THESIS OF THE DOCTORAL (Ph.D.) DISSERTATION

THE DETERMINANTS OF YOUTH UNEMPLOYMENT: EVIDENCE FROM THE ARAB WORLD

Ahmed Salama

Supervisor:

Dr. habil. Judit Oláh

Associate Professor

UNIVERSITY OF DEBRECEN

Károly Ihrig Doctoral School of Management and Business

Debrecen

2020

Contents

Background of the research

The first question that can come to mind is "why to study youth unemployment?" Youth unemployment is a great challenge among many countries around the world. The youth unemployment rate is defined as the percentage of unemployed people aged (15 to 24 years old) from the labour force (ILO, 2019A). Youth unemployment is a serious concern for many countries of the world and the reasons behind this that youth unemployment has several consequences on society as it can be a waste in human resources and on the individual side, it can have many consequences in term of health, and in addition to crimes as FOUGÈRE et al. (2009) found and sociological problems as well. All these consequences show how youth unemployment is important to be highlighted.

The second important reason for studying youth unemployment is the youth migrations from some of these countries as unemployment can be the main reason for youth migration to other countries. The unemployment among youth pushes them to find new opportunities in other countries and these youth migration impact on the productivity of the base countries in term of waste of human resources and therefore impact on the economic development in these countries. To address the youth unemployment problem, I need to look for determinants of youth unemployment and further the solution can be introduced. Youth unemployment determinants are not highly researched in the Arabic region jointly, for that this study will address the determinants of youth unemployment in Arabic countries. Besides that, I need to uncover the impact of the financial crisis of 2008 on youth unemployment in the Arabic world.

Many researchers address the topic globally, for example, recently, BAYRAK–TATLI (2018) examined the youth unemployment determinants in OECD countries. In the case of the Arabic world and according to our knowledge, I did not find that it addressed before in terms of the Arabic region jointly, for that this dissertation will address the determinants of youth unemployment in Arabic countries to fill this gap. In addition to that this dissertation will address the difference between genders in terms of determinants of youth unemployment. Moreover, the study will explore the determinants of total unemployment and adult unemployment and how they are different from determinants of youth unemployment which contribute new findings on the topic in the Arab world.

On another side, the impact of financial crises on youth unemployment studied by many scholars, for example recently BRUNO et al. (2016) studied the financial crisis short and long-run impacts on unemployment of youth in OECD countries. The impact of financial crises on youth unemployment is not highly researched in the Arabic region jointly according to our search. This dissertation will address the impact of financial crises on youth unemployment in Arabic countries

to fill this gap. In addition to that, this dissertation will address the difference between genders in terms of the impact of financial crises on youth unemployment. Moreover, the dissertation will explore the impact of financial crises on total unemployment and adult unemployment and how they are different from the impact of financial crises on youth unemployment which contribute new findings on the topic in the Arab world.

Economic freedom has a very important impact on unemployment, for example, FELDMANN (2007) found that in particular, among young people and women, economic freedom can ultimately decrease unemployment. The impact of economic freedom on youth unemployment is not highly researched in the Arabic region jointly according to our search. This dissertation will address the impact of economic freedom on youth unemployment in Arabic countries to fill this gap. In addition to that, this dissertation will address the difference between genders in terms of the impact of economic freedom on youth unemployment. Moreover, the dissertation will explore the impact of economic freedom on total unemployment and adult unemployment and how they are different from the impact of economic freedom on youth unemployment which contributes to new findings on the topic in the Arab world.

Minimum wages as an example of institutional variables have a very important impact on unemployment and youth unemployment, for example, GORRY (2013) found that the minimum wages impacted on the unemployment rate and youth unemployment as well. Moreover, he found that youth unemployment will be increased more than the unemployment rate by the minimum wage. The impact of minimum wages on youth unemployment is not researched in the Arabic region jointly according to our search. This dissertation will study the impact of minimum wages on youth unemployment in Arabic countries to fill this gap. In addition to that, this dissertation will study the difference between genders in terms of the impact of minimum wages on youth unemployment. Moreover, the dissertation will investigate the impact of minimum wages on total unemployment and adult unemployment and how they are different from the impact of minimum wages on youth unemployment which contribute new findings on the topic in the Arab world.

Research objectives

The study will focus on analyzing the factors that impact on youth unemployment in the Arab world starting from economic factors and goes to reach financial crisis and economic freedom factors to build a complete macro perspective evaluation for what determines youth unemployment in the Arab world. The study designed to address the determinants of youth and not focusing only on macroeconomics variables but address the other variables including economic freedom variables such as labour market regulations. Besides that, the study addresses the males and females

unemployment determinants among youth. More specifically the objective of this study is to explore the determinants of youth unemployment in the Arabic world.

Research questions

To address the challenge of youth unemployment, I need to look for determinants of youth unemployment and further the solution can be introduced. Youth unemployment determinants are not highly researched in the Arabic region jointly, for that this study will address the determinants of youth unemployment in Arabic countries. Besides that, I need to uncover the impact of the financial crisis of 2008 on youth unemployment in the Arabic world. For that, the study will attempt to answer the following questions:

Question1: What are the determinants of youth unemployment in the Arab world?
Question 2: What is the impact of the financial crisis on youth unemployment in the Arab world?
Question 3: What is the impact of economic freedom on youth unemployment in the Arab world?

Hypotheses of the study

Economic growth and its impact either on total unemployment or youth unemployment are addressed by many researchers to understand the effect of the economic growth on unemployment and youth unemployment, for example, AGHION–HOWITT (1994) found that the growth can impact on unemployment in two impacts "capitalization and creative destruction". In terms of capitalization impact, the growth increase leads to a decrease in the rate of unemployment. On the other hand, in the term of creative destruction impact, the growth increase leads to increasing the balance of unemployment either by increasing the job separation rate or by job creation discourage.

MAQBOOL et al. (2013) concluded that in the short-run and long-run, GDP is among the significant determinants of unemployment in Pakistan. ABBAS (2014) revealed that there is a negative long term impact done by economic growth on the level of unemployment. BAYAR (2014) pointed out that economic growth and unemployment have long term relationships and the relationship between economic growth and unemployment is negative. ARSLAN–ZAMAN (2014) reported that gross domestic product rate affects negatively on unemployment. CHOWDHURY–HOSSAIN (2014) presented that there is a negative effect of GDP growth rate on unemployment. OGBEIDE et al. (2015) obtained that GDP is among the factors that help in the repression of unemployment.

ŞAHIN (2016) proved that in the case of the long run, the relationship between GDP and unemployment is negative and significant. The relationship between unemployment and GDP is negative but insignificant in the case of the short-run. FOLAWEWO–ADEBOJE (2017) deduced that the gross domestic product (GDP) growth has a negative effect on unemployment. AKHTAR–

SHAHNAZ (2006) provided that the GDP growth has impacted on youth unemployment started from a certain growth. DIETRICH (2013) confirmed that GDP growth has an impact on the unemployment rate of youth in which the relationships between GDP growth and youth unemployment are negative.

ANYANWU (2014) summarized that the economic growth impacted on total youth unemployment, female and male youth unemployment and decrease them. CAPORALE–GIL-ALANA (2014) proposed that the main macroeconomic determinants of youth unemployment are GDP and inflation. Besides that their results prove that there is a long term relationship between GDP and inflation and youth unemployment. GÖÇER–ERDAL (2015) stated that the relationship between economic growth and youth unemployment is negative and economic growth above the average can impact on youth unemployment and led to a decrease in youth unemployment.

BAYRAK–TATLI (2016) informed that the GDP growth rate has a significant impact on decreasing youth unemployment in the short term. EBAIDALLA (2016) discovered that among determinants of youth unemployment in "Organization of Islamic Cooperation" (OIC) countries is GDP growth. For that and for the study to address the impact of economic growth on youth unemployment, the study will use the following hypothesis:

 H1: *Economic growth impact positively on youth unemployment in the Arab world.*

The financial crisis and its impact either on total unemployment or youth unemployment are studied by many researchers to understand the effect of the financial crisis on unemployment and youth unemployment. Among the studies which study the impact of the crisis on unemployment and youth unemployment, for example, VERICK (2009) who studied the impact of the recent crisis on the labour market by evaluate the impact of past 'Big 5 Crises' on unemployment and found that the young people got the hardest impact of the crises. Moreover, ARPAIA–CURCI (2010) found that the "great recession" had impacted on workers and increased youth unemployment greatly.

CHOUDHRY et al. (2010A) acknowledged that that financial crisis impacted on the youth unemployment rate and the impact on the youth unemployment rate is more than the impact on overall unemployment. CHOUDHRY et al. (2010B) studied the impact of financial crises on youth unemployment and found that the financial crisis has a significant effect on the unemployment rate among youth. BRUNO et al. (2016) illustrated that the financial crisis has a great impact and significant on youth unemployment in the short and long run but the impact is larger on youth unemployment than the impact on total unemployment. FURCERI–MOUROUGANE (2012) determined that a financial crisis has a negative and permanent impact on potential output. They mentioned that on average, the financial crises can decrease the potential output by around 1.5–

2.4%. For that and for the study to address the impact of the financial crisis on youth unemployment, the study will use the following hypothesis:

H2: *The financial crisis impact negatively on youth unemployment and higher than its impact on older in the Arab world.*

Economic freedom is playing a role and impact on unemployment in general and unemployment among young as well. Few studies conducted on addressing the impact of economic freedom on unemployment, for example, FELDMANN (2007) recognized that in particular, among young people and women, economic freedom can ultimately decrease unemployment. In addition to that, he concluded that the size of the government has an impact on youth persons and the labour force in which the smaller size of the government possibly decreasing unemployment. Regarding property rights, the more secure and strong law, the more favorable the impact on unemployment and decreasing youth unemployment and total unemployment as well. On the other hand regarding regulation, his study found that more flexibility in regulation is correlated with youth unemployment decline. The more liberal of international trade is correlated with youth unemployment decline as well. For that and for the study to address the impact of economic freedom on youth unemployment, the study will use the following hypothesis:

H3: *Economic freedom impact positively on youth unemployment in the Arab world.*

Methodology

The study will consist of three steps. *In the first step*, the study will address the impact of (labour market, economic, and educational, economic freedom, financial crisis) variables on youth unemployment total unemployment and adult unemployment and in addition to examining the impact on gender as well. *In the second step,* the study will address the impact of labour market regulations on youth unemployment, total unemployment and adult unemployment and in addition to examining the impact on gender as well. *In the third step*, the study will examine the impact of the minimum wage on the level of youth unemployment and besides its impact on total unemployment and adult unemployment and in addition to examine the impact on gender as well *(Figure 1).*
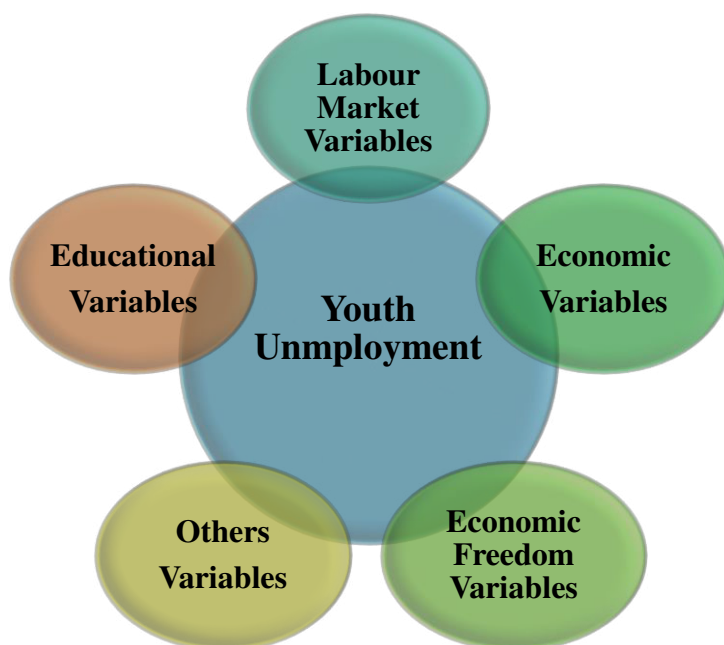
Figure 1: The main variables of the research

Source: Author's own construction (2020)

The impact of the main variables on youth unemployment

In this section will address the effect of (labour market, economic, and educational, economic freedom, financial crisis) variables on youth unemployment total unemployment and adult unemployment and in addition to examining the impact on unemployment among gender as well. In this section, the study will cover the following countries Algeria, Egypt, Jordan, Kuwait-Morocco, Oman, Qatar, Saudi Arabia, and Tunisia in the time series study from 2000 to 2016.

The dependent variables will include "total youth unemployment rate (15-24), male youth unemployment rate (15-24), female youth unemployment rate (15-24), total unemployment rate (+15), male unemployment rate (+15), female unemployment rate (+15), adult unemployment rate (+25), male unemployment rate (+25), female unemployment rate (+25)".

The independent variables will be some (labour market, economic, and educational, economic freedom, financial crisis, and others) variables. Economical variables are such as, "GDP growth rate, manufacturing value added (% of GDP), imports of goods and services (% of GDP), government revenues, percentage of GDP, trade percentage of GDP, employment in service". Educational variable represented by "Education index". Economic freedom variable is represented by "index of economic freedom".

Besides that, the study will use a dummy variable for the financial crisis of 2008. The dummy variable for the financial crisis 2008, this variable will indicate 1 if the year is 2008 and 0 is

otherwise in our panel database. In this study, I will utilize panel regression methods because of short-period data availability. To make our results more suitable and accurate, firstly, I will use both fixed panel method and random panel method. Secondly, I will use the Hausman test to evaluate which of my models will be stronger to use. To test the effect of (labour market, economic, and educational, economic freedom, financial crisis) variables on youth unemployment, total unemployment, and adult unemployment and besides it impact on unemployment among gender, firstly I analyze our data by conducting fixed effect method; secondly, I analyze our data using random effect method. Moreover, and to evaluate which of the two models (fixed or random) is appropriate, I use the Hausman test.

The impact of labour market regulations on youth, total, and adult unemployment

In this step will address the effect of Labour market regulations on youth unemployment total unemployment and adult unemployment and in addition to examining the impact on unemployment among gender as well. In this step, the study will cover the following countries Algeria, Egypt, Jordan, Morocco, and Tunisia in the time series study from 2000 to 2016.

The dependent variables will include "total youth unemployment rate (15-24), male youth unemployment rate (15-24), female youth unemployment rate (15-24), total unemployment rate (+15), male unemployment rate (+15), female unemployment rate (+15), adult unemployment rate (+25), male unemployment rate (+25), female unemployment rate (+25)". The independent variables will include the index of Labour market regulations" which includes the following indicators: "Labour market regulations, Hiring regulations and minimum wage, hiring and firing regulations, Centralized collective bargaining, Hours regulations, mandated cost of worker dismissal, conscription".

I will utilize panel regression methods because of short-period data availability. To make our results more suitable and accurate, firstly, I will use both fixed panel method and random panel method. Secondly, I will use the Hussman test to evaluate which of our models will be stronger to use. To test the effect of Labour market regulations on youth unemployment, total unemployment, and adult unemployment and besides its impact on unemployment among gender, firstly I analyze our data by conducting fixed effect method; secondly, I analyze our data using random effect method. Moreover, and to evaluate which of the two models (fixed or random) is appropriate, I use the Hausman test.

The impact of the minimum wage on youth, total, and adult unemployment

In this step will test the impact of the minimum wage on the level of youth unemployment, total unemployment and adult unemployment. I will utilize the availability of minimum wage in some

countries according to the availability of this variable in the following countries (Algeria, Jordan, Lebanon Egypt Morocco, and Tunisia) for the time series from 2000 to 2011. The dependent variables will include "total youth unemployment rate (15-24), male youth unemployment rate (15-24), female youth unemployment rate (15-24), total unemployment rate (+15), male unemployment rate (+15), female unemployment rate (+15), adult unemployment rate (+25), male unemployment rate (+25), female unemployment rate (+25)".

The independent variables will include the minimum wages as an example of labour market intuitions variables. I will utilize panel regression methods because of short-period data availability from 2000 to 2011. To make our results more suitable and accurate, firstly, I will use both fixed panel method and random panel method. Secondly, I will use the Hausman test to evaluate which of our models will be stronger to use. To test the effect of minimum wage on youth unemployment, total unemployment, and adult unemployment and besides its impact on unemployment among gender, firstly I analyze our data by conducting fixed effect method; secondly, I analyze our data using random effect method. Moreover, and to evaluate which of the two models (fixed or random) is appropriate, I use the Hausman test.

Scientific findings

The impact of (labour market, economic, and economic freedom) variables

In this section, I will show our results of the effect of (labour market, economic, and educational, economic freedom, financial crisis) variables on youth unemployment, total unemployment, and adult unemployment. More specifically, what are the factors that determine the unemployment among the youth besides the determinants of unemployment in terms of males and females? Moreover, the results will show how these factors impact on unemployment among adults besides in terms of males and females of the adult unemployment rate.

In addition to that, the results will show how these factors impact on total unemployment besides in terms of males and females of the total unemployment rate. The labour market, economic, and educational, economic freedom, financial crisis variables play a role as independent variables and the unemployment rate of youth; adult and total beside the males and females of youth, total and adult unemployment play a role as dependent variables.

The determinants of youth unemployment

Table 1 shows that the impact of (labour market, economic, and educational, economic freedom, and financial crisis) variables on youth unemployment. The dependent variable is youth unemployment and the independent variables are GDP growth rate, manufacturing value added (% of GDP), imports of goods and services (% of GDP), government revenues, percentage of GDP,

trade percentage of GDP, employment in service, education index, index of economic freedom, and financial crisis dummy variable.

The results show that GDP growth (GDPGR), government revenues, percentage of GDP (GRGDP), manufacturing value added (% of GDP) (MVAGDP), employment in service (EMPLOYMENTSERVICES), and economic freedom (EFINDEX) are associated significantly with youth unemployment. GDP growth (GDPGR), government revenues, percentage of GDP (GRGDP), manufacturing value added (% of GDP) (MVAGDP), and economic freedom (EFINDEX) have a significant negative relationship with youth unemployment. On another side, employment in service (EMPLOYMENTSERVICES) has a significant positive relationship with youth unemployment. GDP growth (GDPGR), government revenues, percentage of GDP (GRGDP), manufacturing value added (% of GDP) (MVAGDP), employment in service (EMPLOYMENTSERVICES), and economic freedom (EFINDEX) are the determinants of youth unemployment.

On another hand, the results showed that the education index (EDUINDEX) has an inverse but not significant relationship with youth unemployment. Moreover, the financial crisis appeared to have a positive and not significant relationship with youth unemployment.

Table 1: The determinants of youth unemployment 2000-2016

YU	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
GDPGR	-.4285791	.146869	-2.92	0.004	-.7164371	-.1407212
IMGDP	.0565778	.0954479	0.59	0.553	-.1304967	.2436522
GRGDP	-.5219055	.0821719	-6.35	0.000	-.6829595	-.3608514
TRADEGDP	.0060545	.0742315	0.08	0.935	-.1394365	.1515455
MVAGDP	-.0902047	.0238021	-3.79	0.000	-.136856	-.0435534
EMPLOYMENTSERVICES	.4851953	.0679308	7.14	0.000	.3520533	.6183372
EDUINDEX	-3.813185	9.066553	-0.42	0.674	-21.5833	13.95693
EFINDEX	-.9765975	.1515047	-6.45	0.000	-1.273541	-.6796537
FCDUMMY	.5529638	2.442675	0.23	0.821	-4.234591	5.340518
_cons	76.07737	8.182847	9.30	0.000	60.03929	92.11546

Source: Author's own calculation (2020)

Table 2 shows that the impact of (labour market, economic, and educational, economic freedom, and financial crisis) variables on male youth unemployment. The dependent variable is male youth unemployment and the independent variables are GDP growth rate, manufacturing value added (% of GDP), imports of goods and services (% of GDP), government revenues, percentage of GDP, trade percentage of GDP, employment in service, education index, index of economic freedom, and financial crisis dummy variable. Results show that GDP growth (GDPGR), government revenues,

percentage of GDP (GRGDP), manufacturing value added (percent of GDP) (MVAGDP), employment in the service sector (EMPLOYMENTSERVICES) and economic freedom (EFINDEX) are significantly related to male youth unemployment. GDP growth (GDPGR), government revenues, percentage of GDP (GRGDP), manufacturing value added (percent of GDP) and economic freedom (EFINDEX) have a substantial negative association with male youth unemployment.

On another side, employment in service (EMPLOYMENTSERVICES) has a significant positive relationship with male youth unemployment. GDP growth (GDPGR), government revenues, percentage of GDP (GRGDP), manufacturing value added (% of GDP) (MVAGDP), employment in service (EMPLOYMENTSERVICES), and economic freedom (EFINDEX) are the determinants of male youth unemployment.

On the other hand, the results showed that the Education Index (EDUINDEX) has a negative but not important relationship with male youth unemployment. Furthermore, the financial crisis seemed to have an opposite and non-significant association with male youth unemployment.

Table 2: The determinants of male youth unemployment 2000-2016

YUM	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
GDPGR	-.4766937	.1571094	-3.03	0.002	-.7846226	-.1687649
IMGDP	-.0128153	.102103	-0.13	0.900	-.2129335	.187303
GRGDP	-.4979903	.0879014	-5.67	0.000	-.6702738	-.3257068
TRADEGDP	.1042897	.0794073	1.31	0.189	-.0513457	.2599251
MVAGDP	-.0786112	.0254617	-3.09	0.002	-.1285153	-.0287072
EMPLOYMENTSERVICES	.3931978	.0726673	5.41	0.000	.2507725	.5356231
EDUINDEX	-17.51033	9.698719	-1.81	0.071	-36.51947	1.498804
EFINDEX	-.9743995	.1620684	-6.01	0.000	-1.292048	-.6567513
FCDUMMY	-.56354	2.61299	-0.22	0.829	-5.684907	4.557827
_cons	80.49421	8.753396	9.20	0.000	63.33787	97.65055

Source: Author's own calculation (2020)

Table 3 shows that the impact of (labour market, economic, and educational, economic freedom, and financial crisis) variables on female youth unemployment. The dependent variable is female youth unemployment and the independent variables are GDP growth rate, manufacturing value added (% of GDP), imports of goods and services (% of GDP), government revenues, percentage of GDP, trade percentage of GDP, employment in service, education index, index of economic freedom, and financial crisis dummy variable.

The results show that imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), manufacturing value added

(% of GDP) (MVAGDP), employment in service (EMPLOYMENTSERVICES) education index (EDUINDEX), economic freedom (EFINDEX) are associated significantly with female youth unemployment. Government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), manufacturing value added (% of GDP) (MVAGDP), economic freedom (EFINDEX) have a significant negative relationship with female youth unemployment.

On other side, imports of goods and services (% of GDP) (IMGDP), employment in service (EMPLOYMENTSERVICES), and education index (EDUINDEX) have a significant a positive relationship with female youth unemployment. Imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), manufacturing value added (% of GDP) (MVAGDP), employment in service (EMPLOYMENTSERVICES), education index (EDUINDEX), economic freedom (EFINDEX) are the determinants of female youth unemployment.

On the other hand, the results have shown that GDP growth (GDPGR) has a negative but not important association with female youth unemployment. In addition, the financial crisis has proven to have a positive and not significant relationship with female youth unemployment.

Table 3: The determinants of female youth unemployment 2000-2016

YUF	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
GDPGR	-.2243334	.1846665	-1.21	0.224	-.586273	.1376063
IMGDP	.3180572	.1200119	2.65	0.008	.0828382	.5532762
GRGDP	-.6125398	.1033193	-5.93	0.000	-.8150419	-.4100377
TRADEGDP	-.2783692	.0933353	-2.98	0.003	-.4613031	-.0954353
MVAGDP	-.1202162	.0299277	-4.02	0.000	-.1788734	-.0615589
EMPLOYMENTSERVICES	.8007545	.0854132	9.38	0.000	.6333478	.9681612
EDUINDEX	51.04233	11.39988	4.48	0.000	28.69899	73.38568
EFINDEX	-.940545	.1904953	-4.94	0.000	-1.313909	-.5671811
FCDUMMY	3.988672	3.07131	1.30	0.194	-2.030984	10.00833
_cons	48.54446	10.28874	4.72	0.000	28.37889	68.71003

Source: Author's own calculation (2020)

The determinants of total unemployment

The results show that imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), and economic freedom (EFINDEX) have a significant association with total unemployment. Government revenues, percentage of GDP (GRGDP), and economic freedom (EFINDEX) are significant and negatively related with total unemployment.

On the other side, imports of goods and services (% of GDP) (IMGDP) is significant and positively related with total unemployment. Imports of goods and services (% of GDP) (IMGDP), government

revenues, percentage of GDP (GRGDP), and economic freedom (EFINDEX) are the factors that determine total unemployment.

On the other hand, the results show that GDP growth (GDPGR) has a negative but not significant relationship with total unemployment and, in addition, employment in the service sector appears to be insignificant in relation to total unemployment. Moreover, the financial crisis seemed to have an inverse and non-significant relationship with total unemployment.

The results show that imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), education index (EDUINDEX), economic freedom (EFINDEX) have a significant association with male total unemployment. Government revenues, percentage of GDP (GRGDP), education index (EDUINDEX), economic freedom (EFINDEX) are significant and negatively related with male total unemployment.

On the other side, imports of goods and services (% of GDP) (IMGDP) is significant and positively related with male total unemployment.

Imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), education index (EDUINDEX), economic freedom (EFINDEX) are the factors that determine male total unemployment.

On the other hand, the results showed that GDP growth (GDPGR) has a negative but not substantial relationship with male total unemployment and, in addition, employment in service tends to be negligible in relation to male total unemployment. Furthermore, the financial crisis seemed to have an opposite and non-significant association with male total unemployment.

The results show imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), employment in service (EMPLOYMENTSERVICES) education index (EDUINDEX), economic freedom (EFINDEX) have a significant association with female total unemployment. Government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), and economic freedom (EFINDEX) are significant and negatively related with female total unemployment. On the other side, imports of goods and services (% of GDP) (IMGDP), employment in service (EMPLOYMENTSERVICES), education index (EDUINDEX) are significant and positively related with female total unemployment. Imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), employment in service (EMPLOYMENTSERVICES) education index (EDUINDEX), economic freedom (EFINDEX) are the factors that determine female total unemployment.

On the other hand, the results showed that GDP growth (GDPGR) has a negative but not important relationship with total female unemployment. However, the financial crisis seemed to have a positive and not important association with total female unemployment.

The determinants of adult unemployment

The results show that GDP growth (GDPGR), imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), and economic freedom (EFINDEX) are associated significantly with adult unemployment. GDP growth (GDPGR), government revenues, percentage of GDP (GRGDP), and economic freedom (EFINDEX) have a significant negative relationship with adult unemployment.

On the other side, imports of goods and services (% of GDP) (IMGDP) have a significant positive relationship with adult unemployment. GDP growth (GDPGR), imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), and economic freedom (EFINDEX) are the determinants of adult unemployment.

On the other hand, the results showed that the Education Index (EDUINDEX) has a negative but not important connection to adult unemployment. Nevertheless, the financial crisis has proven to have an opposite and not important association with adult unemployment.

The results show that imports of goods and services (% of GDP) (IMGDP), education index (EDUINDEX), and economic freedom (EFINDEX) are associated significantly with male adult unemployment. Education index (EDUINDEX), and economic freedom (EFINDEX) have a significant negative relationship with male adult unemployment. On the other side, imports of goods and services (% of GDP) (IMGDP) have a significant positive relationship with male adult unemployment. Imports of goods and services (% of GDP) (IMGDP), education index (EDUINDEX), and economic freedom (EFINDEX) are the determinants of male adult unemployment.

On the other hand, the results showed that GDP growth (GDPGR) has a negative but not important relationship with male adult unemployment and, in addition, employment in the service sector tends to be non-essential in relation to male adult unemployment. Furthermore, the financial crisis tended to have an opposite and non-significant association with male adult unemployment.

The results show GDP growth (GDPGR), imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), education index (EDUINDEX), economic freedom (EFINDEX) are associated significantly with female adult unemployment. GDP growth (GDPGR), government revenues, percentage of GDP

(GRGDP), trade, percentage of GDP (TRADEGDP), and economic freedom (EFINDEX) has significant negative relationship with female adult unemployment. On the other side, imports of goods and services (% of GDP) (IMGDP), and education index (EDUINDEX) have a significant positive relationship with female adult unemployment. GDP growth (GDPGR), imports of goods and services (% of GDP) (IMGDP), government revenues, percentage of GDP (GRGDP), trade percentage of GDP (TRADEGDP), education index (EDUINDEX), economic freedom (EFINDEX) are the determinants of female adult unemployment.

On the other hand, the results showed that employment in the service was not important in the relationship with adult female unemployment. Furthermore, the financial crisis tended to have an opposite and not significant association with adult female unemployment.

The impact of labour market regulations

The impact of labour market regulations on youth unemployment

The random-effects GLS regression showed Labour Market Regulations (LMR) and its variables which are hiring regulations and minimum wage, hiring and firing regulations, centralized collective bargaining, hours regulations, mandated cost of worker dismissal, and conscription are associated significantly with youth unemployment. The results showed, that there is a significant negative relationship between LMR and youth unemployment. More specifically, the variables of LMR "hiring regulations and minimum wage, hiring and firing regulations, centralized collective bargaining, hours regulations, mandated cost of worker dismissal, and conscription" have a positive and significant impact on youth unemployment *(Table 4)*.

LMR has a great effect on youth unemployment in which it has the highest coefficient among the variables and among its variables the mandated cost of worker dismissal has the greatest impact on youth unemployment in which it got the highest coefficient among LMR variables. Moreover, the results showed that centralized collective bargaining and hours regulations have also a high effect on youth unemployment and among the lowest effect are hiring regulations and minimum wage, hiring and firing regulations, and conscription *(Table 4)*.

Table 4: The impact of LMR on youth unemployment 2000-2016

LOGYU	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
LOGhrandmw	.7100831	.1956896	3.63	0.000	.3265384	1.093628
LOGhandfr	.6407227	.2570653	2.49	0.013	.136884	1.144561
LOGccb	1.05849	.4158465	2.55	0.011	.2434459	1.873534
LOGhr	1.008788	.3491014	2.89	0.004	.3245621	1.693014
LOGmcofwd	1.183578	.3581782	3.30	0.001	.4815612	1.885594

LOGconscription	.6826173	.2297977	2.97	0.003	.232222	1.133013
LOGlmrs	-5.786344	1.885833	-3.07	0.002	-9.482508	-2.09018
_cons	4.521032	.7336267	6.16	0.000	3.08315	5.958914

Source: Author's own calculation (2020)

The results of random-effects GLS regression showed Labour Market Regulations (LMR) and its variables which are hiring regulations and minimum wage, hiring and firing regulations, centralized collective bargaining, hours regulations, mandated cost of worker dismissal, and conscription are associated significantly with male youth unemployment. The results showed that there is a significant negative relationship between LMR and male youth unemployment *(Table 5)*.

In addition to that, the variables of LMR "hiring regulations and minimum wage, hiring and firing regulations, centralized collective bargaining, hours regulations, mandated cost of worker dismissal, and conscription" have a positive and significant impact on male youth unemployment. The results show that LMR has a great effect on male youth unemployment in which it has the highest coefficient among the variables and among its variables the mandated cost of worker dismissal has the greatest impact on male youth unemployment in which it got the highest coefficient among LMR variables. Moreover, centralized collective bargaining and hours regulations have also a high effect on youth unemployment and among the lowest effect are hiring regulations and minimum wage, hiring and firing regulations, and conscription *(Table 5)*.

Table 5: The impact of LMR on male youth unemployment 2000-2016

LOGYUM	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
LOGhrandmw	.7899415	.2179266	3.62	0.000	.3628132	1.21707
LOGhandfr	.9762501	.2862766	3.41	0.001	.4151582	1.537342
LOGccb	1.142681	.4631008	2.47	0.014	.2350205	2.050342
LOGhr	1.33698	.3887712	3.44	0.001	.5750022	2.098957
LOGmcofwd	1.433876	.3988794	3.59	0.000	.6520872	2.215666
LOGconscription	.8499149	.2559105	3.32	0.001	.3483395	1.35149
LOGlmrs	-7.291179	2.100127	-3.47	0.001	-11.40735	-3.175005
_cons	5.018787	.8169916	6.14	0.000	3.417513	6.620062

Source: Author's own calculation (2020)

The results of random-effects GLS regression showed hiring regulations and minimum wage, and centralized collective bargaining are associated significantly with female youth unemployment. The results showed that there is a negative but not significant relationship between LMR and female youth unemployment. The variables of LMR "hiring regulations and minimum wage and centralized collective bargaining" have a positive and significant impact on female youth

unemployment. The results show that LMR has an effect on female youth unemployment but not comparable in degree and not significant as with the effect on youth unemployment and male youth unemployment. In addition to that and among the significant variables, the results show that centralized collective bargaining has a higher effect on female youth unemployment. Hiring regulations and minimum wage got a high impact on female youth unemployment *(Table 6).*

Table 6: The impact of LMR on female youth unemployment 2000-2016

LOGYUF	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
LOGhrandmw	.4441521	.1602906	2.77	0.006	.1299882	.7583159
LOGhandfr	-.3676701	.2105638	-1.75	0.081	-.7803676	.0450274
LOGccb	.7592401	.3406226	2.23	0.026	.0916321	1.426848
LOGhr	-.1163115	.2859512	-0.41	0.684	-.6767655	.4441426
LOGmcofwd	.4767643	.293386	1.63	0.104	-.0982618	1.05179
LOGconscription	.1748407	.1882288	0.93	0.353	-.194081	.5437623
LOGlmrs	-1.156518	1.544698	-0.75	0.454	-4.184069	1.871034
_cons	3.177985	.6009184	5.29	0.000	2.000207	4.355763

Source: Author's own calculation (2020)

The impact of labour market regulations on total unemployment

The random-effects GLS regression showed Labour market regulations (LMR) and its variables which are hiring regulations and minimum wage, hours Regulations, mandated cost of worker dismissal, and conscription are associated significantly with total unemployment. The findings showed that there is a significant negative relationship between LMR and total unemployment. More specifically, the variables of LMR "Hiring regulations and minimum wage, hours regulations, mandated cost of worker dismissal, and conscription" have a positive and significant impact on total unemployment.

LMR has a great effect on total unemployment in which it has the highest coefficient among the variables and among its variables the mandated cost of worker dismissal has the greatest impact on total unemployment in which it got the highest coefficient among LMR variables. Moreover hiring regulations and the minimum wage has the lowest effect on total unemployment in which it has the lowest coefficient. Hours regulations have also high effect on total unemployment comparing to the effect of hiring and firing regulations and conscription.

The random-effects GLS regression showed the mandated cost of worker dismissal is associated significantly with male total unemployment. The results showed that there is a negative but not significant relationship between LMR and male total unemployment. In addition to that, the

variable of LMR "Mandated cost of worker dismissal" has a positive and significant impact on male total unemployment. LMR has an effect on male total unemployment but not significant. In addition to that and among the significant variables, the findings showed that the mandated cost of worker dismissal has a higher effect on male total unemployment.

The random-effects GLS regression showed hiring regulations and minimum wage, centralized collective bargaining, and mandated cost of worker dismissal are associated significantly with female total unemployment. The findings showed that there is a negative but not significant relationship between LMR and female total unemployment. The variables of LMR "Hiring regulations and minimum wage, centralized collective bargaining, and mandated cost of worker dismissal" have a positive and significant impact on female total unemployment. LMR has an effect on female total unemployment but not significant. In addition to that and among the significant variables, the findings showed that centralized collective bargaining has the highest effect on female total unemployment and the lowest effect was by hiring regulations and minimum wage.

The impact of labour market regulations on adult unemployment

The random-effects GLS regression showed Labour Market Regulations (LMR) and its variables which are hiring regulations and minimum wage, hiring and firing regulations, hours regulations, mandated cost of worker dismissal, and conscription are associated significantly with adult unemployment. The findings showed that there is a significant negative relationship between LMR and adult unemployment. In addition to that, the variables of LMR "Hiring regulations and minimum wage, hiring and firing regulations, hours regulations, mandated cost of worker dismissal, and conscription" have a positive and significant impact on adult unemployment.

LMR has the greatest effect on adult unemployment in which it has the highest coefficient among the variables and among its variables the mandated cost of worker dismissal has the greatest impact on adult unemployment in which it got the highest coefficient among LMR variables. Moreover, hours regulations have also high effect on adult unemployment and among the lowest effect are hiring regulations and minimum wage, hiring and firing regulations, and conscription.

The random-effects GLS regression showed the mandated cost of worker dismissal is associated significantly with male adult unemployment. The findings showed that there is a negative but not significant relationship between LMR and male adult unemployment. In addition to that, the variable of LMR "Mandated cost of worker dismissal" has a positive and significant impact on male adult unemployment. LMR has an effect on male adult unemployment but not significant. In addition to that and among the significant variables, the results show that the mandated cost of worker dismissal has the highest effect on male adult unemployment.

The random-effects GLS regression showed Labour Market Regulations (LMR) and its variables which are hiring regulations and minimum wage, centralized collective bargaining, hours regulations, and mandated cost of worker dismissal are associated significantly with female adult unemployment. The findings showed that there is a significant negative relationship between LMR and female adult unemployment. More specifically, the variables of LMR "Hiring regulations and minimum wage, centralized collective bargaining, hours regulations, and mandated cost of worker dismissal" have a positive and significant impact on female adult unemployment.

The impact of the minimum wage

The case of youth unemployment

The results illustrated the impact of minimum wage on youth unemployment in which the dependent variable is youth unemployment and the independent variable is minimum wage. The results of random-effects GLS regression showed that there is a significant negative relationship between minimum wage and youth unemployment *(Table 7)*.

Table 7: The impact of the minimum wage on youth unemployment 2000-2011

YU	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
MW	-.0043488	.0010001	-4.35	0.000	-.006309	-.0023887
_cons	34.49729	3.040064	11.35	0.000	28.53888	40.45571

Source: Author's own calculation (2020)

The results clarified the impact of minimum wage on male youth unemployment in which the dependent variable is male youth unemployment and the independent variable is minimum wage. The results showed also that there is a significant negative relationship between minimum wage and youth unemployment among males *(Table 8)*.

Table 8: The impact of the minimum wage on male youth unemployment 2000-2011

YUM	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
MW	-.0052451	.0010949	-4.79	0.000	-.007391	-.0030992
_cons	34.17133	3.483006	9.81	0.000	27.34476	40.99789

Source: Author's own calculation (2020)

The results displayed the impact of minimum wage on female youth unemployment in which the dependent variable is female youth unemployment and the independent variable is minimum wage. The results of random-effects GLS regression showed also that there is a negative relationship but not significant between minimum wage and youth unemployment among females *(Table 9)*.

Table 9: The impact of the minimum wage on female youth unemployment 2000-2011

YUF	Coef.	Std. Err.	z	P>z	[95% Conf.	Interval]
MW	-.0003848	.0009767	-0.39	0.694	-.0022991	.0015296
_cons	34.03508	4.644132	7.33	0.000	24.93275	43.13741

Source: Author's own calculation (2020)

The case of total unemployment

The findings presented the impact of minimum wage on total unemployment in which the dependent variable is total unemployment and the independent variable is minimum wage. The random-effects GLS regression showed that there is a significant negative relationship between minimum wage and total unemployment.

The outcomes offered the impact of minimum wage on male total unemployment in which the dependent variable is male total unemployment and the independent variable is minimum wage. The fixed-effects regression also showed that there is a significant negative relationship between minimum wage and total unemployment among males.

The results exhibited the impact of minimum wage on female total unemployment in which the dependent variable is female total unemployment and the independent variable is minimum wage. The results of fixed-effects regression showed also that there is a negative relationship but not significant between minimum wage and total unemployment among females.

The case of adult unemployment

The results appeared the impact of minimum wage on adult unemployment in which the dependent variable is adult unemployment and the independent variable is minimum wage. The random-effects GLS regression showed that there is a significant negative relationship between minimum wage and adult unemployment.

The findings manifested the impact of minimum wage on male adult unemployment in which the dependent variable is male adult unemployment and the independent variable is minimum wage.

The fixed-effects regression showed also that there is a significant negative relationship between minimum wage and adult unemployment among males.

The outcomes evidenced the impact of minimum wage on female adult unemployment in which the dependent variable is female adult unemployment and the independent variable is minimum wage. The random-effects GLS regression showed also that there is a negative relationship but not significant between minimum wage and adult unemployment among females.

Recommendations

The results and findings which summarized previously need for some policies and recommendations.

- ➢ Economic growth is critical for employment creations in which it needs development to cover the growth of the labour force available annually.
- ➢ Education has a significant positive relationship with female's unemployment among youth, total, and adult. Firstly, the outputs of the education system should be inconvenient with the labour market needs. Moreover, in this case, technical education can be a partial solution to improve the outputs of the education system.
- ➢ As economic freedom have negative and significant relationships with youth, total and adult unemployment and its gender as well. Secondly, Economic freedom development should be improving at all stages like business freedom, financial freedom, investment freedom, monetary freedom, trade freedom particularly in terms of investment freedom which can attract more investors to invest in the region and therefore create more job opportunities for youth.
- ➢ As labour market regulations have a significant and negative relationship with youth, total, and adult unemployment. Thirdly, flexible labour market regulations are needed in the Arab world to make youth easily access to the labour market.
- ➢ As negative relationship appeared between minimum wage and unemployment. Fourthly, fair minimum wages should be sited according to the standard of living especially for youth employment but at the same time not strict labour market regulations which lead youth to have a normal wage and entering the labour market easily.
- ➢ Fifthly, the free movement of individuals between the Arabic countries will improve the labour market in the Arab world, especially for youth.
- ➢ Training of job search for youth for using the internet effectively and applying to jobs to be online to increase productivity by policymakers.
- ➢ Training for self-employment can be helpful for young persons to reduce the pressure on the public sectors

- Developing private sectors to absorb more young people after offering concentrated training to young graduates before joining private-sector jobs to substitute the challenge of lack of experiences of youth.

- The agriculture sector can be critical for employment in some countries in which wages in the sector must develop to be in harmony with living prices so this sector can attract a more young person's for employment particularly the young without or less educated.

- The service sector can be one of the important sectors for the future of employment which need development to absorb more young people especially for the educated young.

- One of the most important factors that can help to decrease unemployment of youth is integration between the Arab world in terms of employment needs.

Strengths, limitations and future research directions

This dissertation has some strength, limitations and in addition to that, further research in the future is concluded.

Firstly, in the case of strengths, the main strengths can be summarized as the following:

- The study covers many variables including the labour market, economic, and educational, economic freedom, financial crisis to investigating the determinants of youth unemployment in the Arab world.

- The study analyzed the determinants of total unemployment and adult unemployment besides the determinants of youth unemployment in the Arab world.

- The study investigates how males and females determinants of youth, total, and adult unemployment are different in the Arab world.

- The study addresses how the minimum wages impact on unemployment among youth, total and adults as well in the Arab world.

- The study adding value by testing the impact of labour market regulations on youth, total and adults unemployment in the Arab world.

Secondly, in the case of limitations, the main limitations can be concluded as the following:

- In general, the lack of availability of data in the Arab world in which the data is not available for many variables in Arabic countries which limited the study to certain periods and certain variables.

- The limited database for minimum wage data and for limited countries as well in which regarding minimum wages, the data was available for some certain time period and for some certain countries in the Arab world.

> The study focuses on determinants of youth unemployment from the macro perspective but it may have other factors on the Arab world that impact on youth unemployment as well.

Thirdly, in case of future direction, the direction for future research can be as the following:

> Further study of how the labour market regulations impact on youth employment in the Arab world.

> Further investigation of minimum wage impacts on youth unemployment among more countries in the Arab world.

> Investigation of how flexible and strict labour market regulations impact on youth employment in the Arab world.

Main conclusions and novel findings of the dissertation

This dissertation aims to seek the determinants of youth unemployment in the Arabic world. As youth unemployment determinants are not highly researched in the Arabic region jointly. The novel findings of the dissertation are the following:

> *The first important of the findings* because this dissertation evaluates the determinants of youth unemployment besides studying the determinants of total unemployment and adult unemployment in comparisons with the determinants of youth unemployment. In addition to that this dissertation evaluates how the genders are different in term of determinants in which the dissertation examine the determinants of youth unemployment of males and females besides studying the determinants of total unemployment and adults unemployment of males and females. Identifying the determinants of youth, total, and adult unemployment will help to set policies to minimize unemployment among youth, total, and adults. In addition to that, knowing the determinants of the males and females of youth, total, and adult unemployment will help to address the challenge of unemployment among youth in the Arab world.

> *The second important of the findings* because this dissertation investigated the impact of economic freedom at all stages like business freedom, financial freedom, investment freedom, monetary freedom, trade freedom on youth unemployment besides studying the impact on total unemployment and adult unemployment in comparison with the impact on youth unemployment. In addition to that this dissertation evaluates how the genders are different in terms of economic freedom impact in which the dissertation examines the impact of economic freedom on youth unemployment of males and females besides studying the impact of economic freedom on total unemployment and adults' unemployment of males and females. Identifying the impact of economic freedom on youth, total, and adult

unemployment will help to set policies and laws to optimize economic freedom which will directly salutary on decrease the unemployment among youth, total, and adults. In addition to that, knowing the impact of economic freedom on males and females of youth, total, and adult unemployment will help to address the challenge of unemployment among them particularly by optimizing investment freedom in the Arab world.

➢ *The third important of the findings* because this dissertation studied the impact of financial crises on youth unemployment besides studying the impact of financial crises on total unemployment and adult unemployment in comparisons with the impact on youth unemployment. In addition to that this dissertation evaluates how the genders are different in term of financial crises impact in which the dissertation examine the impact of financial crises on youth unemployment of males and females besides studying the impact of financial crises on total unemployment and adults unemployment of males and females. Knowing the impact of financial crises on youth, total, and adult unemployment will help to set policies and laws to prevent and decrease the impact of any future financial crises.

➢ *The fourth important of the findings* because this dissertation studied the effect of labour market regulations on youth unemployment besides studying the effect of labour market regulations on total unemployment and adult unemployment in comparisons with the impact on youth unemployment. In addition to that this dissertation evaluates how the genders are different in term of labour market regulations impact in which the dissertation examines the effect of labour market regulations on youth unemployment of males and females besides studying the effect of labour market regulations on total unemployment and adults' unemployment of males and females. Identifying the impact of labour market regulations on youth, total, and adult unemployment will help to set policies and laws to develop labour market regulations which will decrease the unemployment among youth, total, and adults. In addition to that, knowing the impact of labour market regulations on males and females of youth, total, and adult unemployment will help to set labour market regulations among them.

➢ *The fifth important of the findings* because this dissertation studied the impact of the minimum wage on youth unemployment besides studying the impact of the minimum wage on total unemployment and adult unemployment in comparisons with the impact on youth unemployment. In addition to that this dissertation evaluates how the genders are different in term of labour market regulations impact in which the dissertation examines the impact of the minimum wage on youth unemployment of males and females besides studying the impact of the minimum wage on total unemployment and adults' unemployment of males and females. Distinguishing the impact of minimum wage on youth, total, and adult unemployment will help to set policies and laws to set a fair minimum wage which will

directly impact on the unemployment among youth, total, and adults. In addition to that, knowing the impact of minimum wage on males and females of youth, total, and adult unemployment will help to set minimum wages which can be in harmony with the standard of living in the Arab world.

References

Abbas, S. (2014). Long Term Effect of Economic Growth on Unemployment Level : In Case of Pakistan. *Journal of Economics and Sustainable Development*, *5*(11), 103–107. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.874.831&rep=rep1&type=pdf

Aghion, P., & Howitt, P. (1994). Growth and Unemployment. *The Review of Economic Studies*, *61*(3), 477–494. https://doi.org/10.2307/2297900

Akhtar, S., & Shahnaz, L. (2006). Understanding the Youth Unemployment Conundrum in Pakistan: A macro-micro Analysis. *The Indian Journal of Labour Economics*, *49*(2), 233–248. https://www.researchgate.net/profile/Sajjad_Akhtar4/publication/298322421_Understanding_t he_youth_unemployment_conundrum_in_Pakistan_A_macro-micro_analysis/links/5b4cabdcaca272c60947e678/Understanding-the-youth-unemployment-conundrum-in-Pakistan-A-macro-m

Anyanwu, J. C. (2014). Does Intra-African Trade Reduce Youth Unemployment in Africa? *African Development Review*, *26*(2), 286–309. https://doi.org/10.1111/1467-8268.12082

Arpaia, A., & Curci, N. (2010). EU labour market behaviour during the Great Recession. *European Economy - Economic Papers 405, Directorate General Economic and Financial Affairs , European Commission. European Union.* https://ec.europa.eu/economy_finance/publications/economic_paper/2010/pdf/ecp405_en.pdf

Arslan, M., & Zaman, R. (2014). Unemployment and Its Determinants:A Study of Pakistan Economy (1999-2010). *Journal of Economics and Sustainable Development*, *5*(13), 20–24. https://pdfs.semanticscholar.org/623e/7011cb8e4b2169ef5cc7a437c9f1c54251d8.pdf

Bayar, Y. (2014). Effects of economic growth, export and foreign direct investment inflows on unemployment in Turkey. *Investment Management and Financial Innovations*, *11*(2), 20–27. https://businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/57 68/imfi_en_2014_02_Bayar.pdf

Bayrak, R., & Tatli, H. (2018). The Determinants of Youth Unemployment: A Panel Data Analysis of OECD Countries. *The European Journal of Comparative Economics*, *15*(2), 231–248. https://doi.org/10.25428/1824-2979/201802-231-248

Bayrak, R., & TATLI, H. (2016). Short and long term analysis of some factors effecting youth unemployment in Turkey. *Theoretical and Applied Economics*, *23*(3), 229–242.

http://store.ectap.ro/articole/1210.pdf

Bruno, Giovanni S. F., Tanveer, M. C., Marelli, E., & Signorelli, M. (2016). The short- and long-run impacts of financial crises on youth unemployment in OECD countries. *Applied Economics*, *49*(34), 3372–3394. https://doi.org/10.1080/00036846.2016.1259753

Caporale, G. M., & Gil-alana, L. (2014). Youth Unemployment in Europe : Persistence and Macroeconomic Determinants. *Comparative Economic Studies*, *56*(4), 581–591. https://doi.org/10.1057/ces.2014.29

Choudhry, M. T., Marelli, E., & Signorelli, M. (2010a). Financial Crises and Labour Market Performance. In *69th International Atlantic Economic Conference Prague, Czech Republic* (pp. 1–24). https://www.researchgate.net/profile/Enrico_Marelli/publication/228337563_Financial_Crises_and_Labour_Market_Performance/links/0fcfd50b71c9b6bbc4000000/Financial-Crises-and-Labour-Market-Performance.pdf

Choudhry, M. T., Marelli, E., & Signorelli, M. (2010b). Youth Unemployment and the Impact of Financial Crises. In *XXV Convegno Nazionale di Economia del Lavoro Università degli Studi G. D'Annunzio, Chieti-Pescara* (pp. 1–18). http://www.aiel.it/Old/bacheca/PESCARA/papers/Choudhry_Marelli_Signorelli_Youth.pdf#targetText=It is well-known that,young people compared to adult.

Chowdhury, M. S. R., & Hossain, M. T. (2014). Determinants of Unemployment in Bangladesh: A Case Study. *Developing Country Studies*, *4*(3), 16–20. https://pdfs.semanticscholar.org/d01a/b61514ccd8a580776a368fe7696b636c6371.pdf

Dietrich, H. (2013). Youth unemployment in the period 2001–2010 and the European crisis – looking at the empirical evidence. *Transfer: European Review of Labour and Research*, *19*(3), 305–324. https://doi.org/https://doi.org/10.1177/1024258913495147

Ebaidalla, E. M. (2016). Determinants of Youth Unemployment in OIC Member States: A Dynamic Panel Data Analysis. *Journal of Economic Cooperation and Development*, *37*(2), 81–102. http://www.sesric.org/pdf.php?file=ART15032301-2.pdf

Feldmann, H. (2007). Economic Freedom and Unemployment around the World. *Southern Economic Journal*, *74*(1), 158–176. https://doi.org/10.2307/20111958

Folawewo, A. O., & Adeboje, O. M. (2017). Macroeconomic Determinants of Unemployment: Empirical Evidence from Economic Community of West African States. *African Development Review*, *29*(2), 197–210. https://doi.org/10.1111/1467-8268.12250

Fougère, D., Pouget, J., & Kramarz, F. (2009). Youth Unemployment and Crime in France. *Journal of the European Economic Association*, *7*(5), 909–938. https://www.jstor.org/stable/40282795

Furceri, D., & Mourougane, A. (2012). The effect of financial crises on potential output: New

empirical evidence from OECD countries. *Journal of Macroeconomics*, *34*(3), 822–832. https://doi.org/10.1016/j.jmacro.2012.05.010

Göçer, İ., & Erdal, L. (2015). The Relationship between Youth Unemployment and Economic Growth in Central and Eastern European Countries : An Empirical Analysis. *Journal of The Faculty of Economics and Administrative Sciences*, *5*(1), 173–188. http://iibfdergi.karatekin.edu.tr/Makaleler/477766409_JFEAS_5_1_10.pdf

Gorry, A. (2013). Minimum wages and youth unemployment. *European Economic Review*, *64*, 57–75. https://doi.org/10.1016/j.euroecorev.2013.08.004

International Labour Organization (ILO). (2019a). https://ilostat.ilo.org.

Maqbool, M. S., Mahmood, T., Sattar, A., & Bhalli, M. N. (2013). Determinants of Unemployment: Empirical Evidences from Pakistan. *Pakistan Economic and Social Review*, *51*(2), 191–207. http://pu.edu.pk/images/journal/pesr/PDF-FILES/5   MAQBOOL   Determinants   of Unemployment_V51_No2_Winter2013.pdf

Ogbeide, F. I., Kanwanye, H., & Kadiri, S. (2015). The Determinants of Unemployment and the Question of Inclusive Growth in Nigeria: Do Resource Dependence, Government Expenditure and Financial Development Matter? *Montenegrin Journal of Economics*, *11*(2), 49–64. https://doi.org/10.14254/1800-5845.2015/11-2/3

Şahin, D. (2016). Determinants of Unemployment: Empirical Analysis for China. *The Journal of Academic Social Science*, *4*(22), 50–58. https://pdfs.semanticscholar.org/2aec/d8f461a346ff2c7af1fea8345386be627710.pdf?_ga=2.157363130.1247481089.1570986649-1430984824.1570986649

Verick, S. (2009). Who Is Hit Hardest during a Financial Crisis? The Vulnerability of Young Men and Women to Unemployment in an Economic Downturn. *Discurssion Paper No. 4359, The Institute for the Study of Labor (IZA).* http://ftp.iza.org/dp4359.pdf

List of publications

Registry number: DEENK/37/2020.PL
Subject: PhD Publikációs Lista

Candidate: Ahmed A. H. Salama
Neptun ID: IDGH97
Doctoral School: Károly Ihrig Doctoral School of Management and Business
MTMT ID: 10060591

List of publications related to the dissertation

Articles, studies (5)

1. **Salama, A.**, Oláh, J.: Key factors impact on unemployment in Arab world.
   Central European Journal of Labour Law and Personnel Management. 2 (2), 1-13, 2019.
   ISSN: 2644-4542.

2. **Salama, A.**: Analysis of unemployment challenges in Palestine between 2000 and 2015.
   SEA - Practical Application of Science. 5 (15), 381-387, 2017. EISSN: 2360-2554.

3. **Salama, A.**: Daily wages comparison for wage employees in the public and private sectors in Palestine.
   Network Intelligence Studies. 5 (10), 97-105, 2017. EISSN: 2344-1712.

4. **Salama, A.**: Discuss the relationship between unemployment and level of education in Palestine.
   The Annals of the University of Oradea. Economic Sciences. 26 (1), 171-180, 2017. ISSN: 1222-569X.

5. **Salama, A.**: How literacy affects unemployment among different age groups in Palestine.
   SEA - Practical Application of Science. 5 (15), 363-371, 2017. EISSN: 2360-2554.

The Candidate's publication data submitted to the iDEa Tudóstér have been validated by DEENK on the basis of the Journal Citation Report (Impact Factor) database.

26 February, 2020