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The employment elasticity of economic growth

A global study of trends and determinants for the years 2000-2017

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Abstract:

In this paper, the employment elasticity of economic growth is calculated for 168 countries globally. The employment elasticity refers to the percentage change in employment associated with a 1% increase in GDP. Therefore, the higher the employment elasticity, the more labor-intensive growth.

In order to evaluate trends across different demographic groups, the elasticity is measured for each country's population, and also for the subgroups *adult, youth, female, male, female youth, male youth, female adult,* and *male adult.* The results are then analyzed on a country, regional level and global level. Comparisons are also made across developed and developing countries. Finally, an econometric model is used to find possible determinants of the employment elasticity measure.

The results vary greatly across countries. The highest and lowest recorded country elasticity was -0.32 and 2.61 respectively. On a regional level, the most employment intensive growths were recorded for the Caribbean, Central America and Southern Europe. The elasticity was higher for developing countries compared to developed. It was also clear that there was a greater gender difference in developed countries. For the majority of observed regions, the highest elasticity measure was recorded for *female adults* followed by *adults*.

Labor force growth, Share of total employment in the service sector, Share of total employment in the industry sector, FDI and trade were all shown to have an impact on the employment elasticity measure, at least for some demographic groups.

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Table of contents

1. Introduction

1.1. Employment elasticity of growth and Okun's Law

One labour market indicator widely used for analyzing an economy's labour market is the *employment intensity of growth* or the *employment elasticity with respect to output.*[1] This measures the percentage change in employment associated with a 1 % increase in GDP (Kapsos, 2005). As described by Slimane (2015), the employment elasticity can be calculated in the context of a demand side approach and will then describe a causal relationship between the two variables. Alternatively, the elasticity can simply measure the co-movement between employment and output. The two variables relationship will then be interpreted in terms of correlation, not causality. In this paper, the latter approach is used.

The employment elasticity indicator is far less researched than other key labour market indicators like percentage of unemployment or employment to population ratio. Nevertheless, it is a commonly used tool by policy makers since it provides valuable insights into the labour market and overall macroeconomic performance of an economy. The employment elasticity is also easily comparable with itself over time, across regions and across demographic groups.

Many of the previous studies on this topic use the Okun's Law as a basis for investigating the relationship between unemployment and growth. In his original study, Okun (1962) proposes a linear relationship between unemployment and economic growth. He concludes that in the United States, a 1% decrease in unemployment is generally accompanied by an increase in GDP of about 2%. In the many studies that followed, economists tried to prove or disprove this relationship by calculating the Okun's Coefficient. The results varied and Okun's Law has been proven true for some countries and time periods. However, since this paper examines the relationship between total *employment* and economic growth, not *unemployment* and economic growth, Okun's Law will not be discussed further.

[1] *Employment elasticity, elasticity, elasticity measure, employment elasticity of growth, employment intensity of growth* and *employment elasticity of GDP* will be used synonymously in this paper.

1.2. Literature gap and relevance

According to the ILO (2018), inequality across demographic groups is still a huge obstacle to the global labor market development. Youth unemployment and gender inequality, in terms of employment opportunities, are especially large issues for most countries. The authors point out that the gender disparity is prominent already amongst the young workers. Therefore, when analyzing labor markets, it is useful to look at the gender inequality for different age groups.

Most of the existing studies on the employment elasticity are restricted to one country or one region. Few have made cross-country comparisons on a global scale and analyzed international trends of the employment elasticity measure. Comparisons between developed and developing countries have also been very limited. It should also be noted that while some studies account for gender and age, no previous study has calculated employment elasticities for male and female youths or adults. Additionally, most papers provide either the country elasticities or the regional elasticities, not both.

This paper aims to fill this literature gap by computing employment elasticities with respect to output on a global scale. Results of said computations will then be used to identify various trends; for example, to find which demographic groups that experience the most employment-intensive growth. The analysis will cover 168 countries between the years 2000-2017. This time period will also be divided into two parts, which enables comparisons of the elasticities between the first period (2000-2008) and the second period (2009-2017). The results will be calculated on a country as well as on a regional level. This allows for cross-country and cross-continental comparisons over time. The study will also analyze possible determinants of the elasticities and compare differences across the demographic groups *female*, *male*, *female youth*, *male youth*, *youth* and *adult*.[2] The analysis will simply record the movement of the employment and GDP over time, and therefore describe a correlation, not a causal relationship.

[2] In this paper, individuals between the ages 15-24 are defined as youths and individuals aged 25+ as adults.

1.3. Layout

The remainder of the study is organized as follows. Section 2 presents the literature review; the methodology and data used to calculate the elasticities are outlined in section 3 and 4 respectively; the results are summarized in section 5; this is followed by discussion and conclusion in section 6 and 7.

2. Literature review

As mentioned in the introduction, some previous studies discuss the employment-output relationship on a cross-country basis for a specific region. Examples include (ILO, et al., 2015) for G20 countries, (Slimane, 2015) and (Prieto, Ghazi and An, 2017) for developing countries, (Balakrishnan, Das and Kannan 2010) for advanced countries, (Görg, et al., 2018) and (Hussami, Verick and Cazes, 2013) for OECD countries, (Adegboye, Egharevba and Edafe, 2017) for Sub Saharan Africa, (African Development Bank, 2018) for Africa as a whole, (Hanusch, 2012) for East Asia, (Blázquez-Fernández, Cantarero-Prieto, and Pascual-Sáez, 2018) for Europe and (Asian Development Bank, 2012) for Asia. Some global studies have also been conducted. For example (Kapsos, 2005), (Ball, et al., 2016) and (Crivelli, Furceri, and Toujas-Bernaté, 2012).

The main findings of previous empirical research related to the employment elasticity measure can be found in appendix 4. Some of the more extensive studies will be discussed below.

In ILO's yearly publication "*World Employment and Social Outlook*" (ILO, 2018), the economic growth and unemployment development is investigated on a global scale. In the most recent paper, the authors describe a trend of decreasing unemployment amongst developing countries between 2014-2017 which they expect to continue. For the same period, emerging economies were shown to experience an increase in unemployment driven by major economic downturns. The authors claim that reasons for these trends lie in the imbalance between the different population subgroups. Gender inequality is shown to be a large, global issue and especially prominent in Northern Africa and the Arab states where women were twice as likely to be unemployed compared to men. The report states that the global youth

unemployment was three times higher than that of adults and that gender inequalities are very prominent even amongst the youth. The authors also point out that as an indicator, the employment rate is only partly representative of the labour market performance in poor countries. The reason being the high rate of informal employment in many developing regions, such as the Sub-Saharan Africa.

One of the earlier and more comprehensive cross-country comparisons of the employment elasticity was conducted by Kapsos (2005) on behalf of the ILO. He compared the elasticities of 139 countries between 1991-2003 and analyzed observed patterns across different population subgroups and countries. The results showed a positive and rather stable global employment elasticity for all years. Female elasticities were higher than male elasticities, and youth elasticities were very low. There were large variations in employment elasticities throughout the world. The most employment-intensive growth was recorded in Africa and the middle-east. Asia and the Pacific experienced great economic growth during this period, and this was shown to be accompanied by strong growth in employment. The macroeconomic variables *labour supply* and *share of service industry* were proven to have a significant positive effect of the elasticity measure whereas *high tax rates* had a significant negative impact. The results showed no empirical relationship between employment elasticity and measures of (i) e*xport-orientation* and (ii) *employment protection regulations* and *globalization*.

In a different study published by the IMF (Crivelli, Furceri, and Toujas-Bernaté, 2012), the employment-output elasticities were calculated for 167 countries between 1991-2009. The recorded elasticities were typically positive and clustered in the range between 0 and 1. Elasticities varied greatly across regions, income groups, and production sectors. The highest estimates were typically recorded for the most economically developed regions as well as in the industry and services sectors.

Ball, et al., (2016) conducted a cross-country analysis of the Okun's coefficient for 29 advanced and 42 developing countries for the years 1980-2015. They concluded that the unemployment rate was less responsive to output fluctuations in developing countries compared to advanced. The responsiveness of the *unemployment rate* to a 1% change in GDP, on average, was measured at -0.2 for developing countries, and -0.4 for advanced countries. The relationship between the two variables was rather homogenous across

developing countries. *Mean unemployment rate* and *share of services in GDP* were found to be significant determinants of the Okun's coefficient measure.

Slimane (2015) conducted an analysis of the employment elasticity across 90 developing countries for the time period 1991-2001. The elasticity tended to be higher for countries which were more *advanced*, *closed off*, had a large *service sector* and/or large *share of urban population*. *Working age population growth*, *Consumer Price Index, Foreign Direct Investment, Credit to private sector* and *Gross Capital Formation* were shown to be negatively correlated with the employment elasticity of growth. The study was only conducted on a country level, not regional.

The African Development Bank (2018) stated that there is a rise in claims that the continent is experiencing a *jobless growth* and that those who suffer the most are young females. *Jobless growth* refers to a situation in which economic growth is not accompanied by a maintained or decreasing level of unemployment. The publication states that the relationship between growth and unemployment varies in strength across countries and time. The desirable elasticity is about 0.7 for developing economies according to the same source.

None of the above research papers have investigated the employment elasticity measure for the population subgroups *youth female* and *youth male*. Majority of these papers limit their research to a few countries or a specific region. Amongst the global studies, only Kapsos (2005) has presented results on a country as well as regional level.

3. Methodology

As mentioned in the introduction, the aim of this paper is to calculate the employment elasticity for 168 countries and subsequently analyze global and regional trends; for example how employment intensive the economic growth is for different demographic groups. To add more depth to the discussion, possible determinants of the employment elasticity are also examined. Further discussion of the methodology can be found in section 6.1.

3.1. Employment elasticity

The employment elasticity shows the percentage change in employment accompanied by a 1% change in GDP. There are various ways of calculating the employment elasticity; one common technique is the *descriptive method* which is calculated as follows:

$$\varepsilon = \frac{(E_1 - E_0)/E_0}{(y_1 - y_0)/y_0} \quad (1)$$

Where ε denotes the employment elasticity of growth, E is the employment expressed in thousands of employed people in the country, y is the GDP in constant local currency and the 1 and 0 denotes different time periods. It should be noted that the above equation can only be used to calculate the *arc* elasticity, which is the elasticity between two different points in time, as opposed to the *point* elasticity which measures the percentage change in the number of employed people when GDP changes infinitesimally close to zero. However, this simple approach to calculating the employment elasticity is suggested by Islam and Nazara (2000) to generate unstable results.

An alternative technique, called the *OLS method*, will be used in this paper. As the name suggests, it utilizes an ordinary least squares regression to compute the *point* elasticity. Its equation is presented below.

$$lnE_t = \beta_0 + \beta_1 ln(y_t) + U_t \quad (2)$$

Where E_t is the employment expressed in thousands of employed people for time *t*, β_0 is a constant, β_1 is the elasticity of employment with respect to GDP, y_t is the GDP expressed in constant local currency for time *t*, and U_t is the error term. This follows the same method as used by Islam and Nazara, (2000).

It can be shown that β_1 is the employment elasticity by differentiating both sides of equation (2) with respect to *y*:

$$\frac{d(ln(E))}{dy} = \frac{\beta_1}{y} \rightarrow \frac{d(\ln(E))}{dE} \cdot \frac{dE}{dy} = \frac{\beta_1}{y} \rightarrow \frac{dE}{dy}\left(\frac{y}{E}\right) = \beta_1 \quad (3)$$

Which can be read as “the percentage change in employment if GDP per capita experiences a small percentage change”.

This paper looks at data for 168 countries between the years 2000-2017 and computes the elasticity for the whole period as well as for the two sub-periods 2000-2008 and 2009-2017 for each country. To compute the elasticities for the different demographic groups (*male, female, total youth, male youth, female youth, total adult, adult male and adult female*), regression (2) is run but with the employment changed from total employment to that of each specific group.

Regional elasticities are calculated using the different countries total labour force as weights and then computing the weighted average of each demographic group’s elasticity. Thus, for each demographic group, their respective total labour force is used as weight. For example, the regional averages for male employment elasticity are computed using the total male labour force. For the first time period, labour force data from 2004 is used. For the second time period, data from 2013 is used. For the total period, an average of the two mentioned years is used.

Average GDP growth for each country and region is also computed. The total labour force for the whole period is used as weight when computing the average for a region.

3.2. Possible determinants to employment elasticity

Having compiled an extensive list of employment elasticities for different demographic groups, it is of interest to examine how different factors affect said elasticities. To examine possible determinants of the elasticity, this paper utilizes the methodology used by Kapsos (2005), with some deviations in the variables examined. The elasticity of each demographic group and time period is used as the dependent variable in OLS regressions; the independent variables used are listed below.

Average annual labour force growth (%) is used to look at the relationship between labour supply and employment elasticity.

Average share of total employment in service (%) and *average share of total employment in industry (%)* is used to capture the effect of a country's economic structure.

Average annual inflation rate on consumer prices (%) reflects the macroeconomic volatility in a country.

Average annual FDI net inflows (% of GDP) and *Average annual trade (% of GDP)* are used to capture the economic openness of a country.

Average life expectancy at birth (years) is used to estimate the effect of a population's health on the employment elasticity.

The regressions are run using the following structure:

$$\beta_{1i} = \gamma + \delta' \bar{X}_\iota + V_i \quad (4)$$

Where β_{1i} is the employment elasticity for demographic group i, γ is a constant, $\bar{X}_\iota$ is the independent variables with δ' being the coefficients of interest and V_i the error term.

The independent variables are chosen to represent 5 out of the 6 categories of variables suggested by Kapsos (2005); Labour supply, economic structure, economic openness and trade orientation, macroeconomic volatility, and health. The 6th category, tax policy and labour regulation, is intentionally left out due to lack of data in many regions. Lack of data is also the reason that only 159 out of the total 168 countries in this study are used for these regressions.

When the regressions were tested using Breusch-Pagan and Cook-Weisberg tests, the results yielded high χ^2-values, showing signs of heteroskedasticity. To solve this problem, all regressions are computed using Newey-West standard errors.

Descriptive statistics of the variables used in the regressions can be found in appendix 3.

4. Data

The data on employment and labour force used in this paper is collected from ILOSTAT and is part of the modeled estimates from the International Labour Organization's (ILO) database of labour statistics. From this database, time series data is gathered on employment for all countries examined, as well as for all demographic groups *(youth, female, male, adult, female youth, male youth, female adult, male adult*) in each country. Employment, as defined in this dataset, includes part-time, informal, seasonal, temporary and casual employment. Further discussion about the dataset can be found in section 6.2.

There are 168 countries examined in this study; countries not examined are left out due to lack of data. A complete list can be found in appendix A.1.1.

All variables used in the study can be found in the table below:

Table 1. Variables used in the study

Variable	**Source**
Total employment (thousands)	ILO, ILOSTAT
Total labour force (thousands)	ILO, ILOSTAT
GDP expressed in constant local currency	World Bank national accounts data
Annual GDP growth (%)	World Bank national accounts data
Share of total employment in service sector	ILO, ILOSTAT
Share of total employment in industry sector	ILO, ILOSTAT
Inflation rate on consumer prices	IMF, IFS
FDI net inflows as ratio of GDP	IMF, IFS and World Bank, IDS
Trade as ratio of GDP	World Bank national accounts data
Life expectancy at birth	UNPD, WPP: 2017 Revision

5. Results

5.1. Employment elasticity

5.1.1. Main findings

From the results, it is clear that the employment elasticity of growth varies greatly across countries, population subgroups and time. Between year 2000-2017, the elasticity results for the total population vary from -0.32 to 2.61 across the observed countries. On a regional level, the highest elasticities are found in the Caribbean, followed by Central America and Southern Europe.

For a large majority of the observed regions in Africa, Europe and the Americas, the elasticities for females are more strongly positive compared to males. For the various regions in Asia, these gender differences are not as prominent. For Africa, Asia & Oceania and the Americas, the *youth* elasticities are generally a lot lower for the second time period compared to the first. In Europe, the trend moves in the opposite direction.

A complete table of all computed elasticities can be found in appendix 2.

5.1.2. Developed and developing countries

This section will discuss the average elasticities of developed and developing countries. In table 2, a summary of these elasticities is presented.[3]

Table 2. Elasticities of different demographic groups for the period 2000-2017 by developed and developing countries

Classification	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	GDP growth
Developed	0,40	0,53	0,30	-0,17	-0,13	-0,21	0,47	0,62	0,36	2,39
Developing	0,56	0,61	0,53	0,14	0,10	0,16	0,64	0,72	0,60	4,50

[3]A country is classified as either developed or developing per the definition of the UN.

As shown in the table above, the employment elasticities are, on average, higher for developing countries compared to developed. The same trend is true for all demographic groups. This result is opposite that of (Crivelli, Furceri and Toujas-Bernate, 2012). This could be explained by the fact that the study's observed time period only partly overlaps with this study.

It is noteworthy that the *youth* elasticities are negative for developed countries in this study, but positive for developing countries. Furthermore, the elasticities for females are generally higher than for males in developed countries. This means that for the average developed country, an increase in GDP is accompanied by a higher employment generation for females compared to males. The same is true for *youth* and *adults*. In developing countries however, the male and female elasticities are closer in value.

5.1.3. Europe

Not unexpectedly, Europe experienced a decline in growth rate following the financial crisis in 2007. Between year 2000-2008, the regions recorded growth rates between 3.13% and 7.04%. After 2008, the growth rates were between -0.21% and 1.41 %.

With exception for the *youth* elasticities, all elasticity measures are positive for all time periods. This result is in line with that of the study conducted by Blázquez-Fernández, Cantarero-Prieto, and Pascual-Sáez, (2018), since they found a negative relationship between *unemployment* and growth for most of their observed countries in Europe.

For the first time period, all elasticities are positive apart from the *youth* elasticities which are slightly negative for Eastern Europe and strongly negative for Southern Europe. The group with the highest elasticity was *female adult*, followed by *female*. In the second time period, the *youth* elasticities for Southern Europe become strongly positive whilst remaining negative for Eastern Europe. Western Europe also records a negative *youth* elasticity. Southern Europe records the highest total employment elasticity of growth for all time periods and Eastern Europe the lowest respectively. For the total time period, female elasticities are higher than male elasticities.

Figure 1. Europe elasticities 2000-2017 by sub-regions and demographic groups

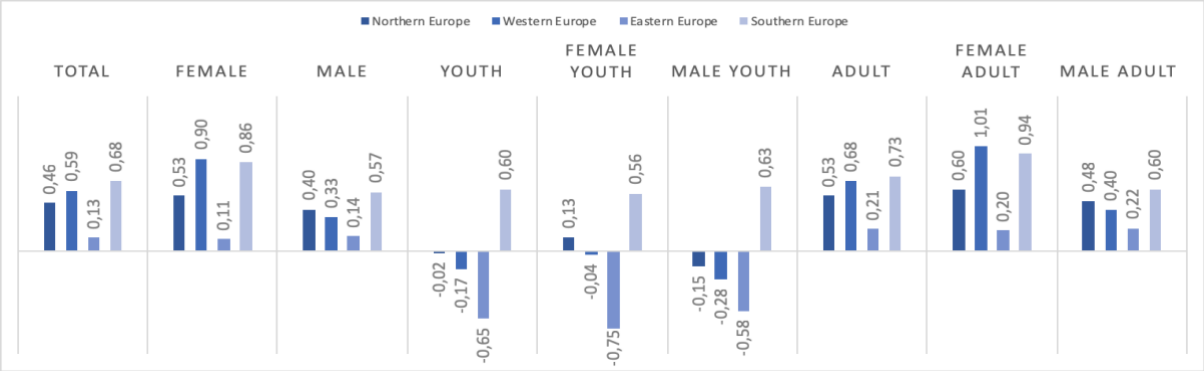


Figure 2. Europe elasticities 2000-2008 by sub-regions and demographic groups

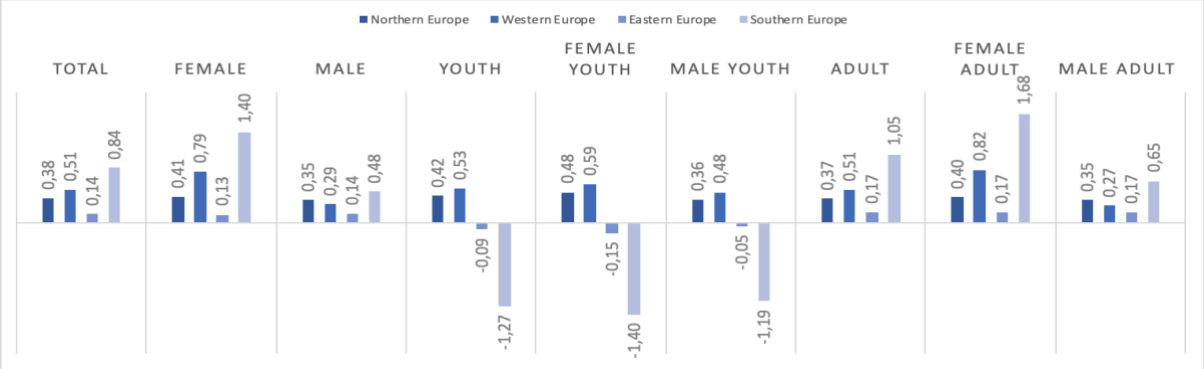
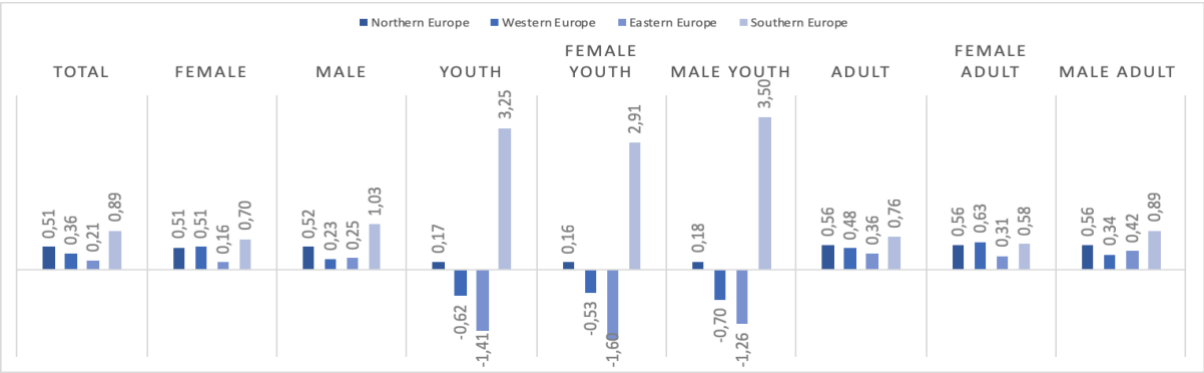


Figure 3. Europe elasticities 2009-2017 by sub-regions and demographic groups



5.1.4. Americas

Over the whole time period, all regions of America have experienced a moderate GDP growth, ranging from 2.04% in North America to 3.54% in Central America.

The different *youth* elasticities are more strongly positive, on average, in the first period compared to the second period. The group which experiences the most employment-intensive

growth is *female adults.* Further, *females* have higher employment elasticities than *males* for all time periods and age groups.

In the IMF working paper (Crivelli, Furceri and Toujas-Bernaté, J., 2012), the results showed that North America had one of the highest elasticities globally, measured at 0.81 for the time period 1991-2009. For Latin America and the Caribbean, the authors found a rather low elasticity of 0.16 for the same time period. In this paper, the elasticity for North America is slightly lower. It is measured at 0.50 for the time period 2000-2008. Here, Latin America is included in Central America and the Caribbean is observed on its own. Both have higher elasticities in this paper compared to the IMF working paper. For the first time period, the employment elasticity was 0.66 for Central America and 0.55 for the Caribbean. However, it should be noted that the compared time periods only overlap partly.

Figure 4. Americas elasticities 2000-2017 by sub-regions and demographic groups

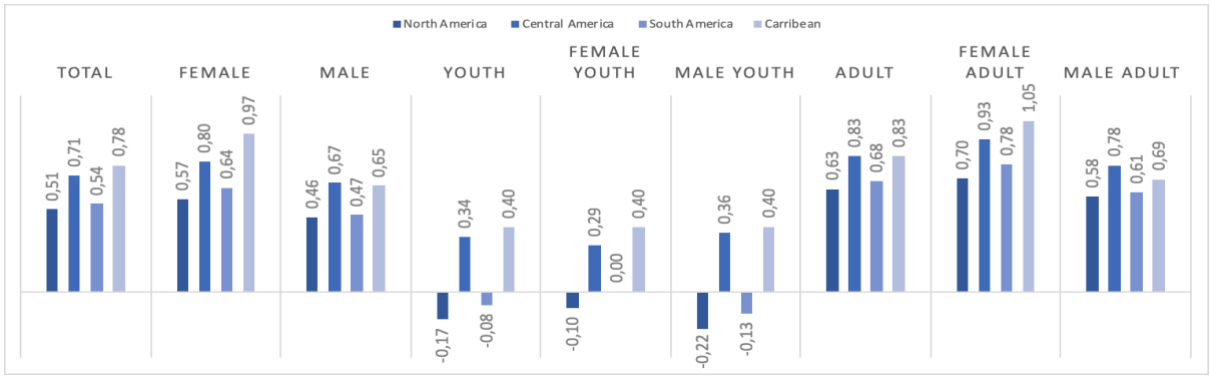


Figure 5. Americas elasticities 2000-2008 by sub-regions and demographic groups

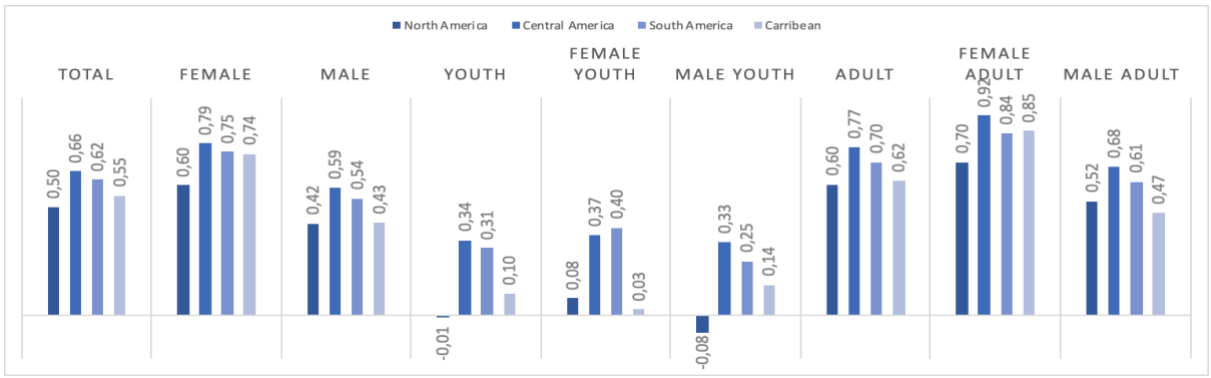
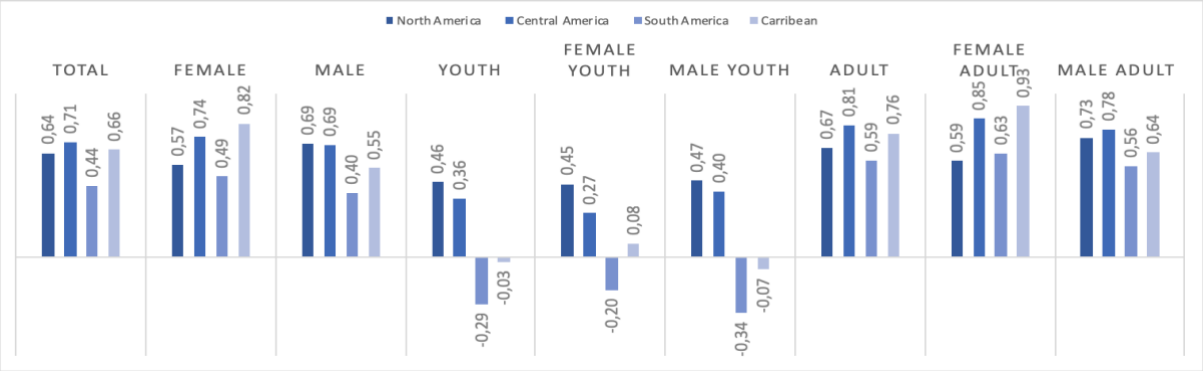


Figure 6. Americas elasticities 2009-2017 by sub-regions and demographic groups



5.1.5. Asia and Oceania

Asia has experienced a rapid growth in GDP in the past two decades, between 4.50 % and 8.60 % for the various regions. The highest GDP growth across all time periods was recorded for East Asia. Oceania had a more moderate growth of 3.06 %. However, Oceania's employment elasticity is higher than all Asian regions apart from Western Asia.

For the whole time period, the total employment elasticities for all Asian and Oceanian regions vary between 0-1. This is in line with the result presented by the Asian Development Bank (2012) for the period 2001-2011. The report showed that the majority of the employment elasticities for the observed countries were recorded between 0.2 and 0.8, and that the average for the developing countries in Asia was just below 0.6.

For this paper, the lowest total elasticities are generally recorded for East and South Asia. Similarly to the other observed continents, the elasticities are positive for all subgroups of the population apart from *youth*, *female youth* and *male youth*. For these youth groups, the average elasticities go from positive in the first period to strongly negative in the second period. The elasticities for the subgroups *adult, female adult* and *male adult* are rather homogenous on average. They are also more strongly positive than the elasticities for the other subgroups. Looking at the whole time period, female and male employment elasticities are very similar.

Figure 7. Asia & Oceania elasticities 2000-2017 by sub-regions and demographic groups

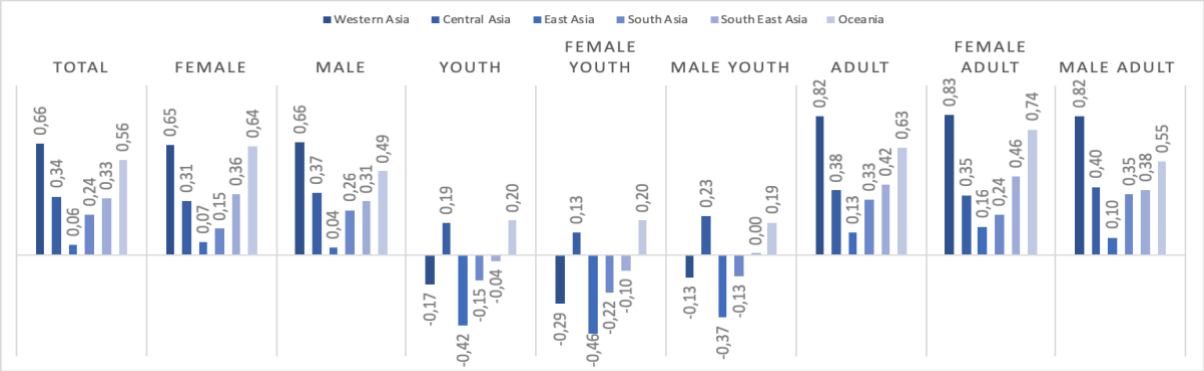


Figure 8. Asia & Oceania elasticities 2000-2008 by sub-regions and demographic groups

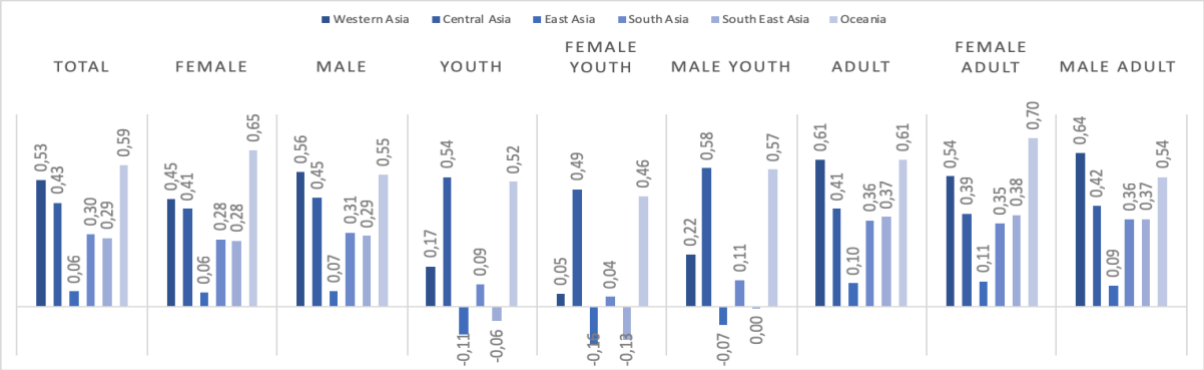
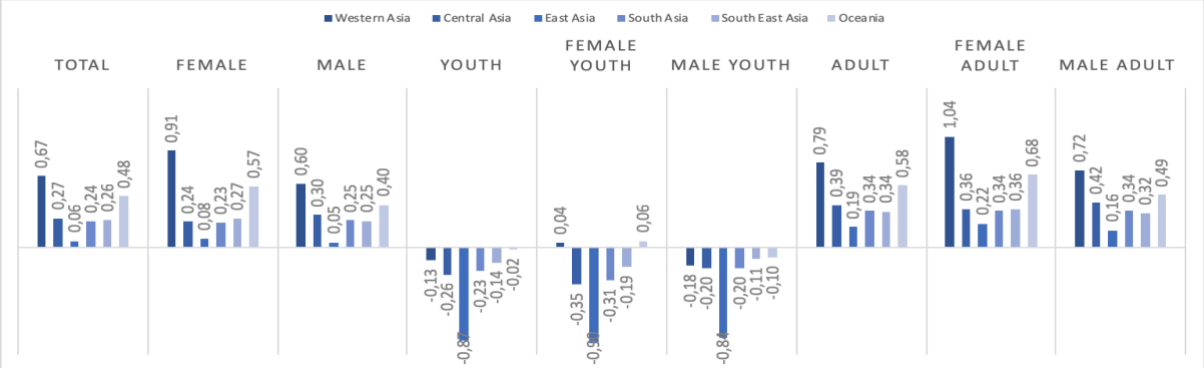


Figure 9. Asia & Oceania elasticities 2009-2017 by sub-regions and demographic groups



5.1.6. Africa

Africa has experienced relatively high albeit declining GDP growth in the past two decades. Despite the Africa Development Bank (2018) mentioning an increase in claims that the continent is experiencing jobless growth, the output increase seems to have been accompanied by higher levels of employment for most of the observed countries. The majority of employment elasticities cluster between 0.4 and 0.8 for the whole time period. In the first time period, all elasticity measures are positive, and Northern Africa has the highest elasticities for all subgroups apart from *youth* and *female youth*. In the second time period,

elasticities are lower on average. The elasticities are slightly negative for all *youth* groups in Southern Africa, and strongly negative for *youth* and *male youth* in Northern Africa.

The group with the highest elasticity, for all time periods, is *female adults* followed by *adults*, while the groups with the lowest elasticities are *youth*, *female youth* and *male youth*. This is in line with the results from the study of Sub-Saharan Africa by Adegboye, Egharevba, and Edafe, (2017).

In the publication *World Employment and Social Outlook* by ILO (2018), they claim that there is still a large gender imbalance in Northern Africa and that women are twice as likely as men to be unemployed in this area. For this paper, it is shown that females have higher elasticities compared to males for all time periods in Northern Africa.

The total employment elasticities are somewhat higher than those calculated by the African Development Bank (2018) for period 2000-2014. They found that the average employment elasticity with respect to GDP was 0.41. They also claim that the demographic group that suffers most in terms of jobless growth in Africa is young females. The results from this paper corroborates that claim, as the female youth elasticities are shown to be the lowest in the region.

Figure 10. Africa elasticities 2000-2017 by sub-regions and demographic groups

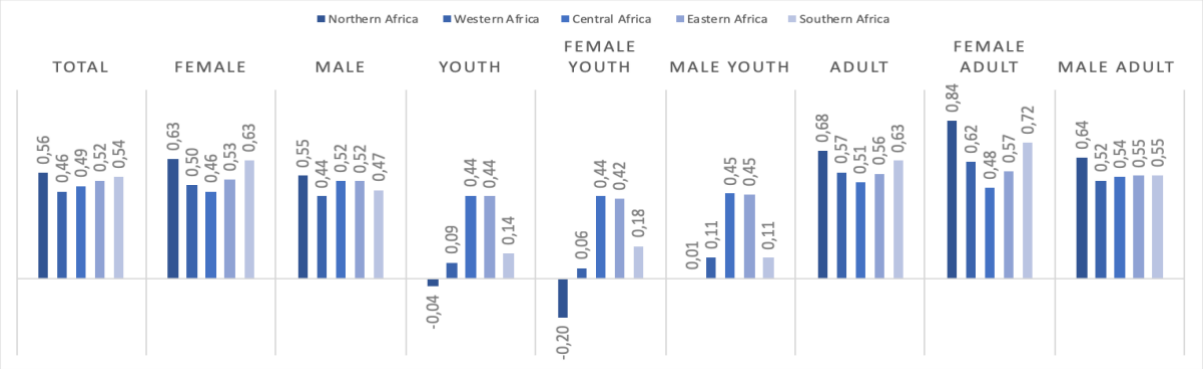


Figure 11. Africa elasticities 2000-2008 by sub-regions and demographic groups

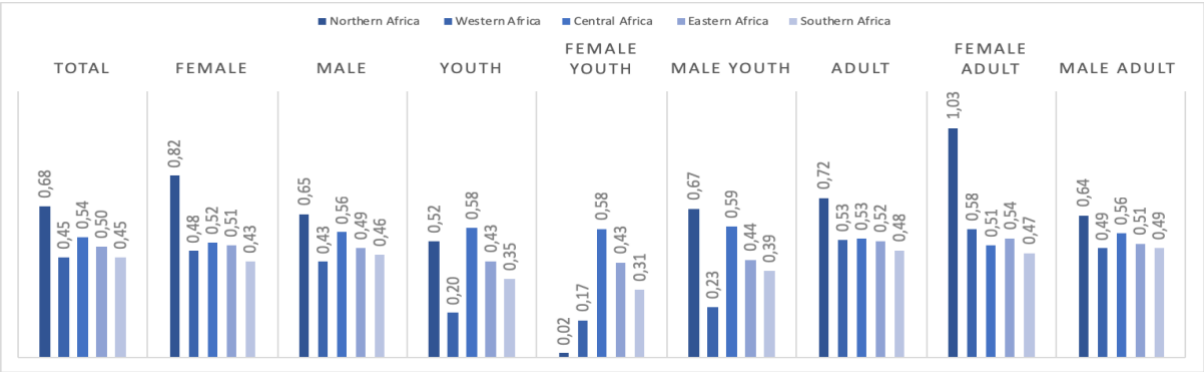
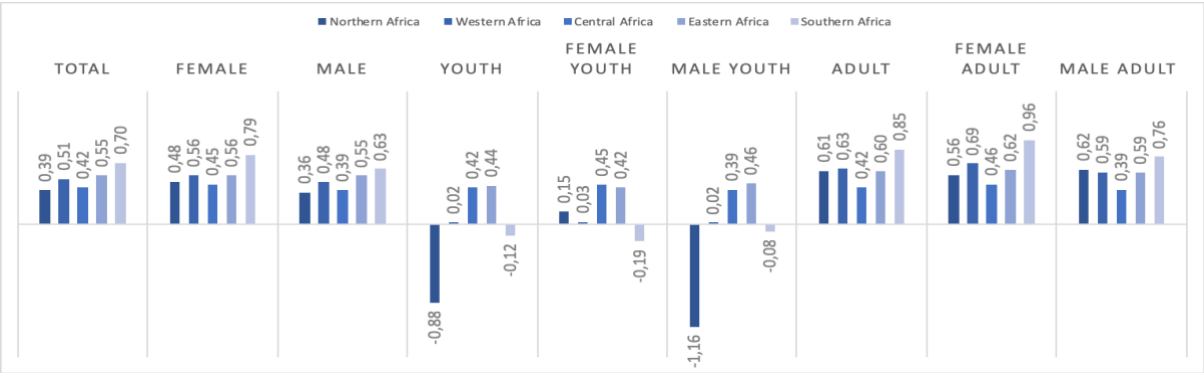


Figure 12. Africa elasticities 2009-2017 by sub-regions and demographic groups



5.2. Determinants of employment elasticities

In this section, the results of the determinant regressions will be discussed. All results will be analyzed using a significance level of 5 %. The discussion will mainly revolve around the regressions using the elasticities that are calculated for the whole period, which is presented in the table below. To clarify, the values in bold should be interpreted as the change in the employment elasticity which would follow from a one percentage point increase in each respective variable, except for life expectancy which is expressed in years. Furthermore, agriculture share of total employment is the benchmark group for service and industry share of employment.

Table 3. Econometric results for the whole period

Variable	Total	Male	Female	Total Youth	Male Youth	Female Youth	Total Adult	Male Adult	Female Adult
Labour force growth	**0,167**	**0,172**	**0,156**	**0,177**	**0,179**	**0,154**	**0,170**	**0,175**	**0,168**
	(0,025)***	(0,026)***	(0,0287)***	(0,021)***	(0,021)***	(0,024)***	(0,029)***	(0,029)***	(0,034)***
Service share of emp	**0,007**	**0,005**	**0,009**	**0,007**	**0,005**	**0,010**	**0,006**	**0,005**	**0,008**
	(0,002)***	(0,003)*	(0,003)***	(0,003)***	(0,003)	(0,004)***	(0,003)**	(0,003)*	(0,003)***
Industry share of emp	**-0,003**	**-0,002**	**-0,004**	**-0,017**	**-0,014**	**-0,024**	**-0,003**	**-0,001**	**-0,002**
	(0.005)	(0,005)	(0,006)	(0,006)***	(0,006)**	(0,007)***	(0,006)	(0,006)	(0,007)
Inflation rate	**-0,004**	**-0,004**	**-0,004**	**0,001**	**0,001**	**0,002**	**-0,006**	**-0,005**	**-0,006**
	(0,002)*	(0,002)*	(0,002)*	(0,005)	(0,004)	(0,006)	(0,002)**	(0,002)**	(0,003)**
FDI net inflows	**-0,001**	**-0,004**	**0,006**	**-0,006**	**-0,007**	**-0,005**	**0,001**	**-0,004**	**0,009**
	(0,002)	(0,002)**	(0,002)***	(0,003)**	(0,003)**	(0,003)	(0,002)	(0,002)*	(0,002)***
Trade ratio of GDP	**-0,001**	**-0,001**	**-0,002**	**-0,001**	**0,000**	**-0,001**	**-0,001**	**-0,001**	**-0,002**
	(0,000)**	(0,000)**	(0,000)***	(0,001)	(0,001)	(0,001)	(0,000)***	(0,000)*	(0,000)***
Life expectancy	**0,001**	**-0,001**	**0,002**	**-0,004**	**-0,003**	**-0,007**	**0,002**	**0,000**	**0,005**
	(0,004)	(0,004)	-0,004	(0,008)	(0,008)	(0,010)	(0,004)	(0,004)	(0,005)
Constant	**-0,036**	**0,044**	**-0,102**	**0,023**	**-0,027**	**0,270**	**-0,022**	**0,090**	**-0,177**
	(0,255)	(0,253)	(0,291)	(0,426)	(0,428)	(0,484)	(0,281)	(0,280)	(0,324)
Observations	159	159	159	159	159	159	159	159	159
R-squared	0,485	0,480	0,416	0,221	0,203	0,704	0,452	0,460	0,396

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %.*

Robust standard errors in parenthesis.

To start with, *labour force growth* is positive and significant across all groups. This is in line with the findings of Kapsos (2005), although the results in this study are less volatile and less positive between groups. For all groups, excluding *male*, *youth male* and *adult male*, *share of service* is positive and significant. This is also consistent with previous studies like (Slimane, 2015) and (Crivelli, Furceri and Toujas-Bernaté, 2012). Interestingly enough, the *share of industry* is negative and significant for all *youth* groups, suggesting that younger people experience a lower employment elasticity within the industry sector compared to the agriculture sector.

Inflation rate has a slightly negative impact on the adult groups. To note here is that due to the low value of its coefficient, only very high inflation rates will have an economic impact on the elasticities. The openness of the economy seems to impact the elasticities of most

groups as either *FDI* or *Trade ratio of GDP* is significant for all groups except *female youth* and *male adult*. *Life expectancy* has no significant impact on any group.

However, looking at the two subperiods, there are big differences. *Share of service* and *industry* has no significance in either of the two time periods, while either *FDI* or *Trade* is significant across most groups. Also of note is that for the second period, *life expectancy* has a significant and positive effect for all groups except *youth*, *male youth* and *female youth*. The full results from these regressions can be found in appendix 3.

6. Discussion

6.1. Methodology

There is need to clarify that the calculations in this paper are based on historical data of employment and GDP and does not account for any outstanding factors that may affect the two variables relationship over time. Therefore, the results are likely to suffer from omitted variable bias and consequently, causality cannot be claimed. Hence, it is not possible to conclude that the change in one variable is *caused* by a change in the other. However, the correlation between the employment and output is recorded and it is therefore possible to observe the co-movement between the two variables over time. As mentioned in the introduction, one does not need to claim causality in order to calculate and compare employment elasticities. Thus, finding a causal relationship between employment and output is beyond the scope of this study.

When calculating the elasticity for an area where the GDP growth is very small, a problem may occur. If a very small change GDP growth is accompanied by a large change in employment, it is likely that this change is mainly driven by other, unobserved, components. It is therefore important to keep in mind the comparative size in the change in GDP when viewing the results. On a regional level, this is not a problem. However, for some individual countries like Greece, Italy or Puerto Rico, the GDP growth is very small, and the elasticity measure should therefore be considered with caution.

6.2. Data

All elasticities in this paper are calculated using data from ILOSTAT. Since there are gaps in real collected data pertaining to these statistics, ILO fills these gaps with modeled estimations. These estimations are made using several econometric models with various macroeconomic indicators collected on country level. The data used in the estimation process is evaluated by the ILO using three criteria (type of data source, geographic coverage and age group coverage) to ensure comparability between countries. (ILO, n.d.)

For countries with very little observed data, the estimates are naturally less accurate than for those countries with more observed data. This adds some uncertainty to the results. Furthermore, the ILO uses historical relationships between the different variables in their model, so there is a risk that the elasticities computed in this paper capture some of these relationships. However, the benefits of using this data is that it enables an estimation of elasticities that otherwise would be impossible to compute due to lack of data in those countries and regions.

Other studies using this dataset include (Kapsos, 2005), (Crivelli, Furceri and Toujas-Bernaté, 2012), (Adegboye, Egharevba and Edafe, 2017) and (Gutierrez, et al., 2018).

6.3. Results

The elasticity measure calculated in this report measures the correlation between employment and economic growth. This means that when interpreting the results, it is important to remember that the relationship goes both ways. For example, if adult females have the highest elasticity in a country, there could be several underlying causes of such a result. Either the economic growth could be driven by increased female employment, or economic growth could be driven by other factors and consequently result in increased female employment.

As previously stated, the elasticity is based on a percentage change in employment and GDP respectively. Even if females were to have a higher employment elasticity compared to

males, the number of additionally employed males associated with a 1% increase in GDP could still be higher than the number of additionally employed females.

Looking at the results, it is of importance to mention the disparity in the significance of the results between the different demographic groups. In particular, there is a notable difference between the two age groups, where the youth groups suffer a lot more in term of significance. The reason for this is hard to determine, but the result at least suggests that the growth of employment amongst the youth is not as dependent on economic growth as the growth of employment amongst older generations are.

The fact that females tend to have higher elasticities than males, could be an indication of a so called "catching-up effect", as females historically had and still have a harder time getting employed than males (ILO, 2017). For example, one of the largest gender differences in the elasticity can be found in northern Africa and according to the ILO, this region is particularly marked by gender inequality in the labour market.

Something else to consider is the computations of the regional elasticities, where a country's labour force is used as that country's weight in its region. The drawback of doing this is that for some regions, elasticities of relatively small countries will not be reflected in the weighted region average. The benefit of using this method to compute averages is that the elasticity reflects that of the average person living in the region. However, in the discussion of developed and developing countries, unweighted averages are used as this better reflects the average developed or developing nation.

Furthermore, when viewing the results of the econometric model used to calculate the effect of the possible determinants, one should note that some of the elasticity estimates used in the regressions are in themselves not significant. This adds some uncertainty to the results. A more in-depth study of the determinants is possible, but beyond the scope of this paper.

6.4. Policy implications

This study shows the correlation between employment and economic growth. While this measure is useful for analyzing global trends in the labour market, it should be combined

with other macroeconomic variables to be able to produce policy recommendations. Although policy recommendations are beyond the scope of this paper, some general guidelines could be incurred from the trends identified.

A common theme in most sub-regions is the low or slightly negative elasticity for the youth groups. As mentioned, this indicates that youth employment is not as strongly linked to economic growth as adult employment. Hence, when combating the issue of youth unemployment, policy makers should take into consideration that economic growth alone is not enough to solve this problem.

Another point to make is that according to the results of this paper, economic openness and the structure of the economy seems to have a significant impact on the employment elasticities of growth for most demographic groups. Therefore, these areas should be of interest for policy makers when discussing stimulation of the labour market.

7. Conclusion

In this study, the employment elasticity of GDP growth was used as an analytical tool to measure the employment intensity of growth, or the change in employment associated with a 1% change in economic output. The elasticity has been calculated for 168 countries and for the time period of year 2000-2017. The observed time period has been split into two parts for a more thorough analysis of the elasticity measures. The employment elasticity was also calculated for eight subgroups of the population: *adult, youth, female, male, female youth, male youth, female adult,* and *male adult*, enabling demographic comparisons. Finally, an econometric model used to examine possible determinants of the employment elasticity was presented along with its results.

The elasticity measure was shown to vary greatly across regions, population subgroups and time periods. The elasticities were recorded between -0.32 to 2.61 globally. The most employment-intensive growth was recorded for the Caribbean, Central America and Southern Europe. An interesting finding was that the employment elasticities were significantly higher for females compared to males for all observed time periods in the regions of Africa, Europe and the Americas. In Asia however, the elasticities were fairly equal for the two subgroups.

On average, the employment elasticity was higher for developing countries. This was driven by the fact that the youth elasticities were positive for developing countries, unlike for the developed.

Looking at the whole time period, *labour force growth* was a significant and positive determinant of the elasticity measure for all observed groups. For all groups, excluding *male*, *youth male* and *adult male*, *share of service* was also positive and significant. The variable *share of industry* was negative and significant for the groups *youth* and *youth female*, suggesting that these groups experienced a lower employment elasticity within the sector. The openness of the economy seemed to impact most groups as either *FDI* or *Trade ratio of GDP* were significant for all groups except *female youth* and *male adult*.

For the vast majority of regions, the highest employment elasticities were recorded for *female adults* followed by *adults.* Additionally, the elasticity for *adult* was notably higher than the elasticity for *youth*. Gender differences in elasticities however, varied a lot across the regions. In Africa, Europe and Americas, elasticities were significantly higher for females than for males. For Asia, this gender difference was present but not as evident. To conclude, the results presented in this study indicate that on a global scale, the population subgroup which experienced the most employment intensive growth was *female adults*.

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Appendix 1. Countries included in the study

Table A.1.1. Countries by region and sub-region, Europe and Americas

Europe		**Americas**	
Northern Europe	*Southern Europe*	*North America*	*Carribean*
Denmark	Albania	Canada	Bahamas
Estonia	Bosnia	Mexico	Barbados
Finland	Croatia	United States	Cuba*
Iceland	Greece		Dominican Republic
Ireland	Italy	*Central America*	Haiti
Latvia	Malta	Belize*	Jamaica
Lithuania	Montenegro	Costa Rica	Puerto Rico*
Norway	North Macedonia	El Salvador	Trinidad & Tobago*
Sweden	Portugal	Guatemala	
United Kingdom	Serbia	Honduras	
	Slovenia	Nicaragua	
Western Europe	Spain	Panama	
Austria			
Belgium		*South America*	
France		Argentina*	
Germany		Bolivia	
Luxembourg		Brazil	
Netherlands		Chile	
Switzerland		Colombia	
		Ecuador	
Eastern Europe		Guyana	
Belarus		Paraguay	
Bulgaria		Peru	
Czech Republic		Suriname	
Hungary		Uruguay	
Moldova			
Poland			
Romania			
Russia			
Slovakia			
Ukraine			

**Not included in the econometric model*

Table A.1.1. Countries by region and sub-region, Asia & Oceania and Africa

Asia & Oceania		**Africa**	
Western Asia	*East Asia*	*Northern Africa*	*Central Africa*
Armenia	China	Algeria	Angola
Azerbaijan	Hong Kong	Egypt	Cameroon
Bahrain	Japan	Libya	CAR
Cyprus	Macau	Morocco	Chad
Georgia	Mongolia	Sudan	DR Congo
Iran	South Korea	Tunisia	Congo
Iraq			Equatorial Guniea
Israel	*South East Asia*	*Western Africa*	Gabon
Jordan	Brunei	Benin	
Kuwait	Cambodia	Burkina Faso	*Eastern Africa*
Lebanon	Indonesia	Cape Verde	Burindi
Oman	Laos	Gambia	Comoros
Qatar	Malaysia	Ghana	Ethiopia
Saudi Arabia	Myanmar	Guniea	Kenya
Turkey	Philippines	Guniea-Bissau	Madagascar
United Arab Emirates	Singapore	Libera	Malawi
Yemen*	Thailand	Mali	Mauritius
	Timor-Leste	Mauritiana	Mozambique*
Central Asia	Vietnam	Niger	Rwanda
Kazakhstan		Nigeria	Tanzania
Kyrgystan	*Ocenia*	Senegal	Uganda
Tajikistan	Australia	Sierra Leone	
Turkmenistan*	Fiji	Togo	*Southern Africa*
Uzbekistan*	New Zealand		Botswana
	Papua New Guinea		Lesotho
South Asia	Samoa		Namibia
Bangladesh	Solomon Islands		South Africa
Bhutan	Tonga		Zambia
India	Vanuatu		Zimbabwe
Maldives			
Nepal			
Pakistan			
Sri Lanka			

**Not included in the econometric model*

Appendix 2. Employment elasticities and GDP growth per sub-region and country

Table A.2.1. Europe elasticities and GDP growth for the whole period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Northern Europe										
Weighted average	0,46	0,53	0,40	-0,02	0,13	-0,15	0,53	0,60	0,48	2,14
Denmark	0,15 *	0,27 ***	0,04	0,71 ***	1,02 ***	0,42 *	0,05	0,14 **	-0,03	1,20
Estonia	0,22 ***	0,20 ***	0,24 ***	-0,12	0,21	-0,35	0,25 ***	0,20 ***	0,30 ***	3,97
Finland	0,38 ***	0,46 ***	0,32 ***	0,98 ***	1,36 ***	0,62 ***	0,31 ***	0,35 ***	0,28 ***	1,55
Iceland	0,40 ***	0,42 ***	0,39 ***	0,38 ***	0,36 ***	0,40 ***	0,41 ***	0,43 ***	0,39 ***	3,17
Ireland	0,18	0,34	0,06	-1,03	-0,87 *	-1,17	0,40 ***	0,57	0,27 *	5,16
Latvia	0,02	0,06	-0,02	-0,34	-0,18	-0,45	0,05 ***	0,08 *	0,03	3,94
Lithuania	-0,06	-0,03	-0,10	-0,24	-0,22	-0,25	-0,05	-0,01	-0,08	4,17
Norway	0,61 ***	0,65 ***	0,58 ***	0,39 ***	0,52 ***	0,28 **	0,64 ***	0,67 ***	0,62 ***	1,71
Sweden	0,37 ***	0,36 ***	0,39 ***	0,48 ***	0,50 ***	0,46 ***	0,36 ***	0,34 ***	0,38 ***	2,36
United Kingdom	0,57 ***	0,65 ***	0,50 ***	-0,16 ***	-0,04 ***	-0,28 ***	0,68 ***	0,76 ***	0,61 ***	1,86
Western Europe										
Weighted average	0,59	0,90	0,33	-0,17	-0,04	-0,28	0,68	1,01	0,40	1,47
Austria	0,62 ***	0,91 ***	0,37 ***	0,25 *	0,41 ***	0,12	0,67 ***	0,99 ***	0,40 ***	1,61
Belgium	0,63 ***	1,05 ***	0,30 ***	-0,64 ***	-0,37 **	-0,86 ***	0,74 ***	1,17 ***	0,39 ***	1,56
France	0,47 ***	0,84 **	0,17 ***	-0,32	0,00	-0,56 **	0,55 **	0,92	0,24 ***	1,33
Germany	0,71 ***	0,98 ***	0,48 ***	-0,17	-0,17	-0,17	0,81 ***	1,12 ***	0,56 ***	1,38

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.1. Europe elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Europe										
Luxembourg	0,92 ***	1,24 ***	0,69 ***	0,38	0,49	0,28	0,97	1,30 ***	0,72 ***	3,09
Netherlands	0,33 ***	0,66 ***	0,06	-0,14	0,03	-0,31 *	0,41 ***	0,79 ***	0,12 **	1,50
Switzerland	0,64 ***	0,77 ***	0,53 ***	0,39 ***	0,39 ***	0,39 ***	0,68 ***	0,84 ***	0,55 ***	1,84
Eastern Europe										
Weighted average	0,13	0,11	0,14	-0,65	-0,75	-0,58	0,21	0,20	0,22	3,55
Belarus	0,16 ***	0,17 ***	0,15 ***	-0,12	-0,10	-0,14	0,19 ***	0,20 ***	0,19 ***	4,78
Bulgaria	0,18 ***	0,18 ***	0,19 **	-0,76 ***	-1,01 ***	-0,58 **	0,25 ***	0,26 ***	0,25 ***	3,70
Czech Republic	0,20 ***	0,20 ***	0,21 ***	-1,41 ***	-1,71 ***	-1,20 ***	0,35 ***	0,37 ***	0,34 ***	2,88
Hungary	0,32 ***	0,36 ***	0,29 ***	-1,71 ***	-1,77 ***	-1,66 **	0,52 ***	0,55 ***	0,49 ***	2,28
Poland	0,38 ***	0,37 ***	0,38 ***	-0,36 ***	-0,49 ***	-0,27 ***	0,45 ***	0,45 ***	0,45 ***	3,72
Moldova	-0,18 ***	-0,28 ***	-0,07 *	-0,64 ***	-0,86 ***	-0,45 ***	-0,13 **	-0,23 ***	-0,03	4,62
Romania	-0,31 ***	-0,41 ***	-0,23 ***	-1,43 ***	-1,63 ***	-1,29 ***	-0,21 ***	-0,31 ***	-0,13 ***	4,03
Russia	0,15 ***	0,14 ***	0,15 ***	-0,74 ***	-0,78 ***	-0,70 ***	0,24 ***	0,23 ***	0,25 ***	3,85
Slovakia	0,24 ***	0,20 ***	0,27 ***	-0,92 ***	-1,34 ***	-0,62 ***	0,35 ***	0,34 ***	0,36 ***	3,90
Ukraine	-0,01	-0,04	0,02	-0,14	-0,32	-0,01	0,00	-0,01	0,02	2,54

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.1. Europe elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Southern Europe										
Weighted average	0,68	0,86	0,57	0,60	0,56	0,63	0,73	0,94	0,60	1,29
Albania	0,00	0,06	-0,05	-1,22 ***	-1,73 ***	-0,85 ***	0,18 ***	0,33 ***	0,07	4,39
Bosnia	0,02	0,00	0,03	-0,13	-0,10	-0,16	0,03	0,01	0,04	3,43
Croatia	0,16	0,30 ***	0,06	-0,49	-0,84	-0,23	0,22 **	0,39 ***	0,08	1,95
Greece	0,71 ***	0,59 ***	0,80 ***	2,34 ***	2,23 ***	2,42 ***	0,63 ***	0,50 ***	0,72 ***	0,23
Italy	0,92 ***	0,64	1,12 ***	4,72 **	4,20 *	5,06 **	0,72 **	0,48	0,91 ***	0,36
Malta	0,53 ***	1,11 ***	0,22 ***	-0,45 ***	-0,44 ***	-0,45 ***	0,71 ***	1,55 ***	0,32 ***	3,63
Montenegro	0,56 ***	0,85 ***	0,36 ***	0,28 **	0,89 ***	-0,05	0,59 ***	0,84 ***	0,40 ***	2,97
North Macedonia	0,55 ***	0,60 ***	0,51 ***	-0,09	-0,17	-0,05	0,60 ***	0,66 ***	0,56 ***	2,78
Portugal	0,65	0,79 ***	0,53	-0,69	-0,71	-0,65	0,86 ***	0,99 ***	0,75	0,63
Serbia	-0,32 ***	-0,24 **	-0,38 ***	-1,75 ***	-2,14 ***	-1,53 ***	-0,20 **	-0,09	-0,27 ***	3,28
Slovenia	0,19 ***	0,19 ***	0,19 ***	-0,79 *	-0,73	-0,84 *	0,28 ***	0,27 ***	0,29 ***	2,32
Spain	0,75 ***	1,57 ***	0,20	-2,41 *	-1,76	-2,90 **	1,04 ***	1,89 ***	0,46 **	1,85

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.2 Europe elasticities and GDP growth for the first period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Northern Europe										
Weighted average	0,38	0,41	0,35	0,42	0,48	0,36	0,37	0,40	0,35	3,22
Denmark	0,35 ***	0,44 ***	0,26 ***	0,79	0,96 *	0,63	0,27 ***	0,35 ***	0,21 ***	1,84
Estonia	0,27 ***	0,26 ***	0,27 ***	0,42 **	0,59 **	0,31 **	0,25 ***	0,24 ***	0,27 ***	7,33
Finland	0,41 ***	0,45 ***	0,36 ***	1,15 ***	1,34 ***	0,97 ***	0,32 ***	0,34 ***	0,29 ***	3,57
Iceland	0,25 ***	0,23 ***	0,27 ***	0,32	0,29	0,36	0,24 ***	0,22 ***	0,25 ***	5,25
Ireland	0,57 ***	0,74 ***	0,44 ***	-0,19	0,02	-0,37 *	0,76 ***	0,94 ***	0,63 ***	5,53
Latvia	0,21 ***	0,20 ***	0,21 ***	0,44 ***	0,44 **	0,43 ***	0,18 ***	0,17 ***	0,18 ***	8,09
Lithuania	0,06 *	0,02	0,10 *	-0,08	-0,23	0,03	0,07 *	0,04	0,10 *	7,88
Norway	0,41 ***	0,48 ***	0,36 **	0,37	0,59 **	0,16	0,42 ***	0,46 ***	0,39 ***	2,51
Sweden	0,25 ***	0,19 **	0,31 ***	0,24	0,16	0,31	0,25 ***	0,19 ***	0,31 ***	3,18
United Kingdom	0,41 ***	0,44 ***	0,38 ***	0,42 ***	0,46 ***	0,40 ***	0,41 ***	0,44 ***	0,38 ***	2,72
Western Europe										
Weighted average	0,51	0,79	0,29	0,53	0,59	0,48	0,51	0,82	0,27	2,25
Austria	0,39 ***	0,62 ***	0,20	0,71 ***	0,89 ***	0,56 ***	0,33 **	0,57 ***	0,14	2,61
Belgium	0,57 ***	0,89 ***	0,33 ***	0,19	0,47 *	-0,03	0,61 ***	0,93 ***	0,36 ***	2,43
France	0,63 ***	0,98 ***	0,34 ***	0,73 ***	0,98 ***	0,55 ***	0,62 ***	0,98 ***	0,31 ***	2,14
Germany	0,45 ***	0,67 ***	0,26	0,48	0,44	0,52	0,44 ***	0,70 ***	0,23	1,73

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.2. Europe elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Europe										
Luxembourg	0,45 ***	0,79 ***	0,20 ***	-0,64 *	-0,90 **	-0,45	0,53 ***	0,94 ***	0,25 ***	4,41
Netherlands	0,52 ***	0,85 ***	0,26 **	0,35 *	0,41 **	0,30	0,55 ***	0,94 ***	0,25 ***	2,48
Switzerland	0,45 ***	0,58 ***	0,34 ***	0,39 **	0,28 *	0,49 ***	0,46 ***	0,63 ***	0,32 ***	2,70
Eastern Europe										
Weighted average	0,14	0,13	0,14	-0,09	-0,15	-0,05	0,17	0,17	0,17	7,04
Belarus	0,17 ***	0,18 ***	0,17 ***	0,22 ***	0,23 ***	0,21 ***	0,17 ***	0,18 ***	0,16 ***	9,03
Bulgaria	0,42 ***	0,36 ***	0,46 ***	0,30 ***	0,09	0,47 ***	0,43 ***	0,39 ***	0,46 ***	6,68
Czech Republic	0,14 ***	0,09 ***	0,18 ***	-1,27 ***	-1,54 ***	-1,07 ***	0,28 ***	0,25 ***	0,31 ***	4,88
Hungary	0,05	0,07 *	0,02	-2,68 ***	-2,82 ***	-2,58 ***	0,32 ***	0,34 ***	0,29 ***	3,87
Poland	0,39 ***	0,33 ***	0,44 ***	0,14	0,03	0,22	0,42 ***	0,36 ***	0,47 ***	4,69
Moldova	-0,09 **	-0,22 ***	0,04 *	0,09	-0,15 **	0,30 ***	-0,11 **	-0,22 ***	0,01	6,64
Romania	-0,35 ***	-0,43 ***	-0,29 ***	-1,15 ***	-1,33 ***	-1,03 ***	-0,27 **	-0,34 ***	-0,20 **	6,80
Russia	0,17 ***	0,20 ***	0,14 ***	0,05	0,06	0,04	0,19 ***	0,22 ***	0,16 ***	7,83
Slovakia	0,29 ***	0,19 ***	0,37 ***	-0,40 ***	-0,71 ***	-0,15 **	0,37 ***	0,29 ***	0,43 ***	6,42
Ukraine	0,02 *	-0,01	0,05 **	0,12 **	-0,04	0,24 ***	0,01	0,00	0,02	7,79

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.2. Europe elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Southern Europe										
Weighted average	0,84	1,40	0,48	-1,27	-1,40	-1,19	1,05	1,68	0,65	3,13
Albania	-0,11 ***	-0,03 *	-0,17 ***	-0,79 ***	-1,02 ***	-0,60 ***	0,01	0,17 ***	-0,09 **	6,97
Bosnia	0,08	0,06	0,09	0,21	0,29	0,16	0,07	0,04	0,08	6,34
Croatia	0,27 ***	0,34 ***	0,22 ***	0,07	-0,33 ***	0,35 **	0,29 ***	0,40 ***	0,20 ***	4,78
Greece	0,28 ***	0,56 ***	0,11 ***	-1,18 ***	-1,06 ***	-1,26 ***	0,41 ***	0,71 ***	0,23 ***	4,00
Italy	1,31 ***	2,25 ***	0,73 ***	-2,06 ***	-2,82 ***	-1,57 ***	1,57 ***	2,65 ***	0,90 ***	1,36
Malta	0,34 ***	0,89 ***	0,09 ***	-0,79 **	-0,94 **	-0,66 **	0,60 ***	1,61 ***	0,22 ***	3,29
Montenegro	0,55 ***	0,81 ***	0,37	0,79 ***	1,36 ***	0,49 ***	0,53 ***	0,77 ***	0,36 ***	4,97
North Macedonia	0,17	0,20	0,15	-0,01	-0,03	0,00	0,19 *	0,22 *	0,17	3,96
Portugal	0,08	0,50 ***	-0,28 *	-5,02 ***	-4,69 ***	-5,27 ***	0,64 ***	1,03 ***	0,30 ***	1,55
Serbia	-0,25 **	-0,26 *	-0,24 ***	-1,27 ***	-1,57 ***	-1,09 ***	-0,14 *	-0,14	-0,15 **	6,88
Slovenia	0,31 ***	0,30 ***	0,32 ***	0,29	0,28	0,29 *	0,32 ***	0,31 ***	0,33 ***	4,75
Spain	1,07 ***	1,63 ***	0,71 ***	-0,09	0,23	-0,33	1,21 ***	1,81 ***	0,83 ***	3,91

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.3. Europe elasticities and GDP growth for the second period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Northern Europe										
Weighted average	0,51	0,51	0,52	0,17	0,16	0,18	0,56	0,56	0,56	1,41
Denmark	0,27 *	0,19	0,34 **	0,45	0,50	0,40	0,23 *	0,13	0,32 **	0,77
Estonia	0,46 ***	0,28 ***	0,64 ***	-0,15	-0,12	-0,19	0,52 ***	0,32 ***	0,72 ***	1,43
Finland	0,11	-0,11	0,32 **	0,41	0,03	0,82 *	0,08	-0,12	0,26 **	-0,07
Iceland	0,60 ***	0,56 ***	0,64 ***	0,85 ***	0,58 **	1,12 ***	0,55 ***	0,56 ***	0,54 ***	1,68
Ireland	0,16 ***	0,14 ***	0,18 ***	-0,13	-0,27	0,02	0,20 ***	0,20 ***	0,20 ***	5,41
Latvia	0,22 **	0,07	0,38 ***	-0,84 **	-0,85 **	-0,84 **	0,31 ***	0,14 *	0,50 ***	0,68
Lithuania	0,33 ***	0,22 **	0,44 ***	0,99 ***	0,72 *	1,21 ***	0,28 ***	0,19 **	0,37 ***	1,33
Norway	0,50 ***	0,44 ***	0,55 ***	0,08	-0,01	0,16	0,56 ***	0,51 ***	0,60 ***	1,19
Sweden	0,40 ***	0,45 ***	0,36 ***	0,43 **	0,47 **	0,40 **	0,40 ***	0,45 ***	0,36 ***	1,90
United Kingdom	0,62 ***	0,66 ***	0,59 ***	0,11	0,13	0,09	0,70 ***	0,74 ***	0,66 ***	1,29
Western Europe										
Weighted average	0,36	0,51	0,23	-0,62	-0,53	-0,70	0,48	0,63	0,34	1,00
Austria	0,50 ***	0,68 ***	0,35 ***	-1,04	-0,81	-1,24	0,72 ***	0,89 ***	0,58 ***	0,90
Belgium	0,51 ***	0,80 ***	0,26 ***	-1,27 ***	-1,15 ***	-1,37 **	0,64 ***	0,95 ***	0,38 ***	0,95
France	0,08	0,23 ***	-0,06	-0,95	-0,83 *	-1,05	0,18 ***	0,33 ***	0,04	0,76
Germany	0,56 ***	0,71 ***	0,43 ***	-0,51 ***	-0,47 ***	-0,55 ***	0,68 ***	0,85 ***	0,54 ***	1,22

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.3. Europe elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Europe										
Luxembourg	0,79 ***	1,04 ***	0,59 ***	1,33 **	1,57 **	1,11 *	0,75 ***	1,01 ***	0,55 ***	2,26
Netherlands	0,01	0,07	-0,03	-0,28	-0,21	-0,34	0,07	0,13	0,02	0,79
Switzerland	0,77 ***	0,89 ***	0,67 ***	0,12 ***	0,12	0,12	0,87	1,02 ***	0,75 ***	1,27
Eastern Europe										
Weighted average	0,21	0,16	0,25	-1,41	-1,60	-1,26	0,36	0,31	0,42	0,84
Belarus	0,08 **	0,09 ***	0,07 **	-1,28	-1,22	-1,34	0,26 **	0,25 **	0,26 **	1,54
Bulgaria	0,05	0,04	0,05	-2,87 **	-3,22 **	-2,62 **	0,22	0,21	0,24	1,47
Czech Republic	0,44 ***	0,63 ***	0,29 ***	-0,52 *	-0,43	-0,57 *	0,51 ***	0,70 ***	0,36 ***	1,43
Hungary	1,12 ***	1,02 ***	1,21 ***	2,79 ***	2,56 ***	2,97 ***	1,01 ***	0,92 ***	1,08 ***	1,11
Poland	0,30 ***	0,34 ***	0,27 ***	-0,70 **	-0,68	-0,71 **	0,39 ***	0,42 ***	0,36 ***	3,27
Moldova	0,16 *	0,17 *	0,15	-1,39 ***	-1,57 ***	-1,25 ***	0,30 **	0,31 **	0,30 **	3,33
Romania	-0,06	-0,13 *	0,00	-0,96 **	-1,11 **	-0,87 ***	0,01	-0,06	0,06	2,02
Russia	0,10 *	0,01	0,20 ***	-3,08 **	-3,31 **	-2,91 **	0,41 ***	0,29 ***	0,53 ***	0,74
Slovakia	0,39 ***	0,49 ***	0,31 ***	-0,17	-0,55	0,06	0,43 ***	0,56 ***	0,33 ***	2,10
Ukraine	0,40 **	0,39 **	0,41 ***	2,59 **	2,44 *	2,71 **	0,20 **	0,23 **	0,18 *	-1,85

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.3. Europe elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Southern Europe										
Weighted average	0,89	0,70	1,03	3,25	2,91	3,50	0,76	0,58	0,89	-0,21
Albania	0,45 **	0,62 **	0,34	-2,14 **	-2,76 **	-1,76 *	0,75 ***	0,96 ***	0,60 ***	2,58
Bosnia	-0,11	-0,37	0,04	-0,19	-1,53	0,53	-0,10	-0,29	0,01	1,21
Croatia	0,86	0,83 *	0,88	5,56 **	5,65 **	5,49 **	0,54	0,54	0,53	-0,35
Greece	0,90 ***	0,78 ***	0,98 ***	2,72 ***	2,54 ***	2,84 ***	0,81 ***	0,70 ***	0,89 ***	-3,10
Italy	0,84 ***	0,35	1,17 **	5,57 *	4,99 *	5,95 *	0,61 ***	0,13	0,94 **	-0,48
Malta	0,43 ***	0,79 ***	0,22 ***	-0,22 ***	-0,16	-0,28 ***	0,53 ***	1,00 ***	0,28 ***	4,35
Montenegro	0,56 ***	0,61 ***	0,52 ***	-0,57 *	-0,51 ***	-0,60	0,66 ***	0,69 ***	0,63 ***	1,52
North Macedonia	0,83 ***	0,93 ***	0,77 ***	-0,35	-0,34	-0,35	0,92 ***	1,01 ***	0,87 ***	2,04
Portugal	1,28 ***	1,11 ***	1,43 ***	4,20 **	3,82 **	4,54 **	1,09 ***	0,94 ***	1,23 ***	-0,12
Serbia	1,65 *	2,04 *	1,35	2,24	1,85	2,51 **	1,61 *	2,05 **	1,26	0,45
Slovenia	0,17	0,28	0,08	-0,05	0,06	-0,13	0,19	0,30	0,10	0,41
Spain	0,85 **	0,77 ***	0,92 **	2,25	2,04	2,43	0,78 ***	0,70 ***	0,85 **	0,22

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.4. Americas elasticities and GDP growth for the whole period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
North America										
Weighted average	0,51	0,57	0,46	-0,17	-0,10	-0,22	0,63	0,70	0,58	2,04
Canada	0,66 ***	0,77 ***	0,57 ***	0,18 **	0,27 ***	0,10	0,74 ***	0,86 ***	0,65 ***	2,20
Mexico	1,01 ***	1,35 ***	0,82 ***	-0,04	0,05	-0,08	1,28 ***	1,69 ***	1,07 ***	2,20
United States	0,33 ***	0,35 ***	0,31 ***	-0,27 *	-0,19	-0,34 **	0,43 ***	0,45 ***	0,41 ***	1,97
Central America										
Weighted average	0,71	0,80	0,67	0,34	0,29	0,36	0,83	0,93	0,78	3,54
Belize	1,28 ***	1,69 ***	1,07 ***	0,82 ***	0,89 ***	0,78 ***	1,42 ***	1,91 ***	1,16 ***	3,70
Costa Rica	0,45 ***	0,68 ***	0,32 ***	-0,31 ***	-0,19 *	-0,37 ***	0,60 ***	0,85 ***	0,46 ***	4,06
El Salvador	0,68 ***	0,78 ***	0,60 ***	0,41 ***	0,21 ***	0,52 ***	0,75 ***	0,90 ***	0,63 ***	0,43
Guatemala	0,88 ***	0,83 ***	0,90 ***	0,56 ***	0,52 ***	0,59 ***	1,01 ***	0,95 ***	1,05 ***	3,45
Honduras	0,78 ***	0,85 ***	0,74 ***	0,36 ***	0,29 ***	0,39 ***	0,94 ***	1,03 ***	0,89 ***	4,17
Nicaragua	0,74 ***	0,98 ***	0,61 ***	0,19 ***	0,23 ***	0,18 ***	0,92 ***	1,15 ***	0,77 ***	3,92
Panama	0,36 ***	0,44 ***	0,31 ***	0,03	0,03	0,02	0,43 ***	0,52 ***	0,37 ***	6,17
South America										
Weighted average	0,54	0,64	0,47	-0,08	0,00	-0,13	0,68	0,78	0,61	3,06
Argentina	0,49 ***	0,47 ***	0,51 ***	0,19 **	0,04	0,29 ***	0,54 ***	0,53 ***	0,55 ***	2,48
Bolivia	0,45 ***	0,43 ***	0,47 ***	0,09	0,03	0,13 **	0,55 ***	0,53 ***	0,56 ***	4,27
Brazil	0,54 ***	0,65 ***	0,47 ***	-0,27 **	-0,15	-0,35 ***	0,74 ***	0,84 ***	0,68 ***	2,48

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.4. Americas elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South America										
Chile	0,65 ***	0,99 ***	0,44 ***	0,21 ***	0,52 ***	0,03	0,70 ***	1,05 ***	0,50 ***	3,90
Colombia	0,62 ***	0,76 ***	0,53 ***	0,25 ***	0,33 ***	0,20 ***	0,70 ***	0,85 ***	0,60 ***	3,93
Ecuador	0,52 ***	0,59 ***	0,47 ***	-0,09	-0,20 **	-0,03	0,66 ***	0,76 ***	0,59 ***	3,66
Guyana	0,28 ***	0,58 ***	0,15 ***	0,45 ***	0,74 ***	0,31 ***	0,24 ***	0,54 ***	0,10 ***	2,86
Paraguay	0,60 ***	0,72 ***	0,53 ***	0,25 ***	0,37 ***	0,17 ***	0,72 ***	0,82 ***	0,65 ***	3,58
Peru	0,48 ***	0,55 ***	0,42 ***	0,20 ***	0,24 ***	0,17 **	0,55 ***	0,64 ***	0,48 ***	4,96
Suriname	0,54 ***	0,82 ***	0,40 ***	0,45 ***	1,02 ***	0,24 ***	0,55 ***	0,80 ***	0,42 ***	3,12
Uruguay	0,32 ***	0,42 ***	0,24 ***	0,26 ***	0,32 ***	0,23 **	0,33 ***	0,43 ***	0,24 ***	2,83
Carribean										
Weighted average	0,78	0,97	0,65	0,40	0,40	0,40	0,83	1,05	0,69	2,92
Bahamas	2,61 ***	2,41 ***	2,80 ***	1,04 ***	-0,13	1,77 ***	2,88 ***	2,75 ***	3,00 ***	0,86
Barbados	0,27 ***	0,53 ***	0,02	-2,09 ***	-2,06 ***	-2,13 ***	0,56 ***	0,83 ***	0,31 ***	1,06
Cuba	0,24 ***	0,40 ***	0,14 ***	0,26 **	0,34	0,21 ***	0,23 ***	0,40 ***	0,14 ***	4,16
Dominican Republic	0,52 ***	0,74 ***	0,40 ***	0,17 ***	0,19 ***	0,16 ***	0,60 ***	0,85 ***	0,46 ***	4,88
Haiti	1,48 ***	1,47 ***	1,49 ***	0,49 ***	0,25 ***	0,65 ***	1,65 ***	1,66 ***	1,65 ***	1,20
Jamaica	1,46 ***	1,98 ***	1,09 ***	0,91 ***	1,68 ***	0,46 ***	1,53 ***	2,01 ***	1,18 ***	0,74

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.4. Americas elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Carribean										
Puerto Rico	0,75 **	0,69 ***	0,79 **	1,82	1,65	1,93	0,65 ***	0,62 ***	0,67 **	0,22
Trinidad and Tobago	0,24 ***	0,39 ***	0,14 ***	-0,67 **	-0,65 **	-0,68 ***	0,43 ***	0,60 ***	0,31 ***	3,49

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.5. Americas elasticities and GDP growth for the first period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
North America										
Weighted average	0,50	0,60	0,42	-0,01	0,08	-0,08	0,60	0,70	0,52	2,62
Canada	0,76 ***	0,89 ***	0,65 ***	0,75 ***	0,84 ***	0,67 ***	0,76 ***	0,90 ***	0,65 ***	2,97
Mexico	1,01 ***	1,56 ***	0,74 ***	-0,03	0,22	-0,16	1,33 ***	1,97 ***	1,01 ***	2,51
United States	0,32 ***	0,35 ***	0,28 ***	-0,10	-0,06	-0,13	0,39 ***	0,43 ***	0,36 ***	2,62
Central America										
Weighted average	0,66	0,79	0,59	0,34	0,37	0,33	0,77	0,92	0,68	4,37
Belize	0,98 ***	1,41 ***	0,77 ***	0,76 ***	1,12 ***	0,58 ***	1,05 ***	1,50 ***	0,83 ***	6,08
Costa Rica	0,62 ***	0,87 ***	0,49 ***	0,31 ***	0,50 ***	0,20 **	0,70 ***	0,96 ***	0,56 ***	5,39
El Salvador	0,68 ***	0,88 ***	0,54 ***	0,51 ***	0,27	0,64 ***	0,73 ***	1,02 ***	0,51 ***	0,47
Guatemala	0,76 ***	0,77 ***	0,76 ***	0,50 ***	0,55 ***	0,48 ***	0,88 ***	0,86 ***	0,89 ***	4,21
Honduras	0,48 ***	0,37 ***	0,54 ***	0,12 **	-0,21 **	0,26 ***	0,63 ***	0,57 ***	0,67 ***	5,95
Nicaragua	0,84 ***	1,39 ***	0,55 ***	0,24 ***	0,89 ***	-0,03 ***	1,06 ***	1,53 ***	0,78 ***	4,07
Panama	0,41 ***	0,47 ***	0,38 ***	0,13 **	0,03	0,18 ***	0,48 ***	0,56 ***	0,43 ***	6,87

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.5. Americas elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South America										
Weighted average	0,62	0,75	0,54	0,31	0,40	0,25	0,70	0,84	0,61	4,47
Argentina	0,47 ***	0,41 ***	0,52 ***	0,54 ***	0,44 ***	0,60 ***	0,46 ***	0,40 ***	0,51 ***	3,97
Bolivia	0,69 ***	0,77 ***	0,64 ***	0,43 ***	0,48 ***	0,40 ***	0,77 ***	0,85 ***	0,71 ***	4,19
Brazil	0,67 ***	0,86 ***	0,55 ***	0,24 ***	0,40 ***	0,14 **	0,80 ***	0,98 ***	0,67 ***	4,22
Chile	0,58 ***	0,86 ***	0,43 ***	0,51 ***	0,72 ***	0,39 ***	0,59 ***	0,88 ***	0,44 ***	5,44
Colombia	0,51 ***	0,52 ***	0,51 ***	0,08	0,04	0,10	0,61 ***	0,62 ***	0,60 ***	4,74
Ecuador	0,61 ***	0,71 ***	0,54 ***	0,35 ***	0,30 ***	0,39 ***	0,67 ***	0,81 ***	0,59 ***	4,80
Guyana	0,23 **	0,52 **	0,10 **	-0,02	0,30	-0,16	0,29 ***	0,57 ***	0,17 ***	1,89
Paraguay	0,92 ***	1,07 ***	0,84 ***	0,69 ***	0,80 ***	0,64 ***	1,01 ***	1,16 ***	0,91 ***	2,99
Peru	0,64 ***	0,79 ***	0,52 ***	0,61 ***	0,69 ***	0,56 ***	0,64 ***	0,82 ***	0,50 ***	6,17
Suriname	0,48 ***	0,76 ***	0,34 ***	0,52 ***	1,30 ***	0,25 ***	0,47 ***	0,71 ***	0,35 ***	5,43
Uruguay	0,44 ***	0,48 ***	0,41 ***	0,67 ***	0,64 **	0,69 ***	0,41 ***	0,46 ***	0,36 ***	2,20
Carribean										
Weighted average	0,55	0,74	0,43	0,10	0,03	0,14	0,62	0,85	0,47	4,07
Bahamas	1,85 ***	1,77 ***	1,93 ***	1,40 ***	1,12 **	1,60 ***	1,94 ***	1,87 ***	2,00 ***	1,77
Barbados	0,41 ***	0,53 ***	0,31 ***	-0,51 **	-0,61 **	-0,42	0,54 ***	0,68 ***	0,42 ***	2,25
Cuba	0,28 ***	0,51 ***	0,14 ***	0,45 ***	0,72 ***	0,28 ***	0,26 ***	0,49 ***	0,13 ***	6,84
Dominican Republic	0,53 ***	0,73 ***	0,44 ***	0,33 ***	0,33 ***	0,34 ***	0,58 ***	0,82 ***	0,46 ***	5,26

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.5. Americas elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Carribean										
Haiti	0,90	0,88	0,92	-0,33 *	-0,71 **	-0,06	1,12	1,13	1,11 ***	0,58
Jamaica	1,03 ***	1,46 ***	0,72 ***	1,15 ***	1,56 ***	0,94 ***	1,01 ***	1,45 ***	0,68 ***	1,70
Puerto Rico	0,16 *	0,37 **	0,02	-1,44 *	-1,60 **	-1,33 *	0,39 ***	0,63 **	0,22 ***	1,61
Trinidad and Tobago	0,26 ***	0,41 ***	0,16 ***	0,03	0,12	-0,03	0,32 ***	0,49 ***	0,21 ***	8,62

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.6. Americas elasticities and GDP growth for the second period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
North America										
Weighted average	0,64	0,57	0,69	0,46	0,45	0,47	0,67	0,59	0,73	1,74
Canada	0,48 ***	0,46 ***	0,49 ***	0,00	-0,04	0,05	0,56 ***	0,55 ***	0,56 ***	1,76
Mexico	0,74 ***	0,80 ***	0,71 ***	0,05	0,02	0,07 *	0,90 ***	0,97 ***	0,86 ***	2,17
United States	0,62 ***	0,52 ***	0,71 ***	0,71 ***	0,66 ***	0,76 ***	0,61 ***	0,49 ***	0,71 ***	1,61
Central America										
Weighted average	0,71	0,74	0,69	0,36	0,27	0,40	0,81	0,85	0,78	3,19
Belize	1,52 ***	1,76 ***	1,38 ***	0,70 ***	0,08	1,01 ***	1,74 ***	2,17 ***	1,49 ***	2,00
Costa Rica	0,34 ***	0,39 *	0,32 ***	-0,45 **	-0,50 *	-0,42 ***	0,48 ***	0,54 **	0,44 ***	3,34
El Salvador	0,57 ***	0,55 ***	0,58 ***	0,38 **	0,26	0,44 ***	0,62 ***	0,61 ***	0,62 ***	0,45
Guatemala	0,90 ***	0,79 ***	0,96 ***	0,58 **	0,25	0,72 ***	1,04 ***	0,99 ***	1,06 ***	3,15
Honduras	0,92 ***	1,17 ***	0,79 ***	0,50 ***	0,93 ***	0,32 ***	1,06 ***	1,23 ***	0,96 ***	3,05
Nicaragua	0,59 ***	0,66 ***	0,55 ***	0,15 *	-0,04	0,23 **	0,72 ***	0,81 ***	0,65 ***	4,21
Panama	0,37 ***	0,52 ***	0,27 ***	0,07	0,28 **	-0,04	0,43 ***	0,56 ***	0,34 ***	6,24

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.6. Americas elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South America										
Weighted average	0,44	0,49	0,40	-0,29	-0,20	-0,34	0,59	0,63	0,56	2,16
Argentina	0,44 ***	0,46 **	0,42 ***	-0,47 *	-0,60 **	-0,39	0,57 ***	0,59 **	0,55 ***	1,43
Bolivia	0,29 ***	0,20 *	0,36 ***	-0,11	-0,32	0,04	0,39 ***	0,32 ***	0,44 ***	4,82
Brazil	0,41 ***	0,45 **	0,38 ***	-0,38	-0,24	-0,47	0,59 **	0,60 *	0,59 **	1,20
Chile	0,62 ***	0,89 ***	0,44 ***	-0,32	-0,08	-0,48 **	0,74 ***	1,01 ***	0,56 ***	2,95
Colombia	0,57 ***	0,74 ***	0,46 ***	0,16	0,34 **	0,05	0,65 ***	0,81 ***	0,54 ***	3,65
Ecuador	0,64 ***	0,77 **	0,55 ***	0,01	-0,08	0,06	0,77 ***	0,93 ***	0,66 ***	3,06
Guyana	0,37 ***	0,60 ***	0,25 ***	0,89 ***	1,04 ***	0,82 ***	0,23 ***	0,49 ***	0,11 ***	4,05
Paraguay	0,43 ***	0,46 ***	0,40 ***	-0,10	-0,11	-0,10	0,58 ***	0,62 ***	0,56 ***	4,50
Peru	0,28 ***	0,27 ***	0,29 ***	-0,41 ***	-0,42 ***	-0,40 ***	0,45 ***	0,44 ***	0,46 ***	4,43
Suriname	0,47 *	0,76 **	0,31	0,01	0,30	-0,11	0,53 *	0,81 **	0,37	1,40
Uruguay	0,09 **	0,21 ***	0,00	-0,45 *	-0,35	-0,51 **	0,18 ***	0,28 ***	0,09 ***	3,70
Carribean										
Weighted average	0,66	0,82	0,55	-0,03	0,08	-0,07	0,76	0,93	0,64	2,22
Bahamas	2,33 ***	1,96 ***	2,64 **	-0,12	-1,88 *	0,90	2,71 ***	2,43 ***	2,98 ***	0,14
Barbados	0,39	0,68 *	0,12	-2,77	-2,15	-3,29	0,72 **	0,96 **	0,50	0,13
Cuba	-0,02	-0,11 **	0,04	-1,36 ***	-2,15 ***	-0,85 ***	0,15 ***	0,15 ***	0,15 **	2,24

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.6. Americas elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Cuba	-0,02	-0,11 **	0,04	-1,36 ***	-2,15 ***	-0,85 ***	0,15 ***	0,15 ***	0,15 **	2,24
Dominican Republic	0,57 ***	0,83 ***	0,42 ***	0,36 ***	0,38 *	0,35 ***	0,61 ***	0,90 ***	0,43 ***	5,09
Haiti	1,10 ***	1,17 ***	1,05 ***	0,47 ***	0,56 ***	0,42 **	1,20 ***	1,25 ***	1,16 ***	1,88
Jamaica	2,51 ***	2,98 ***	2,16 ***	-0,34	1,84 *	-1,70 *	2,91 ***	3,13 ***	2,75 ***	-0,03
Puerto Rico	0,08	0,43 *	-0,17	1,25 **	2,50 ***	0,43	-0,03	0,24	-0,24	-0,99
Trinidad and Tobago	0,18	0,13	0,22	0,75	0,68	0,80	0,16	0,11	0,19	-0,68

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.7. Asia and Oceania elasticities and GDP growth for the whole period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Asia										
Weighted average	0,66	0,65	0,66	-0,17	-0,29	-0,13	0,82	0,83	0,82	4,50
Armenia	0,00	0,03	-0,03	-0,35 ***	-0,52 ***	-0,24 ***	0,04 *	0,08 ***	0,00	6,59
Azerbaijan	0,23 ***	0,26 ***	0,21 ***	-0,02	-0,05 *	0,01	0,28 ***	0,31 ***	0,24 ***	9,56
Bahrain	1,34 ***	1,35 ***	1,34 ***	0,66 ***	0,67 ***	0,65 ***	1,44 ***	1,46 ***	1,43 ***	4,69
Cyprus	0,67 ***	1,04 ***	0,40 ***	-0,32	-0,13	-0,48	0,81 ***	1,22 ***	0,51 ***	2,24
Georgia	-0,15 ***	-0,16 ***	-0,15 ***	-0,41 ***	-0,63 ***	-0,29 ***	-0,13 ***	-0,13 ***	-0,13 ***	5,43
Iran	0,54 ***	0,70 ***	0,51 ***	-1,12 ***	-1,45 ***	-1,06 ***	0,88 ***	1,17 ***	0,83 ***	3,66
Iraq	0,49 ***	0,56 ***	0,48 ***	0,22 ***	0,16 *	0,23 ***	0,58 ***	0,62 ***	0,57 ***	5,28
Israel	0,85 ***	0,94 ***	0,78 ***	0,25 ***	0,34 ***	0,17 ***	0,98 ***	1,06 ***	0,90 ***	3,50
Jordan	0,83 ***	1,15 ***	0,78 ***	0,37 ***	0,54 ***	0,35 ***	0,92 ***	1,25 ***	0,86 ***	4,72
Kuwait	1,16 ***	1,37 ***	1,07 ***	0,27 ***	0,47 ***	0,21 **	1,22 ***	1,42 ***	1,14 ***	4,02
Lebanon	0,96 ***	1,07 ***	0,93 ***	0,82 ***	0,79 ***	0,83 ***	0,98 ***	1,13 ***	0,94 ***	3,95
Oman	1,97 ***	1,27 ***	2,10 ***	0,83 ***	-0,94 ***	1,26 ***	2,18 ***	1,87 ***	2,23 ***	3,56
Qatar	1,11 ***	0,95 ***	1,14 ***	1,19 ***	0,80 ***	1,27 ***	1,10 ***	0,97 ***	1,12 ***	9,37
Saudi Arabia	1,14 ***	1,22 ***	1,13 ***	0,29 ***	0,17	0,31 ***	1,21 ***	1,31 ***	1,19 ***	3,72
Turkey	0,44 ***	0,58 ***	0,38 ***	0,08	0,05	0,09 *	0,52 ***	0,73 ***	0,44 ***	5,25

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.7. Asia and Oceania elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Asia										
United Arab Emirates	2,19 ***	2,33 ***	2,16 ***	1,15 ***	1,13 ***	1,16 ***	2,31 ***	2,55 ***	2,27 ***	4,46
Yemen	0,15	-0,58	0,32	0,18 **	-0,26	0,35 *	0,14	-0,71	0,31	0,39
Central Asia										
Weighted average	0,34	0,31	0,37	0,19	0,13	0,23	0,38	0,35	0,40	6,87
Kazakhstan	0,26 ***	0,27 ***	0,25 ***	-0,02	-0,01	-0,02	0,31 ***	0,31 ***	0,31 ***	6,77
Kyrgystan	0,32 ***	0,18 ***	0,41 ***	-0,01 ***	-0,28 ***	0,15 ***	0,39 ***	0,27 ***	0,47 ***	4,48
Tajikistan	0,46 ***	0,36 ***	0,51 ***	0,48 ***	0,31 ***	0,60 ***	0,46 ***	0,38 ***	0,50 ***	7,74
Turkmenistan	0,29 ***	0,27 ***	0,31 ***	0,21 ***	0,19 ***	0,22 ***	0,31 ***	0,29 ***	0,33 ***	8,27
Uzbekistan	0,40 ***	0,38 ***	0,41 ***	0,28 ***	0,25 ***	0,30 ***	0,42 ***	0,41 ***	0,44 ***	7,06
East Asia										
Weighted average	0,06	0,07	0,04	-0,42	-0,46	-0,37	0,13	0,16	0,10	8,60
China	0,04 ***	0,02 ***	0,06 ***	-0,34 ***	-0,39 ***	-0,30 ***	0,10 ***	0,09 ***	0,11 ***	9,28
Hong Kong, SAR China	0,28 ***	0,51 ***	0,10 ***	-0,45 ***	-0,48 ***	-0,43 ***	0,36 ***	0,62 ***	0,14 ***	3,87

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.7. Asia and Oceania elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Eastern Asia										
Japan	0,10 *	0,57 ***	-0,23 ***	-1,90 ***	-1,92	-1,88 ***	0,30 ***	0,86 ***	-0,10 *	0,96
Macau, SAR China	0,43 ***	0,47 ***	0,40 ***	0,32 ***	0,20	0,46 ***	0,45 ***	0,50 ***	0,39 ***	8,30
Mongolia	0,26 ***	0,26 ***	0,26 ***	-0,32 ***	-0,44	-0,23 ***	0,37 ***	0,38 ***	0,35 ***	6,92
South Korea	0,28 ***	0,32 ***	0,25 ***	-0,61 ***	-0,66 ***	-0,55 ***	0,36 ***	0,45 ***	0,31 ***	4,13
South Asia										
Weighted average	0,24	0,15	0,26	-0,15	-0,22	-0,13	0,33	0,24	0,35	6,61
Bangladesh	0,34 ***	0,59 ***	0,25 ***	-0,11 ***	0,20 ***	-0,22 ***	0,46 ***	0,70 ***	0,38 ***	5,95
Bhutan	0,42 ***	0,37 ***	0,46 ***	-0,22 **	-0,14	-0,30 ***	0,56 ***	0,50 ***	0,60 ***	7,48
India	0,16 ***	-0,04	0,23 ***	-0,25 ***	-0,53 ***	-0,17 ***	0,26 ***	0,06 *	0,32 ***	7,06
Maldives	0,94 ***	0,71 ***	1,04 ***	0,39 ***	0,31 ***	0,43 ***	1,10 ***	0,85 ***	1,20 ***	5,55
Nepal	0,49 ***	0,60 ***	0,38 ***	0,34 ***	0,38 ***	0,30 ***	0,55 ***	0,69 ***	0,41 ***	4,20
Pakistan	0,66 ***	1,22 ***	0,54 ***	0,35 ***	1,12 ***	0,17 ***	0,78 ***	1,27 ***	0,67 ***	4,32
Sri Lanka	0,11 ***	0,16 ***	0,09 ***	-0,54 ***	-0,57 ***	-0,52 ***	0,20 ***	0,26 ***	0,18 ***	5,37
South East Asia										
Weighted average	0,33	0,36	0,31	-0,04	-0,10	0,00	0,42	0,46	0,38	5,80
Brunei	1,39 ***	1,56 ***	1,28 ***	-0,18	-0,55	0,10	1,66 ***	1,94 ***	1,46 ***	0,84
Cambodia	0,36 ***	0,32 ***	0,40 ***	0,14 *	0,05	0,23 **	0,46 ***	0,44 ***	0,48 ***	7,80

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.7. Asia and Oceania elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South East Asia										
Indonesia	0,37 ***	0,45 ***	0,32 ***	0,04	0,05	0,03	0,43 ***	0,54 ***	0,37 ***	5,28
Laos	0,34 ***	0,33 ***	0,35 ***	0,14 ***	0,09 ***	0,20 ***	0,42 ***	0,43 ***	0,41 ***	7,22
Malaysia	0,61 ***	0,69 ***	0,56 ***	0,38 ***	0,28 ***	0,45 ***	0,65 ***	0,79 ***	0,58 ***	5,11
Myanmar	0,05 ***	0,02 ***	0,08 ***	-0,24 ***	-0,31 ***	-0,17 ***	0,16 ***	0,16 ***	0,16 ***	10,14
Philippines	0,46 ***	0,49 ***	0,45 ***	0,21 ***	0,19 ***	0,22 ***	0,52 ***	0,56 ***	0,50 ***	5,30
Singapore	0,59 ***	0,72 ***	0,49 ***	0,35 ***	0,34 ***	0,36 ***	0,61 ***	0,76 ***	0,50 ***	5,32
Thailand	0,19 ***	0,18 ***	0,19 ***	-0,57 ***	-0,76 ***	-0,43 ***	0,29 ***	0,31 ***	0,28 ***	4,04
Timor-Leste	0,02	-0,01	0,04 *	-0,54 ***	-0,65 ***	-0,47 ***	0,14 ***	0,15 ***	0,13 ***	8,01
Vietnam	0,31 ***	0,30 ***	0,31 ***	-0,17 ***	-0,25 ***	-0,10 **	0,43 ***	0,44 ***	0,42 ***	6,41
Oceania										
Weighted average	0,56	0,64	0,49	0,20	0,20	0,19	0,63	0,74	0,55	3,06
Australia	0.65 ***	0.75 ***	0.57 ***	0.30 ***	0.32 ***	0.29 ***	0.72 ***	0.85 ***	0.62 ***	2,94
Fiji	0.58 ***	0.83 ***	0.46 ***	-0.41 ***	-0,19	-0.50 ***	0.77 ***	1.02 ***	0.66 ***	2,03
New Zealand	0.66 ***	0.75 ***	0.58 ***	0.33 ***	0.29 ***	0.37 ***	0.72 ***	0.84 ***	0.62 ***	2,87
Papua New Guinea	-0,01	0,00	-0,02	-0.22 ***	-0.23 ***	-0.22 ***	0,06	0.07 *	0,04	4,05
Samoa	0.15 ***	0.22 ***	0.11 ***	-0.03 ***	-0.14 ***	0.02 ***	0.20 ***	0.31 ***	0.13 ***	2,97
Solomon Islands	0.54 ***	0.55 ***	0.53 ***	0.34 ***	0.30 ***	0.38 ***	0.62 ***	0.66 ***	0.59 ***	2,64

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.7. Asia and Oceania elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Oceania										
Solomon Islands	0.54 ***	0.55 ***	0.53 ***	0.34 ***	0.30 ***	0.38 ***	0.62 ***	0.66 ***	0.59 ***	2,64
Tonga	0.68 ***	0.81 ***	0.61 ***	0.46 ***	0.47 **	0.46 ***	0.74 ***	0.88 ***	0.64 ***	1,67
Vanuatu	0.90 ***	0.94 ***	0.87 ***	0.48 ***	0.54 ***	0.43 ***	1.03 ***	1.07 ***	1.00 ***	2,83

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.8. Asia and Oceania elasticities and GDP growth for the first period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Asia										
Weighted average	0,53	0,45	0,56	0,17	0,05	0,22	0,61	0,54	0,64	6,23
Armenia	0,01	0,04	-0,03	0,05	0,05	0,04	0,00	0,04 *	-0,04 *	12,61
Azerbaijan	0,18 ***	0,22 ***	0,14 ***	0,08 ***	0,08 ***	0,07 *	0,20 ***	0,25 ***	0,16 ***	18,72
Bahrain	1,48 ***	1,41 ***	1,50 ***	1,25 ***	0,90 ***	1,35 ***	1,52 ***	1,51 ***	1,53 ***	6,52
Cyprus	0,66 ***	0,86 ***	0,51 ***	0,28 ***	0,20	0,33 **	0,72 ***	0,98 ***	0,54 ***	4,95
Georgia	-0,17 ***	-0,18 ***	-0,15 ***	-0,31 **	-0,64 ***	-0,13	-0,15 ***	-0,14 **	-0,16 ***	7,87
Iran	0,71 ***	1,25 ***	0,60 ***	0,28	0,71	0,18	0,83 ***	1,43 ***	0,72 ***	5,45
Iraq	0,21	0,41	0,18	0,07	0,36	0,04 *	0,26	0,43	0,23	5,25
Israel	0,96 ***	1,02 ***	0,91 ***	0,42 *	0,44 **	0,41 *	1,09 ***	1,16 ***	1,03 ***	3,97
Jordan	0,53 ***	0,71 ***	0,50 ***	0,34 ***	0,50 **	0,32 ***	0,57 ***	0,76 ***	0,54 ***	7,46
Kuwait	0,43 ***	0,45 ***	0,42 ***	0,31 **	0,43 ***	0,28 ***	0,44 ***	0,46 ***	0,44 ***	7,82
Lebanon	0,90 ***	0,80 ***	0,93 ***	0,64 ***	0,89 ***	0,52 ***	0,95 ***	0,78 ***	0,99 ***	5,15
Oman	1,77 ***	1,52 ***	1,83 ***	1,52 ***	-0,46 **	2,18 ***	1,84 ***	2,36 ***	1,75 ***	3,49
Qatar	1,12 ***	0,86 ***	1,16 ***	1,48 ***	0,84 ***	1,62 ***	1,06 ***	0,86 ***	1,09 ***	12,92
Saudi Arabia	0,90 ***	0,99 ***	0,88 ***	0,12 **	-0,26	0,19 **	0,96 ***	1,12 ***	0,94 ***	4,66
Turkey	0,11 **	-0,13	0,20 ***	-0,26 **	-0,55 ***	-0,12	0,21 ***	0,00	0,28 ***	5,54
United Arab Emirates	2,07 ***	1,85 ***	2,10 ***	1,76 ***	1,52 ***	1,81 ***	2,11 ***	1,93 ***	2,14 ***	6,77
Yemen	0,60 ***	-1,02 ***	0,96 ***	0,55 ***	-0,74 ***	0,92 ***	0,62 ***	-1,16 ***	0,97 ***	4,67

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.8. Asia and Oceania elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Central Asia										
Weighted average	0,43	0,41	0,45	0,54	0,49	0,58	0,41	0,39	0,42	8,35
Kazakhstan	0,22 ***	0,23 ***	0,21 ***	0,22 ***	0,23 ***	0,20 ***	0,22 ***	0,22 ***	0,21 ***	10,58
Kyrgystan	0,45 ***	0,32 ***	0,55 ***	0,47 ***	0,12	0,70 ***	0,45 ***	0,37 ***	0,50 ***	5,58
Tajikistan	0,48 ***	0,43 ***	0,50 ***	0,66 ***	0,57 ***	0,73 ***	0,44 ***	0,39 ***	0,46 ***	9,93
Turkmenistan	0,40 ***	0,38 ***	0,42 ***	0,50 ***	0,49 ***	0,51 ***	0,38 ***	0,36 ***	0,39 ***	8,51
Uzbekistan	0,58 ***	0,58 ***	0,59 ***	0,74 ***	0,73 ***	0,74 ***	0,54 ***	0,54 ***	0,54 ***	7,14
East Asia										
Weighted average	0,06	0,06	0,07	-0,11	-0,16	-0,07	0,10	0,11	0,09	10,95
China	0,06 ***	0,04 ***	0,07 ***	-0,02	-0,06 ***	0,02	0,07 ***	0,06 ***	0,08 ***	11,76
Hong Kong, SAR China	0,23 ***	0,44 ***	0,06	-0,15 *	-0,06	-0,24 **	0,27 ***	0,51 ***	0,09 **	5,58
Japan	0,06	0,26 ***	-0,08	-1,79 ***	-1,76 ***	-1,81 ***	0,25 ***	0,52 ***	0,07	1,34
Macau, SAR China	0,43 ***	0,46 ***	0,40 ***	0,68 ***	0,53 ***	0,89 ***	0,39 ***	0,45 ***	0,34 ***	11,90
Mongolia	0,29 ***	0,32 ***	0,26 ***	0,04 **	-0,03	0,10 ***	0,35 ***	0,40 ***	0,30 ***	7,68
South Korea	0,26 ***	0,31 ***	0,23 ***	-0,98 ***	-0,98 ***	-0,99 ***	0,38 ***	0,48 ***	0,32 ***	5,76

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.8. Asia and Oceania elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South Asia										
Weighted average	0,30	0,28	0,31	0,09	0,04	0,11	0,36	0,35	0,36	7,13
Bangladesh	0,40 ***	0,53 ***	0,35 ***	0,08	0,08	0,07	0,50 ***	0,67 ***	0,45 ***	6,31
Bhutan	0,62 ***	0,64 ***	0,60 ***	0,54 ***	0,69 ***	0,41 ***	0,64 ***	0,62 ***	0,65 ***	9,51
India	0,26 ***	0,18 **	0,29 ***	0,03	-0,13	0,08	0,32 ***	0,26 ***	0,34 ***	7,56
Maldives	0,90 ***	0,74 ***	0,97 ***	0,99 ***	0,78 ***	1,12 ***	0,86 ***	0,72 ***	0,92 ***	7,14
Nepal	0,45 ***	0,51 ***	0,39 ***	0,13 **	0,25 ***	0,00	0,59 ***	0,63 ***	0,55 ***	4,51
Pakistan	0,57 ***	1,15 ***	0,45 ***	0,57 ***	1,61 ***	0,37 ***	0,56 ***	0,99 ***	0,48 ***	5,26
Sri Lanka	0,21 ***	0,29 ***	0,17 ***	-0,20 **	-0,09	-0,25 ***	0,28 ***	0,36 ***	0,24 ***	5,81
South East Asia										
Weighted average	0,29	0,28	0,29	-0,06	-0,13	0,00	0,37	0,38	0,37	6,91
Brunei	1,05 ***	1,12 ***	1,00 ***	0,43 ***	0,02	0,76 ***	1,16 ***	1,34 ***	1,05 ***	1,98
Cambodia	0,38 ***	0,33 ***	0,43 ***	0,56 ***	0,42 ***	0,70 ***	0,30 ***	0,29 ***	0,30 ***	10,56
Indonesia	0,24 ***	0,21	0,26 ***	-0,20	-0,28	-0,15	0,34 ***	0,33 **	0,35 ***	5,80
Laos	0,39 ***	0,40 ***	0,39 ***	0,35 ***	0,30 ***	0,41 ***	0,41 ***	0,44 ***	0,38 ***	7,63
Malaysia	0,47 ***	0,41 ***	0,50 ***	0,39 ***	0,24 ***	0,49 ***	0,48 ***	0,45 ***	0,50 ***	6,17
Myanmar	0,05 ***	0,02 ***	0,07 ***	-0,20 ***	-0,26 ***	-0,15 ***	0,15 ***	0,15 ***	0,15 ***	14,18
Philippines	0,48 ***	0,51 ***	0,46 ***	0,23 ***	0,20 ***	0,25 ***	0,55 ***	0,59 ***	0,52 ***	5,43
Singapore	0,56 ***	0,67 ***	0,48 ***	0,35 ***	0,39 ***	0,32 ***	0,58 ***	0,70 ***	0,50 ***	6,67

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.8. Asia and Oceania elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South East Asia										
Thailand	0,27 ***	0,29 ***	0,27 ***	-0,35 ***	-0,54 ***	-0,21 ***	0,38 ***	0,41 ***	0,35 ***	5,48
Timor-Leste	0,01 **	-0,02 ***	0,03 ***	-0,28 ***	-0,39 ***	-0,22 ***	0,08 ***	0,08 ***	0,08 ***	19,75
Vietnam	0,30 ***	0,30 ***	0,31 ***	0,01	-0,04 **	0,05 **	0,39 ***	0,40 ***	0,38 ***	7,63
Oceania										
Weighted average	0,59	0,65	0,55	0,52	0,46	0,57	0,61	0,70	0,54	3,50
Australia	0.74 ***	0.83 ***	0.67 ***	0.88 ***	0.80 *	0.96 ***	0.71 ***	0.84 ***	0.62 ***	3,79
Fiji	0.90 ***	0.95 **	0.87 ***	-1.13 ***	-1.33 ***	-1.05 ***	1.34 ***	1.42 ***	1.31 ***	1,57
New Zealand	0.76 ***	0.85 ***	0.69 ***	0.83 ***	0.78 ***	0.87 ***	0.75 ***	0.86 ***	0.65 ***	3,38
Papua New Guinea	-0.25 ***	-0.27 ***	-0.23 ***	-0.61 ***	-0.61 ***	-0.61 ***	-0.13 ***	-0.15 ***	-0.10 ***	2,69
Samoa	0.08 ***	0.19 ***	0.02 ***	-0.36 ***	-0.44 ***	-0.32 ***	0.19 ***	0.34 ***	0.10 ***	5,10
Solomon Islands	0.51 ***	0.54 ***	0.49 ***	0.21 **	0.23 **	0.19 **	0.63 ***	0.67 ***	0.60 ***	1,64
Tonga	0,69	1,01	0,49	-0,01	0,59	-0,30	0,86	1,10	0,71	1,48
Vanuatu	0.71 ***	0.73 ***	0.70 ***	0.58 **	0.57 **	0.58 **	0.76 ***	0.79 ***	0.74 ***	3,87

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.9. Asia and Oceania elasticities and GDP growth for the second period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Asia										
Weighted average	0,67	0,91	0,60	-0,13	0,04	-0,18	0,79	1,04	0,72	3,46
Armenia	0,12	0,18	0,07	-0,57	-0,83	-0,42	0,18 *	0,26 **	0,12	1,97
Azerbaijan	0,85 ***	0,90 ***	0,81 ***	-0,20	-0,49 **	0,05	1,00 ***	1,09 ***	0,92 ***	2,49
Bahrain	0,72 ***	0,81 ***	0,69 ***	0,36 *	0,66 ***	0,26 ***	0,76 ***	0,84 ***	0,74 ***	3,59
Cyprus	0,75 ***	0,57 ***	0,90 ***	1,70	1,72 *	1,65	0,63 ***	0,42 **	0,80 ***	0,08
Georgia	0,01	0,01	0,02	-0,60 **	-0,51 *	-0,64 ***	0,07 **	0,04	0,09 ***	3,86
Iran	0,47 **	0,95 **	0,37 *	-1,54	-1,57	-1,52 *	0,75 **	1,30 ***	0,64 *	2,47
Iraq	0,55 ***	0,48 ***	0,56 ***	0,35 ***	0,06	0,37 ***	0,61 ***	0,54 ***	0,62 ***	5,89
Israel	0,72 ***	0,75 ***	0,68 ***	0,35 ***	0,37 ***	0,33 ***	0,79 ***	0,83 ***	0,75 ***	3,47
Jordan	1,38 ***	1,32 ***	1,39 ***	0,31 **	-0,48 *	0,43 **	1,57 ***	1,58 ***	1,57 ***	2,81
Kuwait	2,02 ***	2,37 ***	1,87 ***	-0,44	-1,28 **	-0,20	2,18 ***	2,54 ***	2,02 ***	1,08
Lebanon	2,46 ***	2,85 ***	2,35 ***	2,42 ***	2,07 ***	2,57 ***	2,47 ***	3,02 ***	2,31 ***	3,33
Oman	2,28 ***	1,36 ***	2,42 ***	0,18	-1,22 ***	0,41	2,61 ***	1,81 ***	2,74 ***	4,01
Qatar	1,06 ***	1,44 ***	1,01 ***	0,93 ***	1,25 ***	0,88 ***	1,09 ***	1,47 ***	1,03 ***	7,26
Saudi Arabia	1,20 ***	1,49 ***	1,15 ***	0,45 **	1,04 **	0,35 *	1,25 ***	1,52 ***	1,20 ***	3,30
Turkey	0,53 ***	0,74 ***	0,44 ***	0,38 ***	0,45 ***	0,34 ***	0,56 ***	0,81 ***	0,46 ***	5,56
United Arab Emirates	0,55 ***	1,33 ***	0,44 ***	-0,72 ***	-0,31 ***	-0,82 ***	0,67 ***	1,58 ***	0,55 ***	2,90

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 per cen*

Table A.2.9. Asia and Oceania elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Asia										
Yemen	-0,42 ***	0,57	-0,52 ***	-0,05	1,29 *	-0,21 ***	-0,54 ***	0,26	-0,61 ***	-3,37
Central Asia										
Weighted average	0,27	0,24	0,30	-0,26	-0,35	-0,20	0,39	0,36	0,42	6,31
Kazakhstan	0,27 ***	0,25 ***	0,28 ***	-0,64 ***	-0,71 ***	-0,58 ***	0,42 ***	0,41 ***	0,43 ***	4,14
Kyrgystan	0,18 ***	0,02	0,28 ***	-0,82 ***	-1,11 ***	-0,66 ***	0,40 ***	0,24 **	0,52 ***	4,00
Tajikistan	0,39 ***	0,26 ***	0,45 ***	0,15 ***	-0,07 ***	0,28 ***	0,44 ***	0,35 ***	0,49 ***	6,66
Turkmenistan	0,21 ***	0,19 ***	0,22 ***	-0,09 **	-0,11 **	-0,08 **	0,28 ***	0,25 ***	0,30 ***	8,98
Uzbekistan	0,29 ***	0,27 ***	0,31 ***	-0,08 **	-0,11 **	-0,07	0,38 ***	0,35 ***	0,40 ***	7,78
East Asia										
Weighted average	0,06	0,08	0,05	-0,87	-0,90	-0,84	0,19	0,22	0,16	7,46
China	0,03 ***	0,02 ***	0,04 ***	-0,94 ***	-0,96 ***	-0,92 ***	0,17 ***	0,16 ***	0,17 ***	8,11
Hong Kong, SAR China	0,39 ***	0,57 ***	0,23 ***	-0,13 *	-0,21 *	-0,04 *	0,44 ***	0,65 ***	0,25 ***	2,78
Japan	0,29 **	0,69 ***	-0,01	-0,13	-0,36	0,11	0,32 ***	0,80 ***	-0,02 ***	0,73
Macau, SAR China	0,23 *	0,22 *	0,23 *	-0,30	-0,37	-0,21	0,30 *	0,32 *	0,29 *	6,01

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.9. Asia and Oceania elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
East Asia										
Mongolia	0,18 ***	0,17 ***	0,19 ***	-0,63 ***	-0,78 ***	-0,52 **	0,30 ***	0,30 ***	0,30 ***	7,01
South Korea	0,43 ***	0,53 ***	0,36 ***	0,86 ***	0,77 ***	0,96 ***	0,40 ***	0,51 ***	0,33 ***	3,13
South Asia										
Weighted average	0,24	0,23	0,25	-0,23	-0,31	-0,20	0,34	0,34	0,34	6,87
Bangladesh	0,33 ***	0,62 ***	0,22 ***	-0,18 ***	0,20 ***	-0,31 ***	0,46 ***	0,72 ***	0,36 ***	6,29
Bhutan	0,30 ***	0,12	0,42 ***	-0,96 ***	-0,99 ***	-0,93 ***	0,53 ***	0,38 ***	0,62 ***	6,50
India	0,18 ***	0,06	0,21 ***	-0,31 ***	-0,61 ***	-0,23 ***	0,27 ***	0,18 *	0,30 ***	7,40
Maldives	0,61 ***	0,30 **	0,73 ***	-0,59 ***	-0,44 ***	-0,68 ***	0,92 ***	0,55 ***	1,06 ***	4,76
Nepal	0,61 ***	0,72 ***	0,50 ***	0,51 ***	0,44 ***	0,59 ***	0,65 ***	0,83 ***	0,46 ***	4,39
Pakistan	0,60 ***	0,76 ***	0,56 ***	0,03	0,18 **	-0,01	0,78 ***	0,97 ***	0,73 ***	3,97
Sri Lanka	0,05 **	0,14 *	0,01	-0,92 ***	-1,14 ***	-0,82 ***	0,17 ***	0,28 ***	0,11 ***	5,58
South East Asia										
Weighted average	0,26	0,27	0,25	-0,14	-0,19	-0,11	0,34	0,36	0,32	5,46
Brunei	-0,31	-0,64	-0,07	1,56	1,00	1,98	-0,54	-0,84	-0,32	-0,08
Cambodia	0,20 ***	0,12 ***	0,28 ***	-0,10 ***	-0,19 ***	-0,02	0,32 ***	0,23 ***	0,40 ***	6,21
Indonesia	0,33 ***	0,39 ***	0,29 ***	0,00	0,05	-0,04	0,39 ***	0,46 ***	0,35 ***	5,40
Laos	0,29 ***	0,27 ***	0,30 ***	-0,10 ***	-0,13 ***	-0,07 **	0,43 ***	0,43 ***	0,43 ***	7,66
Malaysia	0,65 ***	0,88 ***	0,52 ***	0,30 **	0,31 ***	0,30 **	0,72 ***	1,00 ***	0,56 ***	4,73

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.9. Asia and Oceania elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
South East Asia										
Malaysia	0,65 ***	0,88 ***	0,52 ***	0,30 **	0,31 ***	0,30 **	0,72 ***	1,00 ***	0,56 ***	4,73
Myanmar	0,07 **	0,01	0,11 ***	-0,27 ***	-0,40 ***	-0,17 **	0,17 ***	0,14 ***	0,19 ***	7,68
Philippines	0,32 ***	0,32 ***	0,33 ***	0,11	0,04	0,15 *	0,37 ***	0,38 ***	0,37 ***	5,77
Singapore	0,57 ***	0,70 ***	0,46 ***	0,50 ***	0,48 ***	0,51 ***	0,58 ***	0,73 ***	0,46 ***	4,70
Thailand	-0,06	-0,10	-0,03	-0,71 ***	-0,86 ***	-0,60 ***	0,02	-0,02	0,05	3,20
Timor-Leste	-0,24 *	-0,26 *	-0,23 *	-0,47 *	-0,44 *	-0,48 *	-0,21 *	-0,23 *	-0,20 *	-1,53
Vietnam	0,25 ***	0,25 ***	0,25 ***	-0,48 ***	-0,54 ***	-0,44 ***	0,41 ***	0,41 ***	0,40 ***	6,05
Oceania										
Weighted average	0,48	0,57	0,40	-0,02	0,06	-0,10	0,58	0,68	0,49	3,01
Australia	0.48 ***	0.60 ***	0.37 ***	-0.23 ***	-0.07 ***	-0.37 ***	0.61 ***	0.74 ***	0.51 ***	2,52
Fiji	-0,05	-0.29 *	0,07	-0.10 *	-0,21	-0,06	-0,05	-0.31 *	0.09 *	2,67
New Zealand	0.66 ***	0.72 ***	0.62 ***	0.67 ***	0.64 ***	0.69 ***	0.66 ***	0.73 ***	0.60 ***	2,73
Papua New Guinea	0.32 ***	0.34 ***	0.29 ***	0.17 ***	0.15 ***	0.19 ***	0.36 ***	0.40 ***	0.32 ***	5,71
Samoa	0.12 ***	0.12 ***	0.12 ***	0.57 ***	0.38 ***	0.67 ***	0.02 ***	0.07 ***	-0.01 ***	1,40
Solomon Islands	0.48 ***	0.47 ***	0.50 ***	0.45 ***	0.32 ***	0.56 ***	0.50 ***	0.53 ***	0.47 ***	3,82
Tonga	0.38 ***	0.36 ***	0.40 ***	1.09 ***	0.92 **	1.18 ***	0.22 ***	0.26 ***	0.20 ***	2,03
Vanuatu	1.45 ***	1.49 ***	1.43 ***	0.63 ***	0.48 ***	0.75 ***	1.69 ***	1.80 ***	1.62 ***	2,21

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.10. Africa elasticities and GDP growth for the whole period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Northern Africa										
Weighted average	0,56	0,63	0,55	-0,04	-0,20	0,01	0,68	0,84	0,64	4,25
Algeria	0,95 ***	1,38 ***	0,87 ***	-0,17	-0,68 ***	-0,08	1,15 ***	1,78 ***	1,04 ***	3,56
Egypt	0,59 ***	0,79 ***	0,54 ***	0,10	0,15	0,08	0,68 ***	0,96 ***	0,62 ***	4,28
Libya	-0,06	-0,22	-0,02 ***	0,14 ***	0,01	0,17 ***	-0,09	-0,25	-0,05	4,92
Morocco	0,35 ***	0,29 ***	0,38 ***	-0,52 ***	-0,73 ***	-0,45 ***	0,54 ***	0,52 ***	0,55 ***	4,26
Sudan	0,47 ***	0,34 ***	0,51 ***	0,36 ***	-0,15 ***	0,53 ***	0,50 ***	0,46 ***	0,51 ***	5,22
Tunisia	0,44 ***	0,41 ***	0,45 ***	-0,55 ***	-0,90 ***	-0,39 ***	0,60 ***	0,71 ***	0,57 ***	3,29
Western Africa										
Weighted average	0,46	0,50	0,44	0,09	0,06	0,11	0,57	0,62	0,52	5,51
Benin	0,71 ***	0,79 ***	0,64 ***	0,14 **	0,27 ***	-0,01	0,90 ***	0,97 ***	0,83 ***	4,33
Burkina Faso	0,33 ***	0,28 ***	0,37 ***	0,04 *	-0,06 **	0,11 ***	0,47 ***	0,43 ***	0,49 ***	5,59
Cape Verde	0,63 ***	0,75 ***	0,54 ***	0,09	0,28 ***	-0,05	0,80 ***	0,89 ***	0,74 ***	4,96
Gambia	1,08 ***	1,22 ***	0,98 ***	0,93 ***	0,87 ***	0,97 ***	1,13 ***	1,35 ***	0,98 ***	3,36
Ghana	0,36 ***	0,35 ***	0,37 ***	0,16 ***	0,06 ***	0,25 ***	0,41 ***	0,42 ***	0,40 ***	6,05
Guniea	0,59 ***	0,62 ***	0,56 ***	0,54 ***	0,56 ***	0,51 ***	0,61 ***	0,64 ***	0,57 ***	4,32
Guniea-Bissau	0,89 ***	0,93 ***	0,85 ***	0,54 ***	0,56 ***	0,52 ***	1,01 ***	1,07 ***	0,95 ***	3,33
Libera	0,63 ***	0,65 ***	0,61 ***	0,48 ***	0,49 ***	0,46 ***	0,67 ***	0,69 ***	0,65 ***	2,61
Mali	0,67 ***	0,64 ***	0,69 ***	0,50 ***	0,56 ***	0,46 ***	0,73 ***	0,67 ***	0,78 ***	4,87

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.10. Africa elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Africa										
Mauritiana	0,54 ***	0,61 ***	0,51 ***	-0,15 ***	-0,23 ***	-0,11 ***	0,73 ***	0,88 ***	0,67 ***	4,36
Niger	0,72 ***	0,68 ***	0,75 ***	0,91 ***	0,81 ***	0,98 ***	0,63 ***	0,62 ***	0,64 ***	4,77
Nigeria	0,39 ***	0,45 ***	0,35 ***	-0,27 ***	-0,34 ***	-0,21 ***	0,53 ***	0,63 ***	0,46 ***	6,06
Senegal	0,53 ***	0,83 ***	0,37 ***	-0,01	0,41 ***	-0,23 ***	0,72 ***	0,96 ***	0,58 ***	4,42
Sierra Leone	0,35 ***	0,34 ***	0,36 ***	0,00	0,07	-0,09	0,43 ***	0,42 ***	0,44 ***	6,10
Togo	0,56 ***	0,52 ***	0,61 ***	0,37 ***	0,29 ***	0,45 ***	0,64 ***	0,61 ***	0,67 ***	3,73
Central Africa										
Weighted average	0,49	0,46	0,52	0,44	0,44	0,45	0,51	0,48	0,54	5,26
Angola	0,71 ***	0,75 ***	0,67 ***	1,13 ***	1,25 ***	1,03 ***	0,60 ***	0,62 ***	0,58 ***	6,24
Cameroon	0,62 ***	0,55 ***	0,69 ***	0,29 ***	0,19 ***	0,38 ***	0,75 ***	0,68 ***	0,80 ***	4,27
CAR	0,05	0,07	0,04	-0,03	-0,01 *	-0,04	0,08 ***	0,10	0,06 *	0,48
Chad	0,43 ***	0,44 ***	0,43 ***	0,44 ***	0,45 ***	0,44 ***	0,43 ***	0,44 ***	0,42 ***	6,93
DR Congo	0,36 ***	0,32 ***	0,41 ***	0,19 ***	0,17 ***	0,22 ***	0,41 ***	0,36 ***	0,45 ***	4,73
Congo	0,94 ***	0,93 ***	0,94 ***	1,05 ***	1,01 ***	1,08 ***	0,91 ***	0,92 ***	0,91 ***	3,81
Equatorial Guniea	0,44 ***	0,39 ***	0,48 ***	0,31 ***	0,29 ***	0,32 ***	0,47 ***	0,41 ***	0,50 ***	10,64
Gabon	1,37 ***	1,27 ***	1,42 ***	0,52 ***	0,69 ***	0,43 ***	1,46 ***	1,33 ***	1,53 ***	2,31

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.10. Africa elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Eastern Africa										
Weighted average	0,52	0,53	0,52	0,44	0,42	0,45	0,56	0,57	0,55	6,62
Burindi	0,97 ***	0,99 ***	0,95 ***	0,32 ***	0,47 ***	0,13 **	1,22 ***	1,20 ***	1,24 ***	2,58
Comoros	1,13 ***	1,33 ***	0,99 ***	0,46 ***	0,63 ***	0,30 ***	1,22 ***	1,45 ***	1,07 ***	3,15
Ethiopia	0,36 ***	0,38 ***	0,34 ***	0,35 ***	0,37 ***	0,34 ***	0,36 ***	0,38 ***	0,34 ***	9,02
Kenya	0,61 ***	0,65 ***	0,57 ***	0,12 ***	0,14 ***	0,11 ***	0,73 ***	0,77 ***	0,69 ***	4,58
Madagascar	1,18 ***	1,20 ***	1,17 ***	1,28 ***	1,26 ***	1,29 ***	1,15 ***	1,17 ***	1,12 ***	3,00
Malawi	0,66 ***	0,63 ***	0,69 ***	0,92 ***	0,82 ***	1,01 ***	0,56 ***	0,55 ***	0,57 ***	4,26
Mauritius	0,26 ***	0,48 ***	0,14 ***	-0,25 ***	-0,14 **	-0,32 ***	0,34 ***	0,58 ***	0,21 ***	4,31
Mozambique	0,33 ***	0,26 ***	0,41 ***	0,32 ***	0,19 ***	0,47 ***	0,33 ***	0,29 ***	0,39 ***	7,02
Rwanda	0,35 ***	0,36 ***	0,35 ***	0,01	-0,03	0,04	0,50 ***	0,52 ***	0,48 ***	7,81
Tanzania	0,43 ***	0,41 ***	0,46 ***	0,35 ***	0,32 ***	0,37 ***	0,47 ***	0,45 ***	0,49 ***	6,65
Uganda	0,58 ***	0,59 ***	0,56 ***	0,55 ***	0,54 ***	0,56 ***	0,59 ***	0,62 ***	0,56 ***	6,27
Southern Africa										
Weighted average	0,54	0,63	0,47	0,14	0,18	0,11	0,63	0,72	0,55	3,06
Botswana	0,80 ***	0,89 ***	0,74 ***	0,33 ***	0,36 ***	0,31 ***	0,90 ***	0,98 ***	0,83 ***	4,16
Lesotho	0,53 ***	0,55 ***	0,50 ***	0,14 ***	0,33 ***	0,04	0,64 ***	0,60 ***	0,67 ***	3,52
Namibia	0,54 ***	0,66 ***	0,44 ***	0,61 ***	0,59 ***	0,62 ***	0,53 ***	0,67 ***	0,40 ***	4,32
South Africa	0,70 ***	0,88 ***	0,57 ***	0,16	0,25	0,10	0,75 ***	0,94 ***	0,62 ***	2,89

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.10. Africa elasticities and GDP growth for the whole period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Southern Africa										
Zambia	0,47 ***	0,46 ***	0,48 ***	0,28 ***	0,29 ***	0,27 ***	0,54 ***	0,52 ***	0,55 ***	6,19
Zimbabwe	0,13	0,12	0,14	-0,04	-0,06	-0,03	0,21	0,19	0,23	0,57

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.11. Africa elasticities and GDP growth for the first period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Northern Africa										
Weighted average	0,68	0,82	0,65	0,52	0,02	0,67	0,72	1,03	0,64	5,82
Algeria	1,23 ***	1,53 ***	1,18 ***	1,00 ***	0,04	1,17 ***	1,28 ***	1,93 ***	1,18 ***	4,66
Egypt	0,73 ***	1,04 ***	0,66 ***	0,80 ***	0,17	0,98 ***	0,72 ***	1,29 ***	0,59 ***	5,64
Libya	0,51 ***	0,70 ***	0,47 ***	0,22 **	0,36 **	0,20 **	0,56 ***	0,76 ***	0,51 ***	5,73
Morocco	0,47 ***	0,62 ***	0,42 ***	-0,04	-0,11 **	-0,01	0,61 ***	0,84 ***	0,53 ***	5,43
Sudan	0,30 ***	0,17 ***	0,34 ***	0,18 ***	-0,16 ***	0,31 ***	0,33 ***	0,27 ***	0,35 ***	8,47
Tunisia	0,43 ***	0,61 ***	0,36 ***	-0,20 ***	-0,41 ***	-0,09 *	0,54 ***	0,90 ***	0,43 ***	5,06
Western Africa										
Weighted average	0,45	0,48	0,43	0,20	0,17	0,23	0,53	0,58	0,49	6,92
Benin	0,77 ***	0,97 ***	0,59 ***	-0,09 *	0,14 *	-0,32 ***	1,07 ***	1,29 ***	0,88 ***	5,03
Burkina Faso	0,31 ***	0,17 ***	0,42 ***	0,16 ***	0,05 ***	0,25 ***	0,39 ***	0,24 ***	0,51 ***	6,62
Cape Verde	0,49 ***	0,55 ***	0,45 ***	0,35 ***	0,41 ***	0,31 ***	0,55 ***	0,60 ***	0,51 ***	9,11
Gambia	1,16 ***	1,34 ***	1,03 ***	0,98 ***	0,90 ***	1,04 ***	1,22 ***	1,51 ***	1,03 ***	3,94
Ghana	0,56 ***	0,60 ***	0,51 ***	0,12 ***	0,08 ***	0,15 ***	0,68 ***	0,74 ***	0,61 ***	6,10
Guniea	0,67 ***	0,68 ***	0,65 ***	0,75 ***	0,75 ***	0,75 ***	0,64 ***	0,66 ***	0,62 ***	3,76
Guniea-Bissau	0,89 ***	0,98 ***	0,82 ***	0,68 ***	0,79 ***	0,58 ***	0,97 ***	1,06 ***	0,90 ***	2,88
Libera	-0,05 ***	-0,02	-0,08	-0,03	-0,03	-0,03	-0,06 ***	-0,02 *	-0,09 *	1,15

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.11. Africa elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Africa										
Mali	0,42 ***	0,35 ***	0,48 ***	0,35 ***	0,28 ***	0,40 ***	0,46 ***	0,38 ***	0,52 ***	6,07
Mauritiana	0,38 ***	0,41 ***	0,37 ***	-0,11 ***	-0,22 ***	-0,06 **	0,54 ***	0,65 ***	0,50 ***	5,71
Niger	0,78 ***	0,71 ***	0,83 ***	0,95 ***	0,84 ***	1,03 ***	0,71 ***	0,65 ***	0,75 ***	4,64
Nigeria	0,32 ***	0,36 ***	0,29 ***	0,00	-0,04	0,04	0,40 ***	0,47 ***	0,36 ***	8,59
Senegal	0,46 ***	0,59 ***	0,39 ***	0,14 ***	0,12 **	0,14 ***	0,59 ***	0,76 ***	0,50 ***	4,76
Sierra Leone	0,49 ***	0,49 ***	0,49 ***	0,42 ***	0,43 ***	0,41 ***	0,51 ***	0,51 ***	0,51 ***	8,10
Togo	1,17 ***	1,12 ***	1,21 ***	0,81 ***	0,75 ***	0,88 ***	1,32 ***	1,29 ***	1,35 ***	1,92
Central Africa										
Weighted average	0,54	0,52	0,56	0,58	0,58	0,59	0,53	0,51	0,56	8,74
Angola	0,52 ***	0,55 ***	0,49 ***	0,94 ***	1,05 ***	0,84 ***	0,42 ***	0,44 ***	0,41 ***	10,83
Cameroon	0,83 ***	0,77 ***	0,88 ***	0,82 ***	0,75 ***	0,88 ***	0,83 ***	0,78 ***	0,87 ***	4,67
CAR	0,72 ***	0,70 ***	0,73 ***	0,92 ***	0,92 ***	0,92 ***	0,65 ***	0,62 ***	0,68 ***	2,32
Chad	0,27 ***	0,27 ***	0,27 ***	0,31 ***	0,31 ***	0,31 ***	0,26 ***	0,25 ***	0,26 ***	11,49
DR Congo	0,48 ***	0,44 ***	0,52 ***	0,39 ***	0,38 ***	0,42 ***	0,50 ***	0,46 ***	0,54 ***	3,77
Congo	1,00 ***	0,96 ***	1,03 ***	0,92 ***	0,85 ***	1,00 ***	1,01 ***	0,98 ***	1,04 ***	4,78
Equatorial Guniea	0,26 ***	0,23 ***	0,28 ***	0,21 ***	0,21 ***	0,22 ***	0,27 ***	0,23 ***	0,29 ***	26,32
Gabon	3,01 ***	2,63 ***	3,23 ***	2,46 ***	2,51 ***	2,43 ***	3,08 ***	2,65 ***	3,33 ***	0,69

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.11. Africa elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Eastern Africa										
Weighted average	0,50	0,51	0,49	0,43	0,43	0,44	0,52	0,54	0,51	7,24
Burindi	1,25 ***	1,25 ***	1,26 ***	0,90 ***	1,12 ***	0,64 ***	1,41 ***	1,31 ***	1,52 ***	2,99
Comoros	1,42 ***	1,79 ***	1,19 **	0,82 ***	1,08 ***	0,57 **	1,51 ***	1,92 ***	1,27 ***	3,73
Ethiopia	0,41 ***	0,46 ***	0,37 ***	0,41 ***	0,44 ***	0,38 ***	0,41 ***	0,46 ***	0,37 ***	9,02
Kenya	0,51	0,48 ***	0,55 ***	-0,01	-0,19	0,14 ***	0,66 ***	0,66 ***	0,67 ***	4,05
Madagascar	0,83 ***	0,84 ***	0,82 ***	0,89 ***	0,90 ***	0,88 ***	0,80 ***	0,81 ***	0,79 ***	4,52
Malawi	0,67 ***	0,62 ***	0,72 ***	1,16 ***	1,02 ***	1,31 ***	0,48	0,46 ***	0,50 ***	4,33
Mauritius	0,19 ***	0,25 ***	0,16 ***	-0,60	-0,44 ***	-0,69 ***	0,31 ***	0,37 ***	0,29 ***	5,50
Mozambique	0,30 ***	0,25 ***	0,36 ***	0,21 ***	0,12 ***	0,32 ***	0,33 ***	0,30 ***	0,37 ***	8,80
Rwanda	0,34 ***	0,34 ***	0,35 ***	0,22 ***	0,17 ***	0,28 ***	0,41 ***	0,43 ***	0,38 ***	9,64
Tanzania	0,46 ***	0,47 ***	0,45 ***	0,39 ***	0,42 ***	0,37 ***	0,49 ***	0,49 ***	0,49 ***	7,46
Uganda	0,50 ***	0,52 ***	0,48 ***	0,52 ***	0,52 ***	0,52 ***	0,49 ***	0,52 ***	0,46 ***	8,07
Southern Africa										
Weighted average	0,45	0,43	0,46	0,35	0,31	0,39	0,48	0,47	0,49	2,62
Botswana	0,69 ***	0,79 ***	0,62 ***	0,76 ***	0,67 **	0,82 ***	0,68 ***	0,82 ***	0,57 ***	5,39
Lesotho	0,65 ***	0,68 ***	0,63 ***	0,51 ***	0,90 ***	0,31 ***	0,70 ***	0,63 ***	0,75 ***	4,21
Namibia	0,33 ***	0,44 ***	0,23 ***	0,26 **	0,18	0,31 ***	0,34 ***	0,48 ***	0,22 ***	5,45
South Africa	0,69 ***	0,70 ***	0,67 ***	0,78 **	0,67	0,85 ***	0,67 ***	0,70 ***	0,65 ***	4,69

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.11. Africa elasticities and GDP growth for the first period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Southern Africa										
Zambia	0,45 ***	0,41 ***	0,48 ***	0,36 ***	0,34 ***	0,38 ***	0,49 ***	0,44 ***	0,53 ***	7,37
Zimbabwe	-0,26 ***	-0,31 ***	-0,22 ***	-0,24 ***	-0,25 ***	-0,23 ***	-0,28 ***	-0,34 ***	-0,21 ***	-7,98

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.12. Africa elasticities and GDP growth for the second period

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Northern Africa										
Weighted average	0,39	0,48	0,36	-0,88	0,15	-1,16	0,61	0,56	0,62	3,33
Algeria	0,31 ***	0,57 *	0,27 ***	-1,61 ***	-1,76 ***	-1,58 ***	0,62 ***	0,86 **	0,57 ***	2,97
Egypt	0,36 ***	0,55 ***	0,32 ***	-1,07 ***	1,16 **	-1,74 ***	0,61 ***	0,43 **	0,66 ***	3,53
Libya	-0,07 *	-0,22 **	-0,03	0,08	-0,06	0,11 *	-0,09 *	-0,24 **	-0,05	4,75
Morocco	0,11 **	-0,24 **	0,23 ***	-1,49 ***	-1,90 ***	-1,36 ***	0,40 ***	0,06	0,51 ***	3,70
Sudan	0,91 ***	1,26 ***	0,82 ***	0,66 ***	0,67 ***	0,66 ***	0,97 ***	1,38 ***	0,85 ***	2,91
Tunisia	0,52 ***	0,49 **	0,53 ***	-0,73	-1,02 *	-0,60	0,68 ***	0,75 ***	0,67 ***	2,08
Western Africa										
Weighted average	0,51	0,56	0,48	0,02	0,03	0,02	0,63	0,69	0,59	4,87
Benin	0,65 ***	0,62 ***	0,67 ***	0,56 ***	0,59 ***	0,52 ***	0,67 ***	0,63 ***	0,70 ***	4,18
Burkina Faso	0,39 ***	0,41 ***	0,37 ***	0,05	-0,01	0,10	0,53 ***	0,58 ***	0,50 ***	5,30
Cape Verde	1,12 ***	1,51 ***	0,78 ***	-0,75 ***	-0,15 ***	-1,22 ***	1,62 ***	1,93 ***	1,35 ***	1,82
Gambia	1,25 ***	1,38 ***	1,15 ***	1,14 ***	1,14 ***	1,13 ***	1,29 ***	1,47 ***	1,16 ***	3,22
Ghana	0,28 ***	0,24 ***	0,33 ***	0,19 ***	0,10 ***	0,27 ***	0,30 ***	0,27 ***	0,34 ***	6,67
Guniea	0,47 ***	0,50 ***	0,44 ***	0,37 ***	0,40 ***	0,34 ***	0,50 ***	0,54 ***	0,47 ***	5,31
Guniea-Bissau	1,07 ***	1,08 ***	1,06 ***	0,56 ***	0,52 ***	0,60 ***	1,24 ***	1,27 ***	1,21 ***	4,10
Libera	0,61 ***	0,67 ***	0,56 ***	0,42 ***	0,46 ***	0,37 ***	0,66 ***	0,72 ***	0,60 ***	4,21

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.12. Africa elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Western Africa										
Mali	0,64 ***	0,72 ***	0,58 ***	0,11	0,36	-0,08	0,84 ***	0,86 ***	0,83 ***	4,33
Mauritiana	0,71 ***	0,82 ***	0,66 ***	0,12	0,12	0,12 *	0,84 ***	0,99 ***	0,78 ***	3,64
Niger	0,61 ***	0,59 ***	0,62 ***	0,79 ***	0,72 ***	0,83 ***	0,52 ***	0,53 ***	0,52 ***	5,42
Nigeria	0,53 ***	0,60 ***	0,48 ***	-0,45 ***	-0,53 ***	-0,39 ***	0,70 ***	0,79 ***	0,62 ***	4,49
Senegal	0,58 ***	0,91 ***	0,38 ***	0,03	0,68 ***	-0,34 ***	0,75 ***	0,98 ***	0,60 ***	4,60
Sierra Leone	0,17 *	0,17	0,17 *	-0,20 ***	-0,12 **	-0,32 ***	0,26 *	0,25 *	0,26 **	5,00
Togo	0,47 ***	0,46 ***	0,48 ***	0,31 ***	0,29 ***	0,33 ***	0,53 ***	0,52 ***	0,53 ***	5,76
Central Africa										
Weighted average	0,42	0,45	0,39	0,42	0,45	0,39	0,42	0,46	0,39	2,75
Angola	1,00 ***	1,02 ***	0,98 ***	1,03 ***	1,06 ***	1,00 ***	0,99 ***	1,01 ***	0,97 ***	2,86
Cameroon	0,59 ***	0,60 ***	0,59 ***	0,31 ***	0,32 ***	0,30 ***	0,69 ***	0,69 ***	0,69 ***	4,38
CAR	-0,02	0,01	-0,03	-0,12 *	-0,11	-0,14 *	0,02	0,05 **	0,00 *	-1,10
Chad	0,69 ***	0,71 ***	0,67 ***	0,62 ***	0,64 ***	0,60 ***	0,72 ***	0,75 ***	0,70 ***	3,65
DR Congo	0,38 ***	0,36 ***	0,41 ***	0,29 ***	0,28 ***	0,31 ***	0,41 ***	0,38 ***	0,43 ***	6,10
Congo	0,92 ***	0,97 ***	0,88 ***	1,23 ***	1,28 ***	1,19 ***	0,86 ***	0,90 ***	0,82 ***	3,38
Equatorial Guniea	-0,81 *	-0,76 ***	-0,83 ***	-0,54 *	-0,57 **	-0,53 *	-0,85 *	-0,79 *	-0,88 *	-2,11
Gabon	0,92 ***	0,96 ***	0,89 ***	0,28 ***	0,42 ***	0,20 ***	0,98 ***	1,01 ***	0,96 ***	4,00

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.12. Africa elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Eastern Africa										
Weighted average	0,55	0,56	0,55	0,44	0,42	0,46	0,60	0,62	0,59	6,81
Burindi	0,86 ***	0,89 ***	0,82 ***	-0,10 ***	-0,05 ***	-0,16 ***	1,19 ***	1,26 ***	1,12 ***	2,51
Comoros	1,08 ***	1,22 ***	0,99 ***	0,34 ***	0,46 ***	0,22 ***	1,18 ***	1,33 ***	1,07 ***	2,99
Ethiopia	0,36 ***	0,38 ***	0,34 ***	0,34 ***	0,36 ***	0,33 ***	0,37 ***	0,39 ***	0,35 ***	10,02
Kenya	0,61 ***	0,68 ***	0,55 ***	0,16 ***	0,23 ***	0,10 ***	0,71 ***	0,77 ***	0,65 ***	5,56
Madagascar	1,09 ***	1,06 ***	1,12 ***	1,04 ***	0,98 ***	1,09 ***	1,11 ***	1,09 ***	1,13 ***	1,97
Malawi	0,89 ***	0,89 ***	0,90 ***	0,82 ***	0,78 ***	0,86 ***	0,93 ***	0,94 ***	0,91 ***	4,68
Mauritius	0,32 ***	0,63 ***	0,15 **	0,20	0,20 **	0,20 ***	0,34 ***	0,69 ***	0,14 ***	3,73
Mozambique	0,39 ***	0,31 ***	0,48 ***	0,46 ***	0,30 ***	0,64 ***	0,36 ***	0,31 ***	0,42 ***	6,23
Rwanda	0,39 ***	0,40 ***	0,38 ***	-0,06	-0,05	-0,07	0,56 ***	0,56 ***	0,56 ***	7,05
Tanzania	0,42 ***	0,37 ***	0,47 ***	0,35 ***	0,27 ***	0,43 ***	0,45 ***	0,41 ***	0,48 ***	6,67
Uganda	0,82 ***	0,86 ***	0,79 ***	0,74 ***	0,76 ***	0,73 ***	0,86 ***	0,91 ***	0,82 ***	5,35
Southern Africa										
Weighted average	0,70	0,79	0,63	-0,12	-0,19	-0,08	0,85	0,96	0,76	3,78
Botswana	0,85 ***	0,93 ***	0,79 ***	0,33 ***	0,44 ***	0,25 **	0,95 ***	1,01 ***	0,90 ***	3,54
Lesotho	0,56 ***	0,62 ***	0,51 ***	0,03	0,18 **	-0,05 ***	0,70 ***	0,72 ***	0,69 ***	3,31
Namibia	0,68 ***	0,71 ***	0,64 ***	0,80 ***	0,77 ***	0,82 ***	0,65 ***	0,71 ***	0,61 ***	3,80
South Africa	0,83 ***	0,99 ***	0,70 ***	-0,85 **	-1,12 ***	-0,66 *	1,00 ***	1,19 ***	0,85 ***	1,61

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Table A.2.12. Africa elasticities and GDP growth for the second period (continued)

Country	Total	Female	Male	Youth	Female Youth	Male Youth	Adult	Female Adult	Male Adult	Average GDP growth (%)
Southern Africa										
Zambia	0,74 ***	0,76 ***	0,72 ***	0,59 ***	0,64 ***	0,55 ***	0,80 ***	0,81 ***	0,78 ***	5,84
Zimbabwe	0,30 ***	0,30 ***	0,29 ***	0,05 *	0,05 *	0,06 **	0,41 ***	0,41 ***	0,41 ***	8,24

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %*

Appendix 3. Descriptive statistics and empirical results

Table A.3.1. Descriptive statistics for the whole period

Variable	N	Mean	Std. Dev.	Min	Max
Average labour force growth	159	0,020	0,017	-0,016	0,111
Average share of total employment in service	159	50,868	19,929	5,949	84,953
average share of total employment in industry	159	19,971	8,678	2,431	48,933
Average inflation rate on consumer prices	159	6,154	7,232	0,037	60,675
Average FDI net inflows (% of GDP)	159	5,599	9,280	-1,987	100,522
Average trade (% of GDP)	159	89,516	51,257	13,347	373,736
Life expectancy at birth	159	69,688	8,969	46,027	82,625

Table A.3.2. Descriptive statistics for the first period

Variable	N	Mean	Std. Dev.	Min	Max
Average labour force growth	159	0,022	0,020	-0,028	0,145
Average share of total employment in service	159	48,848	20,202	5,590	83,307
average share of total employment in industry	159	19,979	9,016	2,391	43,400
Average inflation rate on consumer prices	159	8,003	12,028	-0,575	110,095
Average FDI net inflows (% of GDP)	159	5,818	13,265	-5,962	164,944
Average trade (% of GDP)	159	88,182	50,288	0,468	395,092
Life expectancy at birth	159	68,259	9,694	42,608	81,910

Table A.3.2. Descriptive statistics for the first period

Variable	N	Mean	Std. Dev.	Min	Max
Average labour force growth	159	0,018	0,016	-0,019	0,090
Average share of total employment in service	159	52,887	20,003	6,156	86,599
average share of total employment in industry	159	19,963	8,849	2,470	54,466
Average inflation rate on consumer prices	159	4,493	4,121	-0,170	24,070
Average FDI net inflows (% of GDP)	159	5,347	8,126	-1,216	62,985
Average trade (% of GDP)	159	91,123	54,524	24,332	401,155
Life expectancy at birth	159	71,295	8,228	49,472	83,622

Table A.3.4. Regression results for the total period with the different demographic groups used as dependent variable

Variable	Total	Male	Female	Total Youth	Male Youth	Female Youth	Total Adult	Male Adult	Female Adult
Labour force growth	0,167	0,172	0,156	0,177	0,179	0,154	0,170	0,175	0,168
	(0,025)***	(0,026)***	(0,028)***	(0,021)***	(0,021)***	(0,024)***	(0.029)***	(0,029)***	(0,034)***
Service share of emp	0,007	0,005	0,009	0,007	0,005	0,010	0,006	0,005	0,008
	(0,002)***	(0,003)*	(0,003)***	(0,003)***	(0,003)	(0,004)***	(0,003)**	(0,003)*	(0,003)***
Industry share of emp	-0,003	-0,002	-0,004	-0,017	-0,014	-0,024	-0,003	-0,001	-0,002
	(0.005)	(0,005)	(0,006)	(0,006)***	(0,006)**	(0,007)***	(0,006)	(0,006)	(0,007)
Inflation rate	-0,004	-0,004	-0,004	0,001	0,001	0,002	-0,006	-0,005	-0,006
	(0,002)*	(0,002)*	(0,002)*	(0,005)	(0,004)	(0,006)	(0,002)**	(0,002)**	(0,003)**
FDI net inflows	-0,001	-0,004	0,006	-0,006	-0,007	-0,005	0,001	-0,004	0,009
	(0,002)	(0,002)**	(0,002)***	(0,003)**	(0,003)**	(0,003)	(0,002)	(0,002)*	(0,002)***
Trade ratio of GDP	-0,001	-0,001	-0,002	-0,001	0,000	-0,001	-0,001	-0,001	-0,002
	(0,000)**	(0,000)**	(0,000)***	(0,001)	(0,001)	(0,001)	(0,000)***	(0,000)*	(0,000)***
Life expectancy	0,001	-0,001	0,002	-0,004	-0,003	-0,007	0,002	0,000	0,005
	(0,004)	(0,004)	-0,004	(0,008)	(0,008)	(0,010)	(0,004)	(0,004)	(0,005)
Constant	-0,036	0,044	-0,102	0,023	-0,027	0,270	-0,022	0,090	-0,177
	(0,255)	(0,253)	(0,291)	(0,426)	(0,428)	(0,484)	(0,281)	(0,280)	(0,324)
Observations	159	159	159	159	159	159	159	159	159
R-squared	0,485	0,480	0,416	0,221	0,203	0,704	0,452	0,460	0,396

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %. Robust SE in parenthesis.*

Table A.3.5. Regression results for the first period with the different demographic groups used as dependent variable

Variable	Total	Male	Female	Total Youth	Male Youth	Female Youth	Total Adult	Male Adult	Female Adult
Labour force growth	0,139	0,143	0,132	0,157	0,160	0,140	0,138	0,142	0,136
	(0,012)***	(0,011)***	(0,017)***	(0,018)***	(0,019)***	(0,023)***	(0,013)***	(0,012)***	(0,021)***
Service share of emp	0,001	0,001	0,002	0,004	0,003	0,004	0,006	0,000	0,001
	(0,002)	(0,002)	(0,002)	(0,003)	(0,003)	(0,004)	(0,002)	(0,001)	(0,002)
Industry share of emp	-0,003	-0,003	-0,001	-0,013	-0,014	-0,011	-0,002	-0,002	-0,001
	(0,004)	(0,004)	(0,005)	(0,009)	(0,009)	(0,010)	(0,004)	(0,004)	(0,005)
Inflation rate	-0,001	-0,001	-0,002	0,003	0,003	0,003	-0,002	-0,001	-0,003
	(0,003)	(0,003)	(0,003)	(0,002)	(0,002)	(0,003)	(0,003)	(0,003)	(0,003)
FDI net inflows	0,000	0,000	-0,001	0,000	0,000	0,000	0,000	0,000	-0,001
	(0,001)	(0,001)	(0,001)	(0,002)	(0,002)	(0,002)	(0,001)	(0,001)	(0,001)
Trade ratio of GDP	-0,001	-0,001	-0,002	-0,001	-0,001	-0,001	-0,001	-0,001	-0,002
	(0,000)***	(0,000)***	(0,000)***	(0,001)	(0,001)	(0,001)	(0,000)***	(0,000)***	(0,001)**
Life expectancy	0,003	0,001	0,007	-0,009	-0,008	-0,013	0,004	0,001	0,010
	(0,004)	(0,004)	(0,004)	(0,006)	(0,006)	(0,007)*	(0,004)	(0,004)	(0,005)**
Constant	0,133	0,261	-0,049	0,609	0,540	0,798	0,134	0,297	-0,147
	(0,133)	(0,244)	(0,274)	(0,356)*	(0,360)	(0,388)*	(0,258)	(0,259)	(0,298)
Observations	159	159	159	159	159	159	159	159	159
R-squared	0,361	0,391	0,265	0,227	0,229	0,178	0,326	0,363	0,235

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %. Robust SE in parenthesis.*

Table A.3.6. Regression results for the second period with the different demographic groups used as dependent variable

Variable	Total	Male	Female	Total Youth	Male Youth	Female Youth	Total Adult	Male Adult	Female Adult
Labour force growth	0,168	0,158	0,183	0,136	0,118	0,146	0,175	0,166	0,195
	(0,029)***	(0,030)***	(0,033)***	(0,062)**	(0,063)*	(0,071)*	(0,032)***	(0,033)***	(0,033)***
Service share of emp	0,002	0,002	0,002	0,007	0,007	0,007	0,000	0,001	0,001
	(0,002)	(0,002)	(0,002)	(0,005)	(0,005)	(0,005)	(0,002)	(0,002)	(0,003)
Industry share of emp	0,001	0,001	0,002	-0,004	-0,003	-0,007	0,002	0,001	0,003
	(0,005)	(0,005)	(0,005)	(0,009)	(0,009)	(0,010)	(0,006)	(0,005)	(0,005)
Inflation rate	0,002	-0,001	0,011	-0,017	-0,025	0,001	0,005	0,002	0,012
	(0,007)	(0,007)	(0,009)	(0,023)	(0,024)	(0,023)	(0,007)	(0,007)	(0,009)
FDI net inflows	0,001	-0,002	0,004	0,004	0,001	0,008	0,001	-0,002	0,004
	(0,004)	(0,004)	(,004)	(0,12)	(0,012)	(0,012)	(0,004)	(0,004)	(0,004)
Trade ratio of GDP	-0,001	-0,001	-0,001	-0,002	-0,002	-0,002	-0,001	-0,001	-0,001
	(0,001)*	(0,001)*	(0,001)*	(0,002)	(0,002)	(0,002)	(0,001)**	(0,001)*	(0,001)**
Life expectancy	0,014	0,012	0,018	0,005	0,004	0,006	0,016	0,014	0,020
	(0,005)***	(0,005)**	(0,006)***	(0,012)	(0,012)	(0,012)	(0,006)***	(0,006)***	(0,007)***
Constant	-0,778	-0,614	-1,093	-0,566	-0,431	-0,732	-0,815	-0,650	-1,157
	(0,370)**	(0,367)*	(0,415)***	(0,743)	(0,749)	(0,875)	(0,413)*	(0,411)	(0,446)**
Observations	159	159	159	159	159	159	159	159	159
R-squared	0,272	0,254	0,263	0,043	0,037	0,043	0,265	0,249	0,264

**Significant at 10 %, **Significant at 5 %, ***Significant at 1 %. Robust SE in parenthesis.*

Appendix 4. Elaboration on literature review

Table A.4.1. Extended literature review

Author/Publisher	Sample	Sample data years	Main results
Adegboye, C. A, Egharevba, I. M. and Edafe, J., (2017)	37 countries (Sub-Saharan Africa)	1991-2014	Employment elasticity of growth was higher during the period where growth was the highest (2010-2014). The elasticities for youth was lower than the average for all periods. The elasticity for female employment was slightly higher than the elasticity for male employment. The mean employment elasticity was 0.16 between 1991-1999, 0.36 between 2000-2009 and 0.45 between 2010-2014.
African Development Bank (2018)	47 countries (Africa)	2000-2014	The average employment elasticity with respect to GDP was 0.41. 38% of the observed countries had an employment elasticity of growth below 0.41, 43% had an elasticity above 0.41 and the remaining countries had an elasticity above 1. The fastest growing countries in the sample have the lowest elasticities, whereas the slower growing countries have higher elasticities.
Asian Development Bank (2012)	45 countries (Asia)	1991-2011	Majority of the employment elasticities for the observed countries were recorded between 0.2-0.8 and the average elasticity for the developing countries in Asia was just below 0.6. Most of the observed countries experienced a decline in the

			employment elasticity measure for the recent observed years. The authors ascribe this decline to an increase in labour productivity.
Balakrishnan, R., Das, M. and Kannan, P., (2010)	21 countries (advanced)	1989-2009	This paper estimates the Okun's coefficient. The responsiveness of growth in unemployment to growth in output has increased on for the average country for the observed time period. The results show significant variation across countries. All countries coefficients are captured between 0 and 1. The average coefficient was 0.25 in the 1990s and 0.36 in the 2000s. The Employment Protection Legislation was shown have a negative, significant effect of the coefficient. Unemployment benefits and share of temporary workers show positive and significant impact on the coefficient for most time periods.
Ball, L. Furceri, D. Leigh, D. Loungani, P. (2016)	20 countries (advanced)	1980-2011	This paper estimates the Okun's coefficient. The results show great variation of the Okun's coefficient across the observed countries. Majority of estimates of the unemployment growth reaction to a 1% increase in output lie between -0.23 and -0.54. The mean elasticity was -0.2 for developing countries and -0.4 for developed countries. *Mean unemployment rate* and *share of services in GDP* were shown to be significant determinants of the elasticity measure.

Blázquez-Fernández, C. Cantarero-Prieto, D. Pascual-Sáez, M. (2018)	15 countries (Europe)	2005-2017	The results show a negative significant relationship between unemployment and output for most of the countries. Small variations are observed across the countries.
Crivelli, E. Furceri, D. Toujas-Bernaté, J. (2012)	167 countries (globally)	1991-2009	The point estimates of the employment elasticity cluster in the 0–1 range, with the majority ranging between 0.3 and 0.8. Elasticities vary greatly across regions, income groups, and production sectors. The highest estimates are typically recorded for the most economically developed regions, and in the industry and services sectors.
Görg, H., Hornok., Montagna, C. and Onwordi, G. (2018)	20 countries (OECD)	1960-2014	The long-term employment-output elasticity for the average country is around 0.8. The responsiveness for the average country and has been increasing for observed time period.
Hanusch, M. (2012)	8 countries (East Asia)	1997-2011	All observed employment elasticities of growth were between 0.22-0.42.

Hussami, A. F. Verick, S. Cazes, S. (2013)	32 countries (OECD)	1990-2010	This paper estimates the Okun's coefficient with focus on the global financial crisis. The results show a linear, symmetric relationship between changes in output and unemployment for majority of the countries.
ILO, OECD, WBG and IMF. (2015)	20 countries (G20)	1991-2014	Overall, the employment elasticities for the countries were quite stable for the observed time period, despite the fact that the observed countries experienced great fluctuations in economic growth. The employment elasticity of growth was measured at 0.23 between 1991-1999, 0.23 between 1999-2007, 0.12 between 2007-2009, and 0.19 between 2009-2014.
ILO (2018)	195 countries (globally)	Various time periods	The authors describe a trend of decreasing unemployment amongst developing countries between 2014-2017 which they expect to continue. For the same period, emerging economies are shown to experience an increase in unemployment driven by major economic downturns. Gender inequality is stated to be a large global issue and especially prominent in Northern Africa and the Arab states where women are twice as likely to be unemployed as men. The results also show that the global youth unemployment is three times higher than

			that of adults and that gender inequalities are very prominent even amongst the young.
Kapsos, S. (2005)	139 countries (globally)	1991-2003	The global employment elasticity was between 0.3 - 0.38. Youth elasticity was 0.06. Female elasticity exceeded male elasticities for the whole time period. The elasticity for the agriculture, industry and service sector were 0.24, 0.21 and 0.61 respectively. The most employment-intensive growth was recorded in Africa and the middle-east. Asia and the Pacific experienced great economic growth during the observed time period and this was shown to be accompanied by strong growth in employment. The employment elasticity of growth moved in opposite directions for North America and Western Europe, with a recorded decrease for the former and increase for the latter. Labour supply share of service industry was proven to have a positive, significant effect of the elasticity measure whereas high tax rates had a negative significant impact. The results showed no empirical relationship between employment elasticity and export-orientation.
Prieto, G. N., Ghazi, T. and An, Z. (2017) G	25 countries (developing)	1981-2015	Positive correlation between real GDP and total employment for 22/25 countries.

Slimane, S. (2015)	90 countries (developing)	1991-2011	Size of service sector and share of urban population had significant, positive effect on the employment elasticity. Degree of openness, Consumer Price Index, Foreign Direct Investment, Credit to private sector, Gross Capital Formation and Working age population growth has significant, negative effects on the elasticity measure. The exchange rate and export performance could not be proven to have a significant empirical relationship with the employment elasticity of growth.