Does Trade Liberalization Reduce Poverty in Morocco? Regional Evidence

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Abstract

The paper analyzes the structure of poverty and trade openness in Morocco, and how trade liberalization affects poverty. We present regional evidence in the last fifteen years. We illustrate significant regional differences in term of poverty, vulnerability, inequality and trade openness. We discuss the driving factors of these regional discrepancies. Our approach is based on estimation on a panel model, including the 14 regions. Our results show that extreme poverty is almost eradicated in Morocco, except for some areas. On the other hand, vulnerability remains high with disparities between regions. The Expenditure negatively affects poverty, and trade openness is positively correlated with Expenditure. Which may confirm the view that trade has a positive effect on growth, and growth reduces poverty by improving income. Our analysis provides policy recommendations for fighting effectively poverty and reducing regional disparities.

JEL classification: F15; I32; O18

Keywords: Trade openness; Poverty; Economic integration, inequalities, Moroccan regions

Introduction

Since the late eighties, many developing countries have progressively integrated global markets through unilateral broad structural economic reforms, bilateral free-trade agreements, and multiparty trade negotiations. This strategic plan was adopted in order to boost economic growth and improve the welfare of the population. There are many economists who share the view that, *ceteris paribus*, countries with few trade restrictions will have faster economic growth than countries that severely limit trade (Krugman, 2000; Baldwin, 2003; Winters *et al*, 2004; Duncan and Quang, 2003).

More recently, the reduction of poverty has become one of the main goals of development efforts as evidenced by the adoption of the Millennium Development Goals by most developing countries and international agencies (Cicowiez M and Conconi A, 2008).

Mindful of the role of trade in economic development, Morocco was one of the first Arab and African country to opt for the opening of its economy and its integration in the world economy since 80s. Trade openness was reinforced during the 90s by export promotion, import liberalization of goods and services, by the abolition of quantitative restrictions and by

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the signing of several free trade agreements in the 2000s. Actually, foreign trade of goods and services confirm this trend, as it represents on average around 80% of GDP over the last five years.

This gradual opening of the economy was accompanied by a real decrease in the poverty rate (extreme poverty). According to data of HCP, from 2001 to 2014, this rate is almost divided by 3, from 15,3% to 4,8% with a vulnerability rate, which fell during the same period from 22,8% to 12,5%.

This finding suggests a correlation among trade openness and poverty. What link can be established between trade openness and poverty for the case of Morocco? What about their real relationship? Moreover, what is the structure of poverty from a spatial perspective between the different Moroccan regions?

More precisely, our objective in this paper is twofold: on the one hand, to analyze the structure of poverty in Morocco by region, while making a distinction between rural and urban areas, and that of trade openness. On the other hand, to test the impact of trade openness on poverty and inequality. To provide answers to these questions, we have adopted a three-part plan:

1. We discuss theoretical and empirical review on trade openness and poverty, highlighting the case of developing countries;

2. In this section, we apprehend the structure of poverty and trade openness in Morocco. This section is divided into two sub-sections:

    2.1. The first analyzes the evolution of inequality, vulnerability and poverty using the results of surveys of HCP (Haut-Commissariat au Plan) by regions while making a distinction between the rural and the urban areas. Two main results to draw:

    - The rural world is more affected by extreme poverty, which caused essentially by traditional and chaotic agricultural activities and no safety net.

    - Some regions are doing better than others. This is due, mainly, to public subsidies, investments in human development and exports.

On this point, the result is to be taken lightly because several parameters must beings considered. Structuring plans adopted by the Kingdom for ten years, the national initiative in fighting poverty and isolation (INDH), improving the quality of institutions, doing business and fighting corruption.

2.2. The second studies, using descriptive statistics, the structure and the trend of foreign trade and the opening rate of the national economy over the last fifteen years (2000-2014). Several dimensions of trade openness and the integration of the Moroccan economy into globalization have been addressed.

3. We tried, finally, to analyze the impact of trade liberalization on poverty. In this perspective, we used an econometric approach (Panel Model) while trying to consider other variables that can positively influence poverty, such as economic growth, GDP per capita, and unemployment rate.

We have adopted a more tailored approach and completely different from other studies that have addressed this issue in Morocco. The bulk of the work addressed the issue from the point of view of computable general equilibrium by simulating the impact of a tariffs reduction on the level of poverty and welfare [Tohami (2009); Hafid *et al*. (2014)].

Finally, our results show that there is a significant reduction of extreme poverty coupled with increasing trade openness. This may confirm the theory of "pro-poor growth" and specialization of the Moroccan economy in activities requiring more unskilled labor. This specialization could leave a population of inactivity to activity reducing consequently extreme poverty.

This decrease of poverty is to be taken with caution, because a revaluation of the poverty line in Morocco is necessary, what could possibly reverse the trend. This also depends on the agreed income level.

Before we get to the heart of the matter, we give an overview of the main theoretical and empirical findings on the link between trade openness and poverty reduction.

1. Trade Openness and Poverty: An Ambiguous Relationship

The argument that trade liberalization has a significant impact on economic development and poverty reduction is at the heart of the controversy since the rise of globalization. While many economists[4] and international financial institutions defend the merits of free trade and openness by claiming that they are the key to economic success and poverty reduction , Other economists, many non-governmental organizations and anti-globalization movements argue that if it is not linked to more ambitious social objectives, trade openness can lead to inequalities and poverty. The disagreement lies in how to integrate into globalization, because neither of these currents is for autarky. The question is how to take advantage of the prospects offered by this surge. Some are for institution building, others for better-structured or better-managed integration.

Since the 1970s and after the "Washington Consensus", few developing countries have succeeded in narrowing the gap between the most advanced countries in terms of income and technology. There are even countries that have seen their situation aggravated. The way in which global economic integration is conceived seems to be decisive in the path that the economy can take. The experience of the countries of East and South-East Asia shows that the combination of active industrial policies and gradual integration is a winning strategy and has enabled these countries to narrow the gap with developed countries. Several countries in Latin America and Africa have adopted deep and rapid economic liberalization and have failed to achieve the expected results.

From a developmental perspective, after almost thirty years of trade reform, the degree of tariff liberalization, on average, has not coincided with proportional reductions in overall poverty as initially expected (World Bank, 2007). Although several factors beyond trade policy appear to have contributed to this divergence, it is also true that the links between trade openness and poverty are not well understood, thus making it particularly difficult to design

[4] As krugman (2000), Winters (2004), Ben-david (1993).

and implement trade-induced pro-poor public policies. In this context, further research – based on new methodological approaches, improvements on existing techniques and accessibility to high-quality data – and continued dialogue with policy makers are two key conditions to ensure the political viability of trade reform and strengthen its poverty nexus.

In practice, the correlation between trade openness and poverty is neither simple nor systematic. Theoretically, voluntary exchange is beneficial for countries. In this sense, openness acts in favor of economic growth, which will lead to a reduction of poverty if it is inclusive. The correlation can be described as indirect and can have a positive effect on poverty, it is the idea developed by the "pro-poor-growth" theory (see Ravallion and Chen, 2003; Klasen, 2004; Kakwani and Pernia, 2000; Baulch and McCulloch, 2000; Kakwani et al., 2002).

1.1. Trade Openness, Growth and Poverty Reduction: Theoretical Literature

Nowadays, it is commonly recognized that trade is an important source of wealth generation, as well as an important means to self-sustained growth and poverty reduction. To begin with, access to larger and richer foreign markets is key to enable domestic firms to generate the level of demand required to exploit economies of scale which, in turn, create the opportunities for sustained economic growth. This is especially true for low-income countries with small domestic markets (OECD, 2008).

Under some conditions of competition and a minimum of human capital, trade allows developing country firms to access technologies that are essential for improving their productivity and competitiveness, which will generate growth and employment opportunities, including for poor men and women. The experience of newly industrialized economies in Asia has demonstrated from the 1960s through to the 1990s, is a very good example of economic success in terms of technological catch-up with lower cost and less risk.

According to the standard trade theory, openness to exchange allows the equalization of the relative prices of traded goods and consequently the equalization of the relative prices of factors of production. An increase in the relative price of a good increases the relative pay of the factor used intensively in the production of that good. Theoretically, international competition tends to exert pressure on the remuneration of factors such that these remunerations are identical in all countries. This theorem is true only under certain hypotheses: specialization, two goods exchanged between two countries using two factors of production.

In a global economy characterized by a growing income gap between rich and poor countries, trade can contribute to converging income levels (Dan Ben-David, WTO 2000). In general, in addition to income convergence, the countries that opted for liberalization are growing faster. According to Winters *et al.* (2004), international trade liberalization generally contributes to poverty reduction by helping people realize their productive potential, stimulating economic growth, limiting arbitrary government interventions, and helping to resist shocks.

In reality, of course, the relative factor incomes are not equalized between countries. This relates to a number of factors: transport costs, barriers to trade, imperfect competition, trade policy divergence, etc.

For a more detailed literature, see the UNCTAD work of Amelia U. Santos-Paulino, 2012 and that of Martin Cicoweiz and Adriana Conconi ,2008. Below is a summary of trade-poverty link.

Table N° 1: The Characterization of the Trade-Poverty Link

Framework / Mechanisms	*Trade focus*	*Transmission channels / response*				*Welfare impacts*		
		Relative prices	*Factors income*	*Government revenues and expenditures*	*Risk and vulnerability*	*Growth*	*In-equality*	*Poverty*
McCulloch et al. (2001); Winters et al. (2004)	Trade policy	Changes in border prices – changes in prices faced by households	Impact on profits → employment → wages	Tax and spending		(+ , -)		(+ , -)
UNCTAD LDCs Report (2004)	Trade balance	Changes in relative prices and factor incomes	Impact on employment → wages. Impact on formal / informal sectors. Capital accumulation and technological progress	Macro-micro policies, labour market focus	Development policies that link tradea and poverty and human development	(+ , -)		(+ , -)
Goldberg and Pavnick (2007b)	Exports	Short and medium term changes in factor income	Impact on employment → wages. Industry specific skill biased-tech change. Impact on formal / informal sectors	Broad based macroeconomic policies. Tariff and trade policy	Industry-specific policies	→ (+ , -)		
Thorbecke-Nissanke (2010, 2011)	Globalization: trade and capital openness, factor movement	Differential cross-border factor prices and mobility	Skill-biased technological change	Broad based macro-economic policies	Pro-poor institutions and policies	(+, -)	→ (+, -)	(+, -)

Source : Amelia U. Santos-Paulino, UNCTAD, 2012, page 5

1.2. Empirical Analysis

The linkages between international trade and poverty are not as direct and immediate as the links between poverty and national policies in the areas of education, health, microcredit, infrastructure, business governance, etc. However, international trade can have both negative and positive effects on the economic prospects of the poor (the most disadvantaged).

Empirically, analysts focus more on the relationship between openness and growth to link poverty and inequality. As a result, trade openness stimulates growth through several channels, and growth contributes to poverty reduction. In this sense, several empirical studies have examined the triangular relationship: growth, inequality and poverty [Bourguignon (2003); Ravallion and Chen (2003); ...]. Using the microeconomic approach and / or the econometric approach, economists seek to establish a causal relationship between the first two factors and poverty. According to Bourguignon (2003), for a given level of growth, a reduction in inequalities greatly reduces extreme poverty. Similarly, with a constant level of initial inequality, the pure effect of growth contributes to a rapid reduction in poverty. Given this approach, known as *pro-poor growth*[5], growth is not a sufficient condition and it is therefore necessary to distinguish between a growth effect and an inequality effect.

Using panel data for the MENA region, Daymon C and Gimet C, (2007) sought to identify factors to reduce inequality and poverty. In a first step and using a test of the Kuznets hypothesis, the results of their study show that GDP per capita has not reached a sufficiently high level to reduce inequalities. With the exception of Kuwait, the remaining countries are still at a stage where rising per capita incomes further deepen the gap between rich and poor. In a second step, these authors tested the theory of pro-poor growth, which shows the interest in promoting policies that improve social equity in these countries.

The majority of the cross-country regression studies conducted during the 1990s share the common finding that openness is associated with more rapid growth (see Dollar, 1992; Sachs and Warner, 1995; Ben-David, 1993). However, most of these studies are subject to different critiques (see Rodriguez and Rodrik, 1999).

In studying this relationship for the case of India, J. Salcedo Cain, Rana Hasan and Devashish Mitra (2010)[6] show that the link between trade openness and the worsening poverty is unfounded. In their article, "Trade liberalization and poverty reduction, new evidence from Indian States," the authors argue that the Indian states most exposed to trade openness have experienced a more rapid reduction in absolute poverty.

For a more recent work on this issue and using a panel of African countries over the period 1981-2010 in the trade-poverty relationship, Maëlan Le Goff and Raju Jan Singh, 2014, find that trade openness tends to reduce poverty in countries where financial sectors are deep, education levels high and institutions strong.

Despite some criticism and in particular methodological criticism (Bhagwati and Srinivasan, 2002), the theoretical explanations and much of the empirical analysis argue for a positive effect of openness on poverty. The example of the countries of South and South-East Asia and China is prominent where openness has brought millions of people out of extreme poverty, while countries that have turned to import substitution policies with trade barriers have failed, or at least less efficiently, to remove the population from poverty, as was the case in Latin America during the 1960s.

2. Structure of Trade an Poverty in Morocco

We are interested in this part, on the one hand, to analyze the structure of poverty, vulnerability and inequalities at the national level, by region and by distinguishing between rural and urban area. On the second hand, we focus on the structure and dynamics of the

[5] Contrary to this approach, for the theoreticians of trickle-down development (Kuznets, 1955), the reduction of inequalities and poverty stem from the growth process.

[6] J.Salcedo Cain, Rana Hasan and Devashish Mitra, 2010, “Trade liberalization and poverty reduction, new evidence from Indian States”, Working Paper N° 2010-3, Columbia Program on Indian Economic Policies.

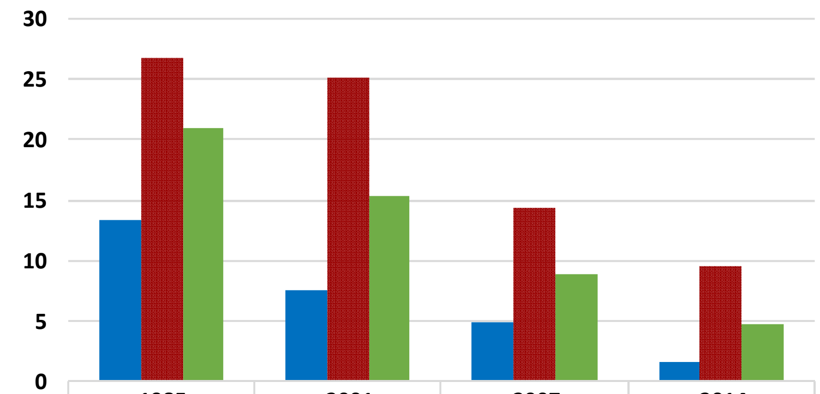
opening in Morocco. It will lead us to answer the question about trade-poverty link in the last point using an econometric approach.

2.1. The Structure of Poverty at National and Regional Level

2.1.1. National View

Based on the statistics of the poverty surveys of the HCP, we find that the downward trend in the poverty rate announced in the UNDP 2012 report about the Millennium Development Goals (MDGs) is also confirmed in the case of Morocco. The poverty rate[7] was sharply reduced nationally and divided by 3 between 2001 and 2014, from 15.3% to 4.8% (Graph N°1). This decline is not monotonous but occurs at different rates depending on the place of residence. In 2014, Morocco has nearly 1605,000 poor. Almost 80% of them live in rural areas. All other measures of poverty (magnitude and severity) indicate the same trend, i.e. a decline since 1985.

Graph N° 1: Evolution of the Absolute Poverty Rate by Area (%)



	1985	2001	2007	2014
Urban	13,3	7,6	4,9	1,6
Rural	26,8	25,1	14,4	9,5
National	21	15,3	8,9	4,8

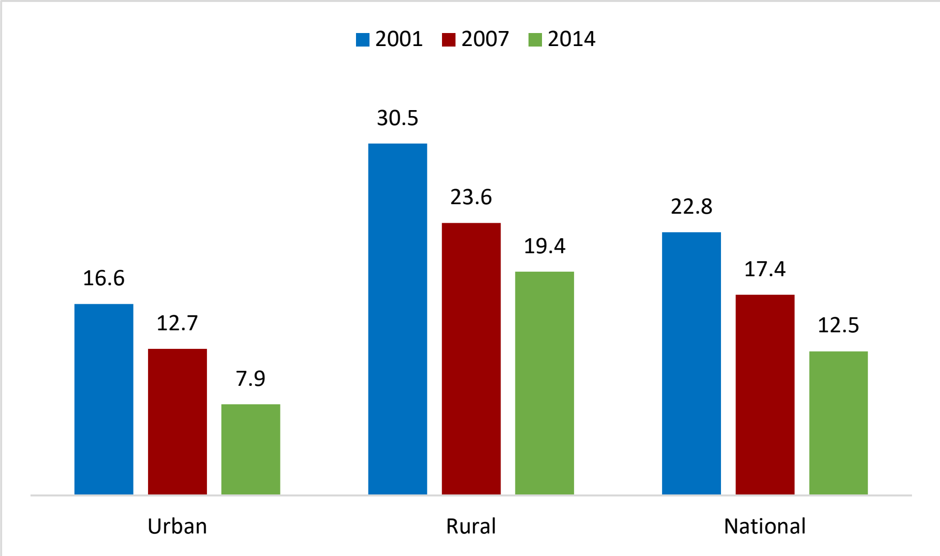
Source: HCP? Author's elaboration

The same trend is observed when we look vulnerability rate[8]. Between 2001 and 2014, the vulnerability rate is halved in both urban and rural areas. It decreased from 30.5% to 19.4% in the rural area and from 16.6% to 7.9% in the urban, which reduces the national rate from 22.8% to 12.5% 5 (Graph N°2).

[7] **Poverty rate**: the proportion of poor people in the population, or even the percentage of individuals in a household whose per capita expenditure is below the relative poverty line. In 2007, this threshold was 3834 MAD per person per year in urban areas and 3569 MAD per person per year in rural areas. This threshold of poverty is reviewed in 2014, taking into account changes in living cost, and achieved 4667 MAD (2.6 $ US PPA) for urban and 4312 MAD (2.5 $ US PPA) for rural.

[8] **The rate of vulnerability** to poverty is the proportion of individuals whose average annual expenditure per person is between the relative poverty line and 1.5 times this threshold.

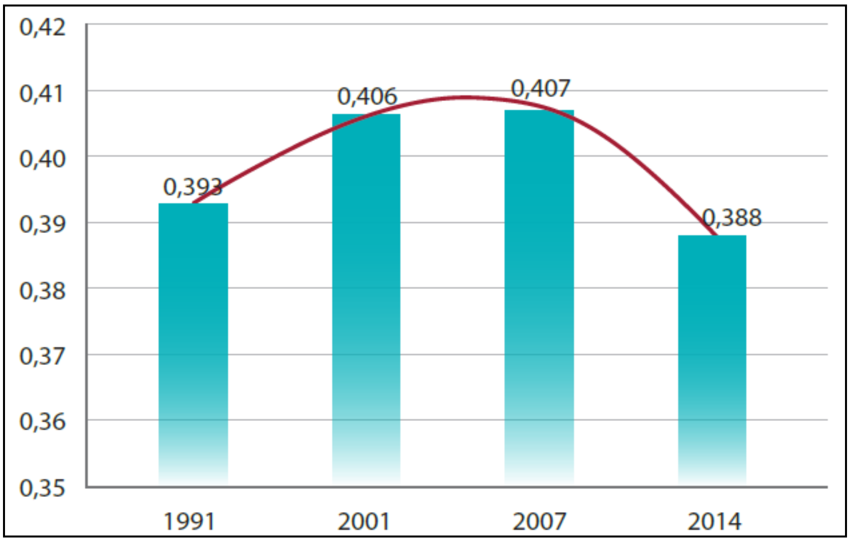
Graph N° 2: Rate of Vulnerability to Poverty by Area (%)



Source: HCP, Author's elaboration

According to the last data from the National Survey on Households Consumption and Expenditure, the per capita living standard improved by 3.3% between 2001 and 2014, with more favorable rates for modest and intermediate social categories. Thus, the share in the overall consumption of 10% of the least affluent households increased by 7.7 %, and the most affluent 10% falling by 5.4%. Under these circumstances, social inequalities[9] assessed by consumption brought about, between 2007 and 2014, a first inflection of their downward rigidity. Measured by the Gini Coefficient, they decreased by 4.7% nationally (from 0.407 to 0.388). They dropped sharply by 6.8 % in urban areas and 4.8% in rural areas (Graph N°3).

Graph N° 3: Evolution of Household Consumption Inequalities (GINI Index)



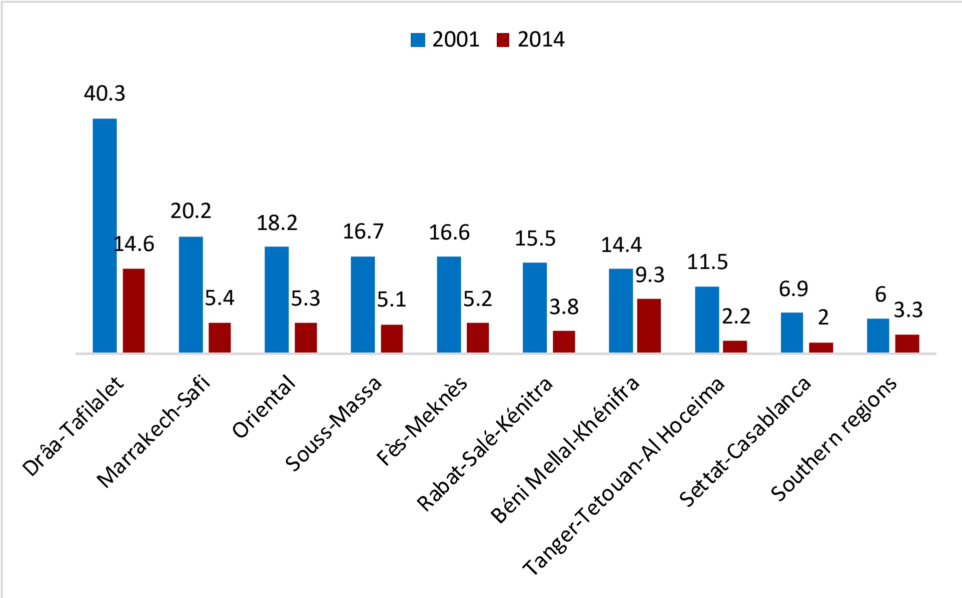
Source: HCP, 2015

[9] Inequality is based on the internationally recognized Gini index as a measure of the level of disparity in living standards. This index lies between the values 0 (in the case of perfect equality of living standards) and 1 (in the case of absolute inequality).

2.1.2. Regional View

Regional data, as in national perspective, show a real decline in extreme poverty in all regions, even for the region that was most affected (Daâra-Tafilalet with a clear drop of poverty rate from 40.3% to 14.6% between 2001 and 2014). Despite this downward trend, some regions are characterized by higher rates than national one (graph N°4), this concerns 5 regions: Drâa-Tafilalet; Marrakech-Safi; Oriental; Souss-Massa; Fez-Meknes, Beni Mellal-Khénifra.

Graph N° 4: Evolution of the poverty rate by region (2001-2014)

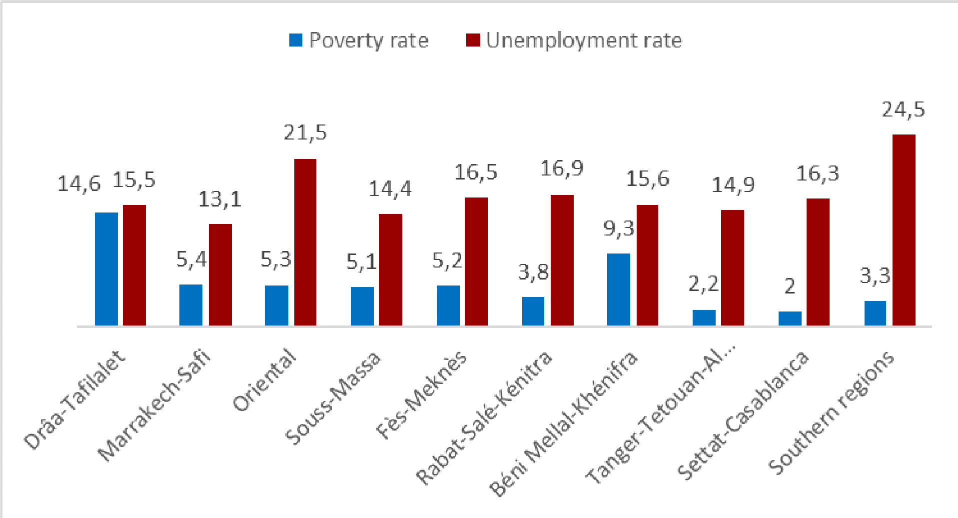


Source: HCP, 2015, Author's elaboration

Examining the rate poverty and the unemployment rate by region, we can make the following observation: Overall, a high rate of unemployment corresponds to a low poverty rate. This is true for Southern regions, Settat-Casablanca and Tanger-Tetouan-Al Houceima.

We can explain this for two reasons. The first concerns the southern regions. Despite a high poverty rate, the poor covers its basic needs through government subsidies and human development policies. The second reason relates to the structure of the inhabitants of the other regions. Regions with a large urban population suffer less from poverty than regions with an important rural world despite a very high poverty rate, as is the case in the region of Settat-Casablanca and Rabat-Salé-Kénitra (Graph N°5).

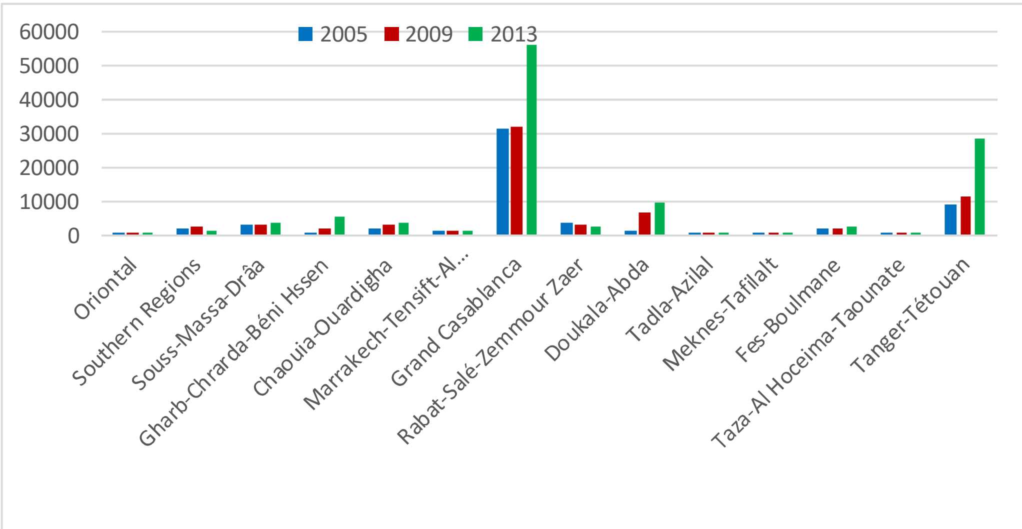
Graph N° 5: Regional Poverty and Unemployment Rates in 2014



Source: HCP, 2015, author's elaboration

Looking at trade by region, it is very difficult to establish a direct link between foreign trade and poverty. The following figure shows exports by region between 2005 and 2013. Two regions (Grand Casablanca and Tangier-Tetouan) are dynamic in exports and have low poverty rates. Openness benefits the most needy in these regions (graph N°6).

Graph N°6: Evolution of Export by Region



Source: Ministry of Industry, 2015, Author's elaboration

2.2. The Moroccan economy and international trade

2.2.1. Overview of trade liberalization policies in Morocco

Since independence, the Moroccan economy has undergone an important evolution and profound and irreversible changes. These developments have gone through several phases that have strongly influenced the country's economic policy and have relatively altered their objectives and priorities. Indeed, we can distinguish three main periods:

1. The first phase is that of a "protected development" that economists would tend to call a model of substitution for importing and promoting exports. This phase was marked by high tariffs, quantitative and non-quantitative restrictions and a high exchange rate. However, this policy oriented towards the internal market has not enabled the country to achieve the expected economic and social results.

2. The second period started in the 1980s, marked by the introduction of trade policy reforms. Since then, trade liberalization has become an integral part of Morocco's trade policy, through the gradual disengagement of the State, the strengthening of private initiative, and the reduction of tariff and non-tariff barriers applied to imports. In addition, Morocco's trade liberalization led to the promulgation in 1992 of a new trade law that eliminated quantitative restrictions and used the tariff as the main means of protecting domestic production. Import products were classified into three categories: free-to-import (listed A), subject to authorization (list B) or prohibited (list C)

3. Lastly, the third phase, 1993-2004 until today, is a period during which Morocco has put in place sectoral development policies[10] (Green Plan, Emergence Plan ...) and the signing several bilateral and multilateral free trade agreements with the countries of the North as well as the countries of the South.

As a member of the World Trade Organization agreement (WTO) in January 1995, Morocco is committed to two main obligations: the Most-Favored-Nation clause (MFN) and the National Treatment obligation.

In addition, since its accession to the WTO, Morocco has signed Free Trade Agreements with 56 countries: the member countries of the European Union and the European Free Trade Association (in 2000), the Turkey and the United States (in 2006), 18 countries of the Arab League in the Framework of the agreement of the Greater Arab Free Trade Zone (in 1998), With each of the countries of the Agadir Agreement (Tunisia, Egypt and Jordan) 1999, then under the Agadir Agreement (in 2007) and the United Arab Emirates (in 2003).

The country is also pursuing its Opening its doors, developing its commercial relations with Regional groupings in Africa: it signed a trade and investment Agreement with the West African Economic and Monetary Union (UEMOA) and the Economic and Monetary Community of Africa (CEMAC).

Negotiations for a Deep and Comprehensive Free Trade Area (DCFTA) between the EU and Morocco were launched on 1st March 2013. Four negotiating rounds have taken place so far, the most recent in April 2014.

[10] The main goal of these policies is the diversification of the productive structure as well as the fight against rural poverty

Morocco adopted the Pan-Euro-Mediterranean system of cumulation of origin[11] in December 2005. This is based on a network of Free Trade Agreements (FTAs) across Europe and the Mediterranean and aims to promote regional integration through a common system of rules of origin.

The country also conducted three rounds of negotiations, which took place from June 18-22, 2012, in Ottawa for a Free Trade Agreement with Canada. The first round of negotiations took place in October 2011, followed by a second round in March 2012. Good progress has been made so far on all aspects of the negotiations, notably in areas related to custom procedures, sanitary and phytosanitary measures and government procurement.

[11] Cumulation of origin means a product of one participant can be processed or added to a product of a second participant and still be considered an originating product for the purposes of a trade agreement.

Morocco and Free Trade Agreements

Regional Agreements

- **Union of the Arab Maghreb** (Morocco, Mauritania, Tunisia, Algeria, Libya)
- **Greater Arab Free Trade Area** (GAFTA), 2005, (18 countries): Morocco, Egypt, United Arab Emirates, Bahrain, Jordan, Tunisia, Saudi Arabia, Sudan, Syria, Iraq, Sultanate of Oman, Palestine, Qatar, Kuwait, Lebanon, Libya, Algeria and Yemen
- **Declaration of Agadir (Agreement Quad),** signed on May 2001 by Morocco, Egypt, Tunisia, and Jordan, The Agadir Agreement was signed on 25 February 2004 and entered into force on 27 March 2007
- **Discussion on a Free Trade Agreement** between Kingdom of Morocco and the countries of MERCOSUR (Argentina, Brazil, Paraguay and Uruguay). The first round of negotiations was held in Rabat, Morocco on 11 April 2008.
- **Trade and Investment Agreement with the West African Economic and Monetary Union (UEMOA)** The agreement notably entails full exonerations or reductions of up to 50% on customs duties and tax for specific products, besides the most-favored-nation status. The aim is to establish an adequate legal framework designed to boost economic ties between the two parties. It should also be noted that negotiations are underway between Morocco and the Central African Economic and Monetary Union (CEMAC) to sign a Free Trade Agreement.

Bilateral Agreements

- **Free Trade Agreement (FTA)** between Morocco and United States signed on June 15, 2004. This Agreement entered into force on January 1, 2006.
- **Free Trade Agreement (FTA)** with Turkey, signed on 7 April 2004 and entered into force on 1st January 2006
- **The Association Agreement between the European Union and Morocco**, forming the legal basis of the EU-Morocco relationship signed on 1997 and entered into force in March 2000. This bilateral agreement replaces earlier cooperation agreements between the European Union and Morocco, and constitutes the framework for EU-Morocco political, economic, social, scientific and cultural cooperation within the Euro-Mediterranean Partnership.
- **Negotiations for a Deep and Comprehensive Free Trade Area (DCFTA)** between the EU and Morocco were launched on 1 March 2013
- **Bilateral Free Trade Agreements already entered into force with** Egypt, United Arab Emirates, Jordan and Tunisia.

During this period, a range of non-agricultural tariff reforms was introduced to reduce tariff barriers, eliminate quantitative restrictions on export products and simplify customs policy by reducing the number of tariffs Taxes and lines and by facilitating import procedures.

Two main tariff reforms have been put in place in this direction. The first reform came into force in 1983 and aimed at reducing customs duties by 400% at rates of 160%, 120%, 90% and 60%.

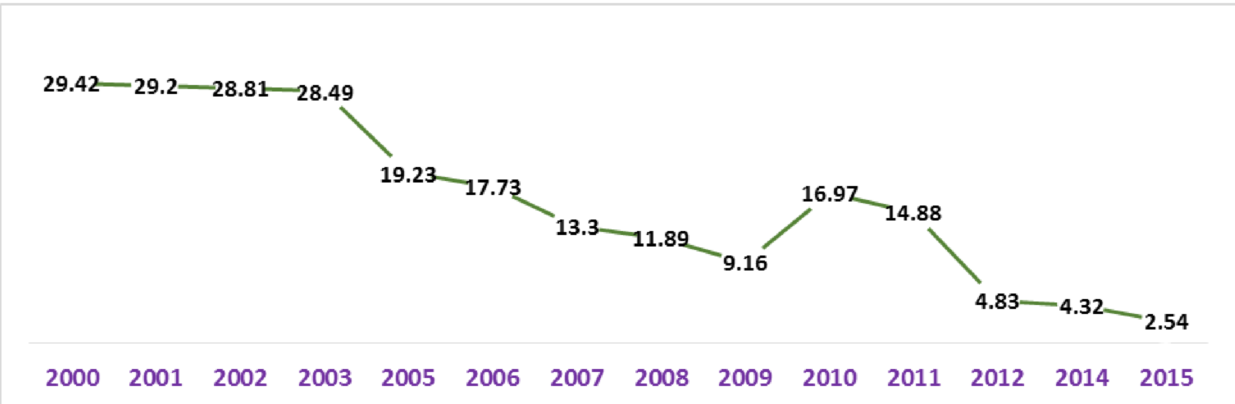
As for the second reform, it took place in 1993 and reduced the maximum rate to 50%. The Uruguay Round in 1995 resulted in the fixing of 55% of tariffs (including the import levy) and a commitment to reduce the rate by 2.4% per year to a reduction of 24% over a ten-year period.

Since 2002, the main import tariffs varied according to the nature of the imported product and the number of quota applicable to non-agricultural products has been reduced from 13 to 6 (in addition to the zero rate), generally: (2.5, 7.5, 10, 20, 27.5, and 35). This new structure is the result of a tariff reform consisting of a gradual dismantling of the MFN rates in four tranches, with the aim of achieving a four-tariff structure in 2012 (2.5, 10, 17 and 25%) on non-agricultural products.

Since 2009, the Kingdom has implemented a tariff reform to, inter alia; reduce the discrepancies between the import duties governed by the agreements and those with the rest of the world, which may be the origin of Fraud on the origins. Moreover, the main change will be on products that are similar to locally manufactured products, which are protected and therefore have high duties. The latter will increase from 30% to 25%.

These duties were 35% in 2009 and 2010, and 40% in 2008. This will include goods such as paints, leather goods, made-up clothing, refrigerators and furniture, industrial vehicles, tires, Ceramics, articles of cast iron and steel and certain lighting fixtures. Imports of semi-finished products will be affected by 17.5% compared with 25% in 2011, 27.5% in 2009 and 2010 and 32.5% in 2008.Imports of semi-finished products will be hit by 17.5% compared to 25% in 2011, 27.5% in 2009 and 2010 and 32.5% in 2008.

Graph N°7: Evolution of the simple average tariff rate, applied, all products (%)



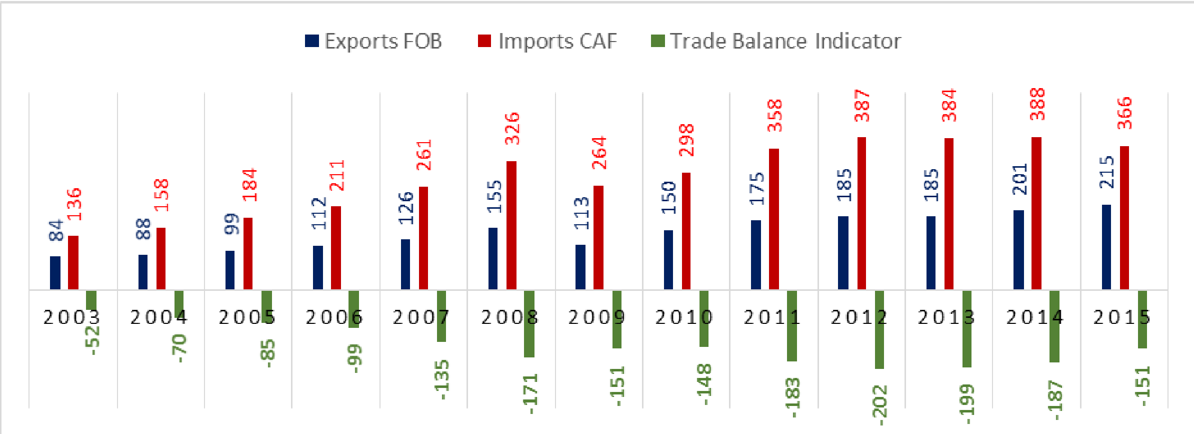
Source: *World Databank, 2016, Author's elaboration*

2.2.2. Performance of Moroccan foreign trade

The performance of Morocco's trade openness shows a sustained increase in exports and imports, indicating a strong integration into the world economy. The graph below shows how exports increased from 84 MMDH to 215 MMDH between 2000 and 2015, an increase of 156%.

Indeed, this evolution remains volatile as evidenced by the drastic decline in the value of exports from 155 MMDH in 2008 to 113 MMDH in 2009, which largely explains the dependence of Moroccan exports to the vagaries and exogenous shocks such as, Changes in oil and phosphate prices or the economic conditions of its main partners.

GraphN°8: Evolution of Moroccan Exports and Imports (in Billion MAD)



Source : Exchange Office Morocco, 2016, Author's elaboration

As regards to the trend of the trade balance, it is marked by a deficit, which is increasingly increasing due to a considerable appreciation of Moroccan imports and this concomitantly with the shrinking of exports.

In 2015, the trade deficit reached 151 MMDH, a deterioration of 190% compared with 2000, due to the difference in absolute growth between the two years of imports and exports: +230 MMDH for the first and +131 MMDH for the seconds.

Nevertheless, this widening of the trade balance clearly shows Morocco's new strategic orientation by making foreign trade an engine of economic development, especially since Morocco has set up in recent years a panoply of sectoral development policies, which consists of diversifying the productive structure and encouraging infant industries.

This trend has been strongly confirmed in recent years, since this deficit is exponentially beginning in 2005, a trend that can be explained in part by the increase in imports, such as intermediate goods, finished goods of industrial equipment and energy products, which make up about 2/3 of total imports.

Table 2: Evolution of the Trade Openness Indicator

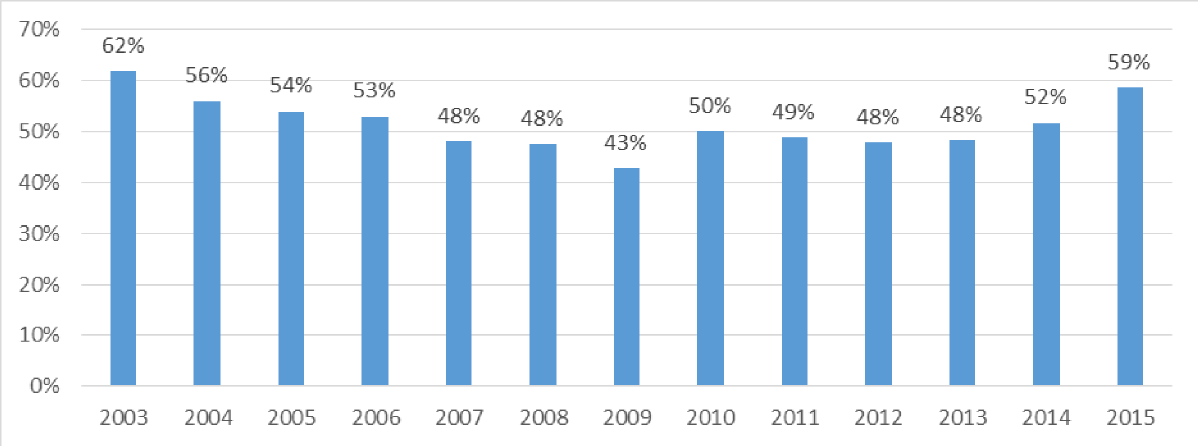
Years	*Imports of Goods and services /GDP*	*Exports of Goods and Services/GDP*	*Openness Rate%*
2000	**33,4**	**28**	**61,4**
2001	**31,9**	**29,4**	**61,3**
2002	**32,3**	**30,2**	**62,5**
2003	**31,5**	**28,7**	**60,2**
2004	**34,3**	**29,4**	**63,7**
2005	**37,9**	**32,3**	**70,2**
2006	**39,7**	**34,2**	**73,9**
2007	**44,9**	**35,7**	**80,6**
2008	**50,9**	**37,5**	**88,4**
2009	**39,7**	**28,7**	**68,4**
2010	**42,9**	**33**	**75,9**
2011	**48,7**	**35,6**	**84,3**
2012	**50,3**	**35,9**	**86,2**
2013	**47,2**	**32,8**	**80**
2014	**46,8**	**34,3**	**81,1**
2015	**42,1**	**34,3**	**76,4**

Source : Exchange Office Morocco, 2016, author's elaboration

The rate of openness[12] measured by the weight of exports and imports in GDP shows that the latter increased from 61.4% in 2000 to 76.4% in 2015. Exports accounted for nearly 34% of GDP.This development indicates a stronger integration into the world economy through the signing of several trade and investment agreements with both northern and southern countries.

[12] This indicator of openness needs to be complemented by other trade policy measures in terms of tariffs; quotas and non-tariff barriers (see Ann Harison 2007). In the case of Morocco, these indicators are in line with the opening rate measured by the volume of trade in recent years.

Graph N°9: Evolution of Coverage of the trade Balance of Goods and Services



Source: Exchange Office Morocco, 2016, author's elaboration

As for the coverage rate, it should be emphasized that this indicator remains very low compared to the ambitions of the Moroccan economy. It declined from 62% in 2003 to 59% in 2015.

Several reasons account for decline of this rate including trade framework of a small open economy, increased demand for intermediate products, capital goods and energy products and high demand of finished goods of high and medium value added with quality requirements imposed by consumers and their ever-changing consumption patterns.

3. Empirical Analysis

Most studies examining the effect of trade openness on poverty are based on a cross-country approach. Thereby, estimates are made at the national level and on aggregated data. This methodological choice could yield biased results. The conclusions of some works presented below show the extent of this confusion.

Krueger (1983) shows in her case studies those developing countries' manufactured exports were, indeed, labor-intensive, but that the employment effects of freer trade policies were generally rather limited. A number of cross-country studies on poverty, while not dealing with trade explicitly, incorporate trade openness as a control variable and showed similar results: at best the benefits of greater trade openness seem to have by passed the poor.

Beck et al. (2007) and Kpodar and Singh (2011), in the case of developing countries only, find no effect on the poor. Similarly, Dollar and Kraay (2001) find a lack of any evidence of an impact of openness on the income of the poorest quintile in a sample of advanced and developing economies. By contrast, looking at a sample of developing countries, Guillaumont-Jeanneney and Kpodar (2011) find a negative relationship between trade openness and the income of the poorest quintile. Similarly, Singh and Huang (2011) focusing on a sample of sub-Saharan African countries suggest that greater trade openness increases headcount poverty, widens the poverty gap, and reduces the income of the poorest quintile.

As indicated in Le Goff and Singh, 2014, "*this lack of any clear correlation between openness measures and poverty indicators in aggregate could be because there is too much heterogeneity in the effects of trade reforms on the poor. Since poor workers in import-competing sectors lose from reforms, while poor workers in export-oriented sectors gain, it could be that in the aggregate these different effects cancel each other. Similarly, cross-country studies have tended to favor larger samples and focus on developing countries at best. While using a broader sample increases the degrees of freedom, it may also introduce unwanted heterogeneity if factors explaining poverty differ between country groups*".

For our case, the methodological choice differs completely. We are working on regional data, that are measured in the same way. Therefore no heterogeneity problem.

3.1. Sample

Our empirical objective is to examine how the poverty reduction effect of openness may depend on a variety of regional characteristics. For this purpose, we work with pooled cross-country and time-series data for 14 Moroccan regions averaged over ten-year periods from 2004 to 2013. Summary statistics and the correlation matrix for the variables used in our estimation exercises are provided in Appendix

We selected all Moroccan regions according to the distribution that was in effect before 2014, ie 16 regions. After 2014, a new regional separation was selected, making the number of regions to 12. In order to have as much data as possible, we merged the three regions of the South, which gives us 14 regions in the end.

Southern regions	Rabat-Salé-Zemmour Zaer
Souss Massa Darâa	Doukala-Abda
Gharb-Chrarda-Béni Hssen	Tadla-Azilal
Chaouia-Ouardigha	Meknes-Tafilalt
Marrakech-Tensift-Al Haouz	Fes-Boulmane
Oriental	Taza-Al Hoceima-Taounate
Grand Casablanca	Tanger-Tétouan

3.2. Model and variables

Our model is a random effects model (see Hausman Test in results), which is specified as:

$$\boldsymbol{Poverty_{i;t} = \beta 1 Export_{i;t} + \beta 2 X_{i;t} + \varphi_t + \mu_i + \varepsilon_{i;t}}$$

where the subscripts i and t represent country and time period, respectively, Poverty is the log of a poverty indicator, X is the matrix of control variables, Export is a measure of trade openness, φ_t corresponds to time effects, μ_i denotes unobserved country-specific effects, and $\varepsilon_{i,t}$ the error term.

Variables

Poverty: The proportion of poor people in the population, or even the percentage of individuals in a household whose per capita expenditure is below the relative poverty line. In 2007, this threshold was 3834 MAD per person per year in urban areas and 3569 MAD per person per year in rural areas. This threshold of poverty is reviewed in 2014, taking into account changes in living cost, and achieved 4667 MAD (2.6 $ US PPA) for urban and 4312 MAD (2.5 $ US PPA) for rural.

Trade openness (*Openness****)*****:** We retained exports as a proxy to illustrate the openness and the weight of foreign trade in each region. We are limited to this indicator because of the lack of import data and trade policies at the regional level.

To control for economic and social development, we retained ***GDP***, ***GDP per Capita (****GDPPERCAPITA****)***, the size of the ***Population*** as a market size, the ***Expenditure Households*** (*EXPEND*) and ***Unemployment Rate (****UNEMP****)***, to test its influence on poverty.

3.3. Results

The results of the estimate show no direct relationship between trade openness and poverty. In contrast, only household consumption expenditure (EXPD) negatively affects poverty with high statistical significance (1%). Any increase by 1% of consumer spending, *ceteris paribus,* reduces the poverty rate by 1.49%, (see table *infra).*

As highlighted in the descriptive part, and paradoxically, the unemployment rate has no impact on the poverty rate. It has even been seen that some regions with high unemployment have succeeded in bringing down their poverty rates.

Dependent Variable: LOG(POVERTY)
Method: Panel EGLS (Cross-section random effects)
Date: 01/29/17 Time: 17:25
Sample: 2004 2013
Cross-sections included: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	216.6522	200.1956	1.082203	0.2868
LOG(OPENNESS)	0.018886	0.075406	0.250461	0.8037
LOG(EXPEND)	-1.491116	0.505312	-2.950884	0.0057
LOG(GDP)	29.85651	28.94246	1.031582	0.3096
LOG(GDPPERCAPITA)	-30.43338	28.96475	-1.050704	0.3008
LOG(UNEMP)	-0.023180	0.244438	-0.094830	0.9250
LOG(POPULATION)	-28.25534	29.16937	-0.968665	0.3396

Effects Specification

	S.D.	Rho
Cross-section random	0.348249	0.5422
Idiosyncratic random	0.320027	0.4578

Weighted Statistics

R-squared	0.751704	Mean dependent var	0.963838
Adjusted R-squared	0.707886	S.D. dependent var	0.622874
S.E. of regression	0.333181	Sum squared resid	3.774322

F-statistic	17.15551	Durbin-Watson stat	1.151898
Prob(F-statistic)	0.000000		

Correlated Random Effects - Hausman Test
Test cross-section random effects

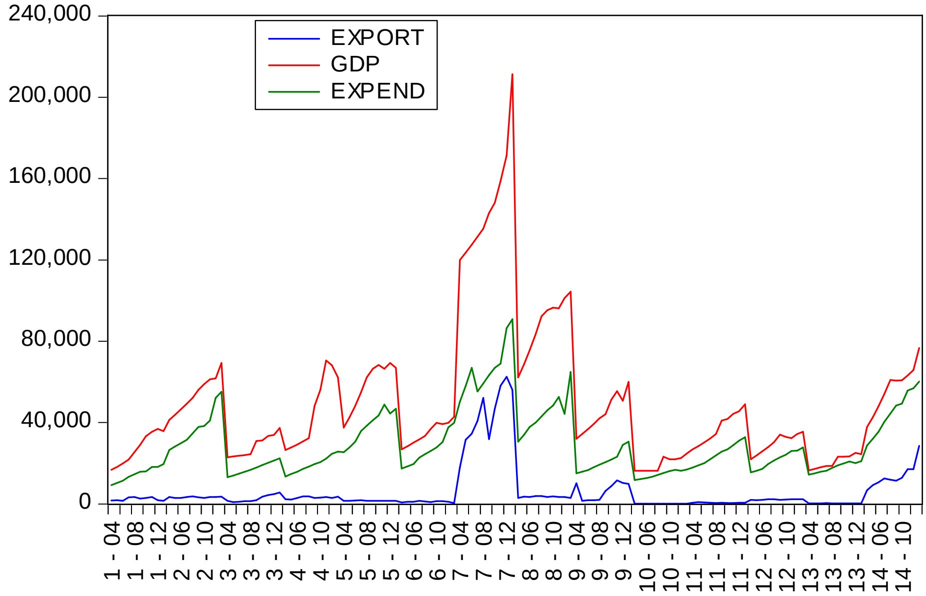
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.806200	6	0.1848

The correlations table below shows a strong positive linear correlation between Trade *Openness, Expend, GDP and GDPPERCAPITA.* Poverty is negatively correlated with all variables, but is significant only with EXPEND and GDPPERCAPITA. The Graph N° suggests a positive relationship between the three variables.

Table N° 3: Correlations Matrix

	POVERTY	EXPORT	EXPEND	GDP	GDPPERCAPITA	POPULATION	UNEMP
POVERTY	1.000000						
EXPORT	-0.353488	1.000000					
EXPEND	-0.508859	0.732892	1.000000				
GDP	-0.459144	0.842576	0.920571	1.000000			
GDPPERCAPITA	-0.618866	0.671018	0.740101	0.855883	1.000000		
POPULATION	-0.128297	0.585966	0.813213	0.752603	0.377586	1.000000	
UNEMP	-0.196168	0.193097	0.149607	0.227364	0.348829	-0.010118	1.000000

Graph N°9 : Evolution of Export, GDP and Expend by Region



Source: Author4s elaboration, HCP end Ministry of Industry database

Granger's causality analysis shows a significant causal link between *Trade Openness, GDPPERCAPITA* and *EXPEND* (*Table infra*). Indeed, exports boost economic growth and increase GDP per Capita, which positively affects consumer spending and, *in fine*, reduces poverty.

Granger Causality Tests
Sample: 2004 2013

Null Hypothesis:	Obs	F-Statistic	Prob.
GDPPERCAPITA does not Granger Cause OPENNESS	126	0.44404	0.5064
OPENNESS does not Granger Cause GDPPERCAPITA		6.85280	0.0100
GDP does not Granger Cause OPENNESS	126	6.00859	0.0156
OPENNESS does not Granger Cause GDP		17.0991	7.E-05
EXPEND does not Granger Cause OPENNESS	126	4.37373	0.0386
OPENNESS does not Granger Cause EXPEND		0.94021	0.3341

3.4. Results discussion

According to the model results, we can deduce two important statistical conclusions: first, there is a negative correlation between poverty and the four main variables: Openness, GDP, GDP Per Capita and Expenditure. Second and using the panel model estimate, only household consumption expenditure has a significant impact on poverty.

These results should be taken with caution. First, because of the problem of veracity of data collection and the lack of long series for all regions. In addition, other factors not captured in our modeling for lack of regional data that can directly or indirectly influence the decline in poverty. We can cite:

- Geographical positioning and territorial specificity;
- The importance of investment in infrastructure (ports, motorways, airports, competitiveness clusters, etc.);
- State commitment through human development policies, (INDH since 2005), and public subsidies for commodities and energy products;
- Transfers in the form of an allowance for widowed women, increase in small pensions, etc.

We can argue that the more open regions, with an industrial sector export-oriented, have benefited from a positive effect resulting in an increase in income and, consequently, a reduction in poverty. This is the case of the Casablanca-Settat and Tanger-Tétouan regions.

In all regions, we note the significant reduction in extreme poverty rates. The magnitude of this decline varies among regions. Casablanca-Settat region achieved the highest average share of GDP in the period 2001-2013, contributing 26.8%, followed by the regions of Rabat Salé Kenitra (14.8%), Marrakesh Safi (11.9%) and Fez Meknes (10.3%). These four regions account for 63.8% of the national GDP. These four regions have low poverty rates. As for the southern region, it is worth highlighting the importance of public subsidies in the reduction of extreme poverty.

On the other hand, landlocked regions, such as the Drâa-Tafilalet, Beni Mellal-Khénifra, Marrakech-Safi, Eastern, Souss-Massa and Fez-Meknes regions, and despite a remarkable decline in poverty rates, still have higher rates than the national rate (4.8%). Poverty rates are respectively 14.6%, 9.3%, 5.4%, 5.3%, 5.1%, and 5.2% respectively in 2014.

The following table summarizes the factors that contribute to poverty reduction as well as the factors that hinder regions from removing people from extreme poverty or even vulnerability.

Regions	**Factors in favor of poverty reduction**	**Factors that obstruct poverty reduction**
Southern Regions	Geographical positioning; direct subsidies; investments in infrastructure; natural resources	High unemployment rate; lack of industrial competitiveness zones
Souss-Massa-Drâa	Internal and external migration (transfers) ; agriculture ; tourism	Landlocked region
Gharb-Chrarda-Béni Hssen	The Green Plan	High vulnerability rate
Chaouia-Ouardigha	Fertile land, investment in human development, industrial economic zones	Inadequate infrastructure; Low value-added activities; climate-dependent agriculture
Marrakech-Tensift-Al Haouz	International tourism	Landlocked region; Services with low added value; Higher vulnerability rate
Oriental	The informal sector as income resources	Landlocked region, High unemployment rate
Grand Casablanca	Openness to the Atlantic, contribution to national GDP; informal economy; High urbanization rate	Urbanization rate which is likely to become a source of poverty; high unemployment rate
Rabat-Salé-Zemmour Zaer	High urbanization rate ; ,GDP ; Infrastructure ; Human Capital	High inequality rate (Gini Index =0.46 upper than the national average, 0.40 in 2007); high unemployment rate
Doukala-Abda	The agricultural potential	High vulnerability rate
Tadla-Azilal	L'investissement dans le développement humain,	High vulnerability rate
Meknes-Tafilalt	The agricultural potential ; Investment	High vulnerability rate ; high unemployment rate
Fès-Boulmane	Local Tourism ; Agriculture	Landlocked region;
Taza-Al Hoceima-Taounate	Geographical positioning	High vulnerability rate
Tanger-Tétouan	Opening on the Mediterranean, proximity to Europe, offshore zones, informal sector, infrastructures	High vulnerability rate ; High inequality rate (GINI Index = 0.47, More than national Average, 0.40, 2007)

Conclusion

The relationship between trade openness and poverty is neither direct nor unambiguous, and closing up the economy to international trade does not help. In other words, the potential of trade to alleviate poverty depends on a multidimensional set of economic and institutional factors.

Morocco, since the 1980s, has opted for openness and its integration into the world economy. This strategy has been followed since the 1990s by a reduction in extreme poverty. The opening has necessarily benefited some, but certainly not for all.

The regional analysis of poverty in Morocco shows a very sharp drop in extreme poverty between 2000 and 2014. On the other hand, we note that some regions did better than others did. Several factors in which each region has its economic and social specificity, as highlighted in the table below can explain this regional disparity.

The rate of vulnerability and the unemployment rate remain very high despite the efforts deployed. This could bring down people into extreme poverty if measures and adequate reforms are not made.

Another crucial point, which could conceal the extent of extreme poverty, is the poverty line taken into account to measure the poverty rate. This threshold, and despite its actualization, remains rather low compared to the reality of the cost of living, especially in the city where the cost of a round trip by bus exceeds 1.5 dollars.

In some ways, we can also mention that the human development policies pursued by Moroccan government are on the right path to achieve the Sustainable Development Goals (SDGs)13 for 2030. This can only be achieved by intensifying efforts, introducing good reforms, putting the citizen and the public interest at the center of all public policy and all this in a sustainable way.

Today, to get out of poverty and vulnerability is to have a minimum income guaranteeing the basic needs. It is a natural right. An unconditional Basic Income will guarantee this right and takes many people out of social exclusion. Morocco must consciously reflect on this possibility and prepare the necessary conditions for its success. Of course, not forgetting the fundamentals that can improve the overall welfare of the population, namely sustainable and inclusive economic growth, efficient and equitable redistribution, and take benefits of a voluntary and transparent international exchange.

"Growth should be the principal, not the exclusive, strategy to remedy poverty" Bhagwati (2001)

[13] The Sustainable Development Goals (SDGs) were born at the United Nations Conference on Sustainable Development in Rio de Janeiro in 2012. The objective was to produce a set of universal goals that meet the urgent environmental, political and economic challenges facing our world. The SDGs replace the Millennium Development Goals (MDGs), which started a global effort in 2000 to tackle the indignity of poverty. The MDGs established measurable, universally-agreed objectives for tackling extreme poverty and hunger, preventing deadly diseases, and expanding primary education to all children, among other development priorities.

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