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## The Long-Term Impact of Syrian Refugees on Turkish Economy: An Input-Output Simulation\*

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in collaboration with :



### 1. Introduction

Turkey has become the country that hosts the largest refugee population in the world thanks with over 3.5 million refugees crossing the borders from Syria since 2011, the beginning of Syrian civil war. Whereas the social reactions against the unconditional acceptance of Syrian refugees remains on the agenda, studies investigating the extensive impacts of these refugees on Turkish economy are still limited.. The March 2016 agreement between EU and Turkey redirected the flows of the refugees intended to go to Europe towards Turkey, which meant that a significant number of Syrian refugees may be staying permanently in Turkey. The main purpose of the research project is to simulate the medium and long-term aggregated economic impact of the refugees with the general equilibrium context by using the input-output analysis in Turkey focusing on the production and consumption sides. The scenarios built for 2017, 2023 and 2028 (short, medium and long terms) are expected to enable a coherent design of an integration road map for refugees to analyze future impacts in a broader perspective. The main conclusion deduced from the research is that the production effect of the refugees, which can be interpreted as the contribution of the refugees in the production, is greater than their induced demand effect interpreted as their contribution on consumption for 2017, 2023 and 2028 respectively.

Concentrating on a migration case of middle-income labor abundant hosting country which is not typically encountered, dealing with the forced and double forced migration then choosing an input-output analysis as a research methodology to comprehend the migration phenomenon within the general equilibrium context distinguish this study from its counterparts.

### 2. Stylized Facts of Syrian Refugees in Turkey

#### 2.1. Syrian Refugees Workers and Business

According to the data of Directorate General Migration Management (DGMM), the number of Syrian refugees registered under temporary protection is around 3.56 million as of September 2018. This number corresponds

to 64.1% of total Syrian refugees in the region. The other countries, Lebanon, Jordan, Iraq and Egypt, have taken 16.7, 11.7, 4.5 and 2.4 percent of total Syrian refugee population respectively. It is estimated that only around 7% of refugees in Turkey are living in temporary accommodation camps constructed by the Turkish government in cities close to Syrian border and the rest is mostly settled in urban areas. Due to Turkey's implementation of the "open door" policy for Syrian refugees, their number increased more than fifteen fold between 2013 and 2017.

Since the status of refugees in Turkey changed from temporary to permanent, which meant that those migrants needed to be integrated into Turkish society, Turkish government eased the access of basic facilities for refugees and approved extending their work permits and residence permission. DGMM data show that the number of Syrian refugees who obtained residence permits increased from 31,715 to 49,983 between 2014 and 2017. The government provides occasional assistance in the form of cash or in kind transfers such as food, coals and clothing items for refugees. Syrians refugees in Turkey now receive around 640 million TL (108 Million USD) of financial aid (Kızılay, 2016).

The number of Syrian refugees employed informally is estimated at around 650,000 which corresponds to around 40 percent of the active population of Syrian refugees in Turkey. The main sector that includes informal working Syrian is agriculture, construction, textile and business. The number of work permits granted for refugees is low and most of the employed are in the services sector (63.2%), followed by the industry (32%), construction (4.4%) and agriculture (0.4%) sectors. According to a survey conducted by AFAD in 2013, the average monthly income of working Syrians in Turkey was 236 USD, roughly half of the national minimum wage for that year. At the end of 2017, the number of firms owned by Syrian Refugees reached around 6,311 with a total capital of around 3.392 thousand USD (average USD exchange rate is 3,6477 USD for 2017). Out of 7,316 foreign capital companies registered at the end of 2017, 1202 belong to Syrians. Share of the Syrians both in number of the firms and total amount of capital has increased during the 2013-2017 period.

## 2.2. Syrian Refugees Social status

The main source of income for Syrian refugees in Turkey is their wage earnings, which correspond to 85% of their total earnings. Social and aid benefits are relatively low and not as expected: in fact, 87% of the Syrians are still not receiving any regular or social aid (INGEV, 2017)

According to the collected data of the World Food Programme in a field survey in four provinces namely Gaziantep, Hatay, Kilis and Sanliurfa in 2015, Syrian households expenditure is 180 TL per capita per month on average. The per capita food expenditure decomposed by poverty level is significantly different among household classes. It is significantly low among the food poor households with 64 TL on average, followed by the poor households with the average of 178 TL and the non-poor spend 548 TL.

Access to preventive and other health care, are ensured through the establishment of 99 dedicated health centers for refugees in 21 provinces by the Turkish government[1]. As of 31 August 2017, about 1.3 million Syrian refugees received inpatient care with more than 1 million operations, more than quarter of a million births, and over 30 million consultations took place.

All registered Syrians children can enroll in state schools free of charge. While, over 1.1 million are registered children in school age, only 459,000 are enrolled in schools in 2017[2]. The majority of these children are in Temporary Training Centers (TTC) (293,039 students) and around 166,482 students enrolled in state schools.

### 3. The effects of Syrian refugees on Turkish economy

Existent literature on the economic effects of Syrian refugees on host countries generally centers around demand side of the economy which is analyzed by the effects of Syrian refugees on the labor market, consumer prices, mainly food prices and housing rents. The studies related to the role of Syrian work force on Turkish labor market do not denote any significant effect of the refugee inflows on the wage earnings of the native individuals neither for formal or informal workers. The other group of studies investigate the effects of Syrian refugees on consumer prices and housing rents show that in the short run, the consumer prices are going down because of the fact that the lower prices or services produced by immigrants cause a downward pressure on production costs. On the contrary, substantial increase in housing rents is reported specially for the high-quality rental units. In the long run, the studies found a significant price increase in food and housing prices in regions hosting refugees which is a consistent finding with the theoretical framework where higher demand leads to higher inflation. In addition to these, there are also studies which examine investment and trade relations with Syria after the refugee influx. Their findings illustrate that Syrian refugees are becoming an economic actor in Turkey not only in terms of their labor supply but also their entrepreneurial skills.

### 4. Methodology and results

The research project entitled “the long-term impact of Syrian refugees on Turkish economy: an input-output simulation” aims to estimate the economic impacts of Syrian refugees within the frame of production and consumption sides by using a dynamic input-output (DIO) approach. The DIO approach is used to estimate the global effect of both inputs in the economy distinguishing two separate components: the production effect and the induced demand effect.

The data used to estimate the production effect of Syrian refugees are the number of Syrian workers as formal and informal and their labor compensation. Consumption and investment figures to estimate the demand effect are derived from the TURKSTAT and field surveys. Considering 2012 Turkish official input-output table as a base reference, total estimated value added of migrant workers and refugees’ final demand components are used to find the production and induced demand effects of value added and final demand as consumption and investment by using dynamic Ghosh and Leontief models respectively. The simulation exercises based on input-output modelling include present, medium and long term scenarios correspond to 2017, 2023 and 2028 respectively. Scenarios are set up according to the presumptions on demographical structure of Syrian refugees in Turkey. The model also gives an information about the native employment generation caused by Syrian influx.

#### Results for 2017 (short term impact)

- The **total value-added impact** generated by the occupations of Syrian refugees in the Turkish economy was an estimated 27.2 billion TL at the end of 2017, representing 1.96% of total Turkish GDP.
- **Production effect** is estimated at 1.51% of GDP for 2017. This impact assumes an increase in production of 30.59 billion TL across different sectors, generating 20.9 billion TL of value added.
- **Induced demand effect** accounts for the rest of global impact, for 0.45% of GDP in 2017. This effect implies new production estimated at around 11.7 billion TL, generating 6.2 billion TL in value added and is essentially produced by direct consumption and investment of Syrian population; the direct effect is estimated at 0.3% of GDP for 2017.
- All in all, **native employment induced by Syrian economic integration** (from both production and demand effects) was an estimated 132,454 persons in 2017.
- The direct impact of Syrian economic integration is **spread unevenly across different sectors**, reflecting

the greater or lesser presence of Syrian workers in the production effect and specific consumption and investment patterns.

- From the production side, manufacturing, energy, construction, transport and storage and service sectors are those with the highest contribution of Syrian workers.
- From the demand side, wholesale and retail trade, real estate activities, manufacturing and energy are the sectors that concentrate the highest share of the impact.
- With regards to the employment effect (linked to production) agriculture, manufacturing, wholesale and trade, construction, accommodation and food service activities are the ones that experience the greater increase in native employment from the production side.
- The native employment creation linked to demand side is concentrated in wholesale and trade, human health and social work activities and manufacturing.
- Details provided by the simulation schema support the idea that **enhancing employment opportunities for refugees by improving their education and skills, promoting entrepreneurial capacity and providing work permits in well-targeted sectors will further increase refugees' contribution to economic growth.**

### Mid- and Long-Term Impact

- According to the set of hypotheses described in the main section of the report, **the impact of Syrian economic integration will moderately increase during the first five years** and will accelerate between 2023 and 2028 in response to the growth pattern of Syrian working-age population and employment.
- Working-age population[3] will increase 15% between 2017 and 2023 and then step up an additional 33% between 2023 and 2028. In proportion to this working-age population, total Syrian employment is projected to grow at an annual 3.5% during the first five years and at 5.5% annually between 2023 and 2028.
- **At the end of the simulation period, the number of Syrian workers is projected to be around 1,000,000.**
- **According to this growth pattern of Syrian employees, the annual economic impact of Syrian integration will double, from 1.96% of GDP in 2017 to 4.05% of GDP in 2028.**
- Induced native employment generated by Syrian integration is projected to reach a total of 265,000 Turkish employees at the end of the simulation period.

## 5. Conclusion and Policy implications

The simulation approach used makes it neither straightforward nor immediate to translate the results directly into policy recommendations. However, the message conveyed to policymakers, and which is based on scientific reflection, free of prejudice, can be used to support decision-making and to counterbalance the negative opinion on the burden of hosting this huge number of refugees.

We conclude from this analysis and taking into account the set of hypotheses in the research, that the impact of Syrian economic integration in Turkey would moderately increase during the coming five years and would accelerate between 2023 – 2028 due to the growth pattern of Syrian working age population and employment. This means that the annual economic impact of Syrian integration will double, from 1.96% of GDP in 2017 to 4.05% of GDP in 2028. At the end of the simulation period, the number of Syrian workers is estimated at around 1 million and induced national employment generated by Syrian integration would reach a total of 265 thousand Turkish employees.

It is shown that the production effect of the refugees is greater than their induced demand effect for 2017, 2023 and 2028 respectively. This means that the productive capacity of Syrian refugees as their entrepreneurial skills and labor supply seems to be more effective than their consumption effects on the entire production of the economy.

According to the results of this work, it seems thus sensible to promote the labour integration of Syrian immigrants in Turkey as well as to facilitate the implementation of entrepreneurial initiatives.

Another interesting result of the simulation exercise state that the sectors chosen to create employment opportunities for the Syrian refugees should be manufacturing, energy, construction, transport and storage and service sectors. Looking from the demand side, the sectors promoting the investment opportunities should be wholesale and retail trade, real estate activities, manufacturing and energy.

In order to ensure the positive impact, there are certain measures that need to be put in place.

First, the enormous resources needed for first aid are inevitable, as is the inevitable emergence of conflicts between nationals and immigrants in a situation of relative scarcity. However, with the help of the international community (ex. the European Union, etc,) and proper medium-term planning that takes into account the positive effects of a genuine labour participation of Syrian refugees in Turkey, a future of true socio-economic integration is possible with minimal friction.

Second, enhancing the employment opportunities of Syrian refugees through improving their education (many children are still outside schools and adults with low educational level) and skill level (many are without any skill or training), local language competency, their awareness about legal obligations and opportunities (training, health, labour market, residence permission, etc.) and their entrepreneurial skills by facilitating their work permits and investment opportunities, particularly in the sectors that were found to be more productive from this exercise. Also integrating Syrian refugees into the society expeditiously can be a moderate policy proposal rather than giving them financial aids and aid in kind in assessment of the net contribution of Syrian refugees on the Turkish economy. Promoting labour integration and facilitating the start-up of small businesses would reduce the pressure on public assistance resources in many cities and towns. This policy can also alleviate the resource competition between nationals and immigrants and can control the stigmatization of the immigrant population.

Third, in order to avoid the crowding out effect of Syrian Refugees on nationals, it is necessary to conduct a comprehensive field survey to explore complementary job opportunities (where exist in terms of sector and location) and skill requirement to fulfil them. The result of this survey will also enhance mismatching in the Turkish labour market. Besides facing some general public resistance for integration can be avoided through raising awareness of the real impact of these refugees in the economy through promoting research results, such as the current ones, that can be used to change public opinions together with other arguments and justifying necessity of integration policies if the majority of the Syrian Refugees will continue to stay. More comprehensive, inclusive and holistic approach seems a key factor for alleviating cost of the Refugees on hosting country which entails to active participation of local actors like municipalities and local NGOs to project design and implementation. Also more resources and better reliable data are needed.

Empirical exercise implemented by the research project supports that creating more employment opportunity for the Refugees population through improving their education and skill level, entrepreneurial capacity and also providing work permits in well targeted work area (complementary and open works) will enhance their contribution to the economic growth because of the fact that the production effect is greater than the induced demand effect. The input-output analysis within the frame of the research project also focus on the creation of native employment arising from the estimation process of production and induced demand effects. According to the findings, the induced demand effect generates more native employment than the production effect, which means that improving entrepreneurial capacity of Syrians will raise the employment of the economy both on behalf of the Syrians and natives.



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In this sense, it is especially relevant to observe how Syrian immigration in Turkey is becoming a factor of economic dynamism that is not only beneficiary to the Syrian community but, also to the Turkish host communities. The direct and indirect contributions in terms of production and demand are very relevant and, if properly channelled and promoted, can become a relative advantage for the country and not a burden of care.

**(\*) This policy brief has been prepared according to the detailed TECHNICAL FULL REPORT (FEM43-05)**

## Notes

1. Health services provided to Syrian refugees are basically described by Temporary Protection Regulation (No: 2014/6883) and Social Insurance and Universal Health Insurance Law (Law no: 5510, Date 31/5/2006).
2. DGMM data
3. 18 years old or older.

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*Its main objectives are:*

- *to contribute to the reinforcement of dialogue on economic and financial issues in the Euro- Mediterranean partnership, within the framework of the European Neighbourhood Policy and the Union for the Mediterranean,*
- *to improve the understanding of priority stakes in the economic and social spheres, and their repercussions on Mediterranean partners in the framework of implementation of EU Association Agreements and Action Plans,*
- *to consolidate the partners of the network of research institutes capable of North-South and South-South interactions, while it sets into motion a transfer of know-how and knowledge between members.*

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