

**Main AL-DALAHMEH**

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# THE SOCIO-ECONOMIC IMPACT OF THE SYRIAN REFUGEES INFLUX IN JORDAN: A SYSTEMATIC REVIEW ANALYSES

*Review  
Article*

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## **Abstract**

*This study aims to demonstrate how the Syrian civil war influences Jordan's economy from the perspective of the labour market and the educational backgrounds of the refugees. Based on the systematic analysis of literature and peer-reviewed papers, a comprehensive analytical framework was developed. This framework is provided with an overview to discover the wage differences between refugees and native-born citizens in Jordan. Three results accompany this analytical report: first, Syrian refugees will have more employment opportunities in the labour market, but vice versa, their employment will increase the ratio of unemployment of Jordanian natives. Second, the Syrian crisis and the influx of refugees should be expected to have a detrimental impact on average wages. A clear sign of this phenomenon can be seen in how Syrian refugees are ready to receive lower salaries and tougher working circumstances in the secondary sector than Jordanians. Finally, educational level and quality of education would be affected negatively. Moreover, the majority of Syrian refugee children are assumed to be registered in schools. Equally important is the need to emphasise that these children will also take quite a long time to adapt to their new educational system.*

## INTRODUCTION

Since World War II, no other conflict has caused as many unwillingly displaced people as the civil war in Syria (Ferris et al., 2013; Beaujouan & Rasheed, 2020). By the mid of 2020, more than 80 million people were forced to leave their homes because of economic reasons, natural disasters, war and tyranny. Among these, 26.3 million refugees have crossed national borders, with 85% of these remaining in third world countries (UNHCR, 2020). According to UNHCR 2021 estimates, as of May 5, 2021, the number of Syrian refugees officially registered as living abroad is 5,602,785, with the majority of these had fled to Turkey (3,671,761 million), followed by Lebanon (855,172), Jordan (665,834), Iraq (245,953), and Egypt (132,408). Of the almost six million refugees, only a small minority - 280,632 people - stay in designated refugee camps (UNHCR, 2021).

Based on Jordan's Office of Statistics, the actual number of Syrian refugees is around 1.3 million. Jordan has the world's second-highest refugee rate compared to its population, 89 refugees per 1,000 residents (UNHCR, 2019) and is deemed the country most afflicted by the Syrian conflict.

Several of Syria's neighbouring countries are afraid of the consequences of a high population influx (Cristea, & Grabara, 2019) because of their influence on the labour-market and public service provisions (Içduygu & Nimer, 2020). However, around 52% of the refugees are actually children, and statistics have shown that 50% of those have missed primary education (UNHCR, 2019).

Currently, the Syrian conflict has become one of the greatest humanitarian crises that this generation faces. Since the conflict exploded in 2011, almost half of the republic's inhabitants have been evacuated externally and internally (Alshoubaki & Harris, 2018). More than 6.6 million Syrian refugees escaped Syria to seek refuge in Jordan, Iraq, Turkey, and Lebanon (UNHCR, 2020). This mass exodus has led to severe political, economic and social consequences affecting the middle east, north Africa and most of Europe (Ceritoglu et al., 2017; Danaj et al., 2018).

The importance of this research has arisen from the international concern over refugees and the economic, social and political consequences of hosting them, especially on the hosting communities (Black, 1994). Tackling this issue, the socio-economic effect of the Syrian refugee inflow on the Jordanian labour market, and the consequences on family dynamics, would lead to a comprehensive study on how to integrate Syrian refugees into Jordanian society better (Lenner & Turner, 2019) without affecting the basic unit of society, which is the family. Moreover, this crisis has incredible costs for Jordanian families,

specifically regarding the younger Jordanian workforce, principally working in the blue-collar sector. Most of these Jordanians were dismissed and replaced by Syrian refugee workers, who are willing to work at a quarter of the net salary and at any time - even during weekends and national holidays. Consequently, there is an increase in the unemployment rate, which directly or indirectly influences the Jordanian family.

Furthermore, Jordanian youths face more challenging economic and social circumstances (Boulby, 2018), creating a great burden on families. This situation has received attention from economists and social scientists. They differ in their conclusions; thus, new research and studies must provide decision-makers in host countries. They face similar problems as in Jordan with best practices and better indicators for creating efficient policies to control the effects of such crises on the host societies. More crucially, affected countries - like Jordan - will need to redevelop into coherent societies offering equal opportunities (Fallah et al., 2019).

This study aims to answer the following questions:

- What are the wage differences between Syrian refugees and the natives in Jordan?
- How do Syrian refugees affect blue-collar jobs in Jordan (informal sector perspective)?
- Do Syrian refugees cause an increasing amount of unemployment among citizens?
- Is there gender diversity among Syrian refugees in the Jordanian labour market?
- Do Syrian refugees have sufficient educational attainment background in Jordan?

## LITERATURE REVIEW

### **Socio-Economic Impact of The Syrian Refugees in Jordan**

The presence of refugees has impacts on host communities: economically, politically, socio-cultural, and environmentally. In this regard, Myers (1997) indicated that refugees' environmental effect is linked to their cultural and economic impacts and that these are inseparable components. Recently, Jordan has become one of the countries suffering all these impacts because of its huge number of refugees. From the economic perspective, based on the World Bank estimates, Jordan is considered a middle-income country with an open, small economy. GDP was equal to US\$ 42,291 billion (World Bank, 2019). Before the Syrian war, Jordan had faced two major economic external jolts. The global financial crisis (2008) and the troubles that followed the "Arab Spring" in the MENA region (Cohen, 2016) created economic instability in the country. Recently, the vast number of refugees became the component that makes economic

stabilisation harder. The job opportunities and living conditions of a large proportion of Jordanians were already intolerable prior to the actual flood wave of Syrian refugees. High youth unemployment is seen in the blue-collar sector or similar forms of work not usually accepted by Jordanians, e.g. street work, construction, and hospitality (Fakih & Ibrahim, 2016). This issue became a reason to consider refugee impact on the labour sector, particularly due to the increasing unemployment ratio affecting native Jordanians.

Undoubtedly, examining the effect of refugees on the labour market is a longstanding topic of concern in Jordan, since the balance of incomes and employment rates for citizens is predicted to decline (De New & Zimmermann, 1994). That is why it has been pointed out by Martin & Makaryan (2015) in the simple theoretical framework that refugees have an adverse influence on the labour market opportunities of Jordanian citizens. The main reason for this situation is that more than 78% of refugees live outside camps in Jordan. Refugees require a structured sponsorship by a Jordanian patron to leave the camps. In reality, this strategy opened the doors for a black market for paid patronages that would simplify refugees being able to leave the camps.

For this reason, refugees primarily work in the unofficial employment sector. Syrian refugees prefer these daily-pay jobs to avoid having to secure a work license or enter into a company's patronage pact. This situation has adversely influenced the probability of work for locals in the agrarian sector, building, and secondary sector occupations (Seeberg, 2020), although their salaries have not been statistically meaningfully influenced. The majority of Jordanian males who failed to secure informal jobs are chronically out of work. Nearly all the females who lost their unofficial careers have entirely dropped out of the workforce. These results indicate that illegal Syrian refugees substituted indigenous workers who lost their unofficial occupations (UNESCO, 2020). Women specifically have discovered it extremely hard to find new careers among these replacement workers. On the other hand, men opted to stay in the workforce, leading to increased joblessness. This means that the most affected groups were females, young workers, and uneducated workers in low-skilled jobs (Bijwaard et al., 2014).

The multidimensional effect of the Syrian crises as a recent research topic has revealed that successful labour market integration would impact opinion on social integration and the affected policies and economic situation of the host countries (Dajnoki et al., 2017). In order to better understand, Figure 1 demonstrates the impacts of the influx of Syrian refugees on the Jordanian labour market.

Subsequently, Syrian refugees flooded into Jordan; they increased the inhabitants, leaving economic

instability by taking Jordanian employment, which left Jordan's population largely unemployed on its labour market. In terms of unemployment, there was a massive increase from 12.9% in 2011 to 19.2% in 2019. Following statistics from the Jordanian Statistics Office show an intensification progressing over the last decade (UNESCO, 2020). On the other hand, it has been estimated by the International Labour Organization (ILO) that 96 per cent of Jordanians believed Syrians were substituted for Jordanians already in employment and that this substitution is what caused the massive losses of jobs. However, regardless of the Syrian presence, it has to be considered that there are also regional and international economic crises. Along with Jordan's preceding structural economic issues, these crises are also responsible for increasing unemployment (Francis, 2015). Nevertheless, government figures specify that more than 15 per cent of the Jordanian population is unemployed in many of the areas populated by refugees. The Syrian turmoil has limited domestic jobs opportunities in the agricultural sector, which are assumed to be the key source of income for 60 percent of the Jordanian rural population. The Ministry of Labour reports that 30,000 Syrian children, especially boys, are currently engaged in child labour (Oltmer et al., 2016).

The refugees are made to work considerably harder than Jordanians to earn their livelihoods (Newman et al., 2018), which has also caused joblessness in Jordan. Joblessness also affects families in terms of unmet family needs, difficulties in supplying students with educational resources, and declining living standards. It is reported that the Syrian war has had an enormous impact on Jordan's economy and that its influence has engulfed the population, mainly on economic and family grounds (Errighi & Griesse, 2016). On the other hand, the arrival displaced from Syria and natives in Jordan share the same common spoken language and probably the same ethnicity and religion. In theory, refugees who correspond to receiving societies regarding their social background, associations, and language are much less likely to have adverse impacts on the cultural construction of the destination societies. Conversely, in Jordan, tribal identity is a crucial driver of social perception since Jordanians focus on relationships, such as family ties and blood; consequently, Jordanian tribes are less interested in outsiders and socio-cultural identities (Al-Mahaidi, 2020).

Considering the consequent financial and economic instability in the kingdom, the linkage between family dynamics and economic situation has become a critical public concern topic. Moreover, it has always been a recurrent issue of social analysis and demographics. Controversially, one study claimed that economic distress might cause more people to postpone marrying and childbirth. The

concept that family formation requires an adequate economic basis also formed social structures (Kreyenfeld et al., 2012). Economic uncertainty may be interpreted as a specific risk factor linked to life-long cycles marked by unemployment, part-time jobs, employed on a term-limited contract, or challenges in accessing the labour force (Sobotka et al., 2011). Some studies have noticed that economic circumstances and fertility are closely associated (Dribe et al., 2017).

Empirical research has continued to concentrate on the interaction between female work and family dynamics on individual-level situations and their connection to childbirth and other family-related upshots (Lehrer & Nerlove, 1986). Several studies are focused on economic strategies that conclude that female schooling and jobs raise the cost of child-rearing opportunities, contributing to a lower fertility rate (Witte & Wagner, 1995). Sociological theories appeal to identical processes as proof of "sex incompatibility". Both the economic response to fertility and the Second Demographic Transition hypothesis indicate that women are counterproductive to fertility through emancipation and work (Leibenstein, 1975). However, neither of these two thought lines provides sufficient consideration of the likelihood of labour market fluctuations affecting childbearing and family demographic behaviour (Andersson, 2000).

The effects of unemployment on households include poverty and distress, tense marriages, lesser healthiness (although the causal interactions are not evident), and pressures on housing (McClelland, 2000). Unemployment may also affect the growth of children and employment prospects in the upcoming years (Simionescu, 2016). Moreover, certain policy concerns are discussed, including the need to maintain unemployed households' living conditions and implement a range of steps to diminish unemployment (González & Jurado-Guerrero, 2006).

The Labor Market Panel Survey (Krafft & Assaad, 2018) indicates a reinstated reduction in fertility rate among Jordanian, with an overall fertility rate of 3.3 births per woman in 2016 compared to 3.9 in 2010; on the other hand, Syrian refugees faced a faster shift to marriage and a significantly higher overall fertility rate in 2016. In addition (Krafft et al., 2018), the Syrian refugees were more vulnerable in terms of their marriage results, including lower marital spending and lower nuclear family residence rates. Table 1 shows the percentage of male and female Syrian refugees in the cities of Jordan.

Table 1 demonstrates gender diversification percentage based on the different cities of Jordan. The first city (Irbid) has 18.2% male refugees, while female refugees number 20.67%. Based on this estimation, it has been found that the ratio of female refugees is higher than that of male refugees

compared to the percentage of the city's total population. Surprisingly, all other cities mentioned in the table have the same situation, except in (Mafraq) (male ratio 36%, female 3.96%). The reason behind the disparity can lie in the males serving in various militaries.

### **Educational Attainment of Syrian Refugees in Jordan**

The global literature indicates that the integration of refugee children into the education system faces three major difficulties: (1) restricted chances for attending school, (2) discrimination (3) instructional difficulties in school (Dryden-Peterson, 2015).

Education and learning are an essential way to integrate refugees into the hosting communities and, also, to help children affected by the war live their lives like their normal peers in other countries (Sunata & Abdulla, 2019).

The increasing number of Syrian refugees entering Jordan puts extreme pressure on the essential services, infrastructure, and social sectors in Jordan. The pressure on the kingdom's schooling system is at its highest degree, and as a result, negative consequences for local citizens and the kingdom's schooling system have been observed. Moreover, to relieve the load on class sizes, the kingdom has established 98 extra dual-shift schools. As a result, in 2014, the percentage of students who expected to attend dual-shift schools increased until it reached 13.4 per cent, whereas it had been just 7.6 per cent in 2009. This has considerably undermined the Ministry of Education's intention to reduce the number of dual-shift schools around the kingdom (Francis, 2015).

Approximately three million Syrian school-aged refugees are predicted to drop out of any educational environment, and most Syrian evacuee school-aged children resolve Jordan as well as Lebanon. The number of refugees of school-age is higher than the number of indigenous children of the same age, which is why Jordan used a program of morning-afternoon alternative education to assist the difficulties affecting their education systems (Assaad et al., 2018).

In the meantime, there are more than 1.3 million Syrian refugees in Jordan; almost one-third of them are school-aged children, with 40% of them remaining out of the educational environment. (Ministry of Planning and International Cooperation, 2016). Table 2. The total direct financial cost for the education sector for the period 2016 – 2018.

The circumstance has stimulated the government of Jordan to assist Syrian refugee children with their learning requirements. The Jordanian government, with essential stakeholders, has shown kindness by expanding educational solutions to Syrian refugee

youngsters and children (Visconti & Gal, 2018). In 2012, the government of Jordan, in partnership with UNICEF and essential partners, introduced the Emergency Education Response (EER) program, which intends to offer Syrian refugee children residing in staying in Jordan --outside or inside camps-- with complimentary official education and extra appropriate risk-free as well as proper educational solutions, enrolment outreach, and methods of curtailing their effect on Jordanian host societies. Emergency Education Response (EER) program has attained a substantial achievement by offering accessibility to official education for 226,000 Syrian refugee children. Nevertheless, considering that huge numbers of school-aged refugees are still not obtaining official schooling until now, the dilemma still needs serious action. (Culbertson, 2015).

## **METHODOLOGY**

The systematic analytical framework in this research has been applied based on the systems thinking approach. The systems thinking method relates to the comprehensive analysis to find out the elements of the interactive relationships and the complex system between various echelons of this method (Carey & Crammond, 2015). Systems thinking encompasses the exploration and composition viewpoints that make the characteristic of this method a methodical and scientific approach (Gao & Nakamori, 2002). The systematic analytical approach is a directing and synthesising tool to merge information from various datasets; from this idea, this analytical framework's development originated (Chung et al., 2009).

This systematic analytical framework was applied based on the following steps:

First step: Map out the structure based upon the contextual variables that function as the drivers of the total effect of refugees' approval in Jordan to design this systematic analytical framework, socio-economic and socio-cultural aspects has been specified.

Second step: by means of systems thinking, the researcher pinpoints the framework design.

A methodical review of articles was performed to evaluate the pertinent research studies. The provided research studies were split into two parts. The first part consists of the articles, Jordanian governmental reports, International humanitarian organisation research concerning the flood of Syrian refugees to Jordan. The second part consists of articles and reports associated with the receiving countries' previous expertise (such as Jordan, Turkey, Iraq, and Lebanon). Along with refugees' acceptance from a comprehensive analytical

context of refugees adoption to promote understanding (Mencutek & Nashwan, 2020).

Third step: Synthesise and analyse the research studies and articles. The researcher used forty-five sources for the synthesising and analysing process. Fundamentally, the research method necessitates separating the elements of a complicated concept to facilitate interpretation and comprehension. The synthesis method is the integration of all the phenomenon components in a case that passes in research into an understandable format. Synthesising is carried out based upon the previous analysis, and analysis needs a succeeding synthesis to affirm or even improve the analysis outcomes. Finally, it can be concluded that the analysis and synthesis as scientific methodological approaches are strongly connected and accompanied by each other (Ritchey, 1991). Figure 2. intends to show each step for the systematic analytical framework approach, which applied for this study.

## **DISCUSSION AND IMPLICATIONS**

Many refugee studies support the idea that the inflow of refugees entails taut political and economic relationships between receiving and sending countries. Hosting refugees brings numerous tensions and problems for the host government, particularly when refugees get better wages and services than the host country's citizens. However, there is still a huge conflict over whether refugees should be viewed as burdens or potential economic benefits for their host community. Supporting the former point of view, De Groot (2010) maintains that refugees represent a source of political intimidation to host countries and an economic encumbrance. This, the argument continues, is especially true when the refugees' host and origin countries are neighbours. A civil war has an adverse impact on the receiving country's economic progress, and that is what is happening currently in Jordan. As mentioned previously, Syrian refugees are being preferred for employment instead of Jordan citizens, increasing the country's unemployment ratio. In order to decrease unemployment, less stringent work protection legislation, lower minimum salaries and more supported active labour market programs seem to affect increasing employment among citizens in Jordan (Máté et al., 2017).

On the other hand, refugees are not alone cause the labour market problems in affected countries. Instead, problems of the education level among their citizens also seem to occur in many countries with vast refugees. It is not unproblematic to provide all refugee children with the same education system and opportunities as citizens receive. With refugees from countries that are very different from their host countries, there are many

barriers, e.g. language, culture, and educational background, which are important hindrances (Aydin & Kaya, 2019). There are many identical elements in Jordan, such as spoken language, which make educational system adaptation easier for refugees. Suppose the government gives enough importance to refugee education in the long term. In that case, refugees can become part of the labour sector as high-educated individuals, thereby helping the host country develop economically (Singh, 2018).

Additionally, this study also emphasises gender discrimination among refugees in Jordan. Particularly, it has been found that male refugees are more likely to be active in the labour market. Christensen & Gomez (2010) and Sarihasan (2017) highlighted an important reason behind the gender-based dominance, which is the patriarchal social system in the culture of, in this case, Syrian refugee families. The refugee community in Jordan is typically male dominated, which negatively affects female refugees seeking to take part in the labour sector (Tiltne et al., 2019). Policymakers should focus on adaptation programs targeting female refugees to integrate them into society better and the labour market (Errighi & Griesse, 2016). However, it should also bear the cultural barrier in mind; this is not easy to overcome.

The main problem with studies on refugees is limited data, making it harder to measure the exact impact on the labour market, educational level, and gender discrimination in host societies (Al-Srehan, 2020). In the future, with more data becoming available on refugees, it will be easier to determine to identify components and study their implications.

## CONCLUSIONS

This study aims to indicate the consequences of Jordan's high refugee population on the locals by answering the research questions. First, the study intended to answer the wage differences between refugees and native-born Jordanians are. Syrian refugees accept 50% less than Jordanian workers; thus, the demand for Syrian refugee workers will grow, thereby increasing the unemployment ratio among Jordanians. On the other hand, Syrian refugees affect blue-collar jobs in Jordan (informal sector perspective) because Syrian refugees will usurp jobs in the labour market from Jordanian citizens by accepting low wages and working under challenging conditions - even on days when Jordanians would not work, such as holidays. Also, it has been found that the increasing number of Syrian refugees raises the unemployment rate and has a negative effect on average wages, namely in the informal sector.

Additionally, affecting the labour market, the number of female refugees is higher than male refugees. Based on estimated data adapted from the Jordanian Department of Statistics (2016), it is expected that it will be harder for female refugees to find jobs because of the cultural barrier, which will be another factor that will increase the unemployment ratio.

Another aim of this study is to demonstrate cultural differences influencing the receiving society. Considering the similarities to Jordanian culture and way of thinking, especially the concepts of strong extended, supportive family, refugees' impact would not be significantly negative.

Furthermore, educational level and quality of education would be affected negatively. For example, many Syrian children will be enrolled in schools, even if some Syrian students are still facing social barriers. In all probability, this will not be due to a language barrier, since their spoken language is also Arabic, but due to the different educational backgrounds. It will take a long time to adapt to the new educational system and society's norms.

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## REFERENCE LIST

- [1] Al-Mahaidi, A. (2020). Securing economic livelihoods for Syrian refugees: the case for a human rights-based approach to the Jordan Compact. *International Journal of Human Rights*, 1–28.
- [2] Al-Srehan, H. S. (2020). The impact of social adjustment policy on Syrian refugees. *Journal of International Studies*, 13(3), 85–97.
- [3] Alshoubaki, W., & Harris, M. (2018). The impact of Syrian refugees on Jordan: A framework for analysis. *Journal of International Studies*, 11(2), 154–179.
- [4] Andersson, G. (2000). L'impact de la participation au marché du travail sur les comportements de fécondité: Fécondité de type cyclique en Suède pendant les années 1980 et 1990. *European Journal of Population*, 16(4), 293–333.
- [5] Assaad, R., Ginn, T., & Saleh, M. (2018). Impact of Syrian refugees in Jordan on education outcomes for Jordanian youth. In *Economic Research Forum Working Paper Series No (Vol. 1214)*.

- [6] Aydin, H., & Kaya, Y. (2019). Education for Syrian Refugees: The New Global Issue Facing Teachers and Principals in Turkey. *Educational Studies - AESA*, 55(1), 46–71.
- [7] Beaujouan J., Rasheed A. (2020). Syrian Crisis, Syrian Refugees. In: Beaujouan J., Rasheed A. (eds) *Syrian Crisis, Syrian Refugees. Mobility & Politics*. Palgrave Pivot, Cham. [https://doi.org/10.1007/978-3-030-35016-1\\_2](https://doi.org/10.1007/978-3-030-35016-1_2)
- [8] Bijwaard, G. E., Schluter, C., & Wahba, J. (2014). The impact of labor market dynamics on the return migration of immigrants. *Review of Economics and Statistics*, 96(3), 483-494.
- [9] Black, R. (1994). Forced migration and environmental change: the impact of refugees on host environments. *Journal of Environmental Management*, 42(3), 261-277.
- [10] Boulby, M. (2018). The Middle East: Syrian refugees, human security and insecurity in Jordan. In *Migration, refugees and human security in the Mediterranean and MENA* (pp. 157-176). Palgrave Macmillan, Cham.
- [11] Carey, G., & Crammond, B. (2015). Systems change for the social determinants of health. *BMC public health*, 15(1), 1-10.
- [12] Ceritoglu, E., Yunculer, H. B. G., Torun, H., & Tumen, S. (2017). The impact of Syrian refugees on natives' labor market outcomes in Turkey: evidence from a quasi-experimental design. *IZA Journal of Labor Policy*, 6(1), 5.
- [13] Chung, M., Balk, E. M., Ip, S., Raman, G., Yu, W. W., Trikalinos, T. A., & Lau, J. (2009). Reporting of systematic reviews of micronutrients and health: a critical appraisal. *The American journal of clinical nutrition*, 89(4), 1099-1113.
- [14] Cohen, E. (2016). From Arab Spring to Economic Winter – Examination of the relationship between politics and economics as evident in the Syrian civil war during 2011-2015. *Journal of International Studies*, 9(1), 9–26.
- [15] Cristea, L. A., & Grabara, J. (2019). Fiscal impact of the migration phenomenon. *Journal of International Studies*, 12(4).
- [16] Christensen, A., & Gomez, M. (2010). *e Impacts of Refugees on Neighbouring Countries: A Development Challenge* (World Development Report 2011). Washington, DC: World Bank Group.
- [17] Culbertson, S., & Constant, L. (2015). Education of Syrian refugee children: Managing the crisis in Turkey, Lebanon, and Jordan. Rand Corporation, Santa Monica, Calif. Retrieved from : [https://www.rand.org/pubs/research\\_reports/R\\_R859.html](https://www.rand.org/pubs/research_reports/R_R859.html). Accessed 25 Jan 2021
- [18] Dajnoki, K., Máté, D., Fenyves, V., & Kun, A. I. (2017). Deconstructing attitudes towards immigrant workers among Hungarian employees and higher education students. *Sustainability*, 9(9), 1639.
- [19] De Groot, O. J. (2010). The spillover effects of conflict on economic growth in neighbouring countries in africa. *Defence and peace economics*, 21(2), 149-164.
- [20] De New, J. P., & Zimmermann, K. F. (1994). Native wage impacts of foreign labor: a random effects panel analysis. *Journal of Population Economics*, 7(2), 177–192.
- [21] Dribe, M., Breschi, M., Gagnon, A., Gauvreau, D., Hanson, H. A., Maloney, T. N., ... Vézina, H. (2017). Socio-economic status and fertility decline: Insights from historical transitions in Europe and North America. *Population Studies*, 71(1), 3–21.
- [22] Dryden-Peterson, S. (2015). The educational experiences of refugee children in countries of first asylum. British Columbia Teachers' Federation. Retrieved from : <https://www.migrationpolicy.org/research/educational-experiences-refugee-children-countries-first-asylum>. Accessed 25 Jan 2021.
- [23] Errighi, L. & Griesse, J. (2016). The Syrian Refugee Crisis: Labour Market Implications in Jordan and Lebanon. *European Economy - Discussion Papers 2015 - 029*, Directorate General Economic and Financial Affairs (DG ECFIN), European Commission. Retrieved from : [https://ec.europa.eu/info/sites/default/files/dp029\\_en.pdf](https://ec.europa.eu/info/sites/default/files/dp029_en.pdf). Accessed 29 Jan 2021.
- [24] Fakih, A., & Ibrahim, M. (2016). The impact of Syrian refugees on the labor market in neighborin countries: empirical evidence from Jordan. *Defence and Peace Economics*, 27(1), 64-86.
- [25] Fallah, B., Krafft, C., & Wahba, J. (2019). The impact of refugees on employment and wages in Jordan. *Journal of Development Economics*, 139, 203–216.
- [26] Ferris, E., Kirişçi, K., & Shaikh, S. (2013). Syrian crisis: Massive displacement, dire needs and a shortage of solutions. Brookings Institution. Retrieved from: <https://www.alnap.org/system/files/content/resource/files/main/syrian-crisismassive-displacement-dire-needs-and-shortage-of-solutions-september-18-2013.pdf>. Accessed 29 Jan 2021.
- [27] Francis, A. (2015). *Jordan's refugee crisis* (Vol. 21). Washington, DC: Carnegie Endowment for International Peace. Retrieved from : <https://carnegieendowment.org/2015/09/21/jordan-s-refugee-crisis-pub-61338>. Accessed 27 Jan 2021.
- [28] Gao, F., Li, M. and Nakamori, Y. (2002). Systems thinking on knowledge and its

- management: systems methodology for knowledge management. *Journal of Knowledge Management*, Vol. 6 No. 1, pp. 7-17.  
<https://doi.org/10.1108/13673270210417646>
- [29] González, M. J., & Jurado-Guerrero, T. (2006). Remaining childless in affluent economies: a comparison of France, West Germany, Italy and Spain, 1994–2001 Rester sans enfant dans des sociétés d'abondances: une comparaison de la France, l'Allemagne de l'Ouest et l'Espagne, 1994–2001. *European Journal of Population/Revue européenne de démographie*, 22(4), 317-352.
- [30] İçduygu, A., & Nimer, M. (2020). The politics of return: exploring the future of Syrian refugees in Jordan, Lebanon and Turkey. *Third World Quarterly*, 41(3), 415–433.
- [31] JLMPS (2016). Jordanian Department of Statistics - Data. Retrieved from: [http://dosweb.dos.gov.jo/products/employment\\_en\\_2016/](http://dosweb.dos.gov.jo/products/employment_en_2016/). Accessed: 26 Jan 2021
- [32] Krafft, C., & Assaad, R. (2018). Introducing the Jordan Labor Market Panel Survey 2016. *Economic Research Forum Working Paper Series No (Vol. 1186)*.
- [33] Krafft, C., Sieverding, M., Salemi, C., & Keo, C. (2018, April). Syrian refugees in Jordan: Demographics, livelihoods, education, and health. In *Economic Research Forum Working Paper Series (Vol. 1184)*.
- [34] Kreyenfeld, M., Andersson, G., & Pailhé, A. (2012). Economic uncertainty and family dynamics in Europe: Introduction. *Demographic Research*, 27, 835-852.
- [35] Lehrer, E., & Nerlove, M. (1986). Female Labor Force Behavior and Fertility in the United States. *Annua Review of Sociology*, 12(1), 181–204.
- [36] Leibenstein, H. (1975). The economic theory of fertility decline. *The Quarterly Journal of Economics*, 89(1), 131.
- [37] Lenner, K., & Turner, L. (2019). Making Refugees Work? The Politics of Integrating Syrian Refugees into the Labor Market in Jordan. *Middle East Critique*, 28(1), 65–95.
- [38] Máté, D., Sarihasan, İ., & Dajnoki, K. (2017). The relations between labour market institutions and employment of migrants. *Amfiteatru Economic*, 19(46), 806.
- [39] McClelland, A. (2000). Effects of Unemployment on the Family. *The Economic and Labour Relations Review*, 11(2), 198–212.
- [40] Martin, Iván & Makaryan, Shushanik (2015). Migrant support measures from an employment and skills perspective (MISMES) : methodological note for the country studies, European Training Foundation, MISMES, [Migration Policy Centre], 2015. Retrieved from Cadmus, European University Institute Research Repository, at: <http://hdl.handle.net/1814/36839>. Accessed 26 Jan 2021.
- [41] Ministry of Planning and International Cooperation. (2016). Hashemite Kingdom Of Jordan Ministry Of Planning And International Cooperation. Reterived from : [https://reliefweb.int/sites/reliefweb.int/files/resources/JRP16\\_18\\_Document-final+draft.pdf](https://reliefweb.int/sites/reliefweb.int/files/resources/JRP16_18_Document-final+draft.pdf). Accessed 27 Jan 2021
- [42] Newman, A., Bimrose, J., Nielsen, I., & Zacher, H. (2018). Vocational behavior of refugees: how do refugees seek employment, overcome work-related challenges, and navigate their careers? *Journal of Vocational Behavior*, 105, 1-5. <https://doi.org/10.1016/j.jvb.2018.01.007> =
- [43] Oltmer, M. (2016). Gender-Specific Representations of Syrian Refugees in Europe—A Discourse-Historical Approach on British and German Print Media (Doctoral dissertation, Master Thesis, Leiden: Universiteit Leiden).
- [44] Ritchey, T. (1991). Analysis and synthesis: on scientific method—based on a study by Bernhard Riemann. *Systems research*, 8(4), 21-41.
- [45] Seeberg, P. (2020). Syrian refugees in Jordan and their integration in the labour market: Jordanian migration diplomacy and EU incentives. *Mediterranean Politics*, 1-20.
- [46] Sahin Mencutek, Z., Nashwan, A.J. (2021). Perceptions About the Labor Market Integration of Refugees: Evidences from Syrian Refugees in Jordan. *Int. Migration & Integration* 22, 615–633. <https://doi.org/10.1007/s12134-020-00756-3>
- [47] Sarihasan, I. (2017). The gender differences of immigration in OECD countries. *Annals of Faculty of Economics*, 1(1), 697-706.
- [48] Simionescu M. (2016), Macroeconomic determinants of permanent emigration from Romania. A Bayesian approach, *Journal of International Studies*, Vol. 9, No 2, pp. 170-180.
- [49] Singh, M. (2018). Pathways to Empowerment: Recognizing the Competences of Syrian Refugees in Egypt, Iraq, Jordan, Lebanon and Turkey. UNESCO Institute for Lifelong Learning. Feldbrunnenstrasse 58, 20148 Hamburg, Germany.
- [50] Sobotka, T., Skirbekk, V., & Philipov, D. (2011). Economic recession and fertility in the developed world. *Population and Development Review*, 37(2), 267–306.
- [51] Stave, S. E., & Hillesund, S. (2015). Impact of Syrian refugees on the Jordanian labour market. Geneva: ILO.website?
- [52] Sunata, U., & Abdulla, A. (2019). Lessons from Experiences of Syrian Civil Society in

- Refugee Education of Turkey. *Journal of Immigrant & Refugee Studies*, 18(4), 434-447.
- [53] Tiltnes, Å. A., Zhang, H., & Pedersen, J. (2019). The Living Conditions of Syrian Refugees in Jordan, Results from the 2017–2018 Survey of Syrian Refugees Inside and Outside Camps. Fafo Institute Available via Relief Web. Reterived from: <https://reliefweb.int/report/jordan/living-conditions-syrian-refugees-jordan-results-2017-2018-survey-syrian-refugees>. Accessed 28 Jan 2021.
- [54] Unesco - Data. (2020). Facilitating female employment in Jordan. retrieved from: <https://unevoc.unesco.org/yem/Female+unemployment+in+Jordan+YEM+Blog&context=>. Accessed 28 Jan 2021.
- [55] UNHCR - Data. (2019). retrieved from: <https://data2.unhcr.org/en/situations/syria/location/36>. Accessed 4 Jan 2021.
- [56] UNHCR - Statistics. (2020). Retrieved from: <https://www.unhcr.org/refugee-statistics/>. Accessed 28 Jan 2021.
- [57] UNHCR - Data. (2021). Retrieved from: <https://data2.unhcr.org/en/situations/syria>. Accessed 24 May 2021.
- [58] Visconti, L., & Gal, D. (2018). Regional collaboration to strengthen education for nationals & Syrian refugees in Arabic speaking host countries. *International Journal of Educational Development*, 61, 106-116.
- [59] Witte, J. C., & Wagner, G. G. (1995). Declining fertility in East Germany after unification: a demographic response to socioeconomic change. *Population & Development Review*, 21(2), 387–397.
- [60] World Bank (2020). Data. Jordan. Retrieved from: <https://data.worldbank.org/country/jordan?view=chart>. Accesed: 26 Jan 2021

**LIST OF TABLES & FIGURES**

Table 1  
**The Percentage of Syrians Refugees to Jordanians in Jordan**

<i>Governorates</i>	<i>% of Syrians to Jordanians</i>	<i>% Syrian males to Jordan males</i>	<i>% Syrian females to Jordanian females</i>
<i>Irbid</i>	<i>19.4</i>	<i>18.2</i>	<i>20.67</i>
<i>Mafrq</i>	<i>37.8</i>	<i>36.</i>	<i>3.96</i>
<i>Jerash</i>	<i>4.5</i>	<i>4.3</i>	<i>4.81</i>
<i>Ajloun</i>	<i>8.2</i>	<i>7.9</i>	<i>8.55</i>
<i>Amman</i>	<i>10.8</i>	<i>10.2</i>	<i>11.58</i>
<i>Albalqa</i>	<i>5.7</i>	<i>5.3</i>	<i>6.1</i>
<i>Zarqa</i>	<i>12.8</i>	<i>12</i>	<i>13.7</i>
<i>Madalba</i>	<i>7.7</i>	<i>7.4</i>	<i>8.1</i>
<i>Kerak</i>	<i>5.4</i>	<i>5.2</i>	<i>5.5</i>
<i>Maan</i>	<i>5.8</i>	<i>5.7</i>	<i>6</i>
<i>Tafilaha</i>	<i>2.</i>	<i>2.</i>	<i>2</i>
<i>Aqaba</i>	<i>4.1</i>	<i>3.8</i>	<i>4.5</i>
<b>Total</b>	<b>13.27</b>	<b>12.6</b>	<b>9.25</b>

Source: *Alshoubaki & Harris, 2018*

Table 2  
**The total direct financial cost for the education sector for the period 2016 – 2018**

	<b>2016</b>	<b>2017</b>	<b>2018</b>
Ministry of Education budget	1,312,377,119	1,316,354,520	1,332,083,043
Total number of Students in public schools	1,557,704	1,711,912	1,881,386
Total number of Syrian refugees students	154,000	169,400	186,340
The estimated cost of a students	843	769	708
<b>Total cost of Syrian students in public schools</b>	<b>129,746,142</b>	<b>130,258,143</b>	<b>131,934,850</b>

Source: Ministry of Planning and International Cooperation, 2016

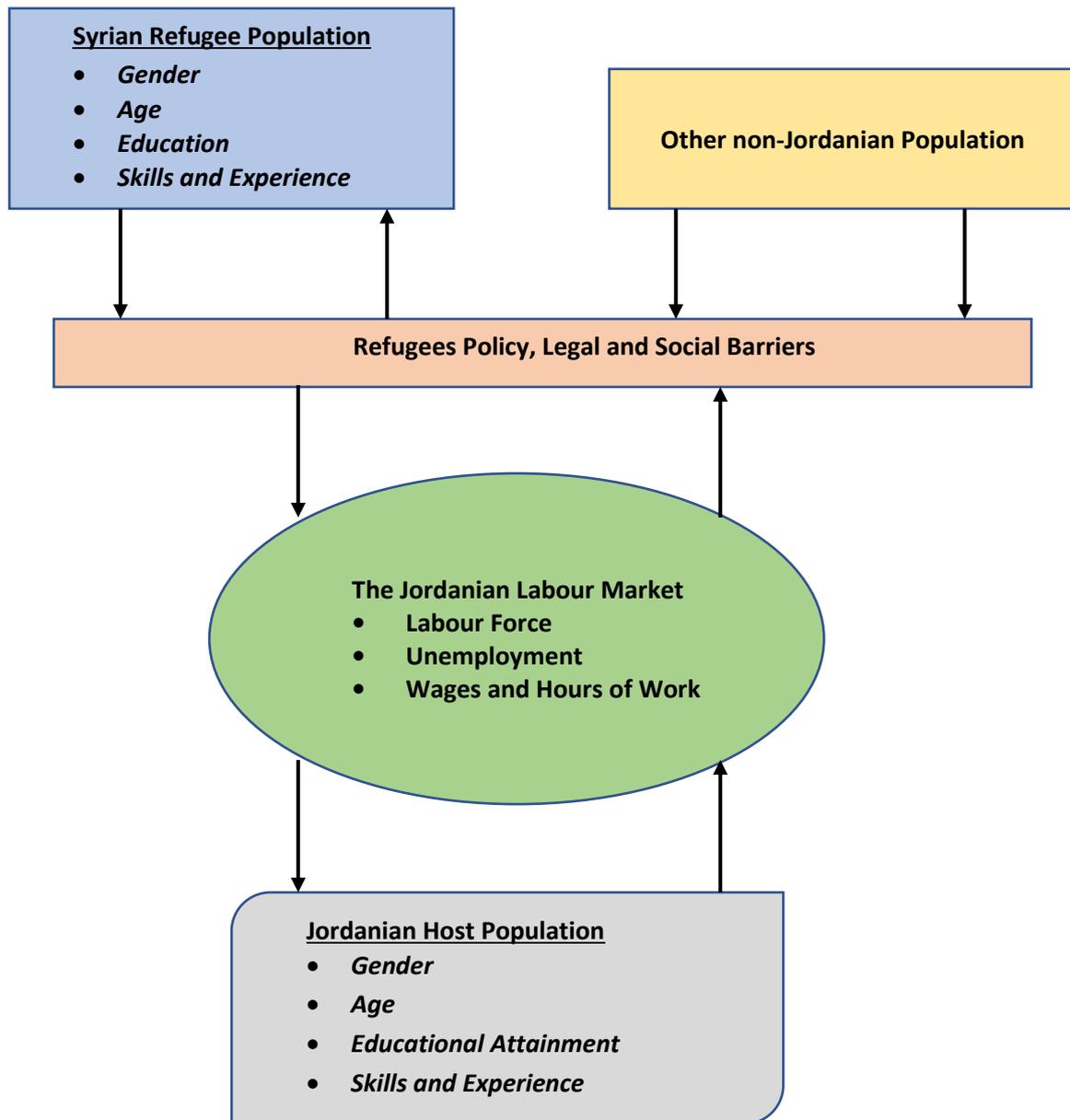


Figure 1  
The influx of Syrian refugees on the Jordanian labour market  
Source: Stave & Hillesund, 2015

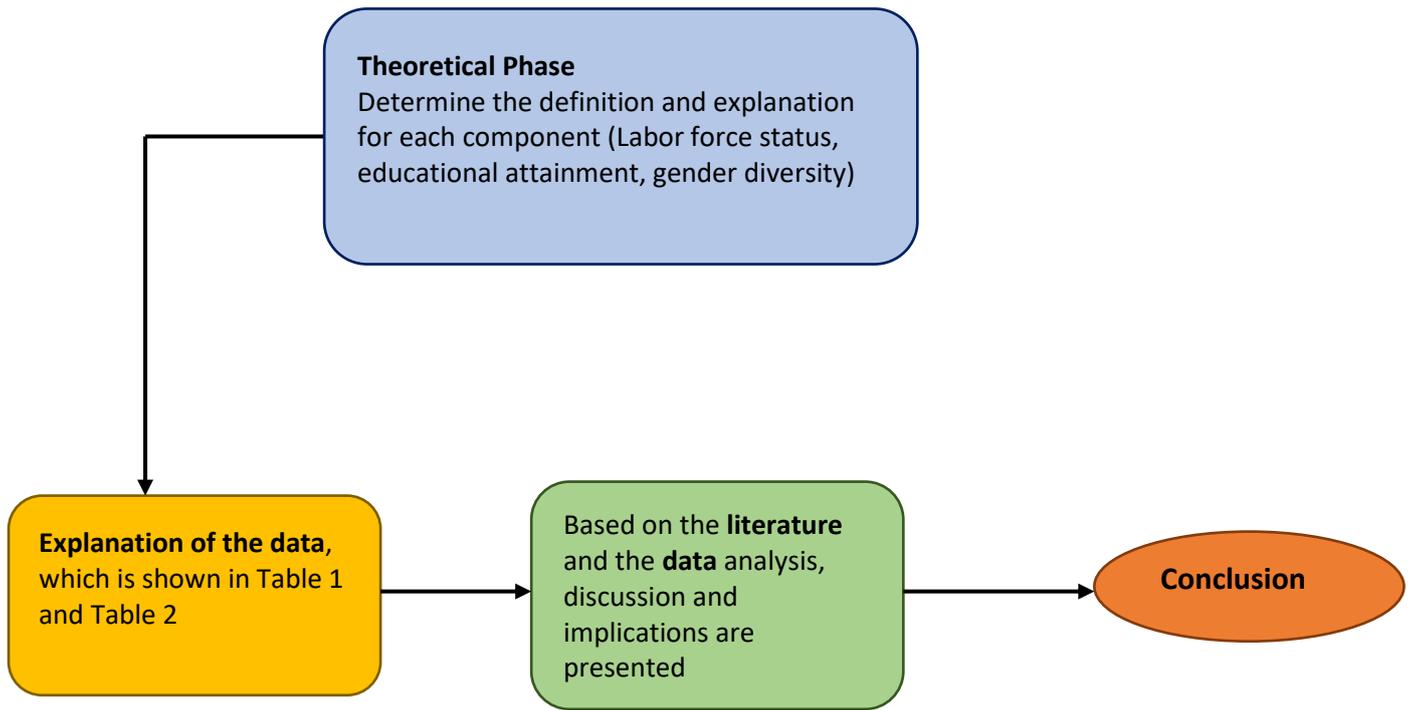


Figure 2  
**Systematic Analyses Framework for the study**  
*Source: Author's construction, 2021*