easier. The majority (58%) however did not believe that the PSA card may bring opportunities for Suriname.

6.6 Financial flows

The home country can benefit from remittances or foreign investments sent by its expatriates (Mahroum et al, 2006). In this section we briefly discuss the financial flows from Surinamese in diaspora to the home country.

In last 12 months 27% of the respondents remitted money to their family and acquaintances in Suriname and 40% sent in kind remittances. The total value of the remittances for the 42 respondents who reported on this was 134,000 Euro's for the last 12 months. Excluding the outliers, the mean amount sent per person was 1418 Euro's and the median amount was 1000 Euro's¹⁴. According to a survey held by Unger and Siegel (2006) among 100 Surinamese living in de capital city, most of persons received remittances up to 500 Euro's per year. Our survey results indicate that as theory predicts (Beine et al., 2006) high skilled migrants remit more than what normally would be the case. The total value of the goods sent for the 64 persons reported on this was 59,000 Euro's. Excluding the outliers, the mean value of the goods sent was around 320 Euro's per person for one year. The median value was 200 Euro's. Although sending goods instead of money is more common, the mean value of the money sent is 4 times the value of the goods.

The majority of the respondents (88%) buys Surinamese foods and goods in the Netherlands. The total amount spent on this in one year is 52,000 Euro's; on average 430 Euro's per person per year. 10% of the respondents ordered goods from Suriname. Involvement in business with Suriname is rather low. 13% of the respondents exports goods to Suriname, whereas only 4% invested in a business start-up in Suriname or helped a Surinamese business to make a trade deal. The total value of the goods exported to Suriname was 12,400 Euro's for 22 respondents who reported on this question, and the total value of the trade deals was 2,077,500 Euro's.

¹⁴ Unger and Siegel (2006) did an extensive study about the amount of remittances Surinamese receive from abroad.

13% of the respondents helped Surinamese financially to work or study in the Netherlands. The value of the financial help ranges from mostly 500 to 12000 Euro's. Excluding the outliers, the average is around 1300 Euro's per person per year.

7. Determinants willingness to accept return migration offer

7.1 Modelling the willingness to accept the offers or proposals

In this section we discuss which type of skilled migrants are attracted towards which brain gain policy. As the policy variables are measured on ordinal scale we turned to the ordered probit regression model technique (Franses & Paap, 2001). Güngör and Tansel (2006) performed this technique to assess the determinants of the return intention of Turkey's students residing abroad.

Regarding the first and second offer the 4 point scale was recoded to a 3 point scale, where 1 and 2 were categorized as 1, that is, not attracted to the offer (respondents basically says no to the offer), 2 indicates that the respondent might take on the offer but is not certain, and 3 means that the respondent is willing to accept the offer. The 7 point scale proposals were scaled down from 1 to 3, where 1 indicates that the migrant did not perceive the proposal as to be decisive for his/her return, 2 indicates that it is possibly decisive, and 3 indicates that the migrant perceived the proposal as to be decisive for his/her return.

We construct our model as:

$$Y_i^* = X_i' \beta + \varepsilon_i,$$

where Y_i^* is the unobserved willingness to accept the hypothetical offer of the government. X_i' represents a vector of indicators for the background characteristics, the affinity or connectedness the migrants have with Suriname, and how much importance migrants attach to certain provisions in Suriname. β is a vector of parameters that needs to be estimated in order to assess to factors associated with the willingness to accept the offer, and ε_i is the error term with a variance set equal to 1 (Franses & Paap, 2001, p. 116).

As Y^* is an unobserved continuous variable, while we observe Y (the dependent variable) in discrete form, we have to make use of threshold parameters to model Y :

$$Y_i = \begin{cases} 1 & \text{if } \alpha_0 < Y_i^* \leq \alpha_1 \\ 2 & \text{if } \alpha_1 < Y_i^* \leq \alpha_2 \\ 3 & \text{if } \alpha_2 < Y_i^* \leq \alpha_3 \end{cases}$$

As is usual, we set $\alpha_0 = -\infty$ and $\alpha_3 = +\infty$. We focus on identifying the determinants of the willingness to accept Offer 1 and Offer 2, and on proposals that did not coincide with the offers and that were received well by the majority of the sample. These were the willingness to return if: 1) the government would provide funds for research and innovation (proposal 5), 2) the government would guarantee that no political interference would occur in performing one's job (proposal 11), and 3) salaries paid in Suriname should at least be 70% higher than what normally would be paid to a non-migrant (proposal 3). The independent variables can be categorized in three groups:

1. Background characteristics. These are: the migration duration, gender, living alone or with partner and/or children, ethnicity, the educational degree, and the initial migration motive.
2. The affinity or connectedness with the home country. The indicators here are: sent remittances, contact with the home country, financial help or advice provided to citizens of the home country, the perception about the PSA card.
3. The extent of importance attached to several provisions in Suriname when considering return migration. Examples are the importance of land or house ownership in Suriname, higher salaries paid to returning migrants, research funding, higher quality of the University of Suriname, easy access to credit. The importance was measured on a five point scale: where 1 = not important at all, 2 = not important, 3 = neutral, 4 = important, and 5 = very important. Analogously to GÜNGÖR and TANSEL (2006) the so-called importance variables were transformed to indicator variables, where 4 and 5 were coded as 1 (important) and 1, 2, and 3 were coded as 0 (not important).

7.2 Determinants willingness to accept offer 1 and offer 2

We first focus on the offer containing the most migration benefits: a luxurious house in a gated community, parental care, education subsidies for the children up until high school, a piece of land, and a mortgage (Offer 2). These facilities should make it possible for migrants to start their life almost immediately upon return to Suriname. Using Eviews we applied the ordered

probit regression to identify the determinants of this offer, that is, we want to know which kind of respondents are more willing to accept this offer so that they would return to Suriname.

Table 7 presents the regression results. The Pseudo R-squared to predict Offer 1 is 0.18, and 0.24 for Offer 2. The LR statistic is for both regressions significant at the 1% level. Regarding the first regression we can predict respectively 58% and 59% of the observations correctly. The model seems to fit the data well.

Using the results of column 2 of Table 7 we estimated the probability that the high skilled migrant would be willing to take on Offer 2. To do this we filled in the value 1 for the significant indicator variables, the mean value for the significant quantitative variables, and the insignificant parameters are set equal to 0. In Figure 3 the probability to accept the offer is given for migrants who have an MSc degree in technical science, have affinity with Suriname, and who perceive several provisions to be important when considering return migration. The migration duration and the ethnicity are held variable here. The willingness to accept Offer 2 decreases as the migrants stays longer in the Netherlands.

The three largest ethnic groups of Surinamese origin are significantly more likely to accept Offer 2 than the reference group which is made up of the minority ethnic groups of Surinamese origin (Javanese, Chinese, and Caucasians). Given that the other factors remain constant, the probability to take on offer 2 and return between 1 and 5 years after emigration is on average 27% for the Multiracials, 25% for the Hindustanis, 18% for Creoles and only 4% for an individual from a minority ethnic group.

The migration duration negatively affects the willingness to accept the offer (offer 2, which includes offer 1). In column 2 the coefficient is significant at the 10% level. Age and migration were highly correlated (see Table 9). Older migrants may have resided for a longer period in the Netherlands, and hence may have become settled there. This result is in accordance with several other studies, such as Güngör and Tansel's study (2006). From Table 9 it is evident that most of the migrants went to the Netherlands in their early twenties, which is not odd as this is the age for starting tertiary education and as indicated earlier: education was the main motive for the majority of respondents.

Offer 1 in particular attracts MSc. degree holders in social science and in technical science (Table 7), which implies that offer 1 triggers a positive selection of return migrants. These may include professionals in the field of management, business and economics, lawyers, and engineers. At the 5% significance level and holding other factors constant we observe that MSc degree holders in technical sciences are significantly more likely to take on Offer 2 than migrants with a BSc or vocational degree (or those with unfinished studies). For instance the

probability to accept the offer between 1 and 5 years after emigration is around 17% higher for Multi-racials who have an MSc degree in technical science than those who do not have this degree.

High skilled migrants who consider it to be important to own a piece of land and to earn higher salaries in Suriname are significantly more willing to accept the offers than migrants who do not consider these aspects to be important. The majority of the respondents considers these provisions important in their return migration decision.

Skilled migrants who have some affinity or connectedness with Suriname are also more likely to accept this offer. Migrants who have more contact with their family in Suriname and/or who send remittances to the home country exhibit a higher probability to accept the offer. However, individuals who travel often (at least once a year) to Suriname have a lower probability to accept the offer, than individuals who travel less often. Individuals who visit Suriname with respect to their work may travel more often to the country. These individuals may prefer to exchange knowledge from the destination country instead of getting established in the home country.

7.3 Determinants willingness to accept other proposals

Table 8 presents the ordered probit regression results for the determinants of the three other proposals, that is, 1) providing research funds, 2) guaranteeing no political interference, and 3) offering higher salaries to skilled migrants. The Pseudo-R-squared, LR Statistic and the percentages for correctly predicted show that the regressions fit the data well.

Ethnicity is no longer significant. We see that individuals, whose main motive to migrate to the Netherlands was to study, are significantly more likely to accept the proposals and to return than those who left for another reason. The importance of landownership is also significant across the three regressions.

Willingness to accept proposal 5 regarding research funds

The charts in Figure 4 present the probability to return to Suriname if the government would provide funds for research and innovation to the returning migrants. We used the parameter estimates of the first column of Table 8 to graph Figure 4. The insignificant parameters were set to 0. Here again we observe that the likelihood to accept the proposal decreases over time, while the likelihood to decline the proposal increases.

Except the engineers (Msc. degree holders in technical science) now the health professionals are also attracted to Suriname if the government would make funds for research and innovation available to the skilled migrants. Assuming that the migrants consider all the provisional factors named in Table 8 important and that they have affinity with Suriname, we see that the probability to accept the proposal and return to Suriname is around 80% for MSc. degree holders in medical and technical science during the first 10 years of residing in the Netherlands. For individuals who hold another degree the probability to accept the proposal decreases to around 55% during the first 10 years of residing in the Netherlands. For individuals who do not have affinity with Suriname the probability to accept the proposal becomes much lower: around 40% lower for engineers.

We furthermore see that skilled migrants who consider landownership in Suriname, higher salaries to be paid, the quality of the university, easy access to credit, and/or research funds to be important in their return decision exhibit a higher likelihood of accepting the proposal compared with individuals who do consider these factors to be important.

High skilled migrants who have affinity or a connectedness with Suriname in terms of attending events or congresses in the Netherlands about Suriname, and/or helping Surinamese financially to work or study abroad are significantly more willing to accept the proposal than those who do not exhibit these kind of connectedness.

Willingness to accept proposal 11 regarding no political interference

The second column of Table 9 presents the regression results regarding the willingness to return to Suriname if the government would guarantee that no political interference would occur in performing one's job.

This proposal is particularly interesting for skilled migrants who live with their children in the Netherlands. This group is significantly more willing to accept the proposal compared with skilled migrants who have a partner (and children). Skilled migrants with an MSc in technical science are significantly more likely to accept the proposal compared with migrants who enjoyed other tertiary education. The proposal furthermore attracts individuals who have affinity with Suriname, in terms of providing financial help to Surinamese to work or study abroad, consuming Surinamese foods and products in the Netherlands, and exporting goods to Suriname. Notice that individuals who consider the PSA card to be important for the development of Suriname are also more likely to accept the proposal.

Willingness to accept proposal 3 regarding higher salaries

The third column of Table 9 presents the regression results to determine the willingness to return to Suriname if the salaries paid in Suriname would be at least 70% higher than what normally could be expected. Here we see that the negative coefficient for gender turns positive and significant at the 10% level, implying that skilled female migrants would be more willing to accept this proposal than the males. Generally women are paid less than men, which might explain why especially women are attracted to this proposal.

The PhD degree holders however are negatively selected by this offer, implying that the Bsc or vocational degree holders are significantly more likely to accept this proposal than PhD degree holders. The latter group generally have high income and may therefore not be attracted towards this proposal.

Clearly individuals who consider higher salaries and landownership to be important in their return migration decision are more attracted towards this proposal than those who do not consider these factors important. Note that affinity with the home country does not matter when higher salaries would be offered to the skilled migrants.

Conclusion and policy implications

This paper analyses which policies have the potential to attract high skilled Surinamese in diaspora to the home country. As structural policy changes (for example better socio-economic and political climate) are not feasible without human capital, especially not in the short run, policies regarding remigration benefits packages were the main focus of this paper. Developing countries need sufficient high skilled individuals in the first place in order to ensure work and education opportunities, strong rule of law (democracy), a well-developed industry sector, and adequate health care.

We surveyed 209 high skilled individuals of Surinamese origin who reside in the Netherlands and proposed several hypothetical offers to them in order to know whether they would return if they would receive several provisions or benefits. A fifth of the high skilled migrants would definitely want to return if they were offered luxurious housing in a gated community, education subsidies for their children, parental care for accompanying parents, land property, and a mortgage in Suriname. Adding up the high skilled migrants who may want to accept this offer but are yet uncertain shows that the majority is positive towards these hypothetical provisions. Even though the majority of the respondents considers higher salaries to be important in their return decision, many respondents are opposed towards the idea of treating return migrants preferential above non-migrants. They consider this as unfair and may

rather want to avoid tension between the returning migrants and the non-migrants. However if successful, the return of many high skilled migrants may bring positive externalities to the benefit of the country as a whole. Informing the non-migrants about the objectives of such policies may encourage the acceptance and the willingness to cooperate with each other.

Most of the high skilled migrants travel at least once every two years to Suriname. A quarter of the migrants remits money home and 40% sends goods. The majority has frequent contact with their friends and family in Suriname, but not with business or work related contacts. Less than a quarter of the skilled migrants is involved in brain circulation activities (such as advising Surinamese, travelling to Suriname for work, or attending events or congresses organized by Surinamese (in diaspora)). The participation in trade related activities is rather low. The majority of the respondents are not well acquainted about the Card of Origin (PSA card) intended to ease the movement of persons between Suriname and the Netherlands, nor do they believe that the PSA card entails extra opportunities for Suriname.

As Surinamese in diaspora are not strongly involved in brain circulation activities and do not (yet) rely on the PSA card to exchange knowledge with the home country citizens, we expect that Suriname may gain more from actively recruiting high skilled Surinamese in diaspora through return migration offers than only offering a Card of Origin to this group.

In this paper we also identified the characteristics related to the willingness to take on the offers. Providing a luxurious house, education subsidies, and parental care would particularly attract MSc degree holders in social science and technical science. Recruitment policies should focus on the younger skilled migrants or on individuals who are only a few years yet in the foreign country, as the probability to accept the offers diminishes over time and approaches zero when residing for 30-40 years abroad. As the majority migrate for tertiary education to the Netherlands, policy campaigns about working in Suriname can at best be provided at Dutch universities. Awareness advertisements may in particular display Multiracials, Hindustanis and Creoles as they are mostly appealed to the offers, and also individuals with children. As having affinity or connectedness with the home country positively affects the willingness to take on the offers, awareness campaigns may also be useful at congresses related to the home country.

Implementing the proposal regarding funds for research and innovation may have good prospects for the technological and health quality advancement of Suriname as especially MSc. degree holders in technical science and medical science are attracted to this proposal.

Incorporating safeguards to prevent political interference in one's job might be the most important step as this can attract at least half of the high skilled migrants. This can be done by disengaging job nominations from election results.

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Table 1 Descriptive statistics categorical background variables

Variable	Item	Percent	N
Gender	Female	50.7%	208
	Male	49.3%	
Ethnicity	Chinese	6.7%	208
	Creole	16.3%	
	Mixed	37.0%	
	Hindustani	35.1%	
	Javanese	2.4%	
	Other	2.4%	
Agegroup	26-30 years	14.4%	208
	31-39 years	26.0%	
	40-49 years	37.0%	
	50-61 years	22.6%	
Citizenship	Suriname	8.7%	183
	Netherlands	90.7%	
	Other	0.6%	
Living	alone	22.5%	187
	with partner	23.5%	
	with children	8.6%	
	with partner and children	45.5%	
Residence	Rent apartment	17.7%	186
	Owner occupied	82.3%	
Highest degree	Msc social (incl. postgraduates)	38.0%	208
	Msc technical	23.1%	
	Msc medical (incl. specialists)	12.5%	
	PhD	8.1%	
	Vocational degree (Bachelor or Master)	9.6%	
	Bsc degree (social, technical, medical) or unfinished	8.7%	
Occupation field	Academic	5.7%	209
	Business (economy, accountancy, business)	24.4%	
	Mining, construction, engineering, project management	11.5%	
	Medical	15.8%	
	ICT	11.0%	
	Law and social sciences	10.5%	
	Government official or other	9.6%	
	Unknown	11.5%	
Migration motive	Education (including career)	85.8%	190
	Because of parents or spouse	3.7%	
	Political situation	4.7%	
	Other reason	5.8%	

Table 2 Descriptive statistics quantitative variables

Variable	Mean	St. dev.	Median	Min.	Max.	N
Age (years)	41.92	8.455	44	26	61	208
Migration duration (years)	22.58	8.62	23	2	40	189
Net income (Euro's p/month)	3683.27	2433.44	3000	1000	22000	159
Contact with family (days p/year)	116.87	143.40	52	0	365	199
Contact with friends (days p/year)	33.72	75.92	12	0	365	194
Contact with acquaintances (days p/year)	10.07	29.47	2	0	365	188
Contact with business partners (days p/year)	2.43	8.10	0	0	7	182
Contact with work related contacts (days p/year)	4.20	15.50	0	0	365	181
Holiday duration in Suriname (days)	13.93	15.50	14	0	90	193

Table 3 Importance of several aspects when considering return migration

Aspects	1 Not important at all	2 Not really important	3 Neutral	4 Important	5 Very important	N
House ownership in Suriname	7.20%	7.70%	10.00%	26.30%	48.80%	209
Landownership in Suriname	9.60%	7.70%	16.80%	26.40%	39.40%	208
Safe living environment	1.00%	0.00%	1.00%	19.20%	78.80%	208
Access to long term low-interest loans (max. 7% interest) in Suriname	8.70%	14.00%	33.30%	29.00%	15.00%	207
Full education subsidies for children up until high school (with the choice option for Surinamese or Dutch curricula) in Suriname	16.40%	12.10%	30.90%	25.60%	15.00%	207
Parental care in Suriname	9.70%	10.60%	23.70%	43.00%	13.00%	207
Funds for (scientific) research	12.50%	13.00%	35.60%	29.30%	9.60%	208
Funds to implement technological improvement (e.g. in the medical, technical and industrial sector)	6.90%	8.40%	21.70%	39.90%	23.20%	203
Higher starting salaries for return migrants	2.90%	7.20%	27.10%	39.10%	23.70%	207
Quality improvement health sector and institutions	0.50%	1.90%	8.10%	39.20%	50.20%	209
Quality improvement university of Suriname	5.30%	3.90%	22.30%	33.00%	35.40%	206
Accreditation university of Suriname	7.70%	5.30%	22.50%	32.10%	32.50%	209
Career opportunities in Suriname	2.50%	1.30%	4.50%	27.40%	64.30%	157

Table 4 Willingness to take on Offer 1 and Offer 2

	No, I do not want to return at all 1	No, these provisions are not appropriate 2	Maybe, I will return then 3	Yes, I would definitely return then 4	I want to return but these provisions are not necessary for me 5	Other opinion 6	N
Offer 1: house, education subsidies for children, and parental care	11.5%	11.1%	39.4%	22.1%	11.5%	4.3%	208
Offer 2: land property, mortgage, and including Offer 1	12.1%	13.1%	38.3%	18.4%	12.6%	5.3%	206

Table 5 Willingness to take on proposals

Proposal	1 I do not want to return at all	2 This is not decisive for my return	3 This is not really decisive for my return	4 This doesn't matter	5 This might be decisive for my return	6 This is decisive for my return	7 This should definitely be in place upon my return	N
1) The government pays your return travel and relocation costs	13.0%	16.9%	15.5%	16.9%	24.6%	8.2%	4.8%	207
2) The government pays the travel costs of your household (family)	13.0%	19.3%	17.4%	16.4%	20.8%	8.2%	4.8%	207
3) Salaries that are at least 70% higher than what is normal in Suriname	14.6%	18.0%	9.8%	19.0%	19.0%	12.2%	7.3%	205
4) The government finances a research and development center which will be staffed with high skilled remigrants	11.8%	14.2%	10.3%	18.6%	28.4%	11.8%	4.9%	204
5) The government provides funds for research and innovation	10.7%	11.7%	8.3%	18.5%	30.2%	13.2%	7.3%	205
6) The government subsidizes education for your children	11.2%	18.0%	9.2%	19.9%	18.9%	14.6%	8.3%	206
7) The government provides parental care	11.2%	18.0%	14.1%	19.4%	18.4%	12.6%	6.3%	206
8) The government offers a luxurrious house in an elite residential area in the capital city or in surrounding area.	11.2%	14.6%	8.3%	14.1%	25.7%	16.0%	10.2%	206
9) The government offers land (1600 sq. m.)	11.1%	15.1%	10.1%	13.6%	25.1%	16.6%	8.5%	199
10) The government offers a mortgage of 80000 Euro's with 7% interest	11.8%	12.3%	7.8%	16.7%	26.5%	19.1%	5.9%	204
11) The government ensures that no political interference occurs when performing your job	11.4%	7.5%	4.0%	6.0%	16.4%	21.9%	32.8%	201

Table 6 Brain circulation and financial flows

Brain circulation (last 12 months)	Yes	No	N
Travelled to Suriname for your work	11.1%	88.9%	199
Travelled to Suriname for other reasons	58.0%	42.0%	200
Advised the government of Suriname	1.5%	98.5%	197
Advised student to study abroad, especially in the Netherlands	22.1%	77.9%	199
Advised a Surinamese company	17.6%	82.4%	199
Advised Surinamese to work abroad, especially in the Netherlands	20.1%	79.9%	199
Done research with Surinamese	4.5%	95.5%	198
Attended an event (e.g. congress) that was organized by Surinamese in diaspora in the Netherlands	25.3%	74.7%	198
Attended an event (e.g. congress) that was organized by the Surinamese in Suriname	16.2%	83.8%	197
Recommended someone in the Netherlands to go on holidays to Suriname	82.5%	17.5%	200
Financial flows (last 12 months)	Yes	No	N
Helped a Surinamese financially in order to work or study in the Netherlands	12.6%	87.4%	199
Helped a Surinamese company making a trade deal	4.0%	96%	200
Invested in a business start up in Suriname	3.5%	96.5%	199
Ordered goods from Suriname	9.6%	90.4%	198
Bought Surinamese goods, food or drink in the Netherlands	87.4%	12.4%	202
Exported goods to Suriname	13.3%	86.7%	195
Sent remittances to family or acquaintances	26.5%	73.5%	196
Sent goods to family or acquaintances	39.8%	60.2%	196
Acquainted with the PSA card			
No, I'm not acquainted with the PSA card	23.8%		202
I heard about it, but I'm not acquainted with the PSA card	35.1%		
Yes, I'm acquainted with the PSA card	41.1%		
Opportunities for Suriname through the PSA card			
No	58.1%		201
Yes	25.7%		
I don't know	16.0%		
Travels to Suriname			
Once a year or more often	42.3%		201
Once every two years	30.3%		
Seldom or never	27.4%		

Table 7 Ordered probit regression offer 1 and offer 2

Independent variables	Dependent variable	Offer 1		Offer 2	
		Coefficient	St. Error	Coefficient	St. Error
Migration duration		-0.018	(0.016)	-0.028*	(0.016)
Gender		0.145	(0.240)	0.183	(0.254)
Living alone		-0.231	(0.281)	0.003	(0.296)
Living with my children		0.002	(0.377)	0.501	(0.389)
Ethnic group: Creoles		0.613	(0.435)	0.902**	(0.451)
Ethnic group: Hindustanis		0.888**	(0.399)	1.131***	(0.406)
Ethnic group: Multiracial (Mixed)		1.023**	(0.409)	1.184***	(0.411)
Degree: Msc in social sciences		0.722**	(0.325)	0.515	(0.333)
Degree: Msc in technical sciences		0.905***	(0.343)	0.741**	(0.361)
Degree: Msc in medical sciences or specialist		0.069	(0.413)	-0.446	(0.436)
Degree: PhD		0.125	(0.539)	-0.031	(0.527)
Landownership in Suriname important for me (yes=1)		0.616**	(0.260)	0.823***	(0.272)
Higher salaries important (yes=1)		0.516*	(0.263)	0.532*	(0.277)
Remittances (yes=1)		0.324	(0.251)	0.546**	(0.258)
Advised Surinamese company (yes=1)		0.004	(0.292)	0.492	(0.318)
Emigration motive (study=1; other=0)		0.549*	(0.320)	0.512	(0.339)
Citizenship (Netherlands=1)		-0.098	(0.478)	0.263	(0.456)
Contact with family in Suriname (number of days)		0.002**	(0.001)	0.003***	(0.001)
Contact with friends in Suriname (number of days)		0.001	(0.002)	-0.001	(0.002)
Travel at least once a year to Suriname (yes=1)		-0.135	(0.247)	-0.486*	(0.260)
Estimated alpha 1		1.504*	(0.810)	1.975**	(0.789)
Estimated alpha 2		3.271***	(0.846)	3.887***	(0.840)
Pseudo R-squared		0.178		0.241	
LR statistic		47.118***		63.454***	
Max. log-likelihood value		-109.483		-99.813	
# observations		129		128	
<u>% Correct</u>					
Category 1 (not decisive)		43.8%		56.4%	
Category 2 (might be decisive)		77.3%		70.3%	
Category 3 (decisive)		32.3%		36.0%	
Total		58.1%		59.4%	

Notes: For the variable Gender female is coded 1 and male 0. The minority ethnic groups were categorized as one group and function here as the reference group. The indicator variables for the educational degree that the respondents hold are with respect to Bachelor of Science degree holders, vocational degree holders or individuals who attained tertiary education but did not graduate. Living alone and Living with my children are with respect to Living with partner or Living with partner and children. Only citizenship holders of Suriname and the Netherlands were included in the regressions.

*** significant at the 1% level, ** at the 5% level and *at the 10% level.

Table 8 Ordered probit regression other proposals

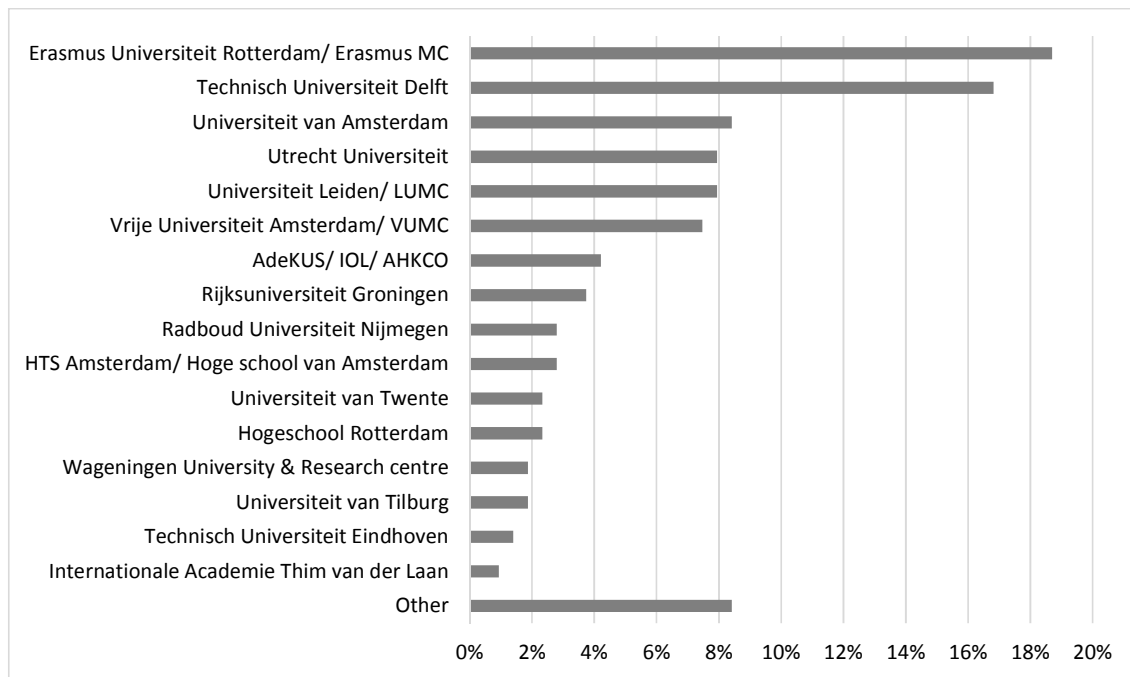
Independent variables	Dependent variable		Research funds (1)		No interference (2)		Higher salaries (3)	
	Coefficient	St. error	Coefficient	St. error	Coefficient	St. error	Coefficient	St. error
Migration duration	-0.025*	(0.015)	-0.012	(0.015)	-0.012	(0.015)	-0.012	(0.015)
Gender	-0.258	(0.235)	-0.130	(0.245)	0.439*	(0.260)	0.439*	(0.260)
Living alone	-0.005	(0.286)	0.463	(0.320)	-0.361	(0.321)	-0.361	(0.321)
Living with my children	0.489	(0.394)	0.977**	(0.494)	0.875**	(0.433)	0.875**	(0.433)
Ethnic group: Creoles	-0.234	(0.453)	-0.056	(0.457)	0.419	(0.530)	0.419	(0.530)
Ethnic group: Hindustanis	-0.496	(0.409)	0.284	(0.430)	0.383	(0.487)	0.383	(0.487)
Ethnic group: Multiracial (Mixed)	0.460	(0.415)	0.216	(0.425)	0.475	(0.489)	0.475	(0.489)
Degree: Msc in social sciences	0.142	(0.344)	0.248	(0.359)	-0.244	(0.377)	-0.244	(0.377)
Degree: Msc in technical sciences	0.752**	(0.361)	0.808**	(0.393)	0.162	(0.377)	0.162	(0.377)
Degree: Msc in medical sciences	0.794*	(0.421)	-0.015	(0.440)	-0.260	(0.483)	-0.260	(0.483)
Degree: PhD	0.695	(0.497)	0.098	(0.520)	-1.469*	(0.778)	-1.469*	(0.778)
Emigration motive (study=1; other=0)	0.691*	(0.375)	0.576*	(0.334)	1.062**	(0.456)	1.062**	(0.456)
PSA brings opportunities (yes=1)	0.194	(0.268)	0.718**	(0.302)	0.276	(0.279)	0.276	(0.279)
Sent remittances (yes=1)	0.190	(0.269)	-0.157	(0.316)	0.245	(0.306)	0.245	(0.306)
Helped Surinamese financially to study/work abroad (yes=1)	0.695**	(0.320)	1.651***	(0.488)	0.085	(0.385)	0.085	(0.385)
Attended events connected to Suriname in the Netherlands (yes=1)	0.528*	(0.276)	-0.005	(0.301)	0.223	(0.320)	0.223	(0.320)
Advised about working abroad (yes=1)	-0.207	(0.347)	0.132	(0.393)	0.103	(0.420)	0.103	(0.420)
Advised Surinamese company (yes=1)	0.182	(0.342)	0.142	(0.413)	0.065	(0.354)	0.065	(0.354)
Bought Surinamese food (yes=1)	-0.431	(0.347)	0.745**	(0.378)	0.598	(0.391)	0.598	(0.391)
Exported goods to Suriname (yes=1)	0.468	(0.317)	1.060***	(0.407)	-0.207	(0.364)	-0.207	(0.364)
Higher salaries important (yes=1)	0.501*	(0.285)	0.330	(0.271)	1.535***	(0.343)	1.535***	(0.343)
Landownership important (yes=1)	0.703**	(0.277)	0.805***	(0.278)	0.717**	(0.325)	0.717**	(0.325)
Quality university important (yes=1)	0.492*	(0.288)	0.446	(0.290)	-0.022	(0.317)	-0.022	(0.317)
Access to credit important (yes=1)	0.467**	(0.238)	0.300	(0.255)	0.388	(0.253)	0.388	(0.253)
Research funds important (yes=1)	0.780***	(0.263)	-0.139	(0.284)	-0.403	(0.296)	-0.403	(0.296)
Estimated alpha 1	1.994**	(0.908)	2.297***	(0.869)	3.806***	(1.061)	3.806***	(1.061)
Estimated alpha 2	3.341***	(0.928)	2.986***	(0.879)	4.580***	(1.077)	4.580***	(1.077)
Pseudo R-squared	0.269		0.259		0.281		0.281	
LR statistic	79.762***		74.132***		75.549***		75.549***	
Max. log-likelihood value	-108.433		-106.036		-96.362		-96.362	
# observations	144		144		145		145	
<u>% Correct</u>								
Category 1 (not decisive)	88.6%		73.2%		93.3%		93.3%	
Category 2 (might be decisive)	59.6%		0.0%		0.0%		0.0%	
Category 3 (decisive)	37.0%		87.2%		63.3%		63.3%	
Total	69.4%		68.1%		71.0%		71.0%	

Notes: *** significant at the 1% level, ** at the 5% level and *at the 10% level. See also notes beneath Table 7.

Table 9 The relationship between age and the duration of migration

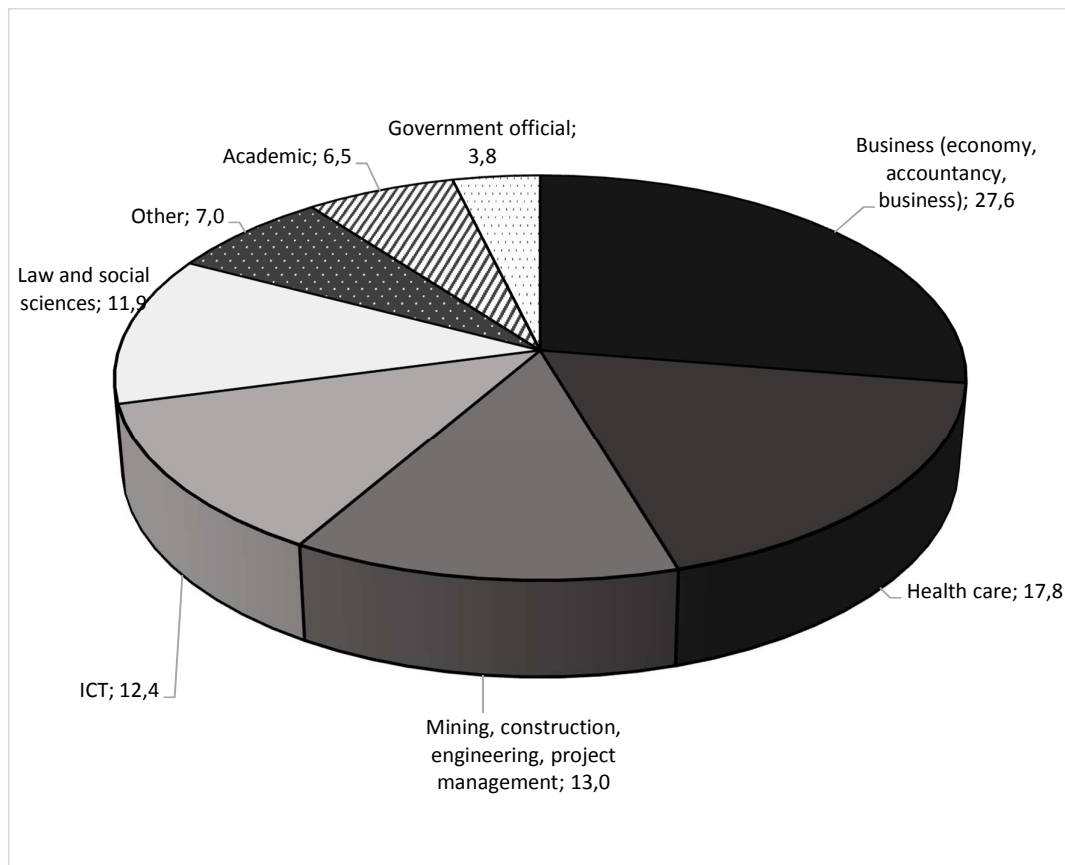
		Agegroup					
		26-30	31-39	40-49	50-61	Total	
Migration duration	1-10 years	Count	10	3	1	1	15
		% within Agegroup	35.7%	6.5%	1.4%	2.3%	7.9%
	11-20 years	Count	18	35	2	3	58
		% within Agegroup	64.3%	76.1%	2.8%	6.8%	30.7%
	21-30 years	Count	0	8	59	7	74
		% within Agegroup	0.0%	17.4%	83.1%	15.9%	39.2%
	31-40 years	Count	0	0	9	33	42
		% within Agegroup	0.0%	0.0%	12.7%	75.0%	22.2%
	Total	Count	28	46	71	44	189

Figure 1 Institution where highest education level was achieved (in %)



N=207

Figure 2 Occupation field of the respondents (in %)



N = 185

Figure 3 The willingness to accept offer 2: housing, land, and other provisions

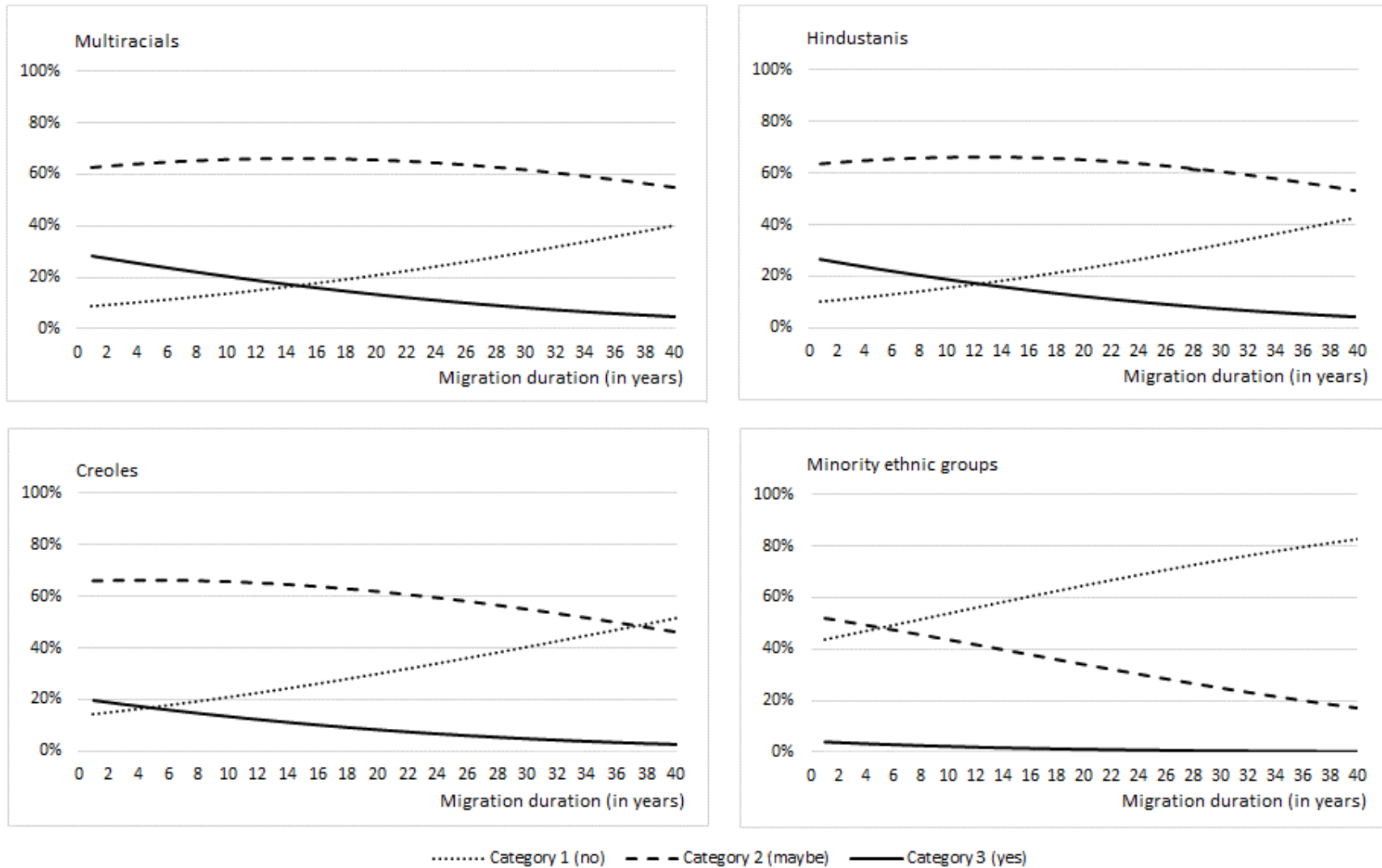
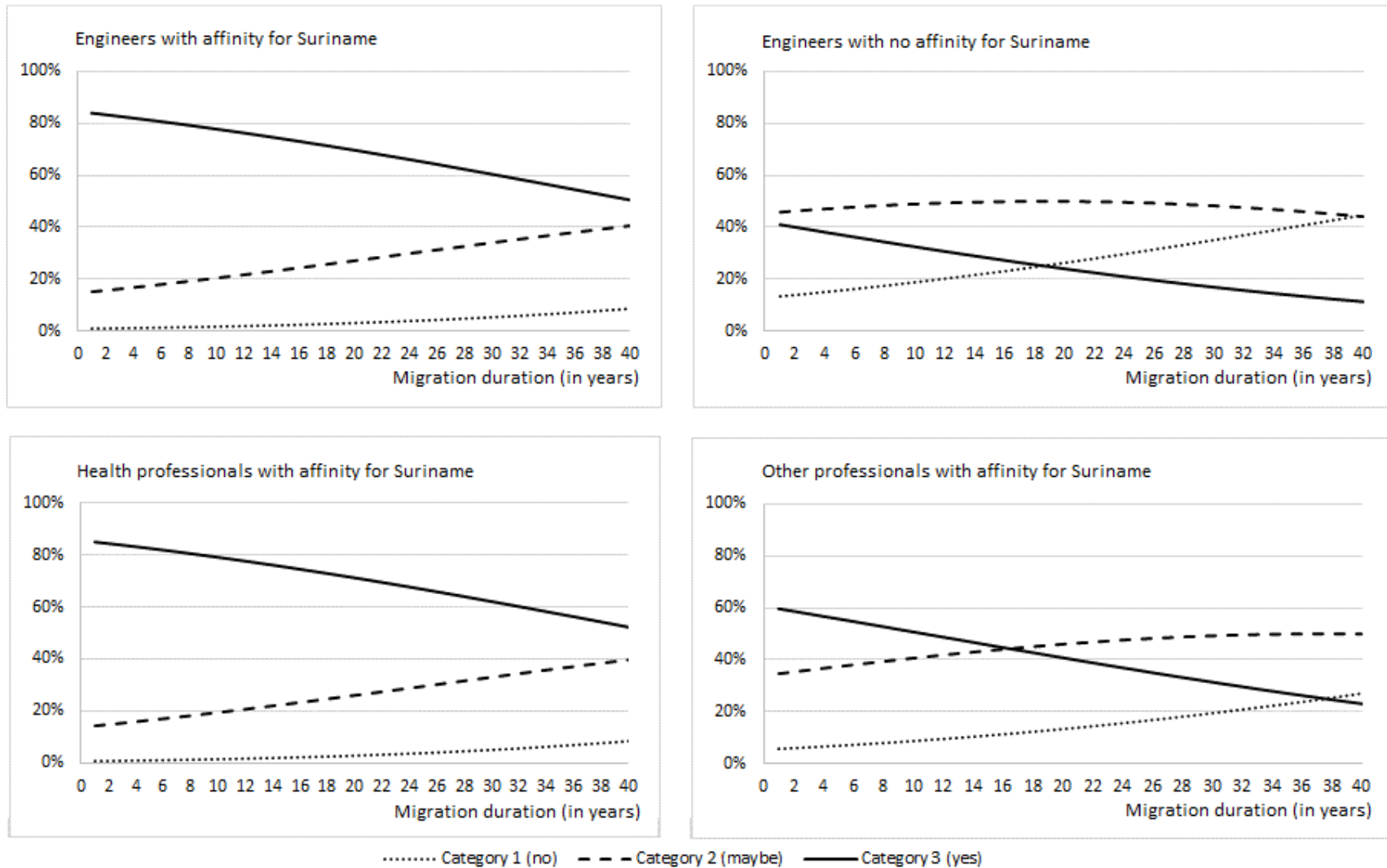


Figure 4 Willingness to accept proposal 5: funding for research and innovation



Appendix

Percentage of highly educated in the population of 15 years and older

Census year	1980	2004	2012
University	0.70%	3.05%	2.87%
HBO	3.10%	2.27%	3.48%
Total	3.79%	5.32%	6.35%
Population	315469	75480	446174

Source: ABS (1992, 2005, 2013)