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Microfinance and The Improvement of Social Welfare of Beneficiary Households: Evidence from Tunisia

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Microfinance and The Improvement of Social Welfare of Beneficiary Households: Evidence from Tunisia

Abstract

This study is a contribution in the field of evaluation of the effects of microfinance on the social status of its beneficiaries. In this article, we used the counterfactual approach that compares the evolution of the situation of beneficiaries of microcredit to a control group (which has the same initial characteristics of the group of beneficiaries). The results of our empirical study confirm previous findings on the positive effects of microfinance on social welfare. These effects are identified through rising food costs, access to health services, education for children and improved household living arrangements.

1. Introduction

Economic growth Microfinance is considered by many economic and policy makers, as the best solution to the problem of the marginalization suffered by populations in developing countries. This discipline has developed as a tool for social and economic development, focusing specifically on people with low incomes. It has emerged as a consistent approach with the new strategies of social and human development who are interested, primarily, in the economic and social integration of the disadvantaged. Around the world, many microfinance institutions (MFIs) are trying to build human capital and improve the living conditions of their clients.

In Tunisia, the public authorities and stakeholders in the development seem to be aware of the socioeconomic scope of microfinance; they are fully convinced of the role it can play as an effective means of social and human development, particularly through its ability to reduce poverty and improve the living conditions of the beneficiaries. Indeed, improvement of income, access to health services and education and improved housing conditions, are just a few ways in which microfinance affects the poorest and excluded populations of financial systems traditional.

This study is part of a perspective for assessing the effects of microfinance on the social status of its beneficiaries. It expands the research in the area of the impact of microfinance. In this article, the question that we intend to answer is: What is the impact of access to microcredit and its use on the social conditions of the beneficiaries? The next section reviews the previous work has addressed the relationship between microfinance and the improvement of social welfare. Section 3 deals with the formulation of hypotheses of the study and present the research methodology. Section 4 presents the model results and their interpretation. Finally, the last section concludes this work.

2. Literature Review

In recent years, the Microfinance impact studies have begun to address more systematically the impact of credit in the beneficiary households. Most of them have found that microcredit may have "magical" effects on the living conditions of households (Sebstad & Chen, 1996). Most of these studies were conducted to highlight the role of microfinance in the economies of developing countries, where social and economic strategies implemented to improve the living conditions of their poorest people have not been successful.

In fact, contrary to economic impacts, social impacts of microcredit are less questionable. Indeed, the additional income generated by the business and other productive investments of microcredit beneficiaries enable them to improve the

living conditions of their households. Several studies have examined the impact of microcredit on the change in consumer spending habits and the structure of these expenditures to assess the improvement of living conditions. Mazumder and Lu (2015) show that access to microfinance services can improve the quality of life of beneficiaries.

To measure social well-being of participating households in a microfinance program, impact studies have often used the indicators of quality of life such as: food availability, access to health services, the education of children and housing conditions (Afrane, 2002; Brau, Hiatt, & Woodworth, 2009; Chen & Snodgrass, 2001). These quality of life measures were designed to evaluate the social impacts that are possibly overlooked in economic analyzes (Brau et al., 2009). These measures are chosen because of their use as poverty indicators by the World Bank, the International Labour Organization (ILO), the United Nations Development Programme (UNDP) and other major development agencies (Littlefield, Morduch, & Hachemi, 2003; Maxwell, 1999).

First, access to microcredit enables poor people to increase their income, which enables them to accumulate savings to improve their security levels and deploy additional spending on food needs and nutritional health (Alemu, 2004). Mknelly and Dunford (1999) have shown that joining a microcredit program led to increased food spending, which implies an improvement in the nutritional status of households. According to Khandker (2005), microcredit helps families to smooth their spending by reducing the pinch of hunger and need in difficult times, especially when women are borrowing.

To appreciate the improvement in the nutritional status of households, impact studies used different indicators. Alemu (2004) has proposed to evaluate the annual expenditure on durable food products, the percentage of households whose Nutritional diet has been improved, the percentage of households that have experienced food shortages and the strategies they adapted. On their part, Brau and Woller (2004) estimated the quality and the value of food purchased. Chen and Snodgrass (2001) measured the increase in food and beverage expenses per member per day.

Secondly, microcredit enables the poor a better access to education and health services. Indeed, the availability of a stable and profitable source of income helps the poor to send their children to school and to benefit from public health services. Studies that focused on the effect of microcredit on children's education examined either expenditures on school fees, children's school attendance or education levels. Suturo (1990) and Buckley (1996) showed that schooling expenditure increases in a remarkable way following the granting of microcredit, which suggests a positive impact on schooling. According to Pitt and Khandker (1998), microcredit has a significant impact on the education of boys and girls. Chen and Snodgrass (2001), by measuring schooling rates, show that access to microfinance services enables children of beneficiaries with a better education. In the same way,

Maldonado and González-Vega (2008)show that microfinance has a positive effect on the education of children in rural areas, reducing, thereby, child labor.

Regarding the improvement of access to health services, studies show that poor households that granted microcredit improved their health conditions and access to family care (Gubert & Roubaud, 2005; Sebstad & Chen, 1996). Pitt et al (2003) show that loans to women help improves the health status of their children while loans to men appear to be ineffective. Several authors have even thought the effect of access to microfinance services on mental health of children by reducing poverty and the risk of depression in children. According to these authors, microfinance has the potential to improve psychosocial functioning of these children. This is further confirmed by DeLoach and Lamanna (2011) which show that the presence of microfinance institutions in communities significantly improves children's health. According to these authors, Microfinance can facilitate the sharing of health-related information among parents, and assist in the development of family health infrastructure.

In addition to food, schooling for children and health conditions, improved housing conditions are another factor in enhancing the living conditions of households. Indeed, the variable "housing conditions" was used in most of the microcredit impact studies (Afrane, 2002; Chen & Snodgrass, 2001; Gubert & Roubaud, 2005; Merrill, 2012). More than 67% of the respondents of Gubert and Roubaud (2005) reported that they have improved their housing conditions and home equipments. According to Merill (2012), Microfinance is playing an increasingly important role in financing housing conditions, helping to provide more adequate shelter and facilities. The basic idea is that participation in a microfinance program helps the poor to accumulate capital and thus invest in the improvement of their homes (McIntosh, Villaran, & Wydick, 2011), either as a living space or to draw an income from it, through its renting.

3. Methodology

3.1. The hypotheses

The review of the literature allowed us to construct the following assumptions:

H1: Access to microcredit has a positive effect on the beneficiary's schooling of children.

H2: Access to microcredit has a positive effect on the beneficiary's and his household's nutritional status.

H3: Access to microcredit has a positive effect on the health of the beneficiary and his household.

H4: Access to microcredit has a positive effect on housing conditions

3.2.The impact assessment

To understand the social change that can induce access to microcredit in Tunisia and verify our assumptions, we chose to use the "counterfactual" approach that seeks to compare the results of the access to microcredit with a simulation of what the results would have been in case of non-access. We chose to use the control group method. In fact, the choice of this approach is justified by its comparative feature which places it among the most robust methods of impact assessment (Hardy & Koontz, 2009; Yin, 2003). To construct a control group formed by individuals who would have had similar results to those achieved by the treatment group members, if they had not borrowed, we used the simplest approach that consist to include, in the control group, individuals whose credit application is approved but who have not yet received the loan amount.

In this study, we intend to assess the impact of microfinance in the governorate of Kairouan (Tunisia). Our comparison will focus on microcredits given by the development association AKDI and those distributed by the NGO ENDA. We chose, deliberately, to carry our study on a large sample size (300 people) to ensure its representativeness and to maximize the quality of the results that will be provided by the estimates. We used the survey as a data collection means, which cover the period 2014-2015.

3.2. The analysis model

The impact of microcredit is estimated by a single equation that relates the social impacts (as perceived by respondents) with the explanatory variables. Our model to estimate is:

$$y_i = C_0 + \alpha A_i + \beta X_i + \gamma Z_i \qquad (1)$$

$\mathbf{Y_i}$ is a vector of variables of change that are qualitative data collected from questions with dichotomous responses. These variables take the value 1 if there is a positive change and 0 if there is no change or if there is a negative change. The indicators we used to evaluate social well-being of beneficiary and his household are the following: increase in school spending, increase in food spending, increase in health spending, housing improvements.

$\mathbf{A_i}$ (ACCES) is a dummy variable for access and use of microcredit. It takes the value 1 if the individual belongs to the treatment group (borrower since 2013), and 0 if it belongs to the control group (who have not yet access to microcredit). The confirmation of our main hypotheses, assuming that access to microcredit has a positive effect on the various welfare measures listed above (Y_i), requires the coefficients α_i, estimated on the variables A_i to be statistically significant and positive.

$\mathbf{X_i}$ is a vector of variables that characterize individuals and their households (household size, poverty level and which are likely to influence the results. We have:

- AGE is a continuous variable that indicates the age of the respondent.
- GENRE is a dichotomous variable that indicates the gender of respondent. It takes the value 1 if the respondent is a woman and the value 0 otherwise.
- NIVEDU is a binary variable that indicates the respondent's level of education. It takes the value 1 if the respondent has a secondary or university level of education and the value 0 if he has a primary level or if he is illiterate.
- ETATMAT is a binary variable that indicates the respondent's marital status. It is set to 1 if the respondent is married and 0 if the respondent is single, divorced or widowed.
- MILGEO is a binary variable that indicates the respondent's area of residence. It takes the value 1 if the environment is rural and the value 0 if it is urban.
- TMENAG is a continuous variable that indicates the number of persons in the respondent's household.
- NIVPAUV is a binary variable that indicates the respondent's level of poverty (measured by average monthly expenditures). It is set to 1 if the respondent's monthly expenses are less than 250 Tunisian Dinars (i.e., very poor) and 0 otherwise (non-poor).
- SECTACTV is a binary variable that indicates the economic sector in which the respondent operates. It takes value 1 if the sector is agriculture or production and value 0 if the sector is trade or services.

Zi is the set of micro-credit related variables when it exists. Indeed, in addition to access to credit, factors related to the degree of participation in the microcredit program are also likely to influence the variables of interest. The variables related to the characteristics of microcredit are given below:

- INSTITMC is a binary variable that indicates the institution that granted the microcredit. It is set to 1 for ENDA clients and 0 for AKDI clients.
- MTCDT is a continuous variable that indicates the amount of microcredit.
- ANCNT is a nominal variable that indicates the length of the credit relationship, that is, the number of credits received.

However, the correlation matrix revealed a perfect correlation between the variable access to credit (Ai) and the characteristic variables of the microcredit (Z_i).

To solve this problem and improve the significance of the model, we opted for the following solution:

In a first step, we estimated a first model (general model) with only the variable access to credit (A_i) and the personal characteristics of the respondents (X_i) to verify the signification of the granting of credit:

$$y_i = C_0 + \alpha A_i + \beta X_i \qquad (2)$$

In a second step, and once the significance of the access variable is verified, we will specify a model with only the individual variables of the beneficiaries (X_i) and the variables related to the credit characteristics (Z_i). This model is estimated only for beneficiaries (that is, for whom A_i= 1).

$$y_i = C_1 + \beta X_i + \gamma Z_i \qquad (3)$$

The purpose of this specification is to explain the other factors involved in the changes generated by microcredit and to verify the importance of credit-related characteristics in achieving the social impact.

Since our dependent variables are dichotomous, we used logistic regression to estimate our models. Finally, the data from our field survey are processed using the STATA software. For each estimated model, the overall significance and the fitting quality are tested, respectively, using the Wald chi-square statistic and the McFadden Pseudo-R2.

4. Results

4.1. Effect of Access to Microcredit on school spending

To evaluate the impact of microcredit on the social status of its beneficiaries, firstly, we have regressed the “increase in school spending” variable (which takes the value "1" if the school spending of the household has increased and "0" If not) on the set of explanatory variables (already presented in the previous paragraph). The increase in school spending is an indicator for measuring the improvement of education of household members or children to the beneficiary.

The first specification of the model shows the significance of the variable "access to microcredit" (p = 0,000) that is positively correlated with the dependent variable. Therefore, access to microcredit allows the increase in school spending. This is either through direct access to credit resources, either by improving household income following the granting of microcredit.

Table 1: Effect of Access to Microcredit on school spending

Dependent variable : Increase in school spending		
Independent variables	**1st model**	**2nd model**
ACCES	1,55***(4,91)	-
AGE	0,03*(1,80)	0,02(0,97)
GENRE	0,24(0,84)	-0,24(-0,59)
NIVEDU	-0,27(-0.88)	-0,16(-0,37)
ETATMAT	1,16***(4,15)	1,80***(4,65)
MILGEO	0,57*(-1,89)	-1,04**(-1,99)
TMENG	0,49***(5,45)	1,03***(6,10)
NIVPAUV	0,05 (0,20)	0,12(0,34)
SECTACT	-0,05(-0,19)	0,04(0,09)
Const 1	-5,25***(-5,36)	-
INSTITMC	-	0,85*(1,94)
MTCDT	-	-0,00(-1,09)
ANCNT	-	0,28(1,13)
Const 2	-	-6,49***(-4,38)
Statistical Z-values in brackets		
*** :Significant at the 1% level (p <0,01)		
** :Significant at the 5% level (p <0,05)		
*: Significant at the 10% level (p <0,10)		

Source: Author's own calculation using STATA software

The second model specification reveals the significant factors that confirm the impact of microcredit on improving school expenditure, namely marital status, area of residence, family size and the microcredit institution.

The marital status variable (ETATMAT) is significant at the 1% level and is positively correlated with the dependent variable. That is, married beneficiaries are more likely than unmarried, divorced or widowed individuals to increase their school expenditures. This seems to be evident since single beneficiaries do not have children in school and are not affected by the increase in school expenses. For the other two statuses: divorced and widowed, they represent only a negligible proportion of our sample. Thus married beneficiaries represent the only category concerned by the increase in their children's schooling expenses.

In addition, the variable area of residence (MILGEO) is significant at the 5% level; it has a negative coefficient in the model. This shows that urban beneficiaries are more likely than their rural similar to increase spending for education, which is the same with the school enrollment rates that are higher in urban areas.

The size of the household is also a significant variable in the model (at 1% level). It is positively correlated with the dependent variable. This means that the larger the size of the household, the greater the likelihood of an increase in school

expenditures. This can only be explained by the fact that the number of school-age members in the household increases with the size of the latter. Thus, for larger households, part of the additional resources will be automatically used to finance school expenses.

Among the variables that characterize microcredit, the only significant variable in the model is the type of credit, in other words, it is the variable (INSTITMC). It is significant at the 10% level, with a positive coefficient. Therefore, the beneficiaries of the microfinance institution ENDA are more likely to increase their spending on schooling than those of the AKDI association. This can be explained by the seminars and awareness-raising activities organized by the ENDA institution for the benefit of its clients, which focused on the importance of schooling on several occasions.

4.2.Effect of Access to Microcredit on food spending

The second well-being indicator we have modeled is “Increase in food expenses”. In fact, investment in food expenditures reflects the improvement on the beneficiary's and his household's nutritional status. So in this model we propose to examine the role of access to microcredit in improving the food situation of the beneficiary and his household.

Table 2: Effect of Access to Microcredit on food spending

Dependent variable : Increase in food spending		
Independent variables	**1st model**	**2nd model**
ACCES	1,42***(4,77)	-
AGE	0,00(0,07)	-0,02(1,07)
GENRE	0,94***(3,07)	1,49***(3,95)
NIVEDU	-0,13(-0,43)	0,26(0,68)
ETATMAT	1,54*** (5,05)	1,37***(3,55)
MILGEO	0,06(0,21)	-0,05(-0,10)
TMENG	0,03(0,42)	0,03(0,29)
NIVPAUV	-0,44(-1,56)	-0,63*(-1,75)
SECTACT	-0,52*(-1,75)	-0,59(-1,09)
Const 1	-2,20**(-2,39)	-
INSTITMC	-	0,37(0,95)
MTCDT	-	-0,00(-0,58)
ANCNT	-	0,12(0,53)
Const 2	-	-1,94(-1,54)
Statistical Z-values in brackets		
*** :Significant at the 1% level (p <0,01)		
** :Significant at the 5% level (p <0,05)		
*: Significant at the 10% level (p <0,10)		

Source: Author’s own calculation using STATA software

The first specification of the model shows that the "access to microcredit" variable is significant at the 1% level. It is positively correlated with the dependent variable which affirms that access to microcredit allows improving the diet of the beneficiary and his family through higher food expenditures. This is explained by the access to new resources (credit itself or income from new activities).

Other factors that explain the increase in food expenditure are mainly the gender of beneficiary (GENRE) and marital status (ETATMAT), which are significant at the 1% level, and the variable "poverty level" (NIVPAUV) which is significant at the 10% threshold. For the variable (GENRE), it is positively correlated with the dependent variable. This means that where the beneficiary is a woman, the likelihood of increased food spending is more important, which is to say that women are more interested than men by improving the nutritional status of their families.

Similarly, the "marital status" variable (ETATMAT) has a positive coefficient in the model, which shows that, if the beneficiary is married, the probability of increased spending on food is more interesting. In fact, married people have more responsibility for their households and are more conscious of the feeding conditions of their children and dependents. Thus, when they have access to additional income, they invest a part in improving the food status of their families (as opposed to singles who do not have to worry about diet, as we have already noted).

The variable level of poverty (NIVPAUV) is significant at the 10% level, it has a negative coefficient in the model. So, unless the recipient is poor, the greater the likelihood of increased spending on food is high. This can be explained by the fact that, for the least poor beneficiaries, when there is extra income; it will be used in the improvement of living conditions, in particular, improving the diet. In contrast, the poorest people will invest additional income in the satisfaction of their most necessary needs.

For the different variables that characterize microcredit, they are not significant. That is to say, they have no impact on increasing food expending and consequently on improved feeding conditions of the beneficiary and his family.

4.3. Effect of Access to Microcredit on Health spending

In a next step, we modeled the variable “increase in health spending”, to clarify the role of microcredit in improving the health of the beneficiary and his household.

Table 3: Effect of Access to Microcredit on Health Spending

Dependent variable : Increase in health spending		
Independent variables	**1st model**	**2nd model**
ACCES	1,33***(4,75)	-
AGE	0,01(0,76)	-0,04(-1,40)
GENRE	0,26(0,97)	1,67***(3,46)
NIVEDU	-0,19(-0,66)	-0,79*(-1,72)
ETATMAT	1,17***(4,24)	1,64***(3,31)
MILGEO	-0,08(-0,32)	1,46**(2,52)
TMENG	0,14*(1,71)	0,19(1,35)
NIVPAUV	0,65**(2,28)	1,16**(2,11)
SECTACT	0,20(0,70)	-1,49**(-2,51)
Const 1	-2,92***(-3,14)	-
INSTITMC	-	-1,52***(-3,14)
MTCDT	-	0,00***(6,15)
ANCNT	-	-0,12(-0,41)
Const 2	-	-6,30***(-3,86)

Statistical Z-values in brackets
*** :Significant at the 1% level (p <0,01)
** :Significant at the 5% level (p <0,05)
*: Significant at the 10% level (p <0,10)

Source: Author’s own calculation using STATA software

The results of the first specification of the model show that the "access to microcredit" variable is significant at the 1% level, with a positive coefficient. This confirms that access to microcredit enables the beneficiary to improve his health conditions and those of his family.

As for the other determinants that confirm this effect of microcredit, there are many. First of all we distinguish variables: gender (GENRE), marital status (ETATMAT), microcredit institution (INSTITMC), and amount of credit (MTCDT) that are significant at the 1%. Then the area of residence variable (MILGEO), poverty level (NIVPAUV) and sector of activity (SECTACT) are significant at the 5% level. Finally, the variable school level (NIVEDU) is significant at the 10% level.

The variable "gender" is positively correlated with the dependent variable, which means that the probability of increase in health spending is higher among beneficiaries "women" than among beneficiaries "men". Similarly, the variable "marital status" has a positive coefficient in the equation. So, if the beneficiary is married, the probability of increase in health spending is more important. This can be explained by the responsibility that support married beneficiaries to their

families and households and concerns they have for their health, unlike the singles who have no dependent children.

The microcredit institution variable (INSTITMC) has a negative relationship with the dependent variable. That is to say the likelihood of increase in health spending is higher for AKDI's beneficiaries than for those of ENDA. The credit amount variable (MTCDT) is positively correlated with the dependent variable. This means that the larger the amount of credit, the greater the likelihood of an increase in health care spending. Indeed, a larger amount of credit implies access to more resources, which the beneficiary can use to improve the living conditions of his household (including improved health).

For variables significant at the 5% level, we note that the variables "area of residence" and "poverty level" are positively correlated with the dependent variable. That is to say that the likelihood of increase in health spending is higher when the recipient is poorer and when resides in a rural area. This is due to the poor health conditions of the poor (who do not have the financial means to medical care) and the rural population (whose environment lacks infrastructure and health services). So access to additional resources (micro-credit) provided to these categories the financial means to move and seek the necessary health services. Unlike, the variable "sector of activity" is negatively correlated with the dependent variable. This shows that beneficiaries who are exercising a commercial or service offering activities are more likely to increase their health spending than their similar operating in the agriculture or production sector.

Finally, the variable "level of study", which is significant at the 10% level, has a negative coefficient in the equation. This means that the probability of increase in health spending is higher for illiterate beneficiaries and for those with a level of primary education, than for those with an advanced school level.

4.4. Effect of Access to Microcredit on Housing Conditions

Among the most important indicators of the social status of individuals, are the conditions of their habitat. It is in this context that we questioned the beneficiaries of microcredit on the improvement of housing conditions.

Table 4: Effect of Access to Microcredit on Housing Conditions

Dependent variable: Housing conditions		
Independent variables	**1st model**	**2nd model**
ACCES	1,15***(4,23)	-
AGE	-0,00(-0,47)	-0,00(-0,13)
GENRE	0,14(0,52)	1,51***(3,00)
NIVEDU	-0,15(-0,51)	-0,76*(-1,74)
ETATMAT	0,68**(2,38)	1,73***(3,99)
MILGEO	-0,25(-0,93)	0,14(0,25)
TMENG	0,14*(1 ,80)	0,20*(1,65)
NIVPAUV	-0,51**(-1,96)	-0,27(-0,59)
SECTACT	0,29(1,03)	-0,35(-0,62)
Const 1	-1,22(-1,45)	-
INSTITMC	-	-1,43***(-3,03)
MTCDT	-	0,00***(5,70)
ANCNT	-	-0,08(-0,28)
Const 2	-	-6,24***(-3,42)

Statistical Z-values in brackets
*** :Significant at the 1% level (p <0,01)
** :Significant at the 5% level (p <0,05)
*: Significant at the 10% level (p <0,10)

Source: Author's own calculation using STATA software

The first specification of our model shows that the variable access to microcredit is positively correlated with the dependent variable. It is significant at the 1% level (p = 0,000), indicating the difference between beneficiaries and non-beneficiaries in terms of the probability of improving housing: the beneficiaries have a higher probability. This shows the positive impact of access to microcredit on the improvement of housing conditions. Indeed, access to microcredit can enable the beneficiary to enhance its income and, consequently, have more financial means it can operate in the development of his home.

By moving to the second specification of the model, we note the existence of other determinants of the improvement of housing, namely, the variables "gender", "marital status", "microcredit institution" and "amount of credit ", which are significant at the 1% level, and the variable" level of study "and" household size "that are significant at the 10% threshold. The gender variable is positively correlated with the dependent variable. This means that the probability of housing improvement is greater when the beneficiary is a woman. This seems very logical, since in most cases, it is women who are interested, more than men, to the layout

of their homes, their appearances and their aesthetics. For marital status, it is also a positive correlation with the dependent variable, which means that married beneficiaries are more likely to improve their housing conditions than others. In fact, single people often do not have individual households, they reside in most cases with their parents and have no interest in spending in the home, unlike married beneficiaries who have their own family dwelling And which always tend to improve.

The other two variables significant at the 1% level are related to the credit conditions. We first note that the variable "microfinance institution" (INSTITMC) has a negative coefficient in the equation, Showing that the probability of housing improvement increases when the beneficiary of the microcredit is a client of the AKDI association and decreases when he is a client of the NGO ENDA. Moreover, the variable amount of the microcredit is positively correlated with the dependent variable. Therefore, the greater the amount of credit, the greater the likelihood of housing improvement. This seems to be obvious, as the development and improvement of the home requires relatively large financial resources, which is only possible with large amounts of credit.

Turning to sparsely significant variables, the "level of study" variable is negatively correlated with the dependent variable, which means that the probability of improving housing conditions is higher for illiterate beneficiaries or with a primary education level. In addition, the household size variable has a positive coefficient in the model. So the size of the household is large, the more likely the development of housing.

5. Discussion and Conclusion

The results of our empirical study confirm previous findings on the positive impact of microfinance on the welfare of households (Afrane, 2002; Brau et al., 2009; Chen & Snodgrass, 2001). These effects are identified through rising food spending, access to health services, education of children and improvement on household living that are poverty indicators used by the World Bank, the international organization of work and the UNDP. Several studies have examined the impact of microcredit on the change in beneficiary spending habits to assess the improvement of living conditions. On our part, we have focused on increasing food, health and children's education related spending to assess the impact of access to microcredit in these three areas of life.

First, microfinance allows poor people to increase their income, which enables them to accumulate savings to improve their security levels and deploy additional spending on food needs and nutritional health (Alemu, 2004). Indeed, the main preoccupation of the poor, in terms of consumption, does not seem to concern

leisure or social consumer goods. Rather, it concerns the satisfaction of basic needs, namely, food, education or health. This is why the effect of the microfinance institutions' intervention seems very significant on food expenditure. We found a significant difference in the increase in food expenditures among beneficiaries and non-beneficiaries ("Access" is significant to the 1% level). This is consistent with the findings of Mknelly and Dunford (1999) which confirmed that membership in a microcredit program led to rising food spending, suggesting improving the nutritional household diet. In addition, we noticed that being a beneficiary "woman" improves the likelihood of rising food spending. Similarly, Khandker (2005) states that Microcredit helps families to smooth their spending and to reduce the pinch of hunger and necessity, in hard times, especially when women are the beneficiaries.

On the other hand, we can conclude that microfinance allows poor better access to education and health services. Indeed, the availability of a stable and profitable source of income helps the poor to send their children to school and to benefit from public (or private) health services. Previous studies that examined the effect of microcredit on children's school attendance or their educational attainment have shown a positive effect: (Suturo, 1990) and (Bucley, 1996) showed that school expenditures increase in a remarkable way following the granting of microcredit. Thus, microcredit has a significant impact on the education of children of beneficiaries, the boys and girls (M. Pitt & Khandker, 1998). The study of Maldonado and González-Vega (2008) showed the positive impact of microfinance on the education of children in rural areas, which has been accompanied by the reduction of child labor.

Similarly, we have confirmed the results of most empirical studies and have shown that poor households can improve their health conditions and access to family care services as a result of access to microcredit. Our results show the importance of the "gender" variable in explaining the increase in health expenditure for microcredit recipients. This coincides with the findings of Pitt et al (2003) showing that loans to women help improve the health status of their children while loans to men seem to be ineffective.

Improving housing conditions are, next to food, health and education of children, another factor in improving social welfare. In the same sense as Afrane (2002); Chen and Snodgrass (2001) and McIntosh et al (2011), we have shown that access to microcredit makes it possible to improve housing conditions following the construction or maintenance of the home or the purchase of new equipment or furniture. This comes from the idea that the intervention of microfinance institutions helps the poor to accumulate capital and therefore to invest in improving their homes, either as a space for permanent living or to earn income through its rental.

At the social level, we have shown that microfinance, and particularly microcredit allows the improvement of living conditions of beneficiary households.

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Tourism and Economics of Transportation: A Macroeconomic Perspective

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Tourism and Economics of Transportation: A Macroeconomic Perspective

Abstract

The paper examines the nexus between tourism and economics of transportation with a new asymmetric panel causality test, developed by Hatemi-J et al (2015) for BRIC-T countries during 1995 and 2017. After some preliminary (homogeneity, cross-section dependence, unit root tests) and co-integration test some selected variables such as real exchange rate, inflation rate and trade are added to the empirical model. The purpose here is to determine the contribution of macroeconomic indicators on tourism growth.

The results show that there is a co-integration between number of tourist arrivals and tourism receipts as well as transportation costs. Also, negative cumulative tourism shock causes positive tourist arrivals shocks and positive cumulative tourism receipts shocks cause negative transportation costs. Hence, there is a causality between variables only in these conditions. Contribution of inflation rate and number of tourist arrivals have the biggest effect on tourism growth. We may say that from a macroeconomic perspective demand side is more dominant than supply side of tourism sector.

1. Introduction

Tourism industry is an important economic source for emerging and developing countries and it has crucial effects on their macroeconomic indicators and economic performance. However, the current written literature examines only or tourism demand or tourism supply sides of the industry. The empirical literature can be divided into three main frames such as; studies on the nexus between transportation and tourism, tourism and the economic development or transportation and the economic growth. However, there is just few papers taking into account both demand and supply sides of tourism within economics of transportation for the major emerging markets.

The purpose of this study is to examine the causality between tourism and economics of transportation with Hatemi-J et al. (2015) asymmetric panel causality test, which considers different reactions of agents to the shocks and the asymmetric information in the market. The major emerging markets (Brazil, India, Russia, China and Turkey) have been chosen for the analysis not only because of their rising economies but also due to their developing tourism industries. Two reasons make this paper innovative and informative compared to the existing literature on the topic. First, theoretically it accounts for the potential impact of both supply as well as demand factors, unlike the main stream literature that usually examines one side of the sector. Second, the methodology that is chosen accords well with the reality because the behavior of economic agents are usually more powerful in negative conditions compared to the positive ones. This asymmetric potential property is accounted which helps considering cross-sectional spillover effects more efficiently when causality tests are implemented within a panel framework. In addition, the relationship between transportation costs and number of tourist arrivals; the relationship between tourism receipts and transportation costs is tested separately. Estimating the coefficients for inflation rate, real exchange rate, trade (TRD), tourism receipts and number of arrivals with CCE (common correlated effects), the model will help us to see the topic from a macroeconomic perspective. The paper is divided into four parts; the second section gives information about the written literature, the third section explains the methodology and includes the tables of application and the last section is about the conclusion with further research ideas.

2. Related Literature

Transportation (accessibility) is important for tourism economics because it links supply (origin) and demand (destination) explicitly. Accessibility is directly connected with the transportation infrastructure and tourist services. Better transportation (easy and comfortable one) means new tourist destinations and

arrivals. But it is possible to express that they have an inverse effect on each other. Alternative determinants of the supply side of tourism sector are; tourist attractions, information, promotions, etc. It means that certain supply elements can raise the number of arrivals. Transportation cost is a major demand indicator for a destination and includes both cost of travel and living with other services. Also, it is a macroeconomic indicator due to two different reasons. Firstly; the role of transportation, because it has an effect on travel and logistic costs and can change the demand-supply curves of some industries. Secondly; transportation investments stimulate the economic growth and can be the cause of rising inflation (prices). From the economic perspective, regional strategies of governments also identify the competitiveness of tourism destination with other countries (Bimonte et al., 2015). Improvements in infrastructure can reduce the costs of transportation and can increase accessibility (to the markets) of the destination, so it fosters the growth in tourism sector and in other sectors of the economy. Demand side of tourism has been mostly examined by tourist arrivals or tourist expenditures but it is also affected by needs to be deleted other factors such as; exchange rates, trade volume, prices, stability of the country (politically or economically) and transportation costs and inflation (prices).

Truong and Shimizu (2017), analyzed the impact of transportation on tourism sector with computable general equilibrium model with several published articles in this topic. According to all of the studies reviewed by Truong and Shimizu (2017) via Google Scholar, Web of Science and Scopus showed that transportation has crucial impact on tourism via oil prices, direct or indirect relevant factors of transportation and accessibility.

Kovacic and Milosevic (2016), defined that transportation is not only the accessibility of destination but also the feeling of joy. Tourism is a journey which carries out economic and social purpose. Nowadays, the role of transport differs than in the past and it depends on tourist (short and long term) stays as well. Sustainable tourism such as: cycling and hiking promotes national and regional economies with its capacity, efficiency and the collaboration between national authorities. Lumsdon (2010), focused on reducing energy with sustainable tourism transport facilities especially cycle tourism and offered a model with four-stage approach for the United Kingdom. The paper approached transport not as a component of tourism but as a mean of evaluating.

Sorupia (2005), claims that travel and transportation can be discussed with ignoring tourism because the study of him re-considers the role of transportation not only in tourism but also in diversified areas such as; ecology, economy, tourist experience and management resources. According to him tourism expands due to development of transportation and the growth of tourism fosters the industry to search for new markets with biodiversity. Hence, the role of transportation should re-arranged between accessibility of a destination and a state of environment.

Erkan and Erkan Şimşek (2015), explained that the contribution of travel and tourism industry to the economic growth of Turkey has higher potential than Europe for the period between 2013 to 2023. They have conducted a survey at the airports with different airlines and airport operators. According to the results, the price policy of Turkish Airlines effects domestic tourism negatively and the competition is really intense in the international area. Government's intervention to the prices of airlines is making the reason out something even slower. The related paper recommends new airports, new flight connections to local tourism destinations, and raising the number of trained people in this area.

According to Proenca and Souzakis (2008), international tourism development in particular has both direct and indirect spillover effects on many economic activities. Chan et al. (2005) states that tourism industry has an extensive influence on many sectors of the economy but it is still open to the shocks and depending to the political and economical stability of the countries such as; terrorism and national security issues, natural disasters, epidemics and infectious diseases, imbalances in exchange rates and energy prices (Gunduz and Hatemi, 2005).

Kizilkaya et al. (2016), tested annual data from 1980 to 2014 to examine the relationship between tourism revenues, tourist arrivals and economic growth in Turkey. ARDL methodology developed by Pesaran et al. (2001) has been chosen and the cointegration coefficients have been estimated. The results gained from the study showed that in the short and the long term, there is a positive effect observed from tourism revenues to economic growth for Turkey but the number of tourist arrivals are not directly related with tourism revenues, because Turkey is famous as a low budget tourism destination and the fluctuations in exchange rate is an important indicator for the Turkish tourism industry.

Jeganathan and Sirinivasulu (2017), examined the impact of tourism on international tourist arrival and receipt, international tourism expenditure, and the employment and economic growth for BRICS countries. They also drawn attention to characteristics of these countries such as; Brazil is a carnival capital world with Rio and Salvador carnivals. The Russian Federation is famous with her lakes (Baikal and Lagoda), India is known with cultural, traditional and religious diversity, China is the major economic power in the world and South Africa is a multi-ethnic society. After the comparison of selected macroeconomic indicators, results show that China is substantially growing with tourist arrivals and international tourism expenditures and receipts for the period between 2003 to 2013, which makes more contribution to the GDP compare to other BRICS countries. China and India together created more employment opportunities during the period 2004 to 2014. Russia and China are the leaders of outbound tourism expenditures. Pop (2014), clarified the role of tourism in BRICS economies and the analysis shows a direct contribution of tourism and travel to the GDP of selected countries. Because GDP

is generated by industries (as a macroeconomic variable) and linked with hotel, travel agents, transport services and etc. (cointegrated with tourism development). Also, the authors mentioned the contribution of mega events such as: South Africa hosted FIFA World Cup in 2010, Russia hosted Olympic Winter Games in 2014, China hosted Olympics Summer Games in 2008 and finally Brazil hosted FIFA World Cup in 2014 and Olympics Summer Games in 2016.

3. Methodology and Findings

The variables have been chosen according to the literature readings. International Tourism Receipts (ITR) are used as a proxy to represent the growth of the tourism sector. According to Martinez-Zarzosso and Nowak-Lehmann (2007), real distance is not a good proxy for transportation costs (TC). Barry and O'Hagan (1972), claims that travel is an inverse function of real prices and tourism prices are rarely available, similarly Crouch (1992) implies that the CPI-Consumer Price Index represents transportation costs better than distance and it is often used by researchers as a proxy. Exchange rates (RER) have a crucial effect on demand for international tourism. If there are depreciation of destination country's currency, the country will be cheaper and more attractive for tourists and it will foster international tourism. Trade (% GDP – TRD) is simultaneously effecting and influenced by transportation costs and tourism growth. Transportation investments stimulate the economic growth and can be the reason of rising inflation (prices-(GDP deflator annual %).

The variables mentioned above is downloaded from World Bank Development Indicators for the period between 1995 to 2017 in annual base. The previous years could not be included due to lack of data. The analysis of the empirical model is conducted by using Eviews-8 and Gauss-10 econometric programs. Except international tourism, number of arrivals (TA) and international tourism receipts (current US$) the others used with their natural logarithmic forms and the logarithm of these two have been calculated before testing the econometric model.

Hatemi-J et al. (2015) panel causality test helps researchers to increase the degrees of freedom especially for developing and emerging market studies where the time dimension (T) is shorter than the number of observations (N) or taking into account spillover effects between cross-sections. This is why combining asymmetric causality with panel data analysis is much more efficient in a globalized era where all the economies are linked to each other and crossed the borders (Hatemi-J, 2011: 2-3). Also, the empirical studies show that a potential asymmetry in the causality testing has crucial indirect effects for the underlying causal inference between related variables. Determining the direction of the causality between variables is the basis of the empirical part. However, it is not sufficient alone, to see which variables are contributing more to the tourism growth. In the long term, coefficients estimated. The Common Correlated Effect (CCE) model, which has been developed as a new prediction approach by Pesaran (2006), because of panel data models include unobserved common factors hence, it is necessary to consider this

multifactorial error structure of given external individual regressors. The main idea is to filter the individual-specific regressors by means of cross-section averages such that asymptotically as the cross-section dimension tends to infinity, the differential effects of unobserved common factors are eliminated (Pesaran 2006, 967).

We can assume that tourism growth is a function of number of tourist arrivals, transportation costs, real exchange rate, inflation rate and trade.

$$ITR = f(TA, TC, RER, INF, TRD) \quad (1)$$

Also, the co-integration and causality between tourism receipts and number of tourist arrivals with transportation of costs can be shown as an equation:

$$ITR_t = \alpha + \beta TA_t + u_t \quad \text{and} \quad ITR_t = \alpha - \theta TC_t + e_t \quad (2)$$

α shows constant and β and θ are the slope coefficients. According to the equations written above an increase in the number of tourist arrivals (demand side) will increase tourism growth too but the opposite is accepted for the increases in transportation costs (supply side).

According to the Delta test which is developed by Pesaran and Yamagata (2008), null hypothesis claims ($H_0: \beta_0 = \beta$) that the series are homogeneous. If the null hypothesis is rejected, then the series are heterogeneous.

Table 1: Homogeneity Test

Delta Test	*Test Stats.*	*Prob.*
$\tilde{\Delta}$	2.288	0.011*
$\tilde{\Delta}_{adj}$	2.719	0.003*

(*) indicates significance in % 5. $\tilde{\Delta}$ represents delta test statistic for small samples and $\tilde{\Delta}_{adj}$ shows augmented Delta tests statistic for big samples. According to table 1 series is heterogeneous because the given probability value is under 0.05 and statistically significant.

To determine the cross-section dependency CD_{LM} test ran for each individual. The test is developed by Pesaran (2004) and the null hypothesis claims that ''there is no cross-sectional dependence – $H_0: p_{ij} = p_{ji} = cor\,(\varepsilon_{2,it}, \varepsilon_{2,jt}) = 0$''.

Table 2: Cross-Section Independency Test for All Variables

	ITR		***TA***		***TC***	
	Test stat.	Prob.	Test stat.	Prob.	Test stat.	Prob.
CD_{LM} (BP, 1980)	16.911	0.076*	38.020	0.000*	30.520	0.001*
CD_{LM} (Pesaran, 2004)	-2.770	0.003*	-2.540	0.006*	-2.057	0.020*
	RER		***INF.***		***TRD***	
	Test stat.	Prob.	Test stat.	Prob.	Test stat.	Prob.
CD_{LM} (BP, 1980)	27.949	0.002*	25.636	0.004*	19.283	0.036*
CD_{LM} (Pesaran, 2004)	-3.321	0.000*	-2.802	0.003*	-3.080	0.001*

(*) represents significance in % 5. According to table 2, probability values of all variables are significant so the null hypothesis is rejected and there is a cross section dependency.

Multifactor unit root test is developed by Pesaran et al. (2013). The purpose of this test is to eliminate the error structure of common factors (autocorrelation) for empirical studies in macroeconomic theory. Multifactor Error Structure is a must do pretest before applying CCE (Common Correlated Effects) Model. There are two different test statistics that are estimated: cross-sectional augmented panel (CIPS) unit root test introduced by Pesaran (2007) and later expanded with a new CSB (simple average of cross-sectional augmented Sargan-Bhargava) statistics (Pesaran et al. 2013, 96). Null hypothesis claims that for all i's (1,2,3, … , N) ''H_0: βi'' cross section units have unit root). CSB test statistic has been calculated with stochastic simulation method. Therefore, series whether or not linear, or even in the existence of autocorrelation, the calculated test statistics are reliable and superior than CIPS statistics in this respect (Pesaran et al. 2013, 99).

Table 3: Multifactor Unit Root Test for ITR, TA and TC

		Constant		Constant and Trend	
	Lags	Stat.	Critical Value (k=2)(%10)	Stat.	Critical Value (k=2) (%10)
$CIPSm$	0	-2.497	-2.53	-2.900	-2.79
ITR	1	-	-2.42	-	-2.73
	2	-	-2.21	-	-2.57
	3	-	-2.07	-	-2.48
	4	-	-1.85	-	-2.54
$CSBm$	0	0.054	0.320	0.035	0.114
ITR	1	0.437	0.258	0.056	0.097
	2	0.192	0.207	0.049	0.079
	3	0.150	0.151	0.042	0.058
	4	0.089	0.102	0.028	0.038
$CIPSm$	0	-3.030	-2.53	-3.903	-2.79
TA	1	-2.640	-2.42	-	-2.73
	2	-	-2.21	-	-2.57
	3	-	-2.07	-	-2.48
	4	-	-1.85	-	-2.54
$CSBm$	0	0.054	0.320	0.045	0.114
TA	1	0.313	0.258	0.081	0.097
	2	0.211	0.207	0.067	0.079
	3	0.256	0.151	0.077	0.058
	4	0.257	0.102	0.049	0.038
$CIPSm$	0	-2.553	-2.53	-3.366	-2.79
TC	1	-3.798	-2.42	-	-2.73
	2	-	-2.21	-	-2.57
	3	-	-2.07	-	-2.48
	4	-	-1.85	-	-2.54
$CSBm$	0	0.034	0.320	0.037	0.114
TC	1	0.239	0.258	0.072	0.097
	2	0.108	0.207	0.052	0.079
	3	0.120	0.151	0.039	0.058
	4	0.136	0.102	0.028	0.038

CIPS and CSB statistic's critical values are calculated by Pesaran et al. (2013) in their paper and taken from table B1 and B2; table B3 and B4 in order (*) indicates calculated statistical values greater than the table critical values in 10 % significance level and k symbols the number of independent variables of the regression. So, variables contain unit roots at their level and but the first difference of them is stationary, I (1).

Westerlund Error Correction Mechanism (ECM) co-integration test is developed by Westerlund in 2007. This test gives effective results even when the number of observations (N) is shorter than the time dimension (T) and assumes that each unit is stationary and orders in one. There are four different (two group, two panel) test statistics estimated with error correction mechanism in three different levels (Westerlund, 2007: 218). Nazlıoğlu (2010); Westerlund (2007) co-integration test assumes that there is no cross-section dependence between cross-section units this is why it is recommended by Chang (2004) to compare test statistics with bootstrap critical values.

Table 4: Westerlund Co-integration Test for ITR, TA and TC variables

Co-integration between ITR and TA	***Test Stats.***	***Prob.***
DH_g *(group)*	-15.915	0.031*
DH_p*(panel)*	-6.673	0.110
Co-integration between ITR and TC	***Test Stats.***	***Prob.***
DH_g *(group)*	-62.558	0.000*
DH_p*(panel)*	-8.514	0.201

(*) represents significance in % 5. Table 4 shows that the probability of group test indicators is less than 0.05; so, the tourism receipts and the number of tourist arrivals are co-integrated and moving together. Also, there is a co-integrated relationship between tourism costs and the growth of tourism. The null hypothesis is rejected for cross-units.

Table 5: Hatemi-J et al. (2015) Causality Test Results

Countries	Null Hypothesis	MWALD	Prob.	Null Hypothesis	MWALD	Prob.
Brazil	$ITR^- \neq> TA^+$	0.035	0.852	$ITR^- \neq> TC^+$	3.143	0.076**
	$ITR^- \neq> TA^-$	0.159	0.690	$ITR^- \neq> TC^-$	0.014	0.905
	$ITR^+ \neq> TA^+$	0.956	0.328	$ITR^+ \neq> TC^+$	0.041	0.839
	$ITR^+ \neq> TA^-$	12.012	0.001*	$ITR^+ \neq> TC^-$	0.039	0.843
China	$ITR^- \neq> TA^+$	13.028	0.000*	$ITR^- \neq> TC^+$	2.376	0.123
	$ITR^- \neq> TA^-$	0.601	0.438	$ITR^- \neq> TC^-$	0.847	0.357
	$ITR^+ \neq> TA^+$	0.716	0.397	$ITR^+ \neq> TC^+$	0.205	0.651
	$ITR^+ \neq> TA^-$	33.542	0.000*	$ITR^+ \neq> TC^-$	11.496	0.001*
Russia	$ITR^- \neq> TA^+$	199.395	0.000*	$ITR^- \neq> TC^+$	11.622	0.001*
	$ITR^- \neq> TA^-$	1.486	0.223	$ITR^- \neq> TC^-$	1.902	0.168
	$ITR^+ \neq> TA^+$	0.001	0.971	$ITR^+ \neq> TC^+$	0.003	0.959
	$ITR^+ \neq> TA^-$	4.333	0.037*	$ITR^+ \neq> TC^-$	0.033	0.856
India	$ITR^- \neq> TA^+$	12.608	0.000*	$ITR^- \neq> TC^+$	1.560	0.213
	$ITR^- \neq> TA^-$	0.048	0.827	$ITR^- \neq> TC^-$	0.533	0.465
	$ITR^+ \neq> TA^+$	0.937	0.333	$ITR^+ \neq> TC^+$	0.109	0.741
	$ITR^+ \neq> TA^-$	1078.9	0.000*	$ITR^+ \neq> TC^-$	7.995	0.005*
Turkey	$ITR^- \neq> TA^+$	3.479	0.062**	$ITR^- \neq> TC^+$	34.398	0.000*
	$ITR^- \neq> TA^-$	0.098	0.755	$ITR^- \neq> TC^-$	0.853	0.356
	$ITR^+ \neq> TA^+$	0.474	0.491	$ITR^+ \neq> TC^+$	0.434	0.510
	$ITR^+ \neq> TA^-$	1.374	0.241	$ITR^+ \neq> TC^-$	0.001	0.973

(*) represents significance in % 5 and (**) represent in % 10. The demonstration of $ITR \neq> TA$ means that tourism growth does not cause number of tourist arrivals. $ITR \neq> TC$ means that tourism receipts do not cause transportation costs. The vectors (ITR^+, TA^+) and (ITR^+, TC^+) show the cumulative positive shocks and (ITR^-, TA^-) and (ITR^-, TC^-) represent the cumulative negative shocks. According to table 5 non-asymmetric causality ($ITR \neq> TA$) can be rejected for all selected countries but in Brazil, China, Russia and India positive cumulative shocks is the reason of decreasing number of tourist arrivals. The opposite effect is acceptable for China, Russia, India and Turkey, as well. Non-asymmetric causality ($ITR \neq> TC$) can be rejected for all BRIC-T countries but in Brazil, Russia and Turkey negative cumulative tourism shocks are increasing the costs of transportation but in China and in India the reverse effect is existed.

Table 6: Causality for All Panel Series

Null Hypoth.	Panel Fisher	Prob.	Null Hypoth.	Panel Fisher	Prob.
$ITR^- \neq> TA^+$	242.936	0.000*	$ITR^- \neq> TC^+$	65.540	0.000*
$ITR^- \neq> TA^-$	6.337	0.786	$ITR^- \neq> TC^-$	9.424	0.492
$ITR^+ \neq> TA^+$	7.753	0.653	$ITR^+ \neq> TC^+$	3.241	0.975
$ITR^+ \neq> TA^-$	1148.4	0.000*	$ITR^+ \neq> TC^-$	25.967	0.004*

(*) represent significance in % 5. Table 6 supports the individual results of table 5. Only negative tourism shocks cause positive tourist arrivals and positive tourism receipts cause negative transportation costs. So, there is causality between variables only in these conditions.

The Common Correlated Effect (CCE) Model is based on a new prediction approach developed by Pesaran (2006), because it includes unobserved common factors. The main idea is to filter the individual-specific regressor by means of cross-section averages such that asymptotically as the cross-section dimension tends to infinity, the differential effects of unobserved common factors are eliminated (Pesaran, 2006: 967). It estimates two different test statistics such as: CCE (Panel) estimator which is superior than the CCE (Mean Group) one under the condition of homogeneity and vice versa (Pesaran, 2006: 992). It is possible to calculate long-term coefficients of each cross-section units individually.

Table 7: CCE (Mean Group) Results

Dependent variable: ITR

Variables	Co-efficient	Standard Deviation	T- statistics
TRD	0.0014	0.0075	0.1990
INF	1.2234	0.0158	7.7048*
RER	0.7478	0.7242	1.0326
TA	0.8299	0.2262	3.6686*
TC	0.0018	0.0009	1.8887*

(*) represent significance in % 5. Table 7 reports only mean group coefficients because the series is heterogeneous. The significance of standard deviation (SE) and Newey west (NW) type t-statistics (for N x T = 5 x 23, bias: 0.12, RMSE: 8.55, size: 6.45, power: 12.55 with rank deficiency) can be seen from Table 4, experiment 2b in Pesaran (2006) page 997. It has seen that in the long term there are a positive relationship between tourism growth and all other independent variables (except trade and real exchange rate). When transportation costs increase 1%, the tourism growth rate increases 0.0018% or while the number of tourist arrivals increases by 1%, the tourism receipts increase 0.82%, as it is expected. But the contribution of the inflation rate is highest in contrast to the theory.

Table 8: Coefficient Estimations with CCE Model

Countries	**RER**	**SE.**	**TA**	**SE.**	**TC**	**SE.**
Brazil	0.006	0.001	0.474	0.094	-0.009	0.002
China	0.004	0.001	1.510	0.109	0.008	0.004
Russia	0.002	0.004	0.169	0.146	-0.008	0.003
India	1.656	0.394	0.371	0.155	0.001	0.001
Turkey	-0.357	0.100	0.764	0.084	0.003	0.002
Countries	**INF**	**SE.**	**TRD**	**SE.**	T_1	T_N
Brazil	0.544	0.151	0.010	0.007	1995	2017
China	1.130	0.136	-0.005	0.001	1995	2017
Russia	0.590	0.191	-0.011	0.003	1995	2017
India	0.645	0.098	0.007	0.003	1995	2017
Turkey	1.040	0.124	0.001	0.001	1995	2017

SE represents Newey West type standard deviation which is estimated according to the equation 50 in Pesaran (2006) at p. 981 and T represents time. CCE co-efficient of independent variables are estimated according to the equation 29 in Pesaran (2006) at p. 977.

According to table 8 and the individual results, in the long-term, the inflation rate and the number of tourist arrivals have positive contribution to the tourism growth for each selected country. To reconfirm the significance of estimations please check Pesaran's (2006) study, p. 994, table 1a. Real exchange rate contributes negatively to the economic growth of tourism in Turkey for the selected period and in Brazil and Russia transportation costs effect tourism receipts negatively. Except China and Russia in the other countries the trade contributes to the tourism growth negatively. Therefore, first the inflation rates and later the tourist arrivals are the most incautious ones.

4. Conclusion

This paper examined the nexus between tourism growth and transportation costs with a macroeconomic perspective for BRIC-T countries during the period 1995 and 2017. Empirical results show that there is a co-integration between the number of tourist arrivals and tourism receipts as well as transportation costs. Also, negative tourism shock causes positive tourist arrivals and positive tourism receipts cause negative transportation costs. Hence, there is a causality between the variables only in these conditions. The macroeconomic determinants of tourism growth such as the inflation rate and the number of tourist arrivals (demand side) have the biggest effect on it according to cross-country (individual) and means to group results.

The BRIC-T countries are not a part of monetary or fiscal community such as the European Union and each country have different transportation structure and natural environment. So, the changes in the exchange rates and transportation costs did not affect in general the whole data set, but separately the effects of each variable can be seen negatively or positively from the quantitative research. The inflation rate depends on prices and except China, in all other countries the inflation rates are relatively high especially in Turkey and Brazil. Russia is more likely not a destination, but the shipper of her citizens mostly to the warm places. This is why the coefficient of the number of tourist arrivals remains the lowest among the others. The negative contribution of trade to tourism growth in China and Russia for the selected period can be interpreted due to the trade war between China and the USA, similar to the decreasing export volume and trade sanctions on Russia from the trade partners and the declining market share of Russia.

For further research, the nexus between variables can be seen in a field of sustainable tourism (reducing energy use) with the same group of countries. Except Russia, other BRIC-T members are dependent to the imported energy. As a part of their development plans, it is important to build a sustainable transportation infrastructure not only for tourism sector but also, for many other sectors of the economies.

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Economic Consequences of Syrian Refugees in Turkey

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Economic Consequences of Syrian Refugees in Turkey

Abstract

Turkey is the most affected country by the humanitarian crisis in Syria since 2011. About 8 million Syrians had to leave their homes and Turkey accepted over 3 million Syrian refugees. The Syrian refugees have social, political and economic effects. The most important economic impact of the Syrian refugees In this study, the macroeconomic impacts of Syrian refugees in Turkey were examined. The macroeconomic indicators of the 13 provinces receiving the highest number of immigrants and the 13 provinces receiving the least number of immigrants were examined between 2011-2017. The results show that while Syrian migrants have a positive effect in industry and services sector, this effect has been negative in agriculture sector.

Türkiye'deki Suriyeli Göçmenlerin Ekonomik Sonuçları

Öz

Türkiye, 2011'den bu yana Suriye'deki insani krizden en çok etkilenen ülkedir. Yaklaşık 8 milyon Suriyeli yer değiştirirken bunlardan 3 milyonu Türkiye'ye göç etti. Geçici koruma statüsünde kabul edilen Suriyeli mültecilerin Türkiye üzerinde sosyal, politik ve ekonomik etkileri ortaya çıkmıştır. Bu çalışmada Suriyeli mültecilerin Türkiye'nin genel makroekonomik değişkenleri üzerine etkileri incelenmiştir. En çok göç alan 13 il ve en az göç alan 13 ilin makroekonomik göstergeleri 2011-2017 tarihleri arasında incelenmiştir. Sonuçlar göstermektedir ki sanayi ve hizmetler sektöründe Suriyeli göçmenler olumlu etkiye sahip olurken bu etki tarım sektöründe negatif olarak ortaya çıkmıştır.

Anahtar Kelimeler: Suriyeli göçmenler, Makroekonomi, Türkiye ekonomisi

1. Giriş

Tunus'ta 2010 yılının Aralık ayında başlayan hükümet karşıtı gösteriler domino etkisi yaparak diğer Ortadoğu ülkelerine de sıçramıştır. Arap Baharı olarak adlandırılan bu hareket diğer Ortadoğu ülkelerinin yanında Suriye Arap Cumhuriyetini'de etkilemiştir. Suriye'nin Arap Baharını diğer ülkelerle karşılaştırdığımızda, "yavaşlatılmış" bir devrim veya reform süreci olarak görmek gerektiği söylenmektedir. Suriye'deki rejim karşıtı ilk hareket Mart 2011 tarihinde Sünnilerin yoğun olarak yaşadığı Dera kentinde başlamıştır. Tabii bu hareketin etkisi sadece Dera ile sınırlı kalmamış, olaylar kısa bir sürede Banyas, Hama, Humus, Deyruz ve ardından Lazkiye'ye sıçramıştır. Bu gösteri yürüyüşleri Esad rejimi tarafından kuvvet kullanarak bastırılmıştır (Koldaş ve Köprülü, 2011). Ancak devam eden gösterilerde Suriye rejimine bağlı kolluk güçleri tarafından göstericilerin üzerine ateş açılmasıyla olayların seyri değiştirmiştir. Suriye rejiminin baskısı arttıkça olaylar da büyümüş, ülkenin her yanına yayılmış ve bir iç savaşa doğru gitmiştir. Bu çatışmalardan sonucunda sivil halk bundan çok etkilenmiştir. Çatışmaların yoğun olduğu yerlerdeki halk hayatları tehlike altında olduğundan başta Türkiye olmak üzere Lübnan, Ürdün, Irak, Mısır ve Kuzey Afrika ülkelerine göç etmiştir (Özdemir, 2017). Bu çatışmalardan etkilenerek Suriye'yi terk eden mültecilerin sayısı ve gittikleri ülkeler Tablo 1'de verilmiştir.

Tablo 1: UNHRC Verilerine Göre Suriyeli Mültecilerin Ülkelere ve Bölgelere Dağılımı

Ülkeler	Kaynak	Veri tarihi	Mülteci sayısı	%
Türkiye	UNHCR, Türk Hükümeti	9-Mayıs-2019	3.606.208	64,1
Lübnan	UNHCR	30-Nisan-2019	938.531	15,7
Ürdün	UNHCR	9- Nisan-2019	660.393	11,0
Irak	UNHCR	30-Nisan-2019	253.371	4,5
Mısır	UNHCR	31-Mart-2019	132.281	2,4
Diger (Kuzey Afrika)	UNHCR	30-Kasım-2018	35.715	0,6

Kaynak: UNHRC Data Portal, *Syria Regional Refugee Response*, http://data.unhcr.org/syrianrefugees/regional.php, (Erişim Tarihi 15 Mayıs 2019).

Tablo 1'e göre Suriye'deki iç savaştan kaçıp diğer ülkelere sığınan mültecilerin sayısı 5,626,497 kişidir. Bunlardan 3.606.208 kişisi yani mültecilerin neredeyse %65'i Türkiye'ye sığınmışlardır. Türkiye'yi %15 ile Lübnan takip etmektedir.

29 Nisan 2011'de Cilvegözü sınır kapısından ilk Suriyeli mülteciler Türkiye'ye gelmeye başlamıştır. Bu tarihten sonrada her geçen gün sayıları artarak gelen Suriyelileri görüyoruz. Çünkü Türkiye, "açık kapı" politikası gereği iç savaştan kaçan Suriyeli mültecilere sınır kapılarını açmıştır. Böylece Türkiye, Suriyeli

"misafirlerini" İçişleri Bakanlığı 1994 Yönetmeliği'nin 10. maddesi gereğince "geçici koruma rejimi" altına almıştır. Geçici koruma statüsü, ilke olarak mültecileri geri dönme konusunda zorlama yapılmamasını, kamplarda barındırmayı ve diğer temel hizmetlerin sağlanmasını içermektedir Geçici koruma, beklenmeye, olağanüstü durumlarda toplu olarak sınırlara yığılan mültecilik durumunda uygulanan acil durum politikasıdır. Bu politika nüfus hareketlerine çözüm bulununcaya kadar bir ara çözüm olarak görülür (Özdemir, 2017).

Birleşmiş Milletler Mülteciler Yüksek Komiserliği'nin (BMMYK) Suriyeli sığınmacılara yönelik bireysel kayıt ve statü belirleme uygulama sürecini durdurmasıyla Türkiye'de kampların kurulması ve koordinasyonu Afet ve Acil Durum Koordinasyon Başkanlığı (AFAD) ve Kızılay tarafından yapılmaktadır. Sığınmacıların kayıt işlemleri ve kimlik dağıtımı ise polis tarafından koordine edilmektedir. Yani polis mültecilerin giriş kayıtlarını yapılmakta ve daha sonra ya kamplara yerleştirilmekte ya da illere sevk etmektedir. Suriyeli mülteciler için 10 ilde 15 barınma merkezi kurulmuştur. Kamplar ilgili hizmetler kamu kurumlarının (güvenlik İçişleri Bakanlığı'nda, eğitim Milli Eğitim Bakanlığı'nda vs.) sorumluluğuna verilerek AFAD aracılığıyla koordine edilmektedir. AFAD tarafından verilen bilgiye göre 15 Ekim 2018 tarihi itibariyle kamplarda bulunan mülteci sayısı 178.965'dir. Bunlardan 174.256 Suriyeli mülteci, geriye kalan 4.709 ise Iraklı mültecilerdir. Geçici barınma merkezlerinde kalan Suriyelilerin sayısı 9 Mayıs 2019 tarihi itibarıyla 130 bin 881 kişi olarak açıklanmıştır. Buna göre kamplarda yaşayan Suriyeli sayısı 2018'in Ekim ayından 2019 Mayıs ayına kadar 43 bin 375 kişi azaldı. Suriyelilerin %96,38'i şehirlerde yaşarken, sadece %3,62'si kamplarda yaşamaktadır. Kamplar dışında yaşayan Suriyeli mültecilerin çoğunluğu Adana, Çanakkale, Diyarbakır, Elazığ, Gaziantep, Hatay, Kayseri, Kocaeli, Mardin, Tekirdağ, Şanlıurfa, Kilis, İstanbul, İzmir, Ankara, Adana, Bursa, Mersin gibi şehirlere dağılmıştır. Aşağıdaki Tablo 2'de Suriyeli göçmenlerin illere göre dağılımı verilmiştir.

Tablo 2'de Göç İdaresinin 9 Mayıs 2019 tarihli verilerine göre Suriyelilerin en yoğun olduğu 20 şehir ve bu şehirlerdeki yoğunluk oranları gösterilmiştir. En fazla Suriyeli barındıran şehir 546 bin 326 kişi ile İstanbul olurken, Suriyelilerin en az bulundukları şehir 25 kişi ile Bayburt, 35 kişi ile Artvin ve 61 kişi ile Tunceli olmaktadır. Suriyelilerin yerli nüfusa oranla en yoğun yaşadığı il %80,55 ile Kilis olmuştur.

Tablo 2. İllere Göre Suriyeli Mültecilerin Dağılımı

Şehir	Sayı	İl Nüfusu İle Karşılaştırma %
İstanbul	546.326	3,63
*Şanlıurfa	442.783	21,75
*Gaziantep	432.856	21,34
*Hatay	427.508	26,56
*Adana	236.695	10,66
Mersin	201.689	11,12
Bursa	170.264	5,69
İzmir	142.824	3,31
*Kilis	114.814	80,55
Konya	106.426	4,83
Ankara	91.312	1,66
Mardin	87.079	10,50
*Kahramanmaraş	87.045	7,60
Kayseri	77.746	5,59
Kocaeli	56.786	2,98
*Osmaniye	48.573	9,09
Diyarbakır	33.514	1,93
*Malatya	29.708	3,73
Adıyaman	24.391	3,91

Kaynak: https://multeciler.org.tr

* işaretli illerde Geçici Barınma Merkezi bulunmaktadır.

Bu kadar yoğun bir şekilde Suriyeli mültecileri barındıran Türkiye'nin bu göçlerden ekonomik, sosyal, politik vs. açısından etkilenmemesi mümkün değildir. Seçim dönemlerinde en çok tartışılan konuların başında gelmektedir. Bu kadar çok ülke gündemini meşgul eden Suriyeli mültecilerin Türkiye ekonomisine olan etkileri özellikle tarım, sanayi ve hizmet sektörleri ele alınarak analiz edilecektir. Bu amaçla seçilen çok göç alan 13 il ile an az göç alan 13 il karşılaştırılacaktır. Bu karşılaştırmada 2011 baz yıl kabul edilerek bir indeks oluşturulmuştur. Bu endeks iller itibariyle tarım, sanayi, hizmetler ve toplam GSYİH gelişmeleri iller bazında analiz edilecektir.

Takip eden bölümde genel olarak Suriyeli göçmenlerin ekonomi üzerindeki olumsuz ve olumlu etkileri gözden geçirilecektir. Üçüncü bölümde ise Suriyeli göçmenlerin ekonomik etkilerinin iller bazında karşılaştırılması GSYİH ve temel sektörler itibariyle yapılacaktır.

2. Suriyeli Göçmenlerin Ekonomik Etkileri

2.1. Olumsuz Ekonomik Etkiler

Suriyeli mültecilerin sayısının artması ve kısa vadede ülkelerine geri dönme ihtimallerinin görünmemesi nedeniyle, Suriyelilerin özellikle sınır bölgeleri ve tüm Türkiye ekonomisine yapmış olduğu etkiler önemlidir. Bu etkiler genel olarak değerlendirildiğinde risk ve fırsatların iç içe geçtiği görülmektedir. Yani bu konuda farklı görüşler mevcuttur. Burada öncelikle Türkiye ekonomisi üzerindeki olumsuz etkiler ele alınacaktır.

2011 yılından önce ticaret, turizm ve emlak alanında hızla gelişen Türkiye- Suriye ilişkilerinin Suriye krizi nedeniyle gerilediğini söylemek mümkündür. Bu gerilemenin ilk olarak Suriye sınırına yakın olan illerde hissedilmesi ve buraları etkilemesi kaçınılmazdır. Bu durum ekonominin tamamını doğrudan veya dolaylı olarak da etkileyecektir. Vizelerin kaldırılmasıyla yoğun bir şekilde Suriyeli turistin ziyaret ettiği Şanlıurfa, Mardin, Hatay, Gaziantep gibi şehirlerin turizm gelirleri azalmıştır. Bunun yerine aşağıda değineceğimiz yoğun şekilde mültecilerin akımına uğrayan şehirlerin karşılaştığı ekonomik sorunlar ortaya çıkmıştır. Mikroekonomi açısından, öncelikle Suriye ile iş yapan firmaların iş hacimleri düşerken aynı zamanda riskleri de artmıştır. Yine aynı şekilde Bahreyn, Birleşik Arap Emirlikleri, Katar, Lübnan, Suudi Arabistan ve Ürdün gibi Ortadoğu'daki ülkelerle ticaret yapan firmaların, bu ülkelere gönderdikleri malların taşıma maliyetleri artmış, dolayısıyla da kâr marjları düşmüştür. Yine sınırda ve Suriye içindeki güvenlik sorunu nedeniyle lojistik firmaları başka güzergahlar aramak zorunda kalmışlardır (Öztürk ve Çoltu, 2018).

Enflasyon konusunda tam bir görüş birliği var. Gaziantep, Adana gibi mültecilerin yoğun olarak yaşadığı yerlerde bölgesel TÜFE endeksi Türkiye ortalamasının üzerinde seyretmektedir. Aralık 2015 itibarıyla ülke genelinde tüketici enflasyonu yüzde 9,6 olurken, Adana ve Gaziantep gibi yerlerde yüzde 10,8 olmuştur. Enflasyon farkı büyük ölçüde yüksek kira artışlarından ve kısmen de gıda fiyat artışlarından kaynaklanmaktadır (Üstün, 2016).

Kiralardaki artış Suriyeli mültecilerin ekonomik açıdan yol açtıkları diğer önemli bir etkidir. Çünkü mültecilerin yoğun olarak yaşadıkları bölgelerde artan konut talebi nedeniyle kiralarda yükselmiştir. Bu durum ev sahipleri için bir fırsat iken, kiracılar için sorun olmaktadır. Kiralardaki artışa bağlı olarak özellikle sınır illerde bir taraftan kiralık ev bulmak zorlaşmakta, diğer taraftan ev fiyatları da artmaktadır. (Orhan ve Gündoğar, 2015). İstihdam ve ücret üzerindeki etkileri konusunda ise farklı görüşler mevcuttur.

İstihdam ORSAM (2015)'ın anket çalışmasına dayanarak hazırladığı raporunda, Suriyeli mültecilerin yerli işgücünün çalışmak istemediği alanlarda iş bulup

çalıştığından dolayı dikkate değer bir ikame etkisi olmadığı iddia etmektedir. Fakat buna karşılık sigortalı yeni işe alımlarda Suriyeli mültecilerin maliyeti %50 daha düşük olduğundan tercih edilmektedirler. Bu da asgari ücretle çalışan yerel işçiler üzerinde işini kaybetme korkusu oluşturmaktadır. Bu durum Carpio ve Wagner (2015)'in yaptığı çalışmada da desteklenmektedir. Çalışmalarında Türkiye'deki Suriyeli mültecilerin kayıt dışı, düşük vasıflı çalışan kadınları işlerinden ettiğini göstermektedir. İkame oranının neredeyse bire bir olduğu hesaplamışlardır. Buna rağmen bu bölgelerde işsizliğin artmadığı görülmüştür. Bunu iki nedene bağlamaktadırlar: İşlerini kaybedenlerin işgücü piyasalarından çekilmesine, diğeri ise genç kızların okula devamlılığının artmış olmasına. Bu nedenlerden dolayı yerli işgücü arzı düşmektedir.

Yine istihdamla ilgili olarak Ceritoğlu, vd. (2017) yaptığı çalışmada Suriyeli mültecilerin emek piyasası üzerindeki etkilerini tahmin etmeye çalışmışlardır. Farkların farkı yöntemi kullanarak mültecilerin işgücü piyasasında sınırlıda olsa bazı etkilerinin olduğunu ama ücretler üzerinde herhangi anlamlı bir etkinin oluşmadığını tespit etmişlerdir. Mülteci akımı sonucunda kayıt dışı çalışan yerel halkta sınırlı da olsa bir istihdam kayıpları yaşanmaktadır. Kayıtlı istihdamda ise bölgede sosyal hizmetlerin yaygınlaşmasının olası bir sonucu olarak bir miktar artışın kaydedildiği belirtilmektedir. Çalışmanın bulgularına göre işsizlik oranları ve kayıtlı istihdam hafif de olsa artış yaşanırken, işgücüne katılım, kayıt dışı istihdam ve iş bulma oranları bir miktar gerilemiştir. Araştırma sonucunda Suriyeli mültecilerin Türkiye'deki işgücü piyasaları üzerindeki etkilerinin sınırlı olduğu tespit etmiştir. İstihdamla ilgili diğer bir çalışmada Balkan ve Tumen (2016)'in çalışmasıdır. Suriyeli mültecilerin ucuz ve kayıt dışı çalıştıklarından dolayı kayıt dışı yerli işçileri, emek piyasasının dışına ittiklerini ve işsizlik riski ile karşı karşıya bıraktıkları, kayıtlı sektörlerde dikkate değer bir değişim yaratmadıklarını tespit etmişlerdir. Ayrıca kayıt dışı emek yoğun sektörlerde maliyet avantajı sağladıkları da görülmüştür.

Suriyeli mültecilerin işgücü piyasalarına etkilerine bakarken cinsiyetler açısından da bir değerlendirme yapmak gerekebilir. Suriye gibi doğu toplumlarında kadınların emek piyasasına girişlerinde engellerin varlığı bilinmektedir. Suriye'de iç savaş öncesinde kadınlar sınırlı sayıda ve genellikle beyaz yakalı işlerde istihdama edilmektedir. Eğitim ve sağlık, Suriyeli kadınların istihdam için en çok tercih ettikleri hizmet sektörleri olarak öne çıkmaktadır. Eğitim düzeyi düşük olan kadınların genellikle tarımda ve mevsimlik işlerde ücretsiz aile işçisi olarak çalıştıkları görülmektedir. Dolayısıyla, Suriyeli mülteci kadınların Türk emek piyasasına son derece sınırlı sayıda katılım sağladıkları ve ciddi bir rekabet oluşturma imkanlarının olmadığı tespit edilmiştir (Duruel, 2017).

Akgündüz, Berg ve Hassink (2015) yapmış oldukları çalışmada Suriye'li mültecilerin yoğun olarak yaşadıkları 10 şehri ele almış, geriye kalan 71 şehri ise kontrol değişken olarak kullanmıştır. Bu çalışmada gıda, konut fiyatları ve istihdam üzerindeki etkiler incelenmiştir. Çalışma sonucunda gıda fiyatlarında anlamlı bir

değişme olmadığı, konut fiyatlarının arttığı ve istihdam üzerinde anlamlı bir etkisinin olmadığı tespit edilmiştir.

Suriyeli mültecilerin çoğunluğunun istihdamının kayıt dışı olduğu bilinmektedir. Bu kayıt dışı istihdamın ekonomiye olumsuz etkilerini şu şekilde sıralayabiliriz:

i. Vergi gelirlerini azaltması ve vergi adaletini ortadan kaldırması,
ii. Kaynak dağılımını olumsuz etkilemesi,
iii. Haksız rekabete sebep olması;
iv. Ekonomik verilerin doğru değerlendirilmesini engellemesi;
v. Çocuk emeğinin sömürülmesi;
vi. Sosyal güvenlik sistemini bozması sayılabilir (Salur ve Erdoğdu, 2017).

Suriyeli mültecilerin Türkiye ekonomisine etkileri incelenirken ülke bütçesine maliyetleri de göz önünde bulundurulmalıdır. Tablo 3'te Suriyeli mültecilerin Türkiye'ye maliyeti ve bu maliyetin karşılandığı kaynaklar verilmiştir.

Tablo 3'e göre Türkiye'de bulunan mültecilere toplam 4.947.127.606 $ harcanmış ve bunun %96,641'ü Türkiye Cumhuriyeti bütçesinden ve Türkiye'deki sivil toplum kuruluşları karşılanmıştır. %5,36 ise yurt dışı kaynaklıdır. Türkiye'nin Suriyeli mültecilere yaptığı harcamalar ve Suriyeli mülteciler için Türkiye'ye gönderilen dış yardımların miktarı karşılaştırıldığında, mülteci krizinde Türkiye'nin çok büyük maliyetler yüklendiği halde, uluslararası toplumun ve kuruluşların son derece kısıtlı bir yardımda bulunduğu görülmektedir.

Tablo 3. Suriye Krizinin Türkiye'ye Maliyeti

Karşılayan Kaynaklar	Maliyet ($)	Bölüm (%)	Genel (%)
Türkiye Cumhuriyeti Hükümeti tarafından yapılan harcamalar ve hizmetlerin maliyeti	4.477.227.326	95,62	90,50
Sivil Toplum Kuruluşlarının Türkiye içi ve Suriye'ye yönelik yardımları	204.955.947	4,38	4,14
Türkiye Toplamı	4.682.183.273	100,00	94,64
BM kuruluşları tarafından yapılan yardımlar	179.571.125	67,78	3,63
Avrupa ülkeri	1.576.640	0,60	0,03
STK'lar	10.392.586	3,92	0,21
Kızılay ve Kızılhaç	20.688.611	7,81	0,42
Diğer ülkeler	52.715.371	19,90	1,07
Yurtdışı toplam	264.944.333	32,22	5,36
Genel toplam	4.947.127.606	100,00	100,00

Kaynak: Paksoy vd. (2015: 155).

Başbakan Yardımcısı Recep Akdağ, Aralık 2017 yapmış olduğu açıklamasında Suriyeliler için yapılan harcamaların 84 milyar 880 milyon lira veya dolar olarak 30 milyar 285 milyon 573 bin dolar olduğunu söylemiştir. 2011 yılından bu yana 7 yıl içinde yapılan harcamalara sektörel olarak bakarsak; Suriyelilere yapılan harcamaların 5 milyar 586 milyon 594 bin lirası Başbakanlık Afet ve Acil Durum Yönetimi Başkanlığı (AFAD) tarafından, 9 milyar 228 milyon 707 bin lirası güvenlik ve kamu düzeni hizmetleri için yapılırken, sağlık hizmetleri için 16 milyar 30 milyon 111 bin lira, eğitim hizmetleri için 15 milyar 489 milyon 968 bin lira, belediyecilik hizmetleri için 17 milyar 527 milyon 481 bin liranın harcandığını söylemiştir (sputniknews, 2017).

Türkiye'nin Suriyeli mülteci krizinin başladığı andan itibaren yaptığı yardımlar dünyanın dikkatini çekmektedir. Küresel İnsani Yardım Raporu (2017)'ye göre, 2016 yılında 6 milyar dolar insani yardım yapan Türkiye'nin, ABD'nin ardından en çok uluslararası insani yardım yapan ikinci ülke olduğunu belirtmiştir. Türkiye 2016 yılında mili gelirinin %0,75'ni insani yardım için ayırarak, bir kez daha, "Dünya'nın En Cömert Ülkesi" olmuştur. (AFAD, 2017).

Suriyeli mültecilerin Türkiye'ye gelmesiyle eskiden beri var olan sınır bölgelerindeki kaçakçılığın daha da arttığı görülmektedir. Bu durum alınan tüm tedbirlere rağmen önlenememekte ve bölge ekonomisini olumsuz etkilediği görülmektedir. Bunun yanı sıra bölgede yaşanan karışıklık ve istikrarsızlık Türkiye'nin Ortadoğu ülkeleriyle olan ticaret hacmini etkilemiştir. Gerek Suriye gerekse bölgedeki diğer ülkelerle olan ekonomik ilişkiler sarsıntıya uğramış, ihracat ve ithalat olumsuz etkilenmiştir (Özdemir, 2017).

Tümen (2016), Suriyeli mültecilerin Türkiye ekonomisi üzerindeki etkilerini ele almıştır. Ekonomi üzerindeki etkilerini incelerken özellikle, işgücü piyasaları, tüketici fiyatları ve kiralar üzerindeki bu zorunlu göçün etkilerine bakmıştır. Bu analizi yaparken önce-sonra analizinden yararlanmıştır. Göç alan şehirlerde önceki ve sonraki durumu incelemiştir. Hiç göç almayan şehirleri de kontrol değişken olarak kullanmıştır. Analiz sonucunda, Suriyeli mültecilerin yoğun yaşadığı şehirlerde, yerel halkın işgücü açısından küçük ama istatistiksel olarak anlamlı kayıt dışı istihdam kayıpları yaşadığı görülmüştür (yaklaşık olarak %1,8). Suriyeli mültecilerin kayıt dışı istihdam kanalıyla Türkiye işgücü piyasalarına girmesi, kayıt dışı emek yoğun sektörlerde işgücü maliyetlerini düşürmüştür. Bu maliyet avantajıda, bu sektörlerde üretilen ürünlerin fiyatlarını düşürmüştür. Kentsel ekonomi perspektifinden bakıldığında, mültecilerin yoğun olduğu şehirlerde, yüksek kaliteli mahallelere talep artı; çünkü mülteciler çoğunlukla düşük maliyetli mahallelerde kiralık konut aradılar. Genel olarak, mülteci girişlerinin Türkiye'deki yerli halkın yaşam standartlarına katlanılabilir maliyetler getirdiğini göstermektedir.

2.2. Olumlu Ekonomik Etkiler

Bir önceki bölümde bahsedilen olumsuz etkilere karşın, Suriyeli mültecilerin ekonomiye olumlu katkıları da vardır. Türkiye'de kamplarda yaşayan Suriyeli mülteciler ve Suriye içine yapılan insani yardımların büyük çoğunluğu Türkiye'deki yerli firmalar tarafından karşılanmaktadır. Bu durumda özellikle tekstil ve gıda sektörlerinde üretim yapan firmalar için yeni fırsatlar demektir. İşlerini Türkiye'ye taşıyan Suriye'li küçük işletmecilerin üretime pozitif katkısı da göz ardı edilmemelidir. Yine Suriye'lilerin yarattığı yeni ekonomi de illere ekonomik hareketlilik getirmekte ve canlılık katmaktadır (Orhan ve Gündoğar, 2015).

Suriyeli mültecilerin ekonomiye diğer bir katkısı, Ortadoğu ülkeleri ile son derece iyi ticaret ve yatırım ilişkisi olan ve o pazarları iyi bilen Suriyeli ve özellikle Halepli tüccarların Türkiye üzerinden ticaret yapmasıdır. Suriyeli tüccarlar Türk mallarını bağlantılı oldukları Ortadoğu pazarına ulaştırmaktadır. Bunun yanında yabancı sermaye girişi de olmaktadır. (Salur ve Erdoğdu, 201?). Yine Türkiye'de kamplarda yaşayan Suriyelilere ve Suriye için yapılan insani yardımların büyük çoğunluğu yerel firmalar tarafından karşılanmaktadır. Aynı şekilde, diğer ülkelerden Suriye'ye gönderilecek olan yardım malzemelerinin büyük kısmı sınır illerindeki yerli firmalar tarafından karşılanmaktadır. Bu durum, sınır illerinde üretimin artmasına ve Suriye'deki krizle beraber düşüş yaşayan ihracatın toparlanmasını sağlamaktadır (Orhan ve Gündoğar, 2015).

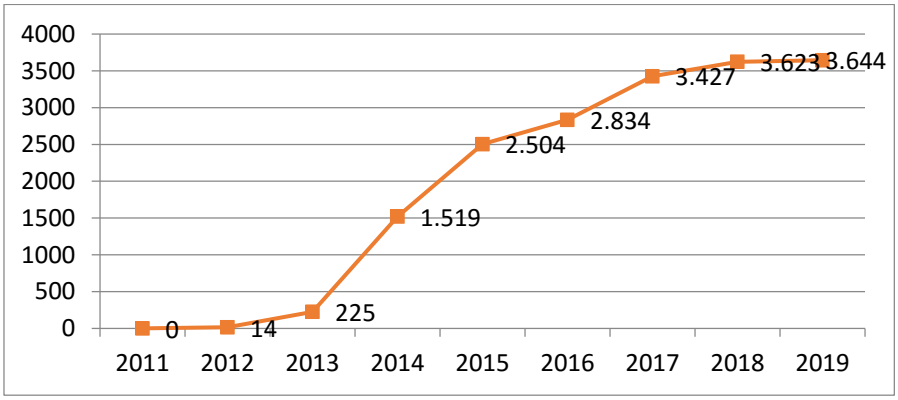
Suriyeli mülteciler konusuna istihdam açısından bakıldığında Suriyeli işçilerin çalıştırılması, iş dünyası tarafından olumlu karşılanmaktadır. Çünkü Türkiye'de üretimle ilgili sektörde ilgi görmeyen birçok vasıfsız işlere yüzlerce Suriyeli talip olmaktadır. İş dünyasında başta tekstil, tarım olmak üzere üretime dayalı sektörlerde eleman açığının gün geçtikçe arttığı ve birçok firmanın vasıfsız eleman bulma sıkıntısından dolayı tam kapasite çalışmadığı durumda Suriyeli işçiler önemli hale gelmektedir (Üstün, 2016). Yine Suriye'li mülteciler çoğunlukla vasıfsız olduklarından daha önce belirttiğimiz gibi bulabildikleri her işte çalışmaktadırlar. Yani iş seçerken çok seçici davranmamaktadırlar. Buda, yerel emek arz ve talebi arasındaki "uyuşmazlığı" azaltma konusunda olumlu bir etkiye neden olmaktadır. Yine kayıt dışı çalıştırılan Suriyeli mültecilerin ekonomiye birtakım olumsuzlukları olmasına rağmen, olumlu etkileri de vardır. Olumlu etkileri şu şekilde sıralayabiliriz:

i. İstihdam etkisi,
ii. Gelir etkisi
iii. Kaynak dağılımını iyileştirici etkisi,
iv. Rekabet arttırıcı etkisi sayılabilir (Salur ve Erdoğdu, 2017).

3. Suriyeli Göçmenlerin Ekonomik Etkilerinin İller Bazında Karşılaştırılması

Türkiye'de Geçici Koruma kapsamında bulunan Suriyelilerin sayısı 2 milyon 715 bin 789'a ulaşmıştır. Türkiye'deki Suriyelilerin yüzde 4'ünden fazlası, yani en az 1 milyon 200 bini 18 yaş altındaki çocuk ve gençlerden oluşmaktadır. 0-4 yaş grubundaki çocuk sayısı 450 bin civarındadır. Bunların içinde Türkiye'de doğanların sayısı 150 binin üzerindedir. Türkiye'deki Suriyeli göçmenlerin sayıları yıllar itibariyle Grafik 1 de görülmektedir. 2011 yılında başlayan Suriye olayları ile birlikte sıfır olan sayı 2019 yılı itibariyle 3,5 milyon kişinin üzerine çıkmıştır.

Grafik 1. Yıllar İtibariyle Suriyeli Göçmenler (Bin kişi)



Kaynak: T.C. İçişleri Bakanlığı, Göç İdaresi Genel Müdürlüğü
https://www.goc.gov.tr/icerik/goc-istatistikleri_363_378

Tablo 4. En Çok Suriyeli Göçmen Bulunduran İller

	Şehir	Suriyeli Sayısı	Nüfusa oranı
1	İstanbul	546238	3,63%
2	Şanlıurfa	441792	21,70%
3	Gaziantep	433664	21,38%
4	Hatay	426869	26,52%
5	Adana	237280	10,69%
6	Mersin	201189	11,09%
7	Bursa	170705	5,70%
8	İzmir	142995	3,31%
9	Kilis	114797	80,54%
10	Konya	106312	4,82%
11	Mardin	87096	10,50%
12	Osmaniye	48572	9,09%
13	Kahramanmaraş	87201	7,62%

Kaynak: T.C. İçişleri Bakanlığı, Göç İdaresi Genel Müdürlüğü
https://www.goc.gov.tr/icerik/goc-istatistikleri_363_378

Suriyeli göçmenler Türkiye'deki iller arasında homojen bir dağılıma sahip değildir. Bazı iller çok yoğun göç alırken bazı illerde bu sayı yok denecek kadar azdır. Bu çalışmada öncelikle Türkiye Göç İdaresinin istatistikleri esas alınarak kişi bazında en çok göç alan 10 il ve en az göç alan 10 il sıralanmıştır (Tablo-5).

Tablo 5. En Az Suriyeli Göçmen Bulunduran İller

	Şehir	Suriyeli Sayısı	Nüfusa oranı
1	Antalya	563	0,02%
2	Zonguldak	379	0,06%
3	Kars	206	0,07%
4	Giresun	174	0,04%
5	Erzincan	166	0,07%
6	Ardahan	147	0,15%
7	Sinop	113	0,05%
8	Tunceli	110	0,13%
9	Iğdır	104	0,05%
10	Gümüşhane	87	0,05%
11	Bartın	65	0,03%
12	Artvin	60	0,04%
13	Bayburt	57	0,06%

Kaynak: T.C. İçişleri Bakanlığı, Göç İdaresi Genel Müdürlüğü https://www.goc.gov.tr/icerik/goc-istatistikleri_363_378

Şehirlerin nüfusları farklılık gösterdiğinden kişi sayısı analizlerde hatalara sebep olabilmektedir. Bu nedenle nüfusuna oranla en fazla Suriyeli göçmen bulunduran 10 il ile nüfusuna oranla en az göçmen bulunduran 10 il tekrar sıralanmıştır. Her iki grupta da (en fazla göçmen bulunduran iller ve en az göçmen bulunduran iller) yedi il ortak olarak ortaya çıkmış ve üç il ayrışmıştır. Bu durumda il sayıları her iki grupta da 1 olarak sınırlandırılmıştır. Tablo 4 en çok Suriyeli göçmen bulunduran illeri gösterirken, Tablo 5 en az Suriyeli göçmen bulunduran illeri göstermektedir.

3.1. Suriyeli Göçmenlerin Sektörler İtibariyle İller Bazında Yoğunluğunun Makro Ekonomik Sonuçları

Türkiye istatistik Kurumu TÜİK il bazında gayrisafi yurt içi hasıla verilerini, iktisadi faaliyet kollarına göre, cari fiyatlarla, 2004-2017 yılları kapsayan şekilde yayınlamıştır. Suriyeli göçmenlerin Türkiye'ye gelişleri 2011 yılında başlaması nedeniyle analizde 2011-2017 verileri kullanılmıştır. Yüksek enflasyon oranlarının yaşandığı yıllar dikkate alınarak cari fiyatlar GSYH deflatörü kullanılarak 2009 yılı sabit fiyatlarına çevrilmiştir.

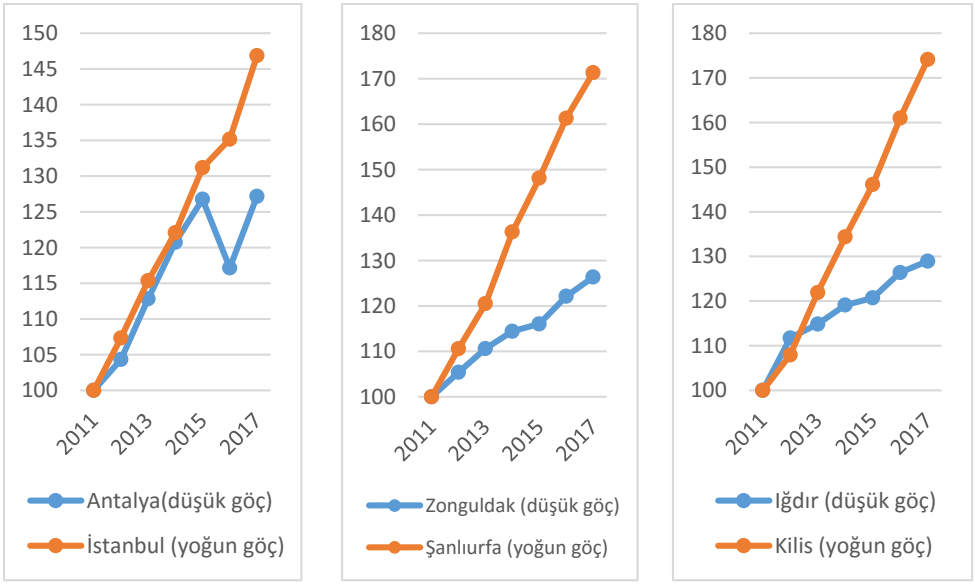
2011-2017 yılları arasındaki elde ettiğimiz iller bazında sektörler itibariyle ve toplam GSYH değerleri 2011 yılı baz 100 değeri hesaplanarak indeks değerleri

oluşturulmuştur. Tarım, sanayi, hizmetler ve toplam GSYH gelişmeleri aşağıda sunulmuştur.

3.1.1. Hizmetler

2011-2017 yılları arasında hizmetler sektöründeki gelişmeler seçilmiş iller bazında Tablo 6 da görülmektedir. Türkiye'ye 2011-2017 yılları arasında Suriye'deki iç karışıklıklar nedeniyle geçici koruma statüsünde göç eden Suriyeli göçmenler illere homojen olarak dağılmamışlardır. İçişleri Bakanlığı Göç İdaresi İstatistikleri verilerine göre göçler bazı illerde yoğunlaşmıştır. Yoğun olarak Suriyeli göçmen barındıran iller ile düşük yoğunlukta göçmen barındıran illerin hizmetler sektörü üzerindeki etkileri seçilmiş bazı iller bazında Tablo 6'da gösterilmiştir. TÜİK sektörler itibariyle yayınladığı verilerde hizmetler sektöründeki yıllık pozitif değişmelerin Suriyeli göçmenlerin yoğun olarak yaşadığı illerde yüksek olduğu gözlemlenmiştir. Karşılaştırmada yoğun göç alan üç il ile düşük göç alan benzer özellikte üç il kullanılmıştır. Yoğun göç alan İstanbul, Şanlıurfa ve Kilis'te hizmetler sektöründeki büyüme hızları tüm yıllarda Antalya, Zonguldak ve Iğdır'a göre belirgin olarak daha yüksek gerçekleşmiştir. Bu durum söz konusu göçlerin Türkiye'de hizmetler sektörünün pozitif büyümesine etki ettiğine işaret etmektedir.

Tablo 6. Hizmetler Sektöründeki Gelişmeler

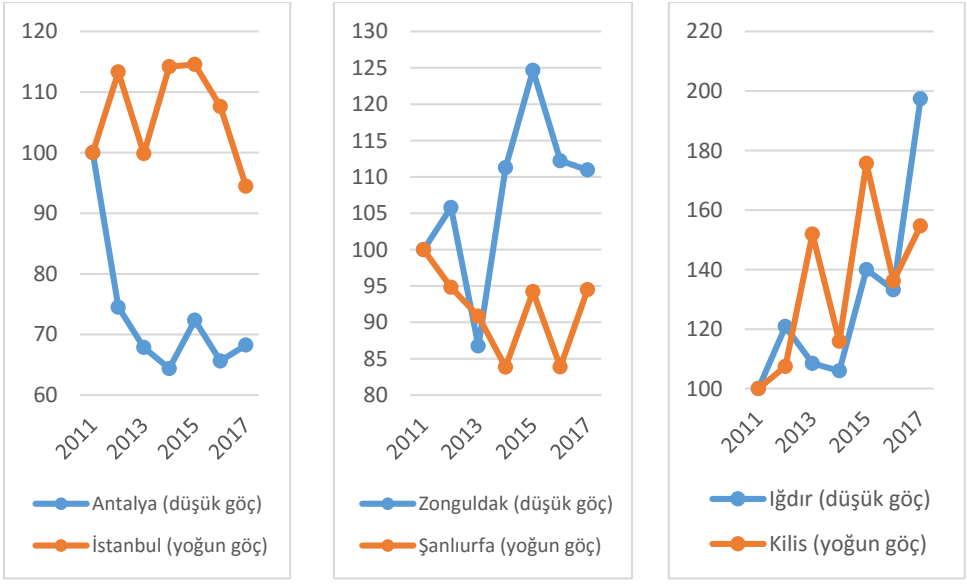


Kaynak: TÜİK, İl Bazında Gayrisafi Yurt İçi Hasıla, 2015-2017, Kalkınma Bakanlığı, 1924-2017 Sektörel Büyüme Hızları ve GSYH Deflatörü,

3.1.2. Tarım

Geçici koruma statüsü altındaki Suriyeli göçmenlerin tarım sektöründe yaptığı etkiler Tablo 7'de gösterilmiştir. Tarım sektöründeki etki net değildir. Hatta bazı durumlarda negatif etki ortaya çıkmaktadır. Göçlerin tarım sektörü üzerindeki etkileri yıllar itibariyle farklılık göstermektedir. Kilis, Iğdır ve Zonguldak, Şanlıurfa karşılaştırmasında negatif etki belirginleşirken, aynı etki Antalya, İstanbul karşılaştırmasında belirgin değildir. Antalya İstanbul örneğinde göçlerin tarım sektörüne pozitif etkisinden söz edilebilir. Türkiye'de Antalya ve İstanbul illeri tarımın payının en düşük olduğu iller arasındadır. Bu nedenle açıklayıcı özelliği düşüktür.

Tablo 7. Tarım Sektöründeki Gelişmeler

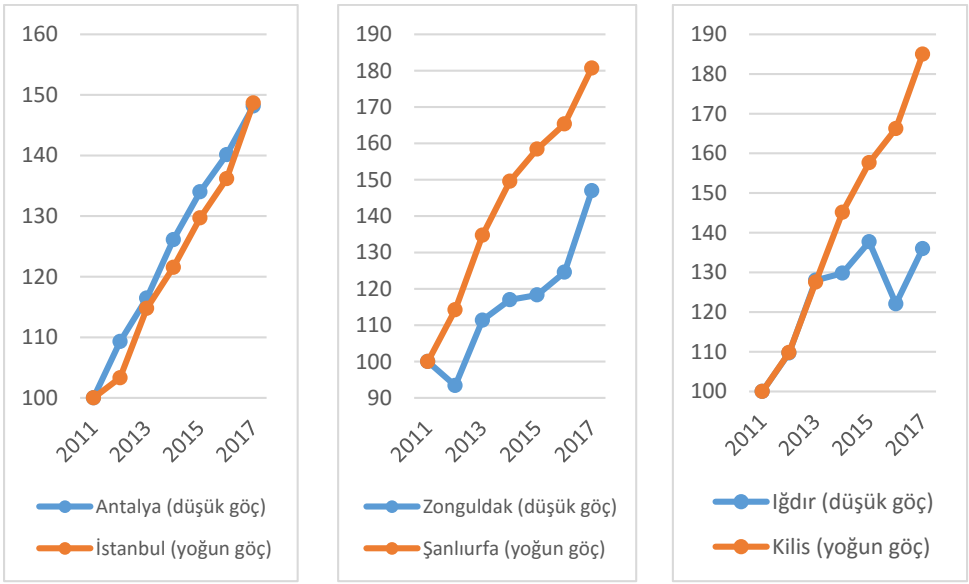


Kaynak: TÜİK, İl Bazında Gayrisafi Yurt İçi Hasıla, 2015-2017, Kalkınma Bakanlığı, 1924-2017 Sektörel Büyüme Hızları ve GSYH Deflatörü,

3.1.3. Sanayi

Suriyeli göçmenlerin 2011-2017 arası sanayi sektöründeki büyüme oranlarına baktığımızda, seçilen iller kapsamında durum Tablo 8'de özetlenmiştir. Sanayi sektörünün büyümesinde Suriyeli göçmenler, Zonguldak, Şanlıurfa ve Iğdır, Kilis örneğinde pozitif etkiye sahipken, bu etki Antalya, İstanbul örneğinde negatife daha yakındır.

Tablo 8. Sanayi Sektöründeki Gelişmeler

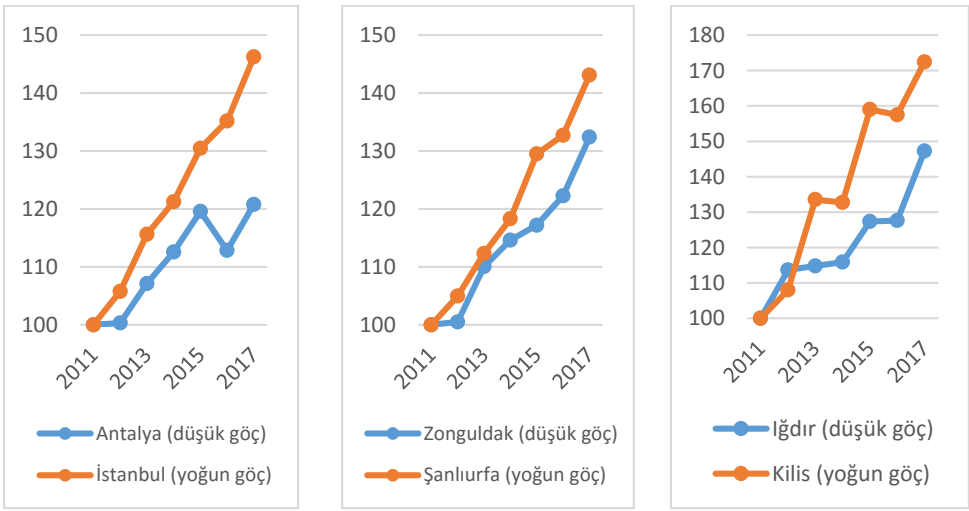


Kaynak: TÜİK, İl Bazında Gayrisafi Yurt İçi Hasıla, 2015-2017, Kalkınma Bakanlığı, 1924-2017 Sektörel Büyüme Hızları ve GSYH Deflatörü,

3.1.4. GSYH

Göçlerin toplam GSYH üzerindeki etkilerinin gösterildiği Tablo 9'da hemen hemen tüm dönemlerde ve seçilen tüm illerde etkinin pozitif olduğu görülmektedir.

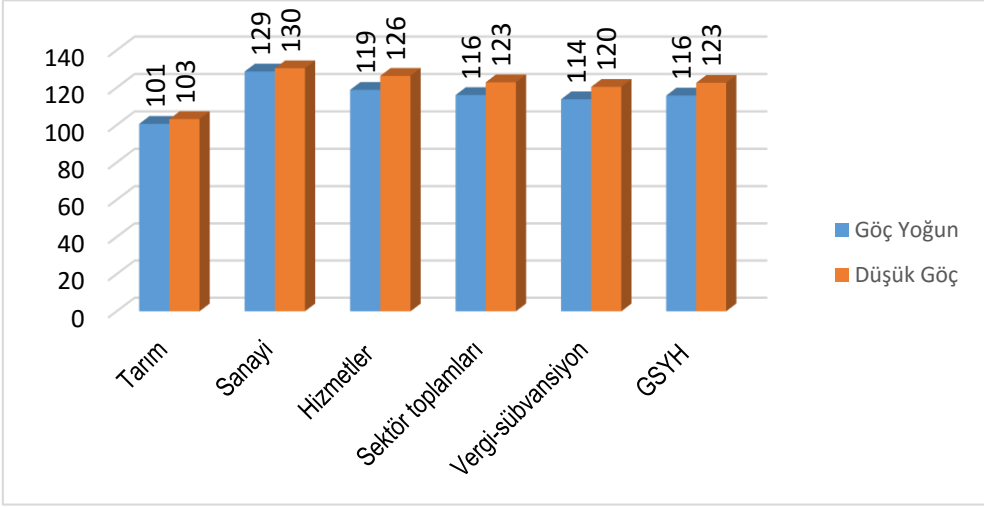
Tablo 9. GSYH Büyüklüğündeki Gelişmeler



Kaynak: TÜİK, İl Bazında Gayrisafi Yurt İçi Hasıla, 2015-2017, Kalkınma Bakanlığı, 1924-2017 Sektörel Büyüme Hızları ve GSYH Deflatörü,

Tablo 9'daki bu sonuca hizmetler sektörünün toplam GSYH içindeki payının büyüklüğü etki etmektedir. Tarım sektöründe ortaya çıkan negatif etki, tarımın GSYH içindeki payının düşüklüğü nedeniyle toplam GSYH içinde önemli bir değişikliğe neden olmamaktadır.

Tablo 10. Yoğun Göç alan ve Düşük alan İllerdeki Gelişmeler



Kaynak: TÜİK, İl Bazında Gayrisafi Yurt İçi Hasıla, 2015-2017, Kalkınma Bakanlığı, 1924-2017 Sektörel Büyüme Hızları ve GSYH Deflatörü

Son olarak Suriyeli göçmenlerin makroekonomi üzerindeki etkilerine seçilen 23 il ve tüm yıllar dikkate alınarak bakıldığında, net etkinin pozitif olduğu ortaya çıkmaktadır. Yoğun göç alan bölgelerde tarım, sanayi ve hizmetler sektöründe büyüme hızı daha yüksektir. Buna bağlı olarak vergi ve sübvansiyonlarda daha yüksek olarak gerçekleşmiştir.

4. Sonuç

2011 yılında Suriye'de başlayan iç karışıklık nedeniyle ortaya çıkan Suriyeli mülteciler sorunu başta komşu ülkeler olmak üzere birçok ülkede birincil öneme sahiptir. Bugüne kadar ortaya çıkan gelişmelere baktığımızda mülteci sorununun sadece kısa vadeli etkilerinin olmadığı, aynı zamanda ev sahibi ülkelere uzun vadeli sonuçlarının da olacağıdır. Bu sonuçlar, ekonomik, sosyal ve politik sonuçlar dahil olmak üzere geniş bir alanı kapsar.

Bu makale de Suriyeli mültecilerin Türkiye 'deki ekonomik etkileri, özellikle tarım, sanayi ve hizmet sektörleri üzerindeki etkileri incelenmektedir. Bu incelemeyi yapabilmek için öncelikle Suriyeli mültecilerin sayısı ve en çok bulundukları illerle

ilgili genel bilgiler verilmiştir. Genel olarak Suriyeli göçmenlerin ekonomi üzerindeki olumsuz ve olumlu etkileri gözden geçirilmiştir. Bunu takip eden bölümde 2011 yılından itibaren Suriye'den Türkiye'ye başlayan yoğun göç dalgasının, Türkiye ekonomisi üzerindeki etkilerini GSYH ve temel sektörler itibariyle incelemiştir. Bu amaçla seçilen en çok göç alan 13 il ile an az göç alan 13 il karşılaştırılmıştır. Bu karşılaştırmada 2011 baz yıl kabul edilerek bir indeks oluşturulmuştur. Bu endeks iller itibariyle tarım, sanayi, hizmetler ve toplam GSYH gelişmeleri en düşük göç alan şehirler ile en yoğun göç alan şehirler itibariyle analiz etmiştir.

Bulunan sonuçlar göstermektedir ki tarım sektörü dışındaki, sanayi ve hizmetler sektöründe Suriyeli göçmenlerin bu sektörlerin büyümesine etkisi pozitif olmuştur. Toplam GSYH üzerindeki net etkide pozitif olarak hesaplanmıştır. Çalışma sonuçları sınırlı veri kaynağı ve dönemi içerdiğinden ihtiyatla değerlendirilmelidir.

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Effect of Income Inequality on Economic Growth in Selected West Africa Countries: An Empirical Analysis

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Effect of Income Inequality on Economic Growth in Selected West Africa Countries: An Empirical Analysis

Abstract

The paper empirically investigates the effect of income inequality on economic growth in the selected Western African countries for the period of 1969-2016 by using panel data analysis. The results of panel data method indicates that poverty has positive and statistically significant effect; openness has a negative, and also significant effect on economic growth. On the other hand, inequality and human capita have negative effect on economic growth and slightly statistically significant.

The results of this study show that the policy makers should focus on reinvestment in human capital, poverty reduction, land reforms, and infrastructure development as the dynamics of economic growth for these countries.

1. Introduction

Economic growth is considered to be a powerful force for reducing poverty, inequality and promote sustainable development goals. High and sustainable economic growth increases demand for labour and wages which in return reduces poverty. Similarly, better earnings as a result of reduction in poverty lead to increased productivity and growth. But the extent to which poverty reduction results from economic growth depends on how disparity in income distribution changes with economic growth and on initial inequalities for income. If income inequality increases, then economic growth does not lead to a significant poverty reduction. Many developing countries achieved high growth rate in different periods with no corresponding reduction in their poverty indices due to increased income inequality. Most South and East Asian economies grew at higher per capita rates since early 1970s along with rise in income inequality over time. The high level of inequality in income distribution requires that efforts to stimulate growth are not sufficient in reducing poverty without being complemented by policies to reduce income inequalities (Tabassum, 2005).

During the 1950's and 1960's attention shifted to the relationship between inequality and economic growth. Most of this literature focused on the impact of income distribution on consumption and saving. During the 1970's and the 1980's, macroeconomic theory lost interest on issues of distribution, partly due to the decline of interest in growth. But the relationship is quite important because policy makers need to understand the way in which increase in output will be shared among heterogeneous agents within an economy, and the constraints that this sharing may put on future growth (Kamila and Samih, 2011). According to World Bank annual statistical reports, poverty has declined significantly in developing countries over the past twenty years but the progress has been uneven. The number of people living in poverty fell from 1.5billion in 1982 to 1.1 billion in 2001. However, many low-income developing countries are still trapped in vicious circle of poverty. In sub-Saharan Africa, the number of the poor rose from 41% to 46% between 1981 to 2001.while in Eastern Europe and Central Asia, the numbers have risen to around 20% in 2001. Therefore, reduction of widely scattered poverty is the most challenging goal for low income developing countries (Tabassum, 2005).

There is disagreement among development economists on the relationship between inequality and economic growth. This controversy derives from the fact that it has been difficult to reconcile the different theories, and the empirical evidences have been largely inconclusive (e.g.Perroti, 1996; Alesina and Rodrick 1994; Clark and Lawson, 2008; Forbes, 2000; Garbis, 2005; and Oguns, 2004). It is against this background that this study examined the relationship between income inequality and economic growth with particular reference to West African region.

The purpose of the study is to empirically identify the factors affecting income inequality in mixed evidence of West African countries. With this aim, it will helps us to identify the relationship between income inequality and growth in Western African countries. The rest of the paper is organized as follows; section 2 literature reviews, section 3, Methodology, Section 4, Conclusion and Recommendation.

2. Literature Review

2.1. Conceptual Issues

Inequality refers to the unequal distribution of Household or individual income across the various participants in an economy. Income inequality is often presented as the percentage of income to a percentage of population. It is often associated with the idea of income "fairness". It is generally considered "unfair" if the rich have a disproportionally larger portion of a country's income compared to their population (Rodriguez, 2000).

Economic growth on the other hand is defined by Kuznets () as a long-term rise in the capacity of an economy to supply increasingly diverse economic goods and services to its population; this growth capacity is based on advancing technologies, and institutional and ideological advancement. Anyanwu and Oaikhenan (1995) stated that economic growth refers to the increase over time, of a country's economic capacity to produce those goods and services needed to improve the wellbeing of the citizens in increasing numbers and diversity. Economic growth is therefore a sustained increase in the per capita income over a period of time.

2.2. Theoretical Issues

The research of Simon Kuznets titled "Economic growth and income inequality" laid foundation of studying the relationship between economic growth and income inequality. He was the first person to introduce the idea of a link between inequality and development. The main idea of his theory is that the relationship between economic growth level and income inequality is likely to show an inverted U-shape, which is known in economic literature as Kuznets hypothesis. This hypothesis suggests that at low levels of income, inequality increases with rising per capita income and decreases only in the later stage of development with industrialization-resulting in an inverted U-shaped relationship between per capita income and income inequality-based on a model where individuals migrate from a low-wage rural sector with little inequality to an urban sector characterized by high income inequality and high average income (Kuznets, 1995).

The Marxist view is that inequality is inherent in the capitalist mode of production. It is inevitably produced during the normal operation of capitalist economies, and cannot be eradicated without fundamentally altering the mechanism of capitalism. In addition, it is functional to the system, which means that power holders have a vested interest in preserving social inequality. There is little point, therefore, in

devoting political energies to the advocacy of policies which deal only with the symptoms of inequality without altering its basic generating forces. Hence, the call for social and economic revolution, the overthrow of capitalism, and the substitution of a method of production and an associated way of life designed around the principles of equality and social justice. Marxism favours an eventual society where distribution is based on an individual's need rather than his ability to produce, inheritance, or other such factors. In such a system, inequality would be minimal. Marxists believe economic equality is necessary for political freedom; that when there is economic inequality then political inequality is assured (Peet, 1975). Marxists are of the view that the more the distribution of resources in favour of the rich, the more the tendency for overinvestment and under consumption and this will result in economic crisis and will have negative implication on economic growth (Anyanwu and Oaikhenan, 1995).

However, Gupta (1990), Alesina and Perotti (1993) also offered a new explanation for the relationship between income inequality and economic growth. According to them, increasing income inequality has the potential to cause political or social instability or revolutions. And this instability eventually will discourage investment and strong establishment of property right which will lead to declining economic growth.

Galov and Moav (2004) developed a growth theory that captures the replacement of physical capital accumulation by human capital accumulation as a prime engine of growth along the process of development. They argued that the positive impact of inequality on the growth process was reversed in this process. In early stages of the Industrial Revolution when physical capital accumulation was the prime source of growth, inequality stimulated development by channeling resources towards individuals with a higher propensity to save. As human capital emerged as a growth engine, equality alleviated adverse effects of credit constraints on human capital accumulation, stimulating the growth process.

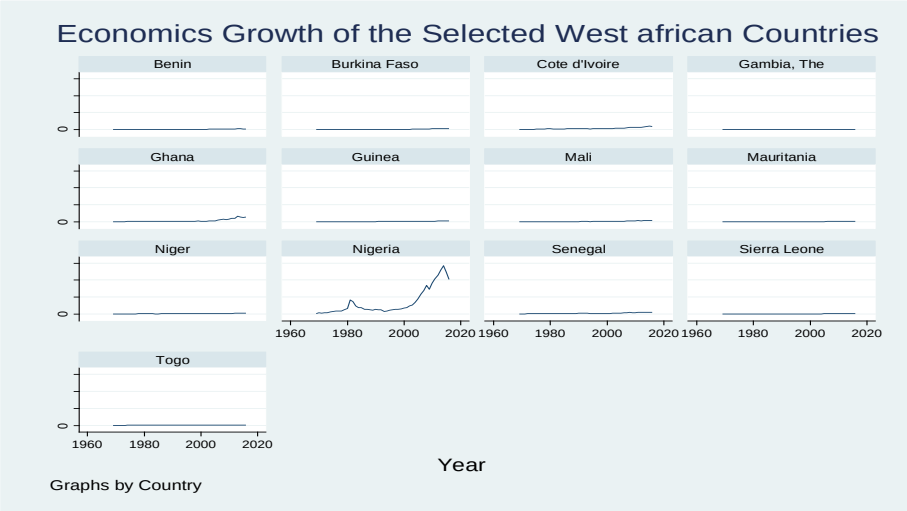
Galor (2000) argues that the classical approach holds at low-income levels but not at later stages of development. In the early stage of development, inequality would promote growth because physical capital is scarce at this stage and its accumulation requires saving. Inequality in income would then result in higher savings and rapid growth. In later stages of economic development, however, as the return to human capital increases owing to capital-skill complementarily, human capital becomes the main engine of growth. Credit constraints, however become less binding as wages increases and adverse effect of income inequality on human capital accumulation subsides, and thus the effect of inequality on growth process becomes insignificant.

The classical approach advanced the hypothesis that inequality is beneficial for economic development in the post-industrialization period (Keynes, 1920; Kaldor, 1957). It argue that since the marginal propensity to save increases with wealth, inequality channels resources towards individual whose marginal propensity to save is higher, increasing aggregate savings, capital accumulation, and economic growth. This means that income inequality is a necessary ingredient for economic growth; that countries cannot grow without inequality because inequality guarantees continuous supply of savings by capitalist who have high marginal propensity to save and invest while on the other hand the poor have high marginal propensity to consume. Therefore, redistributing income in favour of the poor will only result in increase in consumption of consumer goods and not savings and investment.

2.3. Empirical Review

Several researchers have conducted the studies on the relationship between income inequality and economic growth.The estimated coefficients imply that both variables have a negative impact on growth. Greater inequality in the distribution of income and land thus appears to slow down economic growth. Symmetrically, equality seems to be growth enhancing.

Figure 1: Economics Growth of the Selected West African Countries



Source; Authors' Computation by using stata 13 for window.

On the impact of economic growth, tax policy and economic freedom on income inequality using data from 1990-2000 and capturing variables such as the Gini coefficient as a proxy for the degree of income inequality, gross capital formation (investment) as a share of GDP, human capital investment, GDP per capita as a proxy for economic growth, changes in the marginal tax rate, and Economic

Freedom of the World (EFW) as the measure of institutional and policy environment. The research employed Two Stage Least Squares (2SLS) model. The findings generally indicate that increased economic growth corresponds with lower Gini-coefficient i.e. more income equality. A two percentage point increase in economic growth correlates with a three unit decrease in the Gini coefficient. The results of the study also revealed that progressive taxation as measured by high top marginal tax rate increased income equality and increases in the level of economic freedom corresponds to increased income equality.

Liu and Wanshun (2006) examined the interaction between income distribution and economic growth in China from 1982-2001 using Granger causality test. The results indicate that there exists causality from income distribution to economic growth; and that the gap in income distribution promotes economic growth.

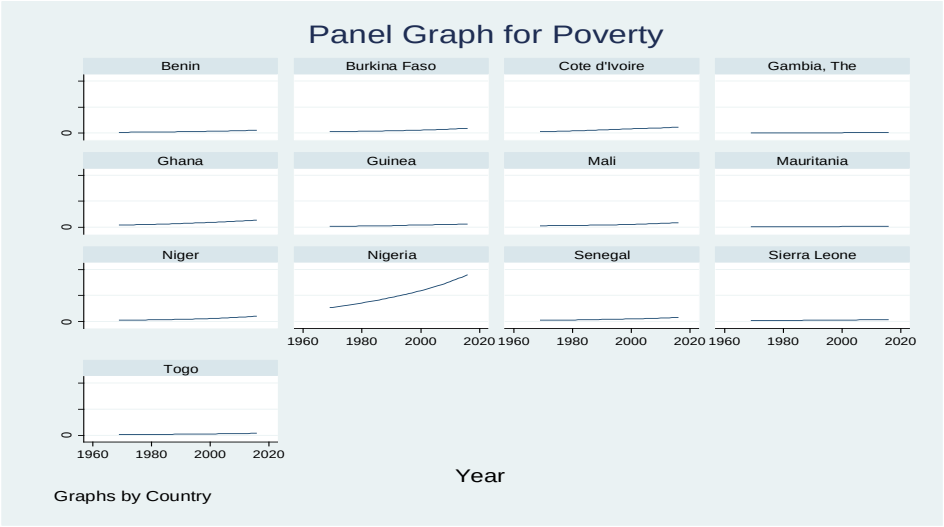
Forbes (2000) found positive effects of income inequality on growth. The author argued that country-specific effects and omitted variables are the cause of significant negative bias in the estimations of the effect of inequality on growth. She also concluded that fixed-effect estimations yield the consistent result of a positive short and medium term correlation between inequality and growth.

Perotti (1996) conducted a careful examination of the various channels through which inequality may affect economic growth, as proposed by the modern theoretical perspective. His study provides support for the Galor-Zeira hypothesis, showing that inequality is indeed associated with lower level of human capital formation, and lower human capital formation is associated with lower levels of economic growth.

Dollar and Kraay (2001) using data on trade liberalization as a share of GDP in constant prices for 101 countries including 73 developing countries from 1975 to 1997 found that trade openness leads to declining inequality between countries and declining poverty within countries. The poor countries that have reduced trade barriers and participated more in international trade over the past 20 years have their growth rate accelerated. In the 1990s they grew far more rapidly than the rich countries, and hence reduced the gap between themselves and the developed countries. At the same time the developing countries that are not participating in globalization are falling further behind. Within the globalizing developing countries there has been no general trend in inequality. Thus, rapid growth has translated into dramatic declines in absolute poverty in countries such as China, India, Thailand and Vietnam. OLS estimation results showed that in the 1990s the globalizing developing countries grew at 5.0% per capita, rich countries at 2.2% per capita and non globalizing developing countries at only 1.4% per capita while 100% increase in the trade share would have the cumulative effect of raising income by 25% over a decade.

In a study on Turkish economy, Oguns (2004) did not find a statistically significant relationship between inequality and growth for the period of 1960-1999 using regression method . She concludes that, income distribution has not deteriorated in this period to other economies, where a change for the benefit of the upper quartile at the cost of the rest of the population has taken place, but substantial losses in real incomes have been realized. Hiranya and Abdullahi (2004) found some evidence of trade liberalization accelerating growth in Bangladesh and also found evidence affecting income distribution or, of income distribution affecting growth or investment. Data on income inequality used in this study has poor quality.

Figure 2: Panel Graph for Poverty



Sources: Authors' Computation By using stata 13 for window.

Garbis (2005) examined the empirical relationship between inequality and economic growth. A panel data set for 82 countries for the period 1965-2003 was assembled with the data averaged over period of three to seven years, depending on the availability of data. The empirical results challenge the belief that income inequality has a negative effect on growth and confirm the validity of the Kuznets curve. Credit market imperfections in low and medium income countries are identified as the likely reason for the positive link between inequality and growth over the short to medium term. In the long term, inequality may have an adverse impact on growth.

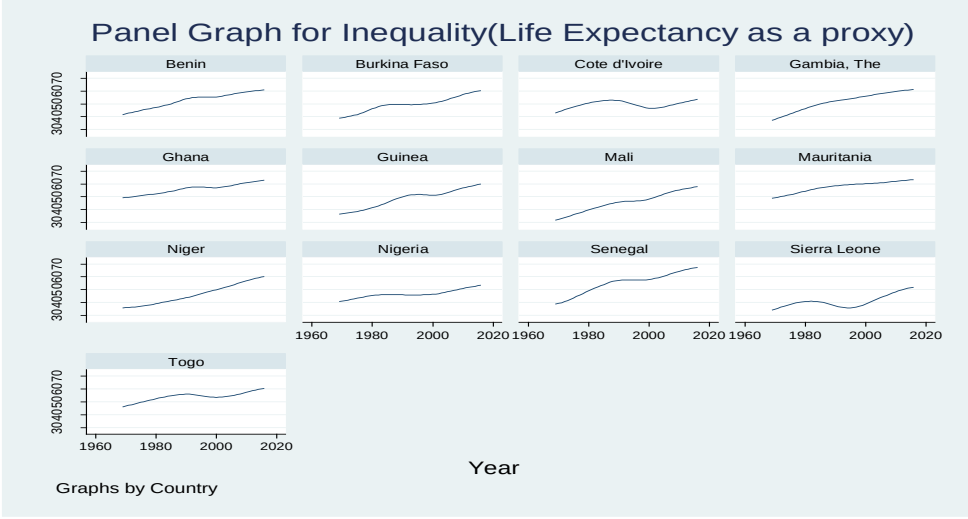
Zouhier and Imen (2012) examines the empirical relationship between growth and income inequality for three countries of north Africa over the period 1970-2004 and the result indicate that the long-run growth elasticity of income inequality is negative and significant.The results also show negative and highly significant

relationship between growth and initial income per capita. Physical capital investment has positive effect on economic growth. The results also suggest that coefficients of openness to trade and human capital investment are positively and robustly significant indicating that both factors have strong impact on economic growth.

Hall (2007) examined the impact of poverty on innovation capacity and economic growth using data from 1980-1999 and used the methodology of pooled cross-sectional time-series analysis with panel corrected standard errors with lags. The findings revealed that poverty impact economic growth negatively through its effect on the components of capacity that leads to economic growth; there is weak support of the negative direct effects of poverty on economic growth; and mixed results for the effects of poverty on innovation capacity formation.

The study by Fosu (2010) used data from 1981-2005 and examined the transformation of economic growth to poverty reduction in developing countries with emphasis on the role of income inequality. The study used Fixed Effect (FE), Random Effect (RA) and the Generalized Method of Moment Estimation. Using both regional and country-specific data the study found that on average, income growth has been the major driving force behind both the declines and increases in poverty and that high initial levels of inequality limit the effectiveness of growth in reducing poverty.

Figure 2: Panel Graph for Inequality



Sources: Authors' Computation By using stata 13 for window.

Ncub.(2013) examined the patterns of inequality, growth and income inequality in the MENA region. Using cross sectional time series data of MENA countries for the

period 1985-2009, the study also investigated the effect of income inequality on key societal development, namely economic growth and poverty in the region. The findings showed that income inequality reduces economic growth and increases poverty in the region. Other factors having significant negative effect on economic growth in the MENA region include previous growth rate, exchange rate, government consumption expenditure, initial per capita GDP, inflation and primary education.

3. Methodology

3.1. Variables Measurement

In conformity with the literature, the variables in the model consist of both the dependent and independent variables. Economic grow is the dependent variable and is measured as gross domestic product (GDP) in line with Kamila and Semih, (2011). The explanatory variables are; population, total as a measure of total population in a country, life expectancy is one of the potential proxy of Gini coefficient which is the measure of inequality following Kamila and Semih, (2011) Tabassum (2005); Human capital is measured as secondary school enrolment rate gross in line with Tabasum (2005); Poverty is also treated as an independent variable following the work of Hall (2007) and it is measured as the percentage of population living on less than 1.25 dollars per day following the work of Fosu (2010); openness is measured as a simple trade shares, which is exports plus imports divided by GDP and is used as proxy for the level of trade between a particular country's economy and the rest of the world as used by Dollar and Kraay (2001), Zouheir and Imen (2012). (Sara Hertog, 2013)wrote Association between Two Measures of Inequality in Human Development: Income and Life Expectancy and uses lifespan as a proxy for inequality.The potential proxies for inequality as suggested by one of the reviewers are found here;https://www.quora.com/What-proxies-can-be-used-to-determine-the-income-inequality-of-a-specific-region-For-example-instead-of-finding-a-Gini-coeffient-what-other-measurements-and-data-could-be-used-to-determine-this-income-disparity.

3.2. Model specification

The paper used panel data for the periods from 1969-2016 to study the relationship between economics growth and income inquality.

At the beginning of the paper we started to build the models as follows;

$$EGrowth_{it} = \theta_0 + \theta_1 HCapital_{it} + \theta_2 Op_{it} + \theta_3 LProxyforGINI_{it} + \theta_4 X_{it} + \vartheta_i + \epsilon_{it} - -(1)$$

Where, the subscript i (=1,…, n) represents country and t (= 1,…,T) the period (years). $EGrowth_{it}$ Indicates Economics growth as a good proxy for gross domestic product of the individual countries a time t (fosu 2010), $HCapital_{it}$ represents human capita as a proxy for secondary enrollment Op_{it}denotes openness that is average of export and import, $LProxyforGINI_{it}$ is the life expentancy as a proxy of inequality measured by gini coeffiencts. Xit denotes control variable, which is poverty,; ϑ_i represents the unobserved country-specific fixed-effects such as country's location, demography, culture that needs to be controlled before we explore the impact of explanatory variables on economic growth to avoid misspecification of the model; and ϵ_{it} stands for the error term.

Furthermore, economics growth which is a proxy of the gross domestic product might affect income inequality by different channels. In this paper, we try to discover whether economics growth affect income inequality through Human capita, openness, Gini coefficient and poverty.

3.3. Estimation

Our model can be estimated using different methods, such as fixed effect and random effect. However, a country-specific effect that affects economic growth are difficult to be explored. If the unobserved country specific variables are correlated with the regressors, our models will produce biased results. To solve this problem, one can use either fixed effect, random effect. However, utilize economic rationality and statistical insights to choose the right model. After using Hausman test, our findings suggest that the fixed-effect model performs better than the random-effect model. Therefore, our models look as follows:

$$EGrowth_{it} = \theta_0 + \theta_1 HCapital_{it} + \theta_2 Op_{it} + \theta_3 LProxyforGINI_{it} + \theta_4 X_{it} + U_{it} \quad --(2)$$

3.4. Method of Data Analysis

This research work employs the use of panel data approach using Fixed Effect and Random Effect model following the worked of Fosu (2010). The choice between Fixed Effects and Random Effects models will be influenced by result of Hausman test (1978) which is commonly used as a way of choosing between fixed and random effects (Gujarati and Sanjeetha, 2007). We used fixed effect model as detected by Hausman specification test results below.

4. Analysis of the results

Table 1: Descriptive Statistics

Variables	Mean	Standard Deviation
Economics Growth	1.49e+10	5.58e+10
Human Capital	59.11757	32.96523
Openness	59.16464	26.11772
Inequality	50.28852	7.353091
Poverty	7488232	1.40e+07

Table 2: Results of the Hausman Specification Test

Variables	Coefficients		
	Fixed Effect (b)	Random Effect (B)	Difference (b-B)
Human Capital	-8.08e+07	-1.56e+08	7.52e+07
Openness	-1.62e+08	1.12e+08	-2.74e+08
Inequality	-4.21e+08	7.73e+08	-1.19e+09
Poverty	7084.599	3454.817	3629.782
chi2(3) = 149.02 (V_b-V_B is not positive definite)		Prob>chi2 = 0.0000	

Source: Computed by Authors Using Stata/ for SE-64.exe 13 for Windows

4.1. Hausman test

The results for hausman test was used at table 1 above to check which model is more appropriate for our analysis. From the result generated indicated that the probability values of F- statistics is significant at 5% level of alpha, which is the decision of favored fixed effect to random effect model i.e Prob>chi2 = 0.0000.In other words, fixed effect is more accurate or accepted and random effect is rejected or is not appropriate for our analysis.

Table 3: Regression Results for West Africa Countries

Independent Variables	Fixed Effect Regression				Random Effect Regression			
	Coeff.	**Std error**	**t-ratios**	**P(t)**	**coef.**	**Std error**	**z-ratios**	**P(Z)**
Human Capital	-8.1e+07	4.74e+07	-1.7	0.089*	-1.6e+08	5.2e+07	-3.00	0.003**
Openness	-1.6e+08	5.57e+07	-2.92	0.004**	1.1e+08	5.5e+07	2.05	0.041*
Inequality	-4.2e+08	2.41e+08	-1.8	0.081*	7.7e+08	2.4e+08	3.25	0.001**
Poverty	7084.599	186.7508	37.94	0.000***	3454.82	95.9569	36.00	0.000***
	N = 624 F(4,607) = 381.76 Prob > F = 0.0000 R-squared = 0.6803				N = 624 Wald chi2(4) = 1457.93 Prob > chi2 = 0.0000 R-squared = 0.7020			
Note: Panel data Estimation results for Fixed and Random effects Model. Dependent variable: Economic growth.								

Standard errors between parentheses
* p=0.10, ** p=0.05, *** p=0.01
Source: Computed by Authors Using Stata/ for SE-64.exe 13 for Windows.

From the above table 2, the result for the fixed effect model indicated that the explanatory variables; poverty and openness are highly significant at 1% and 5% respectively. In contrast, the coefficient for poverty level is also economically significant, meaning positive correlation between poverty and economics growth of the selected West African countries under analysis. Openness to international trade from 1969-2016 have negative impact on the rate of change of economics growth. For instance, human capita and inequality are slightly significant and both have negative slope. Meaning both human capita and income inequality moved inversely with economics growth. It is also important to know that the overall R-squared value for fixed effect is good and the f-statistics also prove the model is good and adequate for our analysis.

Further, the results for random effect presented in the same table also revealed that poverty, human capita and inequality all are statistically significant at 1% and 5% respectively, except human capita which is significant at 10%.Poverty and

inequality have positive sign on economics growth, while human capita as indicated in the fixed effect have negative correlation with growth. Openness, average of export and import is slightly significant and associated with positive sign. This is true , because countries with high export, expected high growth. The overall R-squared is 70%.

5. Discussion of Finding

The results for fixed and random effect are interchange of coefficient and p-ratios, because of the fixed the error term at time t may be correlated with all the regressors while the opposite is the case of random effect. Human capital is slightly significant for fixed effect and negative sign and highly significant for random effect with negative sign respectively. Trade openness is highly significant for fixed effect model and negative sign, while the same variable is slightly significant and negative coefficient in the random effect regression. Inequality is highly significant and positive sign for random effect model and slightly significant and negative for fixed effect model.

The results for poverty is significant related to economics growth are not in line with the work of Hall(2007). In the West African countries, poverty from 1969-2016 reduces growth and development. This means most of the variables like inflation, crime rate, Mental illness, family breakdown, civil war, unemployment, interest rate are high, while investment, consumption and saving becomes low.

Inequality in which life expectancy as a proxy of in equality and which in turn measured by gini coefficients have negative coefficient and slightly significant with growth as proposed by the model of fixed effect. This result is in line with the classical theory used as the theoretical framework of the study and conformity with economics a priori expectation. The finding of inequality also provide support of the Kuznets' inverted U-shape hypothesis, which explains that at the early of industrialization and development, inequality increases with rising per capita income and decreases only at the later stages of development. The fixed effect regression results is that inequality reduces economics growth and is consistent with the result of the works of Alesina and Rodrick (1994);Ncubeet al.(2013) and Wheelan (2002), which show that inequality slows down economic growth; and the work of Perotti (1996) which revealed that inequality is associated with lower levels of human capital formation, and lower levels of human capital formation is associated with lower levels of economic growth.

Our fixed effect regression results also in in conformity with the work of Gupta (1990) and Alesina and Peroti (1993) which explain that increasing income inequality has the potential to cause political or social instability or revolutions or

crime rate,civil war, which could discourage investment and lead to declining output and employment. The result contrasts with the work of Forbes (2000) and Garbis (2005) who found that inequality is positively related to economic growth.

The findings also reveal that human capital has negative and statistically significant effect on economic growth. This is in contrast with the previous studies conducted by Zouhier and Imen (2012) and Wheelan (2002), which found that human capital has positive impact on economic growth; and the result does not conform with the a priori expectation of the study.

The findings on trade show that openness is negative and significantly related to economic growth for fixed effect model and positive sign and significant for random effect.. This is in conformity with the works of Romer (1999), Frankel and Romer (1999), Ekpo (2005), Dollar and Kraay (2001) which found that openness or trade liberalization have positive and statistically significant effect on economic growth for random effect regression but opposite results for fixed effect regression.. The result is also in conformity with the a priori expectation of the study for random effect regression, but not in fixed effect regression.

For the adequacy of the model, the results reveal that all the models were adequate based on the F-values that were statistically significant at 1% and Prob > F = 0.0000 is also significant at 1% level meaning that the fixed effect model is adequate to explain the effect of income inequality on economics growth of the selected West African countries.

6. Conclusion and Recommendations

On the basis of the findings of the study, we draw conclusion that human capita, openness and income inequality slow down economic growth of the West African region and poverty rises with growth. poverty translate into boosting the growth of West Africa. Poverty and openness are highly significant, but human capita and income inequality are slightly significant and negative signs respectively.

These suggest the need for the sub-region to pursue policies that will bring economic development with an immediate decrease in inequality through immediate re-investment of the proceeds of economic growth into land reforms, poverty reduction, human capital and infrastructural development. Ownership rights to land should be redistributed in areas where traditional institutions have high access to land at the expense of the farmers by acquiring the lands and making available to farmers who engage in large scale agriculture. High property tax should

be imposed on those with ownership of large areas of lands without being engaged in economic activities.

West African governments should ensure sound macroeconomic management through budget tracking, financial sector reform, economic planning, project monitoring and evaluation as well as ensuring that projects being embarked upon by the government are prioritized and reprioritized based on their contribution to the long term plan and goals of the economy and not just on the basis of their linkage with the financial statements in the budgetary provisions. The fight against corruption, poverty and insecurity in West Africa should be taken to the sub regional level through the Economic Community of West African States (ECOWAS) to create synergy among West African leaders in tackling the problems effectively.

There is need for redesign of industrial policies to distribute income more equally by ensuring high and increasing wages for workers as profits of the entrepreneurs increase. Also, a holistic tax reform should be carried out to ensure a more progressive tax system and strengthening of the tax enforcement agencies to reduce tax evasion and tax avoidance and the revenues used to close the income gaps and poverty alleviation in the region.

Finally, we recommend that further researchers' on the relationship between income inequality and economic growth included the following control variables; institutional quality, FDI, political stability, control of corruption, resources intensity, voice of the people, soft and digital skills.

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