

WHERE ARE AFRICAN AGRICULTURAL POLICIES HEADING AND HOW DOES THIS INFLUENCES MIGRATION?

Petr Blizkovsky¹

¹Faculty of Regional Development and International Studies, Mendel University in Brno, třída Generála Píky 2005/7, Brno, Czech Republic

Abstract

BLIZKOVSKY PETR. 2017. Where Are African Agricultural Policies Heading and How Does this Influences Migration? *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 65(5): 1631–1641.

This paper addresses the link between lack of rural development and migration flows and investigates whether weak agricultural development and poor governance indicators can be explaining factors for migration. The African continent offers a mixed picture with both positive developments and challenges ahead. With regards to its agricultural sector, Africa still has many challenges to face. Lack of quality infrastructures, widespread poverty, environmental degradation and human capital issues have to be addressed if the continent is to rise up from its current situation. As regards migration, the paper was unable to establish a clear correlation between weak development indicators and effective migration flows. Further data needs to be collected in order to establish a more comprehensive analysis. Nevertheless the paper recommends the creation of a comprehensive strategy strengthening the international governance of agricultural policies in Africa.¹

Keywords: Africa, European Union, obstacles to growth, human capital, governance, migration

INTRODUCTION

Despite Africa experiencing overall strong economic growth this past decade, many countries continue to face severe development challenges. Indeed many African countries still have the lowest GDP per capita in the world and suffer from widespread food insecurity, high unemployment, poverty, environmental degradation, and low integration in the global economy.

Agriculture plays a key role in the continent's economic growth. It accounts for 2/3 of Africa's total employment and 25% of its GDP (AfDB, OECD Development Centre, UNDP, 2014). However, yield and production levels remain below world average. Furthermore although Africa possesses the world's largest share of arable land the continent remains a net food importer and its economy is still heavily influenced by volatility of commodity market

prices (Stanford Center on Food Security and the Environment, 2013).

Low interregional trade as well as highly differentiated national economies have also hindered African development and complicated the establishment of coordinated policies at the continental level. As a result Africa is, in most sectors, lagging behind the rest of the world. The continent suffers from a wide extent of problems which will need to be addressed if Africa wants to realise its full potential.

Furthermore, the continent also faces severe migratory and stability challenges. Many African countries still suffer from violent conflicts and civil wars which have become endemic due to the absence of proper governance infrastructures (Elbadawi & Sambanis, 2000). These instabilities are gradually leading to an increase in migratory pressure which have resulted in population

¹ Dr. Petr Blizkovsky, Associated Professor, is a Director at the Secretariat General of the Council of the European Union. Opinion expressed in the article are his own and not those of the Secretariat General of the Council.

displacements inside the African continent as well as an increase of illegal migration flows towards Europe (Adepoju, 2004).

The objective of the paper is first, to provide an analysis of key challenges facing the African agricultural sector. Second, the paper assesses whether agricultural and rural policies are linked to an increase in migratory pressures. Special attention is also provided to the issue of migration from Africa to Europe and the resulting problems for both continents. Finally, the paper provides some policy recommendations for the future development and strengthening of the governance of African agricultural policies.

Literature overview

Poverty and population boom challenge

The continent's economies are extremely differentiated. Four countries account for nearly 60% of African GDP namely Egypt, South Africa, Nigeria and Algeria. Middle income countries such as Gabon, Mauritius and the Seychelles have high real GDP per capita but still face major development challenges while countries such as Burundi, Democratic Republic of Congo, and Comoros remain extremely under-developed and suffer from entrenched food security and poverty (AfDB, OECD Development Centre, UNDP, 2014a). Overall, resource-rich countries in Africa have fared better than their resource poor counterparts in increasing the level of life of their population. However despite its efforts Africa's development is still below that of other developing regions such as Latin America or South East Asia

Poverty is still an important issue for the continent. About 46.8 percent of Sub Sahara's population lives with less than 1.25 dollars a day (World Bank, 2014). The poor account for 60.8 percent of the population and hold 36.5 percent of Africa's total income whereas the rich which represent 4.8 percent of the population hold up to 18.8 percent of the total income (AfDB, 2012). This makes Africa the second region with the most income inequalities after Latin America. The continent also suffers from high levels of undernourishment (Fig. 1). Some 20 percent of the continent's population is not able to meet its daily dietary energy requirements and the average African faces a food deficit of 156 calories per person per day (FAO, 2014).

As a consequence the issue of food security is increasingly becoming more and more acute due to the continent's rising population numbers. Indeed Africa is currently the second largest continent in terms of size and population. The current population stands at approximately 1.1 billion

people and it is estimated to increase to 2.3 billion by 2050 (UN, 2013).

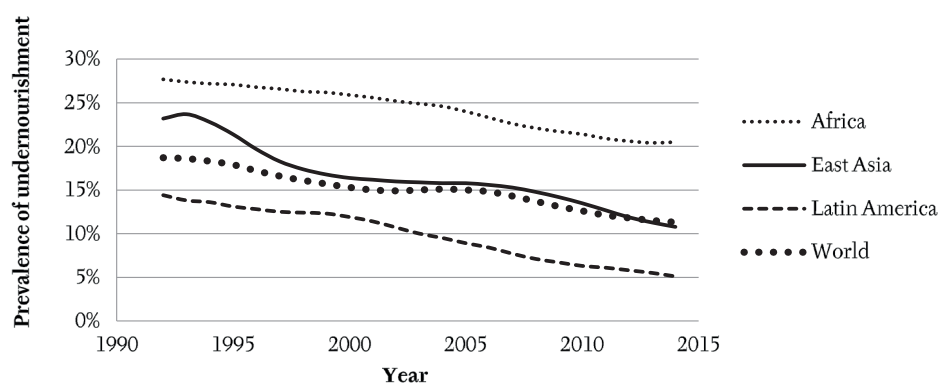
Several African countries are faced with the dilemma of trying to achieve food sovereignty while being hampered by a constant increase of their national population. Indeed despite the rise of Africa's overall agricultural output, domestic agricultural production is unable to match the increase in demand. As a consequence African countries are still heavily dependent on food imports to feed their population. Imported food products represent 1.7 times the value of exports which accounts for Africa's negative food trade balance (Rakotoarisoa *et al.*, 2011). This can be explained by the fact that Africa exports only a limited number of products mainly cocoa, coffee, tea, cotton, sugar, fish, shellfish, bananas and pineapples. Most of the export products are unprocessed (less than 6% of African cotton is processed, and only 25% of cocoa) and involve little workforce skills and technology. With the exception of cocoa which accounts for 68% of the world's production (World Cocoa Foundation, 2014), the continent has also little influence over international commodity prices. This makes African economies highly susceptible to external shocks – oil prices, monetary policy, overproduction – and internal shocks – military conflicts, diseases, natural disasters, and partly explains the volatility of many African nations' growth rates.

Economic hurdles for agricultural growth

Lack of quality infrastructures also factors as an obstacle for further agricultural development. Less than a fourth of sub-Saharan Africa's total road network (excluding Mauritius and Seychelles) is properly paved (IMF, 2014). The continent also suffers from poor shipping installations. Newly constructed ports are insufficiently equipped and cannot keep up with the increase in sea traffic (UNCTAD, 2003; AfDB 2010)². This ultimately raises the cost of freight to Africa especially when exporting or importing to inland countries.

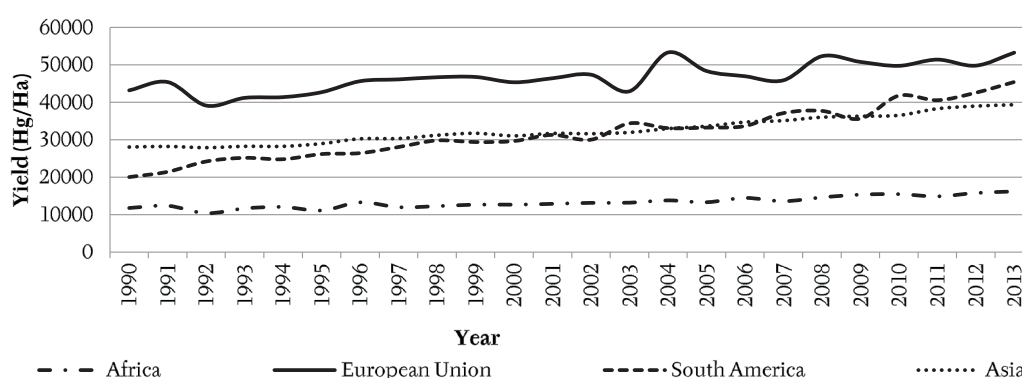
With regards to agricultural production systems, several challenges still remain. Many countries in Africa do not possess proper irrigation infrastructures despite having ample resources of underground water. Irrigated areas in Africa currently represent less than 6 percent of the total cultivated area (Frenken, 2005). This is spectacularly low when taking into consideration that other developing regions like Asia and Latin America show irrigation levels up to 37 and 14 percent respectively (You, 2008). African agricultural systems also show low levels of mechanization. Animal traction and engines supply 35 percent of

2 In 2001 African ports handled 750 million tons of merchandise and petroleum products which amounted to 6.3% of world trade. These volumes are very small by comparison with those handled by other developing countries, which are far greater: seven times greater in the case of Asia (42%) and twice as great in Latin America (12%).



1: Evolution of the prevalence of the undernourished across major developing areas (1990-2014)

Source: FAOSTAT



2: Evolution of Cereals Yield levels across regions and time (1990-2012)

Source: FAOSTAT

agricultural power source (Rakotoarisoa *et al.*, 2011). This means that 65 percent of agricultural work is carried out by manpower. The lack of storage facilities, transportation systems and modern slaughter houses also affect the quality and quantity of African products put on the market (Rakotoarisoa *et al.*, 2011). Agro processing industries in the rural agricultural communities to reduce post-harvest losses and at the same time bring about value addition to the agricultural primary products. This will lead to higher and stable prices and at the same time create more job opportunities in the rural communities which will in the first place reduce poverty, check urban drift and bring more sustainable development in the rural areas.

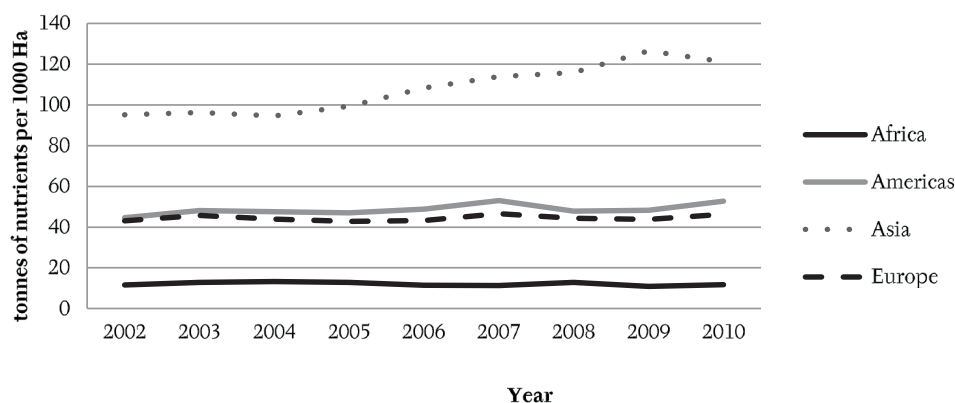
Remoteness is therefore one of the main reasons behind Africa's low trade levels inside the continent. Indeed transport within the continent itself is very difficult. Cities, towns, and villages are often isolated from one another which restrict producers' access to markets, create widespread uncertainties and results in massive food losses. Furthermore Africa's customary system of landholding has proven to result in widespread inequalities for farmers (Peters, 2004). This has led to a rise in conflict concerning land tenure and landholding.

Agricultural production capabilities are another challenge. African agricultural production systems

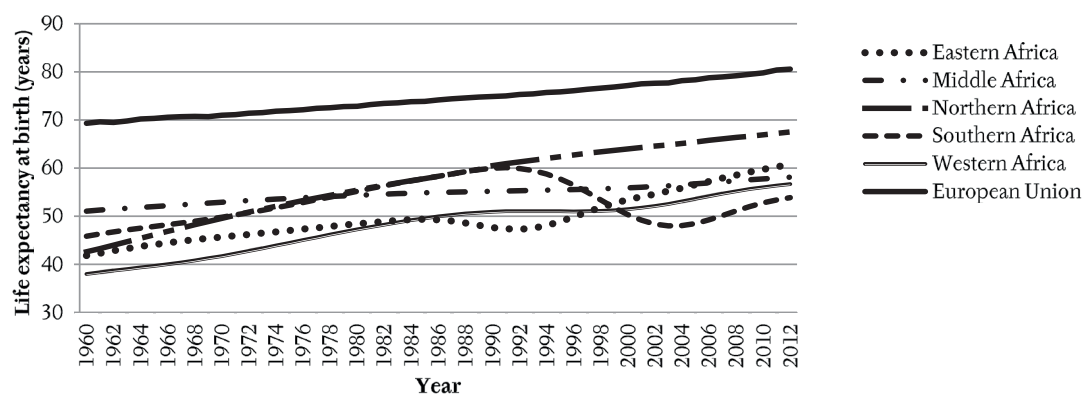
remain largely extensive, especially for food crops and livestock production (Rakotoarisoa *et al.*, 2011). Most of Africa's vegetable crops are produced through family farming. Furthermore pastoralism continues to be the dominant livestock production system in Africa. This partly explains the continents' difficulties in increasing its output and meeting with internal demand. Despite Africa's dire need to intensify its production levels, the continent's crop yields have been mostly stagnant during the past decade (Fig. 2).

This is mainly due to the fact that Africa has always relied on the use of inputs to boost its productivity levels and has never widely implemented good farming practices or shifted its production to high yielding varieties (as has been the case for Latin America and South East Asia) (You, 2008). For instance fertilizer consumption in Sub-Saharan African is 10 times less compared to Asia (Fig. 3).

Furthermore farmers have not been taught to take preventive measures in order to take care of their crops and livestock. This makes African production particularly vulnerable to outbreaks (ex: Bovine fever in East Africa, Avian Influenza in West Africa) which in the end affects the global performance of African economies. A perfect example of this situation can be seen through the international community's reaction to the Ebola epidemic



3: Evolution of levels of pesticide uses across major geographic regions (2002-2010)
Source: WORLD BANK



4: Evolution of life expectancy at birth in regions of Africa compared to the European Union (1960-2012)
Source: WORLD BANK

(Hamilton, 2014). Border closures, quarantines and other restrictions hindered African people's access to food and disrupted national and international food markets thus resulting in huge economic losses for African countries and food security crises for some part of the continent (World Bank, 2014).

Sustainability challenges

Protecting production factors, such as land and water is critical to the future of African agriculture as it is the only way to ensure long-term and sustainable growth. However environmental concerns are not currently considered a top priority in many African states. This has had a negative impact on African agricultural systems. For instance, Sub-Saharan Africa already suffers from extensive soil depletion and erosion linked to the mismanagement of natural resources. This is mainly caused by overexploitation and overgrazing of the land as well as water and wind erosion. Farmers are not taught how to properly restore nutrient levels within the soil and ensure long-lasting soil quality. As a result the fertility of the land decreases thus lowering productivity levels and creating environmental imbalances such as the loss of wildlife habitat or the increase of drought spells. Soil samples in food production areas are never tested to check their fertility and to

know the missing micro nutrients that are needed for the types of crops they grow in particular communities but instead continue to apply fertilizers, especially NPK to the soil every year with hope to achieving higher yields but this, rather to certain extent, makes the soil more susceptible to contamination than making it fertile.

Climate change, natural disasters and epidemics also need specific attention. Africa is one of the most vulnerable regions concerning climate change and climate variability. The continent is indeed the third region most affected by natural disasters after Asia and the Americas (Guha-Sapir, Hoyois, Below, 2012). This in turn affects the competitiveness of the agricultural sector. Since the 1970s, droughts have intensified in terms of their frequency, severity and geospatial coverage, especially in the tropical and subtropical regions (Masih, Maskey, Mussá, Trambauer, 2014). The continent also experiences cyclones, earthquakes, flooding and bush fires which have severe economic repercussions as African nations tend to demonstrate little adaptive capacity and resilience to these external stresses. Natural disaster events often lead to the destruction of crops, livestock, infrastructures and the displacement or killing of millions of Africans thus resulting in the occurrence of food and sanitary

I: Table 1: List of independent variables used against migration data (years 1990, 2000, 2010)

Independent Variables	Unit
Cereal Yield	(Kg)
GDP per capita	(current US\$) (per year)
Rural Population	(% of total pop)
Value added in agriculture	(% of region's) total GDP)
Human Development Index	none
Government Effectiveness	Score between (-2,5 and +2,5)

II: Table 2: List of countries pertaining to the five African geographic regions

NORTHERN AFRICA	SOUTHERN AFRICA	EASTERN AFRICA	WESTERN AFRICA	MIDDLE AFRICA
Algeria	Botswana	Burundi	Benin	Angola
Gambia	Lesotho	Comoros	Burkina Faso	Cameroon
Libya	Namibia	Djibouti	Cabo Verde	Central African
Morocco	South Africa	Eritrea	Cote d'Ivoire	Republic
Sudan	Swaziland	Ethiopia	Ghana	Chad
Tunisia		Kenya	Guinea	Congo Republic
Western Sahara		Madagascar	Guinea-Bissau	Congo Dem.
		Malawi	Liberia	Republic
		Mauritius	Mali	Equatorial Guinea
		Mozambique	Mauritania	Gabon
		Rwanda	Niger	Sao Tome
		Seychelles	Nigeria	and Principe
		Somalia	Senegal	
		South Sudan	Sierra Leone	
		Uganda	Togo	
		United Republic		
		of Tanzania		
		Zambia		
		Zimbabwe		

These data we available for five geographical regions in Africa.

crisis which cripple national economies and prevent economic development.

The continent is also prone to epidemics and faces a number of recurring diseases many of which could be easily eradicated if the proper medication were distributed to the population. Such is the case of malaria, measles, tetanus, cholera and tuberculosis. In the case of malaria, Africa accounts for 85% of all malaria cases and 90% of malaria deaths worldwide (WHO, 2014). Furthermore, the region also acts as the epicenter of the HIV epidemic. More than 71% of people suffering from AIDS are located on the continent. This puts a strain on the regions health infrastructure and explains the lower life expectancy and high mortality rate of Africa's population as well as the hampered productivity of the African workforce (Fig. 4).

Human capital and governance

Africa's low levels of school enrolment as well as lack of governmental investment in research and development partly explains the continent's difficulties in making the transition towards new production techniques and infrastructures. Indeed Sub-Saharan Africa still lags behind the rest of the world with less than 40% of young adults attending secondary school (UNESCO, 2011). Despite recent efforts made by governments,

current levels of enrolment are insufficient to match the need for qualified workforce. Furthermore, Africa's low enrolment rate in education also has an impact on the availability of researchers and engineers to implement new agricultural projects and promote innovation. Low literacy rate in Africa is due to poverty, high cost of education, poor infrastructure, lack of human capital and low spending by individual governments in the educational sector.

Data collection and statistical analysis is also a widespread problem. Reliable statistical information on African nations is lacking. This is partly caused by the absence of qualified personnel and automatized data collection. Very often obsolete data processing and calculation methods are used thus leading to flawed statistical analyses. Furthermore in some countries, misplacement, loss or theft of data has been known to occur (Akinsoye, 2008). This compromises the comparability of data sets and hinders the development of evidence-based policy-making. Most international organizations like the IMF, World Bank use staff from various local institutions including the Universities in collecting data but unfortunately lack of certain logistics poor transportation network make it difficult for the staff to get to the field to collect the relevant and needed data. Widespread cheating by some data collectors,

various governments control and manipulation of data for the international organizations.

One of the main challenges that still need to be addressed by African nations lies in the implementation and enforcement of good governance practices (Bräutigam & Knack, 2004). This is the key to ensure long-term and sustainable development. Unfortunately, most African nations still suffer from pervasive corruption of their political and administrative systems. Indeed the region's nation-states rank amongst the most corrupt countries on Transparency International's Corruption Perception Index. Asset misappropriation by African officials is widely known and economic crime levels in Africa are amongst the highest in the world (PWC, 2014). Furthermore the continent also shows low levels of democratization. African institutional capabilities are weak and administrations often struggle to ensure the frequency and fairness of the electoral process thus leading to the occurrence of electoral maladministration, manipulation and mismanagement (UNECA, 2013). In addition, many African governments are still under autocratic to semi-autocratic regimes with sitting leaders prosecuted by the International Criminal Court for crimes against humanity, war crimes or genocide.

Ethnic cleavages and armed conflicts amongst nation-states have been widespread since the 1960s and created problems with regards to national identity and social cohesion. The 2012 conflict in Northern Mali or the 2013 civil war in South Sudan is proof of the remaining instabilities within the continent. Furthermore terrorist groups such as Boko Haram and AQIM have increasingly gained influence and lead to additional destabilization through acts of kidnaping, murder, burning of crops with little to no effective retaliation by African states. As a result, African governance and rule of law are at best compromised or unreliable and the continent still suffers from widespread instabilities. This affects the continent's potential for long-term stable development and deters foreign investment.

Africa's difficult political and economic situation has led many Africans to believe that emigration to developed countries is the only way to obtain a better future. This seriously compromises the continent's chances for economic growth. Indeed currently, much of Africa's qualified workforce chooses to emigrate thus resulting in a "Brain Drain" of the continent's most promising candidates. The rise of illegal immigration flows also represents an additional stressor for Africa. Organized crime organizations have become experts at exploiting and profiting from Africans' desire to reach what they perceived to be the European "El Dorado". This has led to tensions between the continent and its neighbors but also resulted in much instability within Africa itself. Tackling the issue of African immigration one should therefore understand its main characteristics and probable root causes.

METHODS

The paper aims at confirming the hypothesis that migration from rural areas in Africa is related to the situation of the agricultural sector of the given region.

The dependent variable was migration from Africa to Europe. Data for the migration parameters were taken from Frontex database (Frontex, 2014). Data period available at the moment of writing the paper were 2013 and 2014. There data are available at the country-level. The alternative source of migration data, the UN Population Division data, included international migration stock at mid year expressed in number of people and in percentage of country population was not suitable for the analysis, as there were aggregated at above-country level.

The independent variable was the situation of the agricultural sector in the African countries. Data related this parameters were taken from UN Population Division. They consist of variables listed in Tab. I.

The statistical analysis used was based on the stepwise regression method, as described by Palát, M., Palát, M. and Prudký, J. (2013).

In addition to the statistical analysis of the quantitative data, a qualitative analysis was pursued based on the available data form OECD, UN and FAO. These data do not however allow for detailed country-specific analysis.

RESULTS

Achieving sustainable development has often been portrayed as a means to prevent migration. In this section of the paper we examine whether emigration rates from Africa to the European Union could be related to poor levels of rural and agricultural development in sending countries. However before addressing this issue, it is necessary to have a clear understanding of the present Africa's migratory situation.

In recent years the issue of African migration legal and illegal flows towards Western countries has gained more attention by the media. This has led to the common misconception that Europe is just one step away from being submerged by a wave of African migrants (Haas, 2008). Lack of reliable data on migration flows is partly to be blamed for this common misconception as many African nations are unable to provide complete data sets with regards to in-bound and out-bound migration (Karagueuzian and Verdier-Chouchane, 2004). Indeed assessing legal and illegal migration within Africa remains quite difficult due to the weakness of migration management infrastructures. For instance in the case of intra-continental migration, many Africans moving to new neighboring countries do not cross at border posts or register with official authorities (World Bank, 2011). This makes current migration data very unreliable and explains the difficulties in quantifying illegal and legal migration from Africa. Nevertheless managing migratory flows is becoming

III: Table 3: Evolution of African immigration levels compared to the rest of the world (1990-2013)

Major area of destination	International migrant stock estimated at mid year (for both sexes)				International migrant stock as percentage of country total population			
	1990	2000	2010	2013	1990	2000	2010	2013
AFRICA	15 630 932	15 591 335	17 125 675	18 644 454	2,5	1,9	1,7	1,7
ASIA	49 910 609	50 414 639	67 781 526	70 846 771	1,6	1,4	1,6	1,6
EUROPE	49 048 341	56 209 420	69 174 301	72 449 908	6,8	7,7	9,3	9,8
LATIN AMERICA AND THE CARIBBEAN	7 129 952	6 502 761	8 093 251	8 548 070	1,6	1,2	1,4	1,4
NORTHERN AMERICA	27 773 888	40 395 432	51 205 367	53 094 891	9,8	12,8	14,8	14,9
OCEANIA	4 668 262	5 402 146	7 349 180	7 938 121	17,3	17,3	20,0	20,7

Source: UN Population Division

a growing challenge for the continent as outbound migration has widespread implications in terms of poverty, development, demographic, international security and inter-state relations.

Emigration levels vary greatly across the African continent. On average countries with history of border conflicts as well as countries with small population numbers tend to experience higher levels of emigration rates. This is mainly due to the lack of economic opportunities or instability which pushes migrants to move. Contrary to common belief, African levels of immigration are not disproportionately rising (See Tab. III). The share of African international migrants has decreased from 1990 to 2013, and African immigration only represents 9% of total immigration to OECD countries (OECD-UNDESA, 2013).

Most African immigrants (particularly from the poorer countries) do not emigrate to Europe as they lack both the financial resources to travel to distant continents and the education and skills required to succeed in rich countries' labor markets (World Bank, 2011). Indeed, international migrants from Africa represent only 1.7% of the continent's total population (UNDESA, 2013b) (See Fig. 5). As a result, most African migrations occur at the intra-continental level. For instance in West Africa, more than 70 percent of intra-African emigration occurred within the sub-region. In contrast, more than 90 percent of migrants from North Africa travel to countries outside the region (World Bank 2011).

International African migrants tend to be young adults (median age is 30), generally male (54 percent of the African international migrant stock is male) and most of them are educated (UNDESA, 2013c).

Indeed in the past five years the number of tertiary educated migrants coming from Africa (450 000) has even exceeded that of Chinese migrants (375 000) (OECD, 2013). This has often resulted in widespread criticism by African Member States which have deplored the *brain drain* resulting from such important emigration flows.

While legal immigration of Africans to Europe doesn't seem to reach disproportionate levels, European countries increasingly have to address the issue of illegal immigration. Indeed the Arab Spring as well as increasing unrest in certain parts of Sub-Saharan Africa has progressively augmented the number of migrants seeking to reach European countries.

According to the latest data published by Frontex, the start of 2014 has seen an important increase in the number of illegal border-crossing detected at the EU external borders. According to Frontex (2014), the number of illegal immigrants for 2014 was three times more (165 000) than the number of immigrants during the same time in 2013 (60 000). This has put a strain on certain European countries most notably Spain, Italy and Greece which are situated on the geographical frontline with Africa. For instance, Italy has received over 140,000 arrivals in 2014. This amounts roughly to 15,650 arrivals per month or 516 arrivals each day (UNHCR, 2014). This situation underlines the disparities within the European Union as border countries are increasingly asking for the burden of illegal immigration to be shared more equitably amongst Member States.

Based on the Frontex data, the illegal immigration from Africa to Europe takes place through three main migratory routes. The first route is the Western

African route for which the main source countries are Morocco, Guinea and the Senegal. Passage to Europe using the Western African route is achieved through the Canary Islands. While this route was very active in the wake of the Arab Spring, recent data seem to indicate a decrease and progressive stabilization of illegal migratory flows. This was mainly achieved through the strengthening of border control activities in the region and the signing of bilateral agreements with origin countries.

The second route used for illegal immigration is the Western Mediterranean route. This route is mainly used by Algerians, Moroccans, Malians, and Cameroonians attempting to reach Spain, France or Italy. Migrants try to enter the Spanish peninsula by hiding into trucks and containers on ferries headed to the ports of Almeria and Algeciras. In recent years there has also been an increase in Sub-Saharan Africans travelling through this route. This has mainly been caused by recent conflicts and violence in Mali, Sudan, South Sudan, Cameroon, Nigeria, Chad and the Central African Republic which have resulted in large displacement of population and has put increased pressure on Spanish border control authorities.

Finally, the now infamous Central Mediterranean route takes immigrants from Libya to the Italian islands of Sicily and Lampedusa. Recently there has also been an increase of migrants from Northern Africa towards Italy and Malta. This is the result of the fall of Khadafy's regime in Libya and increasing instabilities in the sub-Saharan African region as well as Syria. Africans which would have previously settled down in Libya are now facing increasing violence and threats thus pushing them to try and migrate to Europe.

This situation benefits international crime organizations, which have become experts at smuggling contraband from Africa to Europe and exploiting illegal immigration routes. 'Full packet solutions' are offered by criminal groups, which include transportation, fraudulent documentation, appropriate cover stories, and clandestine border crossings (UNODC, 2014). The cost of the trip to Europe is dependent on a number of factors, including the origin of the migrant and the methods used. But it is frequent that migrants invest their entire savings or borrow money from friends and families to pay for their passage. The UN Office on Drug and Crime estimates that the market for illegal border crossing from Africa to Europe could amount to US\$300 million (280 million euros) each year, which is a huge sum of money looking at the poverty level of most African households. Unfortunately, for Africa, many African states

indirectly benefit from the revenues derived from the financing of illegal immigration trips. This has rendered some governments unwilling to tackle the problem for fear that lashing down on organized crime and human trafficking may deprive them from the additional revenues derived from the black economy (The Economist, 2014). Another widespread problem is the blatant abuses suffered by migrants undergoing illegal trips (Taran, 2000). Amnesty International estimates that at least 23,000 migrants have lost their lives trying to reach Europe since 2000 (Amnesty International, 2014). Indeed undocumented migrants are often put at risk: they may suffocate in containers, perish in deserts or drown at sea while being smuggled. As such it is not uncommon for them to be abused or die on the way to their destination, and many are abandoned "en route" without resources (UNODC, 2014). It is therefore increasingly important to understand the reasons for migration and counteract them in order to stop the demand for illegal migration transportation.

Investing in rural development is believed in some cases will help stabilize regions and achieve a better migratory flow management (Deshingkar & Grimm, 2005). While agriculture and migration are often seen as inter-connected the relationship between these two factors is rather complex especially with regards to development (Haas, 2012). For instance certain scholars believe that migration levels are also influenced by the labor demand in destination countries, while others believe it also to be a side effect of poor countries' growing prosperity³. Famines and rural poverty have also been depicted as "push" factors which nudge Africans towards choosing to emigrate (Crush, 2013). As for "pull factors" they are often related to new opportunities for the urban-based industry and services especially in the case of out-rural migration flows.

Meanwhile, many studies have underlined the negative effects that migration has on agricultural systems (Mendola, 2010). Indeed migratory flows lead to changes in the population distribution. This affects a country's food supply but also its labor availability and production capabilities. Nevertheless rural development is often presented as a strategic way to counteract migratory flows. This derives from the belief that sound agricultural and food security policies may prevent migration by promoting more and better employment opportunities in rural areas (through enterprise development, employment-based safety nets, and more advanced agricultural technologies) (FAO-ILO, 2009). Additional benefits include improving opportunities for rural residents to productively use the remittances they receive

3 This is referred to as the "migration hump". This theory assumes that a country's increase in wealth tends to lead (even if temporarily) to a rise in migration. This is due to the fact that a certain threshold of wealth is necessary to enable people to assume the costs and risks of migrating

from migrant relatives; and by minimizing some of the risks associated with cross-boundary migration movements (FAO-ILO, 2009). Yet the effect of migration on the agro-rural sector is far from being completely understood. There is still much debate regarding to what extent rural development can contribute to reducing or preventing emigration.

This research has led us to believe that poor rural development and governance acts as a push factor for migration. In order to test this hypothesis the paper analyzed the number and nationality of illegal immigrants attempting to cross into Europe. This data was compared against rural development and governance indicators (see below). The above-mentioned parameters were considered for the years 1990, 2000, 2010, 2013 as these were

the only estimates provided by the United Nations Populations Division with regards to international migration flows.

Results obtained from the statistical analysis are not presented within this paper as it became clear that there was no statistically significant relation between the independent and dependent variables. This was caused by insufficient data as regards migration flows from Africa to Europe. Therefore the tested hypothesis cannot be confirmed. This brings about the conclusion that rural development alone cannot account for migration flows or prevent them. Wider instabilities linked to bad governance, political and social unrest are also to be taken into account when assessing a country's likelihood of becoming a source of illegal migrants.

CONCLUSION

This article analyzed Africa agricultural situation. It concluded that in spite of heterogeneity among the countries, several challenges are common to most countries. These involve the poverty trap, fragile and import-dependent economies, lack of quality infrastructure and hampered production capacities. Other long-term sustainability issues that also need to be addressed are environmental degradation, recurring natural disasters and epidemics. On the social side, the need for enhancing human capital formation and dealing with political stability and governance improvements has been identified as a critical development factor.

The paper also looked at the migration flows from Africa to other parts of the world and to the European Union specifically. The tested hypothesis was that migration flows depended on the situation in the agricultural and rural development sector and on the quality of governance infrastructures. Here, the migration data proved to be too restricted to allow for statistically significant results. Therefore, with the migration data available, the hypothesis cannot be confirmed.

In a way of policy recommendation, the paper argues in favor of tackling issues linked to illegal immigration to the European Union and adopting a global perspective on African development both at the national and continental level. Recent progress in the field of agricultural cooperation and regional integration may help African countries in developing stable infrastructures and increase economic opportunities thus helping prevent migrants from fleeing their home country. However there is a greater need for coordination and simplification of the current framework. African agriculture and food security cooperation programs are still too disperse to provide perennial solutions. Further research therefore needs to be done on the effectiveness of collective pan-African actions in the field of agricultural and rural development policy coordination.

REFERENCES

- ADEPOJU, A. 2004. Trends in International Migration in and from Africa. In: MASSEY, S. D. and TAYLOR, E. (Eds.) *International Migration Prospects and Policies*. New York: Oxford University Press, pp 59–76.
- AFDB, OECD DEVELOPMENT CENTRE, UNDP. 2014. *African Economic Outlook 2014: Global Value Chains and Africa's Industrialisation*. OECD. [Online]. Available at: <http://www.africaneconomicoutlook.org/en> [Accessed: 2017, June 15].
- AFDB, OECD DEVELOPMENT CENTRE, UNDP. 2014a. *Comparing the Real Size of African Economies*. [Online]. Available at: <http://www.afdb.org/en/news-and-events/article/comparing-the-real-size-of-african-economies-13030/> [Accessed: 2017, June 15].
- AFDB. 2012. Briefing Note 5: Income inequality in Africa. In: *Briefing Notes for AfDB's Long-Term Strategy*. [Online]. Available at: <http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/FINAL%20Briefing%20Note%205%20Income%20Inequality%20in%20Africa.pdf> [Accessed: 2017, June 15].
- AFDB. 2010. Chapter 2: Port Development in Africa. In: *African Development Report*. p. 31–75. [Online]. Available at: <http://www.afdb.org/en/knowledge/publications/african-development-report/african-development-report-2010/> [Accessed: 2017, June 15].
- AKINYOSOYE, V. 2008. Repositioning the National Statistical Systems of African Countries within the Framework of International Best Practices: The Case of Nigeria. *The African Statistical Journal*, 6: 191–220.
- AMNESTY INTERNATIONAL. 2014. *The Human Cost of Fortress Europe: Human rights violations against migrants and refugees at Europe's borders*. United Kingdom: Amnesty International Secretariat.

- BRÄUTIGAM, A. D. and KNACK, S. 2004. Foreign Aid, Institutions and Governance in Sub-Saharan Africa. *Economic Development and Cultural Change*, 52(2): 255–285.
- CRUSH, J. 2013. Linking Food Security, Migration and Development. *International Migration*, 51(5): 61–75.
- DESHINGKAR, P. and GRIMM, S. 2005. *Internal migration and development: a global perspective*. IOM migration research series, Issue 19. Geneva: IOM. 79 p.
- ELBADAWI, I. and SAMBANIS, N. 2000. Why are there so many civil wars in Africa? Understanding and Preventing Violent Conflict. *Journal of African Economies*, 9(3): 244–269.
- FAO. 2014 a. *FAO Director-General stresses link between rural development and migration*. [Online]. Available at: <http://www.fao.org/news/story/en/item/270265/icode/> [Accessed: 2017, June 15].
- FRENKEN, K. (Ed.) 2005. *Irrigation in Africa in Figures: Aquastat Survey – 2005*. FAO Water Reports. [Online]. Available at: ftp://ftp.fao.org/agl/aglw/docs/wr29_eng.pdf [Accessed: 2017, June 15].
- FAO-ILO. 2009. *Rural Migration*. [Online]. Available at: <http://www.fao-ilo.org/migration0/en/> [Accessed: 2017, June 15].
- FRONTEX. 2014. *FRAN Quarterly Report: Quarter 2, April–June 2014*. Warsaw: Frontex. [Online]. Available at: http://frontex.europa.eu/assets/Publications/Risk_Analysis/FRAN_Q2_2014.pdf [Accessed: 2017, June 15].
- GUHA-SAPIR, D., HOYOIS, P. and BELOW, R. 2012. *Annual Disaster Statistical Review 2012: The Numbers and Trends*. Brussels: CRED. [Online]. Available at: http://www.cred.be/sites/default/files/ADSR_2012.pdf [Accessed: 2017, June 15].
- HAMILTON, R. 2014. Ebola crisis: The economic impact. *BBC News*. [Online]. Available at: <https://www.bbc.com/news/business-28865434> [Accessed: 2014, February 15].
- HAAS, DE H. 2012. The Migration and Development Pendulum: A Critical View on Research and Policy. *International Migration*, 50(3): 9–25.
- HAAS, DE H. 2008. *Migration and development: A theoretical perspective*. International Migration Institute. [Online]. Available at: <http://www.imi.ox.ac.uk/pdfs/wp/WP9%20Migration%20and%20development%20theory%20HdH.pdf> [Accessed: 2017, June 15].
- IMF. 2014. *Regional Economic Outlook; Sub-Saharan Africa, Staying the Course*. World Economic Financial Surveys. Washington, D. C.: International Monetary Fund. [Online]. Available at: <https://www.imf.org/external/pubs/ft/reo/2014/afr/eng/sreo1014.pdf> [Accessed: 2014, February 15].
- KARAGUEUZIAN, C. and VERDIER-CHOUCANE, A. 2004. Taking Africa's Irregular Migrants into Account: Trends, Challenges and Policy Options. *Africa Economic Brief*, 5(1). [Online]. Available at: <http://www.afdb.org/fr/documents/document/economic-brief-taking-africas-irregular-migrants-into-account-trends-challenges-and-policy-options-50783/> [Accessed: 2017, June 15].
- MASIH, I., MASKEY, S., MUSSÁ, F. E. F. and TRAMBAUER, P. 2014. A review of droughts on the African continent: a geospatial and long-term perspective. *Hydrology and Earth System Sciences*, 18: 3635–3649.
- MENDOLA, M. 2010. Rural out migration and economic development at origin: A review of the evidence. *Journal of International Development*, 24(1): 102–122.
- OECD. 2013. *International Migration Outlook 2013*. [Online]. Available at: http://dx.doi.org/10.1787/migr_outlook-2013-en [Accessed: 2017, June 15].
- OECD-UNDESA. 2013. *World Migration in Figures*. [Online]. Available at: <http://www.oecd.org/els/mig/World-Migration-in-Figures.pdf> [Accessed: 2017, June 15].
- PALÁT, M., PALÁT, M. and PRUDKÝ, J. 2013. Modeling of natural water retention in the catchment basin of the Opava river during flood. *Beskydy*, 2(6): 109–116.
- PETERS, P. 2004. Inequality and Social Conflict Over Land in Africa. *Journal of Agrarian Change*, 4(3): 269–314.
- PWC. 2014. *Global Economic Crime Survey 2014: The Evolution of Fraud*. [Online]. Available at: <https://www.pwc.com/cz/en/hospodarska-kriminalita/assets/pdf/global-economic-crime-survey-2014-en.pdf> [Accessed: 2017, June 15].
- RAKOTOARISOA, M. A., IAFRATE, M. and PASCHALI, M. 2011. *Why has Africa become a net food importer: Explaining Africa agricultural and food trade deficits*. Rome: FAO UN. [Online]. Available at: <http://www.fao.org/docrep/015/i2497e/i2497e00.pdf> [Accessed: 2017, June 15].
- STANFORD CENTER ON FOOD SECURITY AND THE ENVIRONMENT. 2013. *Debating the future of food in Africa*. [Online]. Available at: http://fse.fsi.stanford.edu/news/debating_the_future_of_food_in_africa_20130213 [Accessed: 2017, June 15].
- TARAN, A. P. 2000. Human Rights of Migrants: Challenges of the New Decade. *International Migration*, 38(6): 7–51.
- UN. 2011. *New Partnership for Africa's Development: ninth consolidated progress report on implementation and international support*. [Online]. Available at: http://www.un.org/africa/osaa/reports/2011_NEPAD_Progress_en.pdf [Accessed: 2017, June 15].
- UNCTAD. 2003. *African ports: reform and the role of the private sector*. Report by the secretariat of UNCTAD. [Online] Available at: http://unctad.org/en/docs/sdtetlb5_en.pdf# [Accessed: 2017, June 15].
- UNECA. 2013. *African Governance Report III 2013*. [Online]. Available at: http://www.uneca.org/sites/default/files/publications/agriii_eng_fin.pdf [Accessed: 2017, June 15].

- UNDESA. 2013a. *The number of international migrants worldwide reaches 232 million*. Population Facts No 2013/2, Population Division. [Online]. Available at: http://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2013-2_new.pdf [Accessed: 2017, June 15].
- UNDESA. 2013b. *International Migration 2013: Migrants by origin and destination*. Population Facts No 2013/3, Population Division. [Online]. Available at: http://www.un.org/en/development/desa/population/publications/pdf/popfacts/PopFacts_2013-3Rev1_new.pdf [Accessed: 2017, June 15].
- UNESCO. 2011. *Global Education Digest 2011: Focus on secondary education: the next great challenge*. [Online]. Available at: <http://www.uis.unesco.org/Education/Pages/global-education-digest.aspx> [Accessed: 2017, June 15].
- UNHCR. 2014. *So close yet so far from Safety*. Central Mediterranean Sea Initiative (CMSI). [Online]. Available at: <http://www.unhcr.org/542c07e39.html> [Accessed: 2017, June 15].
- UNODC. 2014. *Smuggling of migrants: the harsh search for a better life*. [Online]. Available at: <http://www.unodc.org/toc/en/crimes/migrant-smuggling.html> [Accessed: 2015, March 10].
- WORLD BANK. 2014. Ebola: Economic Impact Could Be Devastating. *World Bank*. [Online]. Available at: <http://www.worldbank.org/en/region/afr/publication/ebola-economic-analysis-ebola-long-term-economic-impact-could-be-devastating> [Accessed: 2017, June 15].
- WORLD BANK. 2011. *Leveraging Migration for Africa: Remittances, Skills and Investments*. Washington DC: The World Bank. [Online]. Available at: <http://siteresources.worldbank.org/EXTDECPROSPECTS/Resources/476882-1157133580628/AfricaStudyEntireBook.pdf> [Accessed: 2017, June 15].
- WORLD COCOA FOUNDATION. 2014. *Cocoa Market Update 2014*. [Online]. Available at: <https://worldcocoafoundation.org/wp-content/uploads/Cocoa-Market-Update-as-of-4-1-2014.pdf> [Accessed: 2017, June 15].
- WHO. 2014. *World Malaria Report 2014*. [Online]. Available at: http://www.who.int/malaria/publications/world_malaria_report_2014/en/ [Accessed: 2017, June 15].
- YOU, L. Z. 2008. *Africa Infrastructure Country Diagnostic: Irrigation Investment Needs in Sub-Saharan Africa*. Background paper No. 9. IFPRI. [Online]. Available at: <http://www.eu-africa-infrastructure-tf.net/attachments/library/aicd-background-paper-9-irrig-invest-summary-en.pdf> [Accessed: 2014, February 15].