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A Game of Loss

The Cost of the Non-integration of People with Disabilities in the Jordanian Labor Market

by

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Abstract: Jordan is a nation marked by an everchanging growing population primarily derived from its geographical position and relative political stability compared to its neighbouring countries, making it one of the primary recipients of refugees in the region. Population increases were marked by a vast boost in the number of disabled individuals in the country, especially individuals of working age, to the point where in 2015, this value accrued to 13%. Despite the efforts made by Buckup (2009) in trying to quantify the costs of the non-integration of people with disabilities in the labor market when considering country-specific information, none of his case studies was applied either to Jordan or in the Middle East and Northern Africa (MENA). By leveraging on Buckup's methodology, the current thesis provides the very first study on the economic impact of the non-integration of people with disabilities in the country, concluding that in 2015 this value accrued to 8% of GDP. More than a quantitative analysis, this thesis aims to provide cultural and macroeconomic explanations for this value.

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1 Introduction

"There is ample evidence that when women are able to develop their full labor market potential, there can be significant macroeconomic gains" (Elborgh-Woytek et al., 2013). This phrase enhances one of the first studies on integrating individuals who are generally ostracized in the labor market. The study's subject? Women.

Studies on the integration of females in the employment sector have shown that their assimilation can lead to growth in the economic sphere. However, more than setting the ground to the integration of females in the labor market, the nature of these studies opened a new set of possibilities within various groups who are generally excluded from the labor market. However, a group tends to be neglected within these studies- people with disabilities, the vastest minority globally, representing 15% of the population (UNDP, 2020). So, why have not been made efforts to find if it is possible to evidence that when people with disabilities can develop their full potential in the labor market, one can find significant economic gains?

The way various individuals characterize disabilities is not consistent. For clarity, during this thesis, the definition developed by Michael Oliver (1900) and implicit in the social model of disabilities will be taken into account. According to this definition, an individual is considered disabled due to the disabling environment it is inserted in; several attitudes and social considerations that difficult or even inhibit an individual's ability to conform with its own needs (Oliver, 1900). To a certain extent, the social model of disabilities discusses the theoretical approach associated with human capabilities. It associates an individual's opportunities of turning means into functioning (capabilities that have occurred, such as education or employment) on conditions that are not only associated with one's impairment (Robeiyns & Byskov, 2020).

Moreover, with this definition comes the need to formulate a distinguishment between impairments and disabilities. While a person is considered to have a disability due to societal lack of adaptability, the impairment derives from the attribute an individual lacks, for example, visual (Oliver, 1900). In practical terms, an individual is considered to have a long-term disability, when 24 months after the beginning of rehabilitation, it is not expected for the disability to disappear (Law on the Rights of Persons with Disabilities Act, 2017).

Interestingly, we still experience scarcity of data and research on the integration of people with disabilities in the labor market, especially studies that do not focus on the loss of productivity derived from an impairment but that delivers a positive approach to this theme. The integration of disabled individuals in the workforce is vital for many reasons. For example, it ensures that the view of disabilities portrayed in the current thesis is propagated throughout society, leading to total inclusiveness. Yet, the path that must be taken to reach this goal is still relatively far. More than collective benefits, one must also look into the advantages for the people with disabilities themselves. People with disabilities generally have a higher risk of poverty and

usually need to endure higher costs related to their impairment. This higher propensity for people with disabilities to develop health complications leads to lower life expectancy. If, to this situation, one pair the widespread discrimination experienced by these individuals in the labour market, one can sense a propensity to a vicious circle. On sociological terms, discriminations correspond to a set of behaviours of exclusion or difference based on a specific characteristic, in this case, disabilities (Kohler-Hausmann, 2011).

Buckup (2009) was the first theorist to deliver a country-specific approach to economic losses related to the non-inclusion of people with disabilities in the labor market. In his work, he considered data related to ten developing nations in Asia and Africa and a developed country, Canada, and measured for different levels of disabilities the associated potential economic impact in terms of GDP. Despite providing the framework necessary for assessing the costs associated with discrimination of disabled individuals, this theory is yet to be outspread. For example, no work has ever been done in the MENA or Jordan, in particular.

The Hashemite Kingdom of Jordan represents a nation of distinctive importance in the studies of disabilities. By being a theocratic monarchy, its assessment of disabilities tends to be more attentive. Moreover, due to its location within the Middle East (bordered by Israel and the West Bank to the west, Iraq to the northeast, Syria to the north, and Saudi Arabia from the west and south) and its political stability, this 92,300 square kilometre nation, is considered one of the primary recipients of refugees in the region. Currently, it is estimated that around 10.9 million people live in the country, of which 69.3% are Jordanian, 13.3% are Syrians, 6.7% are Palestinians, 6.7% are Egyptian, and 1.3% are Iraqi (CIA, 2020). The increasing number of immigrants paired with high fertility levels sustain its population growth, that of 2019 experienced a 1.5% rate (The Economic Policy Council, 2019). It is estimated that Jordan presents one of the fastest-growing populations globally, going from 2.1 million people in 1979 to 10.9 million in 2019.

It is within asylum seekers that one can perceive the higher number of disabled individuals. While the country experiences a rate of 3% for the total population, it is estimated that within Syrian refugees, this value accrues to 30%; one can therefore observe a relation between the increase of disabilities in the nation with the rise of asylum seekers (Thompson, 2020). Data from the 2015 Census also notes that around 50% of disabilities comprise individuals between the ages of 5 and 39 (Thompson, 2020).

In 2015, the Jordanian GDP comprised 38,587,017,944 current USD. Due to its scarcity of water and natural resources, the country heavily relies on the service sector with a higher prevalence of employment on government services (26%), trade (11%), and education (12%), manufacturing account for 10% of employment. In comparison, agriculture only accounts for 2%. The prevalence of the service sector has its positive and negative impacts, mostly due to the nature of these services. For starters, it is a segment that allows for easy integration of people with disabilities compared to the industrial and agricultural sectors; conversely, not being highly specialized or diversified leads to a mismatch between the country's growing human capital and jobs created (The Economic Policy Council, 2021). The focus on the service sector goes accordingly with the high urbanization levels in the country, accounting for the accommodation of around 91.2% of the population, with an emphasis in the capital city, Amman (O'Neill, 2021).

1.1 Aim and Scope

By developing this thesis, I aim to quantify the dimension of the issues people with disabilities face in their integration in the labor market as a percentage of GDP in 2015 while bearing in mind intra-specific societal and macroeconomic evinces of the Jordanian Kingdom.

The choice of 2015 was not arbitrary. 2015 corresponded to the very first round of census to ever include a module on disabilities. Moreover, it also represented the very first time studies on the kingdom's disabled population utilized the Washington Group Questionnaire on Disabilities. By providing information on this base year, it will be possible to orientate better policymakers and scholars in future research and government acts that compare this round of census with that of 2020 and hereafter present the fundaments for future research within economic history.

Thereby, by using as a foundation the methodology provided in the work of Buckup (2009), the current thesis aims to find an answer to the following research question:

How large is the cost of non-including people with disabilities in the labour market, bearing in mind the case of Jordan in 2015?

Which will further consider the subsequent hypothesis/sub-questions:

Are men overrepresented in the composition of people with disabilities of active age?

What is the profile of people with disabilities?

1.2 Outline of the Thesis

The current thesis is subdivided into six chapters. The first chapter is composed of essential aspects, familiarizes the reader with the subject of the very first studies on the economic losses related to the non-integration of individuals in the labor market, and describes how such research is vital in the case of people with disabilities. Simultaneously provides the necessary background on the efforts made thus far to study the integration of people with disabilities in the workforce while parallelly presenting some geographical and demographic aspects on Jordan and the scope and aims of the thesis.

Chapter 2 relates to previous research and provides the reader with the background information needed for the complete understanding of this thesis, such as demographic and evolutionary view of disabilities through its various models and definitions; as well legislation on the integration of people with disabilities in the labor market, and macroeconomic information on Jordan during/in the years preceding 2015.

Chapter 3 provides information on the data, its sources, and limitations, while chapter 4 gives a furrow explanation of Buckup's (2009) methodology and how it was adapted to accommodate data limitations. Chapter 5 focuses on the results and discussion by showing the results of the statistical analysis performed and giving measures on the economic loss related to the non-integration of people with disabilities in the Jordanian labor market, and further segregating this information by gender to understand how it reiterates the information provided on chapter 2.

Lastly, chapter 6 presents the concluding remarks, informs the reader of the main findings of the thesis, and sees to which extent the research question was answered while indicating which should be the next steps of research on both the Jordanian panorama and the possible robustness enhancements.

2 Previous Research and Theory

The current chapter gives an in-depth look into people with disabilities in the Hashemite Kingdom of Jordan. It considers the main questions that may lead to the segregation of people with disabilities in the labor market. At the same time, it includes the macroeconomic situation of the nation.

It was decided that the Literature Review division into three main components would be the most appropriate. The first one is separated into three subsections and relates the existence of disabilities with the long history of Jordan as a recipient of refugees from neighbouring countries, while relating statistical information to the current legislation and views on disabilities through times, focusing on the society's assessment. The second provides information on the country's macroeconomics specific to economic growth and employment. It is undoubtful that the macroeconomic environment influences the integration of people with disabilities in the labor market. Lastly, the third focuses on the economic models of disability. It introduces current research on GDP losses related to the non-integration of people with disabilities in the labor market. The reason by which this model is not detailed derives from its further explanation in the methodological section of this thesis.

2.1 Disabilities in Jordan

Similarly to other countries, Jordan falls short on reliable data on people with disabilities (PWD) (Thompson, 2018). Moreover, the way disabilities are portrayed and defined within society has suffered various alterations through times (Kazou, 2017). The case of 2015 displayed a clear example of its unreliability. While official census data pointed to a prevalence of disabilities of 2%, NGO's reports indicated these values to near 13% (UNICEF, 2017). To understand the existence of people with disabilities in the nation, one must understand its history and how it correlates to the presence of refugees in the country ever since its creation (in 1921) and subsequently its independence from Great Britain in 1946 as the Hashemite Kingdom of Transjordan (Robins, 2019).

The Jordanian Department of Statistics is the centralized entity in charge of developing the general population census on a decade basis since 1952; however, the first Health Assessments were only conducted in the nineties, when the government solved its issues on the composition of the population (Bel-Air, 2013). This case dated to the unification of West Bank Palestine and the Kingdom of Transjordan in 1948, when the nation naturalized non-Jewish Palestinians born before May 1948. In 1988, 21 years after the loss of the Arab-Israeli war, Jordan recognized the Palestinian Liberation Organization as the representative of Palestinians. With this recognition came alterations in the nationality law to only accommodate those living in

Jordanian territory between 1949 and 1954, resulting in millions of individuals seeing their nationality revoked (UNRWA, 2021; Köprülu, 2013). The annexation of the West side of the Jordan River, and the conflict of Jordan with Israel over the West Bank territory, resulted in the displacement of a tenth of all Palestinian refugees into the main Transjordanian cities, leading to an increase in the country's urbanization and to the creation of thirty-six temporary refugee camps by 1950 (Ababsa, 2013; Husseini, 2013). It is currently estimated that between 43% to 67% of the Jordanian population comprises individuals of Palestinian origin connected to the 1948 exodus. (Dlol, 2015).

To this day, Jordan's location within the Middle East and its relative political stability, threatened by the volatility and unpredictability of its neighbouring countries, make the Kingdom a critical host country for refugees from other Arab war-torn countries, such as Iraq, with the Gulf War in the 1990s and its subsequent invasion in 2003, and most recently Syria with the 2011 civil war following the 2010 Arab Spring (Bank, 2016; Alshoubaki & Harris, 2017). Officially, it is estimated that 2.36% of all registered refugees in Jordan are impacted with at least one type of disabilities; however, more recent studies on Syrian refugees point to a significantly higher number, 30%. It is also estimated that within refugees, 90% of disabilities are conflict-related, with a higher prevalence of sensory and physical impairments 42.5% and 44.2%; leaving us with a perspective that cannot dissociate the integration of PWD and the integration of refugees in the country (Thompson, 2020; Thompson, 2018).

As previously stated, unofficial information from government bodies considered that, as of the 2015 census, at least 13% of people with disabilities inhabited the Jordanian Kingdom, which means that at least 1 million people live with at least one form of impairment. More than 80% of PWD live in urban areas, with higher concentration in Ajloun, Mafraq and Irbid; however, in the particular case of refugees with disabilities, one can see a higher concentration in the capital city; this concentration of disabled individuals goes accordingly with that of the overall of the population (Thompson, 2018; ESCWA, 2011; Ay, González & Delgado, 2016). The prevalence of disabilities is slightly higher in man than in women, with the values accruing to 59% in males and 41% in women. Regarding marriage, the values are similar to those of the general population; however, women with disabilities are faced with discrimination in this aspect, whose importance is exacerbated given specific cultural considerations in both the nation and the region (Thompson, 2018; Jalal & Gabel,2014).

Education is one of the most relevant points when considering the integration and equity of PWD. PWD have considerably lower attendance rates and are more likely to drop out of school before completing secondary education (UNESCO, 2017). The implications of the inclusion of PWD in education has more than social and developmental implications. It affects the person's ability to perform active citizenship and its opportunities within the labour market, as well as its marginalization within society due to lack of financial stability (Global Education Monitoring Report Team, European Agency for Special Needs and Inclusive Education & Network of Education Policy Centers, 2021). Education is viewed as an indicator for employment that presents double the significance on PWD compared to their non-disabled counterparts (Bliksvær, 2018). Since 1993, the Hashemite Kingdom of Jordan has established that people with disabilities should have the right to education in traditional schools; however, they fail in infrastructural adaptation. Something as simple as access to adapted restrooms, of higher relevance given the prevalence of physical disabilities in the nation, is only found in

55% of the schools with PWD enrolled. The lack of adaptability in both infrastructures and programs are two of the main causes why PWD do not carry out their education. Only 150 Jordanian public schools are fully adapted for PWD, which is stressed when considering that for the academic year 2018/2019, 79% of children with disabilities were out of the school system. (Thompson 2018; Ahmad &Alshoura, 2015; MOE & UNICEF, 2020). In general, Thompson (2018) reveals that illiteracy rates for PWD stand at 35.3%, with the percentage being larger when considering the case of women (40%).

As previously stated, a direct consequence of access to education regards the integration of individuals within the labor market. Whose importance can lead to an increase in the visibility and social integration of PWD and is a pivotal point in the access to the material needs required for one's subsistence (Heyman, Stein & Moreno, 2014; Pinilla-Roncancio, 2015). Moreover, while many scholars recognize the issues welfare states face given the increases in the dependency ratio as the population grows older, many fail to acknowledge how the integration of PWD in the labour market can underemphasize this burden (Bengtsson, 2010; Bengtsson & Scott, 2010; Segendorf & Theobal, 2019; Mason, 2005; Galasso & Profeta, 2004).

The question of employment of PWD in Jordan does not vary from the norm. PWD present lower employment and higher unemployment rates (Altarawneh, 2016). In 2014, the employment rate was 32.8%, for men with disabilities and 13.5% for women, compared to 61.4% and 13.5%, respectively, for their non-disabled counterparts. Additionally, 82.2% of PWD were inactive (ESCWA, 2017).

The low employment in women and particularly women with disabilities can be primarily related to gender norms. As of 2018, Jordan was considered the nation with the 5th highest female unemployment rate, a tendency that has not changed through times (Kasoolu, Hausmann, O'brien & Santos, 2019). According to the World Bank (2018), one of the critical aspects of women employment is financial need. Without this component, females tend to leave the labour market once they are married to pursue societal and intra-household expectations on the role of women in the family unit. This question is more exacerbated in women with lower educational levels, as is the case of women with disabilities. In the case of women with higher education, the participation rates are similar to men, but they tend to face higher levels of unemployment due to discriminatory attitudes towards women in the labour market (Kasoolu, Hausmann, O'brien & Santos, 2019)

2.1.1 The portrayal of Disabilities through times: Definitions and Models

How PWD are portrayed within society is one of the underlying reasons behind these individuals' discrimination. For a matter of clarity, throughout this sub-chapter, there will be a progressive view on the societal view, and consequently governmental from a solely based religious and charitable model of disabilities towards the currently implemented social model of disabilities and how this progression still reminisces today.

Through times, the stigmatization of PWD within Arab societies resulted from a misunderstanding of the causes of disabilities, and to a great extent, this perspective is still present (Saad & Borowska-Bezta, 2019). In the case of Jordan, until relatively recently, the

social order believed that given the negative connotation between disabilities and their origin, support should derive from the family unit, as even the slightest statal intervention would only result in an increase in the country's burden to a cause with no end (Turmusani, 2015).

The rise of the Islamic movement in the Hashemite Kingdom of Jordan has been deemed as remarkable due to its contrast in comparison to other Middle Eastern countries, as not only was the rise peaceful but also resulted in the protection of the state towards the upsurge of radical ideologies (Moaddel, 2002). Moreover, despite the connection of the Kingdom's royal family to the Prophet Muhammad, the nation has achieved a good balance between the state's institutional framework and religion (Shboul, 2018). Nonetheless, it would be partial to state that religion has did not influence the country's perception of PWD, especially knowing that this connection has been heavily researched and applied to different faiths and countries (Embassy of the Hashemite Kingdom of Jordan, 2021; Miles, 2002; Blanks & Smith, 2009, Kaur & Arora, 2019).

When considering the references to disabilities in the Islamic sacred books, one can find a positive association that deems disabilities as a natural cause connected with the idea of predestination (*qadar*) (Al-Aoufi, Al-Zyoud & Shahminan, 2012). Furthermore, there is an overall social responsibility for non-disabled individuals within the religion to protect and look after PWD (Al-Aoufi, Al-Zyoud & Shahminan, 2012). Despite the positive intention behind this attitude, two consequences can be involuntarily generated and are primarily related to the negative aspects of both the charity and religious models of disabilities. Firstly, exaggerating the view that PWD should be cared for may lead to a deterioration of an individual's self-esteem, paired with creating a disabling and discriminatory environment (Amponsah-Bediako, 2013). Secondly, the idea of predestination combined with the concept of a system of rewards and punishments leads people to try and find in religion justification for an individual's disabilities, for example, parents trying to find in their sins the cause for their children's disabilities (Retief & Letšosa, 2018). Social constructions exacerbate this phenomenon within the family structure. It leads some family members to try and deny disabilities if such disabilities are not directly visible or hide PWD. In either case, there is a high probability that PWD won't receive the rehabilitation, nor the healthcare needed. Individuals try to find in religion the source of rehabilitation, for example, through prayers (Al-Aoufi, Al-Zyoud & Shahminan, 2012, Turmusani, 2015).

Another question of relevance that may have hindered advances on the perspective of PWD within the household regards the fact that up until 1993, the Hashemite Kingdom of Jordan did not present any formal definition of disabilities. For example, when the 1979 surveys on PWD were performed, only those with a visible disability were considered (Turmusani, 2015).

The definition of disabilities outlined in 1993 (and later ratified in 2003) was based on the medical model and is a consequence of the nation's prevalence of NGO's and its history of colonization by the United Kingdom. Created in the Western Culture, this model served as a basis for today's International Classification of Disabilities and enhanced the sense of dependability of PWD (Turmusani, 2015; Moaddel 2002, WHO, 1980).

As a result of the 2007 signature of the Convention on the Rights of Persons with Disabilities and further ratifications, the country has made efforts to create various strategies on PWD.

Moreover, in 2017 Jordan altered the official definition of disabilities to accommodate the social model of disabilities, which the social conditions in which PWD live and its lack of adaptation (Law on the Rights of Persons with Disabilities Act, 2017; UN, 2007; Levitt, 2017).

PWD can also benefit from disability pensions in the case it presents 60 months of tax contributions. This value corresponds to 50% of the person's average income in the previous 36 months (for incomes below 1500 dinars), added of 30% of incomes above 1500. The values are adjusted for each year of contributions. In the case the disability is work related the individual can receive up to 75% of its daily salary (Social Security Office of Retirement and Disability Policy, 2021).

2.1.2 Disabilities, Labor Market Policies, and Empirical Considerations

The Hashemite Kingdom of Jordan is often praised for being one of the most disability-inclusive countries within its region; however, there is often a displacement between what is legislatively portrayed and what happens in fact. This subchapter aims to look into the current policies and how they relate to the actual empirical considerations on PWD integration within the labor market.

As of the witting of this thesis, the ILO (2018) identified two central laws that considered the insertion of PWD in the labour market, the Law on the Rights of Persons with Disabilities Nº. 31 of 2007 and Article 13 of the 2010 Jordanian Labor Code. Nonetheless, bearing in mind that the Jordanian Kingdom both signed and ratified the Convention on the Rights of People with Disabilities, and the 1983 ILO Convention No.159 (regarding vocational rehabilitation and employment), one can note an effort for the moderation of discrimination based on disabilities (Bitar, 2013; Jordan Labour Watch, 2017).

When taking a deeper look into the previously mentioned law, one can observe that the first-mentioned article aims to ensure the economic empowerment of people with disabilities. This law conforms with King Abdullah II intent when he instituted a National Strategy on PWD in the same year (National Centre for Human Rights of Jordan, 2010). In this same article, it is stated that public and private companies with a number of workers comprised between 25 and 50 must employ at least one worker with disabilities, while in the case where the number of workers surpasses 50, at least 4% of its labour force should be constituted by people with disabilities, this same article comes with an exciting twist, this clause is only applicable if nature of work of the institution permits so, given that the nature of such work that PWD cannot perform is not further enlightened in the article, one can observe a barrier to its applicability, nevertheless, when considering the case of public and private enterprises in 2016, almost ten years after the implementation of this law, less than 1% of PWD were employed (ILO, 2018; HCD, 2007).

Despite the 2007 article, when considering the 2010 Jordanian Labor Code, it is stated under Article 13 that 2% of an enterprise with more than 50 employees should consist of individuals with disabilities who have undergone vocational rehabilitation programs from governmental approved institutions (ICLC, 2021). Excused it is to say that given the previously presented information, the empirical considerations contradict that of the legislation.

2.1.3 The Jordanian Economy between 2008 and 2016

Taking into account the current thesis considers data from the 2015 Jordanian Population Census, the focus of this sub-chapter will be on the nation's macroeconomic conditions during this time with an emphasis on the period between 2008, due to the impact of the financial crisis and the Arab Spring (in the immediately succeeding years), and 2016. Its objective is to understand the country's economic situation and provide both a background and an empirically supported need for PWD integration in the labour market.

From 2004 to 2007, the Hashemite Kingdom of Jordan observed an outstanding event. Powered by liberalization and fiscal reforms, after the presence of the IMF in the nation, and paired with a significant investment by nationals living in Kuwait in local companies (as a result of the profits of oil-producing countries), the government was able to observe a GDP growth rate of 8% (Idris, 2016, Taghdisi-Rad, 2012). When looking into today's world, the macroeconomic situation of the nation is not as promising. Jordan's scarcity of natural resources and water, paired with its excessive reliance on foreign aid and investment, makes it one of the smallest economies within its region (Idris, 2016). The stagnation of economic growth observed since 2009, with the values shifting between 2% and 3%, can be deemed to three leading causes, the 2008 financial crisis, the regional instability following the Arab Spring, and a growth strategy that was not based on productivity and employment creation (World Bank, 2020).

Jordan reliability on the import of crucial resources such as energy comes as both an issue and blessing in disguise. With crude imports accruing to 96% of all imports, the country is highly volatile to oil prices. However, with the 2008 financial crisis, the drop of crude's value combined with the fact that Jordan is not an oil-producing country prevented the nation from entering a recession and allowed it to save the equivalent of 10% of its GDP (Taghdisi-Rad, 2012). Nonetheless, the 2008 period was also marked by several burdens, with the diminishing of the foreign aid and the overall monetary policy of the country as some of the main culprits on its aggravating state during the financial crisis as for example, since 1995, the Jordanian Dinar has been fixed to the United States Dollar, the 2008/2009 period was marked by a fast-paced depreciation of the country's currency (Jaradat, 2010; Idris, 2017).

During the year 2011 entirely different set of difficulties were imposed in the Jordanian economic panorama. For starters, like in the other Arab States, the nation experienced a vast collection of challenges and instability in the political spectrum, with a total of 6 different government bodies and five prime ministers rising to power in the 2011 to 2013 period (Ryan, 2014). Moreover, given that the country's leading exporters are other countries belonging to the MENA region, the civil war triggered in Iraq and Syria resulted in a degradation of Jordan's terms of trade (Asaad & Salemi, 2018). Additionally, the armed conflicts stimulated by the Arab Spring destroyed the natural gas pipelines that connect Egypt to Jordan, ensuing in the destruction of one of the primary sources of energy in the country (80%), in which the Kingdom benefited from lower prices due to the support of President Mubarak (Idris, 2016; BBC, 2011). Furthermore, the instability in neighbouring countries negatively affected tourism in the country, with a decrease of 14% in 2013 compared to values in 2012 (Mahafzah, 2015). Tourism accounted for 10% of the country's GDP, before the increase of regional vulnerability, and to this day is considered one of the main grounds for the nation's development and one of

the fastest-growing sectors in the country, primarily due to mimicking of what has been done in countries such as Egypt, and Lebanon (Alrawadieh, 2009; Orieqat & Saymeh, 2015).

The instability in Syria was also marked by the accommodation of more than 600,000 (registered) refugees in the country. Despite leading to some positive impacts, as it increased foreign aid and Syrian capital and led to an increase in both rents and cheap human capital, it is estimated that it has negatively impacted the country's economic outlook. Among other reasons for its negativity lay the fact that the aid provided by foreign nations is not enough to cover the costs with asylum seekers and as a result of increased pressure in both institutions and the labour market (UNICEF, 2021; Asaad & Salemi, 2018; Idris, 2016, Taghdisi-Rad, 2012).

The labour market question imposes an entirely different set of issues whose consequences were exacerbated through the previously mentioned events. Jordan's lack of water, paired with a lack of arable land and natural resources, makes the nation heavily dependent on the service sector, with it accounting for 67% of the GDP and 76% of total employment (European Commission, 2011; The Hashemite Kingdom of Jordan, 2021). Since the increase of the country's active population, through an upsurge of the overall population from the inflow of refugees and the growing entrance of educated youth in the labour market, the nation has observed an evident lack of demand for labour owing to a lack of employment creation and a mismatch between the types of jobs offered and people's education (Taghdisi-Rad, 2012). This problem has had far more consequences in the case of Jordanian than in the case of non-Jordanians. In a study developed in 2018, Asaad & Salemi (2018) concluded that when weighted for both Jordanians and non-Jordanians, the annual growth rate of employment was 0.6% and 5.7% for each respective group. However, and in contrast to common belief, these jobs are not occupied by refugees, for the most part, but by work immigrants from Egypt who find in the informal sector, which accounts for 25% of GDP, their primary source of income (Asaad & Salemi, 2018). In contrast, it is estimated that as time passes, the likelihood of a Jordanian being employed in the public sector diminishes. Despite the turbulences mentioned thus far, data from 2015 shows us an increase from 39% (in the early 2000s) to 43% in the number of nationals employed within the public sector (Asaad & Salemi, 2018)).

As previously stated, within the service sector, it is estimated that a larger share is applied to the public sector. This question is not only a result of the social security services provided by this sector but also of the fact that it is with the public sector that most of the specialized jobs are created. This reliance on the public sector can be deemed as a positive element for PWD that have a higher probability of being employed within this sector to bridge out the gap between legislation and implementation,

2.2 The Economic Model of Disabilities

The economic model of disabilities regards a deprecating view on disabilities primarily based on the limitations of impairments in the labour market (Letšosa & Retief, 2018). Despite the considerations on the civil rights of people with disabilities, this view's focus on a cost-benefit analysis diminishes the value of individuals. It creates a barrier on the entrance and full

participation of PWD in employment, leading to an increase in the propensity to poverty (Amponsah-Bediako, 2013).

When considering policymaking, as of 2017, The Kingdom of Jordan defined an individual with disabilities as "a person who has a long-term physical, sensory, intellectual, mental, psychological or neurological impairment, which, as a result of interaction with other physical and behavioural barriers, may hinder performance by such person of one of the major life activities or hinder the exercise by such person of any right or basic freedom independently", with later on considering work as a significant life activity hindered based on an individual's impairment (Law on the Rights of Persons with Disabilities Act, 2017). Despite the need for this clarification, the definition in itself directs us to a practical application of this model in policymaking (Jordan, 2008).

Nevertheless, regardless of the apprehensive behaviour of employers in hiring PWD (Lengnick-Hall, Gaunt & Kulkarni, 2008), there is extensive literature on the competitive advantages of employing PWD, both on efficiency and social terms (Mital & Subramanian, 2009; Hindle, Noble & Phillips, 1999; Kalagyrou, 2012; Powers, 2008). Moreover, authors such as Rioux (1998), Metts (2000) and Buckup (2009) were able to quantify the macroeconomic benefits of the integration of people with disability in the labor market through a measure of labor productivity losses. This evidence is of particular interest when applied to Jordan. As of 2015, around 13% of the working-age population presented a disability. Moreover, the country has shown relatively stagnant economic growth and increasing deficit after the 2008 financial crisis and the Arab Spring (among others, through a decrease on the country's exports to Iraq, representative of 20% of its outwards foreign trade) (Al-Smadi & Malkawi, 2019; The Economic Policy Council, 2021).

The tie between economic growth and labour productivity is not new. When considering the basis of economic growth theory, especially when taking into account the works of Keynes (1936), Solow (1956), Harrods (1973), and Kaldor (1957), one can observe the role of the availability of labour force, paired with the accumulated stock of capital, in defining the total capacity of output in a nation. The works of Rioux (1998), Metts (2000) and Buckup (2009) present us, after that, with a quasi-full capacity output theory that bears in mind the added value of employing PWD when considering differentials in various labor market indicators for people with and without disabilities at different productivity levels.

Rioux (1998) bottom-up approach had as a basis data for Canada in 1993 and calculated losses by distinguishing productivity levels of PWD who were institutionalized or not. According to the author, an institutionalized individual with a long-term disability saw his productivity level accruing to 10% of a person without disabilities; in the case of "household disabled", this value accrued to 90%. These values were then multiplied by the numbers of disabled, the level of disabilities and the average labour productivity while being deducted of wage supplements and unsalaried work. Metts (2000) extrapolated from the latter mentioned theory to calculate worldwide losses of a nation's non-inclusive approach to PWD in the labour market. Its view was presented with a significant flaw; it implied that every country had the Canadian structure in 1993, leading to an approach that lacked country sensitivity (Walton, 2012).

Intending to overcome the previously mentioned limitation, and while bearing in mind the lack of data availability on PWD, Buckup (2009) proposed an equation that considered the efforts of the Washington Group on Disability Statistics of homogenization of data and definition of disabilities. In the said equation, which will be developed during the methodology section, the author distinguishes three dimensions of exclusion, leading to a formulation of labour productivity gains that acknowledged different productivities regarding various severity degrees of disabilities and the disabling environment and stigmas that PWD are subjected.

3 Data

The current chapter gives the reader an in-depth critical look into the datasets used to develop the furtherly explained Empirical Analysis, which aims to analyze the economic costs from the non-integration of PWD in the labor market. This chapter will examine its reliability, representativity, and validity more than just presenting the dataset and its sources.

3.1 Source Material

For the development of this thesis, three primary sources of data were identified. For clarity and due to their nature, I will present them and discuss them independently. For starters, to produce the current thesis, information on employment, unemployment and economic inactivity of people with disabilities were needed; for this matter, a secondary qualitative dataset was utilized. The dataset comes from the aggregation of data from the Jordanian Population and Housing Census 2015. This census was marked by several alterations that improved the assessment of people with disabilities. It was the first time that the nation utilized the Washington Group of Disabilities Questionnaire to quantify disabilities in the country; it was also the first time the census presented a module entirely dedicated to PWD. Various international organizations created this questionnaire with two primary purposes: to tackle the scarcity of reliable information and statistical data on PWD, especially in low- and middle-income countries, and to homogenize data collection on PWD to leeway international comparisons.

The Short-Set of questions, utilized by the Kingdom, comprises six different inquiries regarding six other domains:

1. Do you have difficulty seeing, even if wearing glasses?

2. Do you have difficulty hearing, even if using a hearing aid?

3. Do you have difficulty walking or climbing steps?

4. Do you have difficulty remembering or concentrating?

5. Do you have difficulty (with self-care such as) washing all over or dressing?

6. Using your everyday language, do you have difficulty communicating (for example, understanding or being understood by others)?

All these questions were passible to be answered, through multiple-choice, in the following manner: (1) No, no difficulty, (2) Yes, some difficulty, (3) Yes, a lot of difficulties and (4)

Cannot do it at all, which allowed for categorization of disabilities by its severity, which will be further explained in the methodology section.

The utilization of the Washington Group of Disabilities Questionnaire in 2015 is intriguing, as the definition of disabilities it follows contradicted that of Jordan when of that time (a social model of disabilities, versus a medical model of disabilities)—showing the intent of change, previous to its official alteration in 2017.

Despite being a Housing and Population Census, the one submitted in 2015 came with a particularity; it only accounted for individuals over the age of 5, leading to underestimating its population. For the case of this thesis, this does not impose a limitation, as the focus group regarded individuals of working age. Nonetheless, it is understandable how such a situation can be considered relevant when studying children with disabilities.

As for PWD of working age, Jordan did not limit the maximum period of labour. Therefore, for consistency, this constraint is also not enforced during the empirical analysis section of this thesis. Nonetheless, it should be noted that the author is aware of the propensity for disabilities to increase with age. However, the fact that part of the population over the age of 65 still works makes their integration crucial for the full understanding of PWD in the labour market and potential GDP losses that can occur from the non-utilization of human capital. Still, it should be stated that a minimum limit was imposed at the age of 15.

As previously acknowledged, the database provides us with absolute values on integrating people with disabilities, separated by their answers on the Washington Group of Disabilities Questionnaires, values of employment, unemployment, and inactivity rates, was needed in relative terms. This transformation was made by dividing the variables for each level of disability by the sum of the active population for each degree (15 and over).

As part of the Washington Group Technical Notes, an individual is considered disabled if any of the questions mentioned above are marked with the answers Yes, many difficulties, and Cannot do it at all; this denomination had two implications on the analysis made. As the current thesis leverages the work of Buckup (2009), the author clarifies between mild, moderate, severe, and very severe disabilities, based on answers that go beyond those mentioned in this paragraph. For this thesis, individuals who claimed to have any difficulties performing any of the activities mentioned in the question set were deemed disabled. Moreover, those who did not answer were subcategorized as non-disabled to approximate as seamlessly as possible to official statistics.

One other limitation comes with this database: it only provides us with the aggregated answers to the questionnaire and their labour market situation and not with the individual responses to categorize disabilities similar to that of Buckup (2009). However, because this is not a problem of the database itself but a result of adaptations to accommodate this thesis methodology, this limitation accompanied by how it was yielded will be explained in the methodology section.

The other two databases were only necessary to retrieve information regarding the GDP in current US$ for the year 2015 and the Average Productivity of the Jordanian Population in the same year. The World Bank DataBank, and the Competitiveness indicators (ILO modelled estimates and projections [ILOEST]), were taken into account, respectively.

The firstly mentioned database applies data from both the national accounts data from the World Bank and the OECD. At the same time, the lastly reported database uses data from the World Bank DataBank and estimations from the ILO itself to retrieve GDP to labour input.

4 Methodology

In the current chapter, the reader can expect a detailed explanation of the methodology used through the development of this thesis, paired with a verification of the limitations and how such was surpassed.

4.1 The Model

As it has been reiterated throughout this thesis, the methodological framework leverages Buckup (2009) work to assess the costs resulting from the non-integration of people with disabilities in the labor market. Henceforth, despite being presented with a quantitative study, this thesis is only a result of statistical research, in the form of a Case Study applied to the Hashemite Kingdom of Jordan, but entirely founded on Buckup's (2009) method (with specific adaptations to accommodate differences in the dataset).

The utilization of Buckup's (2009) method is justified by being the only methodology that considers country sensitive data to estimate the potential economic losses of the discrimination of people with disabilities in the labor market, leading to a more exact estimation.

This bottom-up approach uses the equation present in (1) and (2) for the calculus:

$$L = \sum_{i=1}^{k} P * n_i * \varphi_i \quad (1)$$

$$\varphi_i = (\beta_i * -\beta_i) * e_i + \beta_i * (u_i - u) + \beta_i * (d_i - d) \quad (2)$$

As can be seen in equation (1), the economic losses (L) are calculated through the sum of the average productivity of the population (P) multiplied by the number of people in a specific disability unit (n_i) and a factor that adjusts productivity levels for each level of disabilities (φ_i).

This productivity adjustment factor represents the core of the model and bears in mind three of the main aspects that can influence the productivity of people with disabilities in the labor market. The first one ($(\beta_i * -\beta_i) * e_i$), considers individuals that, even though they are employed, cannot exercise their functions to the fullest due to their disabling environment. This aspect accommodates all forms of discrimination that individuals have suffered based on their disabilities throughout their lives, from lack of education to more concrete elements such as lack of infrastructures on both national and corporate levels. The disabling environment also considers the efforts made in developing strategies and legislations on PWD while being aware of the gap between legislation and implementation, while discussing the harmful experiences

of PWD in the labour market that may lead to self-exclusion, such as the lack of infrastructures outside and within the corporations (for example unadapted buildings or public transportation). This aspect is calculated through the differential of an individual's productivity at a certain level of disability (as a percentage of that of a person without disabilities) (β_i), and a person's potential productivity for the same sub-category of disabilities (β_i*), multiplied by the employment rate for that level (e_i).

In the second part ($\beta_i * (u_i - u)$), it possible to assess the number of unemployed people due to discrimination towards disabilities and goes accordingly with the facts mentioned in the literature review section regarding the fact that PWD has a higher unemployment rate than those without due to groundless misconceptions. This section is calculated through the multiplication of an individual's potential productivity for a particular disability level with an unemployment spread is given by the differential of the unemployment rate for people with disabilities at a given category (u_i) and the identical factor applied for people without disabilities (u).

Lastly, in the third subsection ($\beta_i * (d_i - d)$) accounts for PWD, who is inactive, which is again related to the empirical evidence on the lower participation of PWD in the labour force. Its calculus is given by the multiplication of the individual's potential productivity at various levels of disabilities by an inactivity differential between inactivity rates of people with and without disabilities, $d_i \; and \; d$, respectively.

The productivity levels for each level of disabilities are a crucial element of the current method, as it takes into account the effects of a disabling environment on the integration of people with disabilities in the labor market (β_i), and makes a clear distinction between the lack of productivity resulting from the disability itself (β_i*), for example, because the individual requires to go to the doctor with a higher frequency (a precise instance in which this situation is applicable, is related to the higher propensity for individuals who use wheelchairs to develop pressure wounds, that can lead to an increasing number of days of sick leave). However, to apply the betas, there is a need to differentiate the severity of a disability. In this instance, Buckup (2009) subdivides it into five categories: No Disability, Mild Disability, Moderate Disability, Severe Disability, and Very Severe Disability.

The way individuals are categorized in each level relates to their answers to the Washington Group Questionnaire, as can be observed in table 1.

Table 1. Categorization by type of disability- Criteria in Buckup (2009)

Disability Level	**Answers Given**
No Disability	All answers responded with "No, no difficulty"
Mild Disability	One answer with "Yes, some difficulty", no answer with "Yes, a lot of difficulty" or "Cannot do at all"
Moderate Disability	More than one answer with "Yes, some difficulty", no answer with "Yes, a lot of difficult" or "Cannot do at all"
Severe Disability	At least one answer with "Yes, a lot of difficulty", no answer with "Cannot do at all"
Very Severe Disability	At least one answer with "Cannot do at all"

Adapted from Buckup (2009)

Despite the feasibility of separating the levels of disabilities in this manner, the segregation between mild and moderate disabilities is only achievable when the researcher performs the survey or has access to the individual answers to the questionnaire. In this thesis, only accumulated values for each of the responses were provided, not allowing for the categorization of mild and moderate disabilities in the same manner. Moreover, Buckup (2009) mentions that this differentiation is ambiguous; thus, it was decided that for this thesis, individuals with mild and moderate disabilities would be allocated to the same category, with the requirement being that observed in table 2.

Table 2. Categorization by type of disability after alterations

Disability Level	**Answers Given**
No Disability	All answers responded with "No, no difficulty"
Mild and Moderate Disabilities	At least one answer with "Yes, some difficulty", no answer with "Yes, a lot of difficult" or "Cannot do at all"
Severe Disability	At least one answer with "Yes, a lot of difficulty", no answer with "Cannot do at all"
Very Severe Disability	At least one answer with "Cannot do at all"

The adaptation of the levels of disabilities also had an impact on the formulation of the betas for mild and moderate disabilities. These values were attained through the consideration of the minimum values, in Buckup's (2009) work, for individuals with moderate disabilities and the maximum values for the mild level of disabilities. The beta itself was attained through an arithmetic mean of these minimum and maximum values, leading to the formulation presented in table 3.

Table 3. Labor Productivity/ Potential Labor Productivity by Level of Disability

	β	β (min)	β (max)	$\beta*$	$\beta*$ (min)	$\beta*$ (max)
No Disability	100	100	100	100	100	100
Mild and Moderate Disabilities	65	50	80	85	70	100
Severe Disability	25	20	30	55	50	60
Very Severe Disability	5	0	10	25	20	30

Adapted from Buckup (2009)

In Buckup's (2009), model the definition of the betas results from an approximation based on various assumptions as a result of the theoretical background the author based himself on. One of the issues that can be noted can be related to the robustness of said betas. For that reason, a sensitivity test has been applied. In such examination, minimum and maximum values are adopted for the betas to create a window in which GDP losses from the non-inclusion of people with disabilities can be compromised. This sensitivity test is present in the appendix.

5 Empirical Analysis

In this section, an overview of the results will be taken into account, paired with a detailed overview of the correlation between the findings and the literature review. Detailed information on how the values presented was obtained can be found in the appendix.

It was concluded that the costs associated with the non-inclusion of PWD in the labour market accounted for around 8% of the GDP. When comparing these values with those of Buckup's (2009), it was possible to affirm that this disparity results from country-specific discrimination towards PWD. It was also possible to compare the data gathered and the previous literature making it possible to distinguish discrepancies resulting from alterations in Buckup's methodology and the overall assessment of disabilities; and similarities on the intra-specific scheme.

5.1 Results

When considering the type of disabilities in the Hashemite Kingdom of Jordan, on table 4 can be noted that even when considering people with Mild and Moderate disabilities, around 3% of the population presents a sort of disability, with a higher prevalence of people with visual and motor impairments (0.98% and 0.78% of the people, respectively). The incidence of disabilities is more prevalent in urban than in rural areas. When looking at differences related to gender, one can note that the values are somewhat similar for both sexes, rounding 3,37% and that they follow the same trend as the overall population, with a higher incidence of people with visual and motor impairing (0.92%, and 0.81% for females, and 1.02%, and 0.75%, male respectively). However, females present slightly higher values on motor, cognitive, and self-care disabilities.

When we look at the various disability levels that the trends differentiate. At the same time, visual impairments are the primary source of disabilities in people with mild and moderate disabilities (32.36%); in the case of Severe and Very Severe Disabilities, motor disabilities take the lead. Parallelly, with the increase of disabilities, one can note an increase in proportion with individuals with difficulties communicating and taking care of themselves. The values range from 7.69% to 17.86%, and 9.23% to 23.13%, respectively.

Table 4 Prevalence of type of disabilities by localization, sex, and disability level (%)

	Total	Seeing	Hearing	Walking	Cognition	Self Care	Communication
Total	**3,37%**	0,98%	0,51%	0,78%	0,47%	0,35%	0,29%
Urban/Rural							
Urban	**6,53%**	3,41%	1,00%	0,51%	0,79%	0,47%	0,35%
Rural	**3,01%**	0,76%	0,49%	0,67%	0,46%	0,34%	0,29%
Sex							
Female	**3,38%**	0,92%	0,51%	0,81%	0,48%	0,37%	0,29%
Male	**3,36%**	1,02%	0,51%	0,75%	0,46%	0,33%	0,29%
Disability Level							
Mild and Moderate	100%	32,36%	16,03%	20,48%	14,22%	9,23%	7,69%
Severe	100%	21,67%	12,66%	33,01%	12,76%	10,86%	9,04%
Very Severe	100%	8,08%	10,21%	25,90%	14,82%	23,13%	17,86%

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

When looking in specific into the situation of the active population, table 5 shows us that in 2015, around 13% of individuals of working age presented a kind of disability, with a higher occurrence of mild and moderate disabilities (9.96%), and lower of Very Severe Disabilities (0.58%), in comparison to the other two levels. An interesting aspect of this analyzes relates to the question of the different age groups. As people grow older, one can note an increase of Mild and Moderate, Severe Disabilities, and a decrease of Very Severe Disabilities.

Table 5. Prevalence of disabilities by Age Group- Active Population

			Disability Categorization		
	Total	**None**	**Mild & Moderate**	**Severe**	**Very Severe**
15-19	993 955	927 282	52 829	9 944	3 900
20-24	959 926	897 295	50 182	9 060	3 389
25-29	831 215	773 779	45 729	8 625	3 082
30-34	754 568	693 855	48 390	9 483	2 840
35-39	686 681	621 383	51 713	10 888	2 697
40-44	609 462	539 706	55 571	11 983	2 202
45-49	536 747	456 606	64 058	13 971	2 112
50-54	418 964	339 189	63 292	14 482	2 001
55-59	308 596	237 331	55 091	14 217	1 957
60-64	223 785	161 279	47 048	13 474	1 984
65+	552 299	324 800	150 700	63 136	13 663
15-65+	6 876 198	5 972 505	684 603	179 263	39 827
15-65+ (%)	**100,00%**	**86,86%**	**9,96%**	**2,61%**	**0,58%**

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

Considering the total population, in table 6, one can note a higher prevalence of inactive individuals than employed and unemployed. While the rates of employability rounded 36% in 2015, unemployment and inactivity rates reached 7% and 56%. As expected, when bearing in mind people with disabilities, the representation goes only partially according to theory. For example, levels of employment (26%) and inactivity (68%) increase, while the unemployment rate observes a decreasing tendency (6%), compensated by the rise in inactivity.

Nonetheless, an exciting and needed comparison regards the behaviour of the various levels of disabilities to the previously mentioned rates. Table 7 helps understand this relation and goes under findings in table 4. As the severity of disability increases, one can observe a decrease in the employment and unemployment rate and a drastic rise in the inactivity rate.

Table 6. Employment, Unemployment, and Inactivity, for people with/without disabilities of working age

	Total population (+15 years)		**People with Disabilities**	
	Absolute terms	Percentage	Absolute terms	Percentage
Employed	2 478 545	36%	232 092	26%
Unemployed	515 589	7%	57 217	6%
Inactive	3 882 064	56%	614 384	68%

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

Table 7. Employment, Unemployment, and Inactivity Rate by the level of disability

	Disability Level			
	Total Population	**Mild & Moderate**	**Severe**	**Very Severe**
Employed	36%	29%	17%	7%
Unemployed	7%	7%	6%	3%
Inactive	56%	64%	83%	90%

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

When considering all the information presented thus far, one question that may arise relates to how the statistics and information reported thus far impacts the economic losses of the non-integration of PWD in the labor market. Considering the population as an all, on table 8, one can note that the country's total economic loss comprises $ 3.030.322.476,22, or the equivalent to 8% of the country's GDP in 2015. Moreover, in the case of the various levels of disabilities, one can note a Productivity Adjustment Factor with a higher in the case of Severe Disabilities, followed by Mild and Moderate, and Very Severe (0.20, 0.13, and 0.09, respectively). This difference is driven by the extra inactivity presented in Severe Disabilities, which surpasses the sum of the low values (concerning Moderate and Mild Disabilities) shown in the variables extra unemployment and disabling environment.

Table 8. Economic Losses- Total Population

	Moderate & Mild	Severe	Very Severe
Number of People in Disability in Level Group (ni)	684 603	168 369	39 827
Productivity Adjustment factor (φi)	**0,13**	**0,20**	**0,09**
Part I (Disabling Environment)	0,058	0,052	0,015
Part II (Extra Unemployment)	-0,009	-0,007	-0,012
Part III (Extra Inactivity)	0,081	0,153	0,087
P x ni x yi	**$ 2 640 712 994,09**	**$ 381 410 413,84**	**$ 8 199 068,29**

∑ Total Economic Loss	**$ 3 030 322 476,22**

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

An interesting outlook that can be noted on tables 9 and 10 relates to how the various components of the Productivity Adjustment Factor apply to both males and females. When accounting for man, the productivity adjustment factor is slightly higher for people with severe disabilities than Mild and Moderate, and Very Severe disabilities (0.25, 0.26, and 0.14, respectively). In the case of disabled males, we can attest to an increasing impact of a disabling environment compared to that of the total population. Moreover, the gains the difference on the extra unemployment, that shows that people with disabilities do not suffer from this variable in the case of Jordan's total population sees a negative trend in the case of people with Severe Disabilities as they experience a situation of increased unemployment in relation to people without disabilities, simultaneously, extra inactivity is exacerbated for all levels of disabilities. Overall, the potential Economic Loss resulting from the non-integration of males with disabilities in the labor market accounts for a total of 6% of the nation's GDP in 2015.

In the case of the female disabled, we observe a relatively lower productivity adjustment factor. Even though females follow the same tendencies in various disabilities, the values only reach 0.06 for Mild and Moderate Disabilities, 0.26 for Severe Disabilities, and 0.14 for Very Severe Disabilities. Women with disabilities suffer way less from labour market discrimination in all the categories than their non-disabled counterparts. However, it should be noted that this situation does not derive from an inclusive behaviour to female disabled in the Kingdom's labour market, but from the precarious situation that women overall experience despite the government's efforts in creating a gender-equal favourable environment. Nonetheless, it is estimated that the non-integration of female disabled in the labor market accounts for a loss of around 2% of the country's GDP in 2015.

Table 9. Economic Losses- Male

	Moderate & Mild	Severe	Very Severe
Number of People in Disability in Level Group (ni)	370 661	94 715	20 791
Productivity Adjustment factor (φi)	**0,20**	**0,26**	**0,14**
Part I (Disabling Environment)	0,094	0,084	0,024
Part II (Extra Unemployment)	-0,002	0,003	-0,011
Part III (Extra Inactivity)	0,109	0,171	0,130
P x ni x yi	**$ 2 208 939 407,68**	**$267 261 821,41**	**$6 777 739,30**

∑ Total Economic Loss	**$ 2 483 529 301,57**

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

Table 10. Economic Losses- Female

	Moderate & Mild	Severe	Very Severe
Number of People in Disability in Level Group (ni)	313 942	84 548	19 036
Productivity Adjustment factor (φi)	**0,06**	**0,08**	**0,03**
Part I (Disabling Environment)	0,016	0,010	0,005
Part II (Extra Unemployment)	-0,018	-0,007	-0,012
Part III (Extra Inactivity)	0,061	0,076	0,040
P x ni x yi	**$548 906 717,37**	**$76 315 063,69**	**$1 420 596,98**
∑ Total Economic Loss	**$626 642 378,04**		

Author's elaboration with data from the Hashemite Kingdom of Jordan (2015)

5.2 Discussion

The first thing mentioned in the current discussion of the findings deems incongruencies between the results and the previous research sections. First, not all the author referenced use the same methodology applied in the 2015 census. Moreover, in this thesis, people who reported to have some difficulty in performing specific actions are deemed as disabled, while the same does not apply to the official statistics, which may explain differences in the current discussion.

Despite the dataset undermining the number of PWD in the country, it was still able to demonstrate that the labour market discrimination endured by 13% of PWD of working-age resulted in an economic impact equivalent to 8% of the country's GDP in 2015. Even if underestimated, the value still surpasses those presented by Buckup (2009) in the 10 case studies performed, as shown in table 11.

Table 11. Potential economic impact by country as % of GDP

Country	%GDP
Asia	
China	4

Thailand	5
Vietnam	3
Africa	
Ethiopia	5
Malawi	3
Namibia	4
South Africa	7
Tanzania	4
Zambia	5
Zimbabwe	4
MENA	
Jordan	**8**

Adapted from Buckup (2009)

The reason for such difference can be related to distinct factors, the higher productivity of the individuals in comparison to that of the nation's presented in Buckup's work, the use of current 2011 USD in the estimation of this value, and the percentage of people with disabilities who are of working age. Another reason for this difference comes from the aggregation of people with mild and moderate disabilities in the same category. Which makes it, so around 10% of people with disabilities presents either mild and moderate disabilities. Given that this level of disabilities is also the one with the highest productivity (β), it ends up being the main culprit for such high value. This aspect is also related to how the indicator is calculated. It is given by the number of persons with disabilities in each level times the productivity and the productivity adjustment factor.

As shown in table 5, the number of people with disabilities increases as the severity of the disability decreases. The cause for this aspect is highly associated with the decreasing life expectancy of PWD. As the severity increases, health deteriorates, potentially leading to higher mortality. Moreover, the high prevalence of disabilities within youth can explain how in table 5, individuals with ages comprised between 15 and 19 years have such high disability prevalence; this association can also result from the increasing population from war-torn countries.

If one compares the values attained for Jordan with South Africa, the ones whose values are the most similar to those achieved, one can understand its causes. For starters, in the case of South Africa, Buckup (2009) cannot formulate values for inactivity levels so he aggregates them. Despite presenting a higher number of people with mild and moderate disabilities (around 20% of the population), the intraspecific differences are still abysmal. Jordan offers lower levels of employment and unemployment. Yet, the numbers observed for each category of the productivity adjustment factor are still superior, which can be seen as an increase of PWD discrimination in Jordan; as shown in table 12, the only case in which the productivity adjustment factor is not superior is in the case of very severe disabilities. Once again, given that the productivity of this level of disabilities is lower it does not have such a magnified effect on potential economic gains. This comparison can also lead to an understanding of what happens in relation to other nations. The intraspecific situation of Jordan paired with the high prevalence of mild and moderate disabled leads to an economic impact much superior to that of other countries.

Table 12. Comparison of the Productivity Adjustment Factor- South Africa and Jordan

	Mild Disabilities	**Moderate Disabilities**	**Severe Disabilities**	**Very Severe Disabilities**
South Africa				
Productivity Adjustment Factor	**0.08**	**0.08**	**0.13**	**0.11**
Disabling Environment	0.09	0.09	0.06	0.03
Extra Unemployment/ Inactivity	-0.01	-0.01	0.07	0.08
Jordan				
Productivity Adjustment Factor	**0.13**		**0.20**	**0.09**
Disabling Environment	0.058		0.052	0.015
Extra Unemployment	-0.009		-0.007	-0.0012
Extra Inactivity	0.081		0.153	0.087

Adapted from Buckup (2009)

Given that the productivity levels, both potential and definite, suffered alterations to accommodate an estimate of both levels, it is intuitive that the losses related to people with mild disabilities were undervalued, while those presented by people with moderate disabilities were overvalued. Nonetheless, this thesis aims to provide an intraspecific overview of the case of Jordan and the dimension of the economic impact to this country, so even if not directly comparable to the work of Buckup (2009) in absolute terms, it achieves its goal of providing a country-specific case study. On this record, it is also noteworthy how these results dissociate us with the perspective of the economic model of disabilities and approaches us to the social model. More than considering a cost-benefit analysis, we consider the disabling environment as one of the foremost perpetrators of lack of productivity, which results in an immense potential GDP gain compared to a position of more inclusive development.

There is, however, an interesting factor that results from the current framework. It allows for a clear understanding of the intra-specific economic and social panorama the country is facing. To have a clear view of this statement, I will be taking a step-by-step approach to bridge the information from the tables presented in the previous chapter with what was expounded in the referenced literature.

When considering table 4, one can observe that the primary source of disabilities corresponds to visual impairments. In contrast, official sources state that motor disabilities have a higher prevalence, representing 17% of all disabilities. This issue results from the previously mentioned unaccountability of people with mild and moderate disabilities in the official statistics. When one observes the segregation between disability levels, this reasoning becomes

even more evident as visual impairments. Despite being the second cause of disabilities in Severe disabled, the percentages presented are still of considerable dimension. Moreover, the distribution of disabilities geographically corresponds to the population's location and the settlement of refugees in urban areas.

Another critical and noteworthy aspect that has a strong influence on the productivity adjustment factor regards the country's macroeconomic situation paired with how the various models of disabilities influence the labour market indicators. As previously stated, both the 2008/2009 financial crisis and the after-effects of the Arab Spring had tremendous negative consequences on the Jordanian macroeconomic stability. They worsened the previously existent issues regarding the employment status of its inhabitants. The high levels of unemployment existent within the general population help hinder the question of lower unemployment among PWD at various disability levels, to a point where it demonstrates a situation where this issue is not remotely existent. Nonetheless, the data gathered and the statistics formulated still confirm the gap between the country's labour policies favouring PWD and the empirical evidence.

Despite the "favourable" dimension regarding unemployment, PWD in Jordan still experiences quite prevalent discrimination resulting from the environment they are inserted in and relatively high inactivity levels. While the firstly mentioned indicator help exposes the situation of the education of people with disabilities, with its inadaptability that results in lower attendance and overall lower education, the secondly mentioned aspect is more related to the way PWD are portrayed within society.

The charitable and religious models, and to a certain extent the medical model, all portray a view on disabilities that moves PWD away from the labour market. The first two models, by associating the perspective of disabilities with the inability of performing specific actions, and observing the group as an assemblage of victims of disabilities that should be taken care increase the sense of dependability of these individuals and ends up hindering the participation of people with disability in the labor market. On the other hand, the medical model of disabilities, by focusing on what is "wrong" and linking the idea of disabilities with heroic actions, also exacerbates inactivity levels. It should be noted that this "brave" perspective occurs when an individual accomplishes something that should be remarked as normal, such as getting a job or education. Still, outsiders portray them as acts of resilience towards the disability itself.

The higher percentage of PWD in urban areas is not surprising. It follows the population trend and goes accordingly with the employment in the service sector. It is harder for individuals with disabilities to participate or even have the opportunity to participate in the first two sectors of the economy, especially if they are underdeveloped. Moreover, the agricultural and manufacturing sectors are of more complex adaptation for PWD, leading to a higher propensity for these individuals to work within the service sector.

As previously stated, women and, specifically, women with disabilities do not experience the same labour market conditions as men for various factors mainly founded on social and gender norms. Therefore, for the interest of this thesis, it was deemed as noteworthy trying to find in which way these gender norms affect the economic losses associated with disabilities both on

an intra-gender and total population level by applying the same methodology for both men and women, experience such that as far as I am aware has not been put in practice by any researcher until this moment.

It is interesting to note how the prevalence of disabilities was relatively equitable in men and women with disabilities of working age. While the prevalence is 3.38% for males, the same value accrues to 3.36% for females. It would be expected that the prevalence for men would be higher than for women due to the higher exposition of the firstly mentioned individuals to, for example, disabilities related to work (given the employment structure of the population). Nonetheless, the increasing number of asylum seekers may have impacted the hindering of these values.

The impact of disabilities in marriage in the Hashemite Kingdom of Jordan is not significant when considering the values for people with and without disabilities. As stated in the previous research section, marriage is deemed one of the main factors for women leaving the labor market. When focusing on males, one can observe a situation in which people with severe disabilities experience a situation of extra disabilities compared to their non-disabled equivalents. Moreover, extra inactivity and environment values are even more pronounced than that of the total population. On the other hand, in the case of females, one can observe the exact opposite trend. As women in the country present higher inactivity and unemployment rates and lower employment rates due to social and gender norms, one can observe rather lower values on all the components of the disability adjustment factor than the population in general. This gender discrepancy can be even more enhanced when we look at the economic losses separated by gender. At the same time, in the case of males, the difference between disabled and non-disabled leads to potential gains of 6% of the GDP, while for women, the same value only reached 2% in 2015. Therefore, to a certain extent, it can be stated that if it was not for the discerned labour market situation experienced by women in Jordan compared to man, we could have observed an overall economic loss that surpassed the 8%.

It is also interesting to note how this situation also led us to a full circle. The first studies ever performed on the economic impact from the non-integration of individuals in the labor market were applied to women, and in this exact source, one can find a precious influence on the outlook of potential economic gains on the integration of PWD in the Jordanian labour market.

6 Conclusion

The current thesis aimed to understand the potential economic impact resulting from the integration of PWD disabilities in the Jordanian labor market by utilizing data from the 2015 Population and Housing Census and the methodology provided by Bukcup (2009). More than just delivering information on potential growth, this thesis also intended to better understand people with disabilities of working age in the country and how its distribution is influenced by gender.

After adapting data to consider individuals with mild and moderate disabilities, it was possible to observe how, for the total population and specific to the various levels of disabilities, individuals with severe disabilities are the most affected by disabling environment unemployment, and extra inactivity. It was also possible to attest that out of the previous three mentioned variables, PWD are the most affected by situations of extra inactivity; this is highly correlated with the country's theocratical monarchy and its propensity to observe disabilities in a more charitably and religious manner. Due to the growing unemployment rates and overall labour market instability in the nation, PWD do not experience different unemployment situations. From this information, it was possible to conclude that the inclusion of people with disabilities would have allowed for a growth of 8% of the GDP in 2015. Despite being superior to the case studies presented in Buckup (2009), the value results from the more significant number of people with mild and moderate disabilities than in Buckup's case studies.

In conformation to the literature review, it was possible to observe how most PWD reside in the urban regions; this makes sense regarding the fixation of population, particularly refugees, in these areas and the primary sector of activity, services. Contrary to the literature review, this study observed that visual impairments are the most prevalent when including people with mild and moderate disabilities. Moreover, despite the increase in the age of mild and moderate disabilities, and severe disabilities, it can be noted how very severe disabilities follow the opposite trend, which can be related to the lower life expectancy of people with disabilities in comparison to their non-disabled counterparts.

Regarding gender, it is interesting to note how gender and cultural norms influence the female productivity adjustment factor—resulting in values in the three variables which are inferior to those for males. This situation is even more evinced when one considers the economic loss related to the non-inclusiveness of male and females separately. At the same time, the value accrues to 6% of GDP for man; for women, the loss only amounts to 2% of GDP.

This thesis contributes to the study of the costs derived from the non-inclusiveness of people with disabilities in the labor market. It presents the very first case study on the MENA by applying it to a country of high relevance on the study of disabilities for its geographical location and political stability, Jordan, one of the primary recipients of asylum seekers from Syria, Iraq, and Palestine. Moreover, it lays the ground for future research by providing

information on the base year in which the Washington Group of Disabilities Questionnaire was applied, allowing for future research on the efficiency of the policies adopted between 2015 and the 2020 round of census.

More than developing information on the potential economic impact associated with disabilities globally, particular adaptations to the model itself must be conducted. It would be interesting for starters to find an estimation for the betas more than based on assumptions and approximations. It would also be necessary for the difference between mild and moderate disabilities to be adapted to provide a separation even when the information available is aggregated.

In the specific case of Jordan, it would be interesting to perform a field study to assess how the discrimination individual' s with disabilities are subject to differentiates when considering the individual's nationality, ethnic group, and status of residency in the nation.

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Appendix A

The Economic Impact of the Non-integration of People with Disabilities in the Jordanian Labor Market

GDP (current US$)	38587017944		
Average Labour Productivity (GDP constant 2011 international $ in PPP--ILO modelled)	45598		
Employed	2478545		
Unemployed	515589		
Inactive	3882064		
Total Loss Related to Disability	**$3 030 322 476,22**	**8%**	**(%GDP)**
Minimum Total Loss	$2 746 287 632,18	7%	(%GDP)
Maximum Total Loss	$3 314 357 320,26	9%	(%GDP)

		No Disability	**Moderate + Mild**	**Severe**	**Very Severe**
Labour Productivity	People with Disabilities (n)	5 972 505	684 603	168 369	39 827
	% of Labour Productivity (β)	100%	65%	25%	5%
	Minimum	100%	50%	20%	0%
	Maximum	100%	80%	30%	10%
	of Labour Productivity (%β*)	100%	85%	55%	25%
	Minimum	100%	70%	50%	20%
	Maximum	100%	100%	60%	30%
	Labour Productivity (P)	$ 45 597,79	$ 29 638,56	$ 11 399,45	$ 2 279,89

	Minimum	$ 45 597,79	$ 22 798,90	$ 9 119,56	$-
	Maximum	$ 45 597,79	$ 36 478,23	$ 13 679,34	$ 4 559,78
	Potential Labour Productivity (P*)	$ 45 597,79	$ 38 758,12	$ 25 078,78	$ 11 399,45
	Minimum	$ 45 597,79	$ 31 918,45	$ 22 798,90	$ 9 119,56
	Maximum	$ 45 597,79	$ 45 597,79	$ 27 358,67	$ 13 679,34
Part I	Employment Rate (e)	38%	29%	17%	7%
	Productivity Spread (β*-β)	0%	20%	30%	20%
Part II	Unemployment Rate	8%	7%	6%	3%
	Unemployment Spread (ui-u)	0%	-1%	-1%	-5%
Part III	Labour Force Inactivity	55%	64%	83%	90%
	Labour Force Inactivity Spread (di-d)	0%	10%	28%	35%
	Total Productivity Loss	**-**	**$ 2 640 712 994,09**	**$ 381 410 413,84**	**$ 8 199 068,29**

	Moderate + Mild	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	684 603	168 369	39 827
Productivity Adjustment factor (yi)	0,13	0,20	0,09
Part I (Disabling Environment)	0,058	0,052	0,015
Part II (Extra Unemployment)	-0,009	-0,007	-0,012
Part III (Extra Inactivity)	0,081	0,153	0,087
P x ni x yi	$ 2 640 712 994,09	$ 381 410 413,84	$ 8 199 068,29

Minimum	**Moderate + Mild**	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	684 603	168 369	39 827
Productivity Adjustment factor (yi)	0,12	0,19	0,08
Part I (Disabling Environment)	0,06	0,05	0,01

Part II (Extra Unemployment)	-0,008	-0,006	-0,010
Part III (Extra Inactivity)	0,067	0,139	0,070
P x ni x yi	$ 2 383 562 545,31	$ 355 894 434,19	$ 6 830 652,68

Maximum	**Moderate + Mild**	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	684 603	168 369	39 827
Productivity Adjustment factor (yi)	0,14	0,21	0,11
Part I (Disabling Environment)	0,06	0,05	0,01
Part II (Extra Unemployment)	-0,011	-0,007	-0,014
Part III (Extra Inactivity)	0,095	0,167	0,105
P x ni x yi	$ 2 897 863 442,87	$ 406 926 393,49	$ 9 567 483,90

Elaborated by the author using data from the Hashemite Kingdom of Jordan (2015)

Appendix B

The Economic Impact of the Non-integration of Males with Disabilities in the Jordanian Labor Market

GDP (current US$)	38587017944		
Average Labour Productivity (GDP constant 2011 international $ in PPP--ILO modelled)	45598		
Employed	2078291		
Unemployed	311789		
Inactive	1237273		
Total Loss Related to Disability	**$2 483 529 301,57**	**6%**	**(%GDP)**
Minimum Total Loss	$2 268 314 145,93	6%	(%GDP)
Maximum Total Loss	$2 719 643 851,36	7%	(%GDP)

		No Disability	**Moderate + Mild**	**Severe**	**Very Severe**
Labour Productivity	People with Disabilities (n)	3 135 172	370 661	94 715	20 791
	% of Labour Productivity (β)	100%	65%	25%	5%
	Minimum	100%	50%	20%	0%
	Maximum	100%	80%	30%	10%
	of Labour Productivity (%β*)	100%	85%	55%	25%
	Minimum	100%	70%	50%	20%
	Maximum	100%	100%	60%	30%

	Labour Productivity (P)	$ 45 597,79	$ 29 638,56	$ 11 399,45	$ 2 279,89
	Minimum	$ 45 597,79	$ 22 798,90	$ 9 119,56	$-
	Maximum	$ 45 597,79	$ 36 478,23	$ 13 679,34	$ 4 559,78
	Potential Labour Productivity (P*)	$ 45 597,79	$ 38 758,12	$ 25 078,78	$ 11 399,45
	Minimum	$ 45 597,79	$ 31 918,45	$ 22 798,90	$ 9 119,56
	Maximum	$ 45 597,79	$ 45 597,79	$ 27 358,67	$ 13 679,34
Part I	Employment Rate (e)	60%	47%	28%	12%
	Productivity Spread (β*-β)	0%	20%	30%	20%
Part II	Unemployment Rate	9%	8%	9%	4%
	Unemployment Spread (ui-u)	0%	0%	1%	-4%
Part III	Labour Force Inactivity	32%	45%	63%	84%
	Labour Force Inactivity Spread (di-d)	0%	13%	31%	52%
	Total Productivity Loss	-	$ 2 208 939 407,68	$ 267 861 721,41	$ 6 728 172,48

	Moderate + Mild	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	370 661	94 715	20 791
Productivity Adjustment factor (yi)	0,20	0,25	0,14
Part I (Disabling Environment)	0,094	0,084	0,024
Part II (Extra Unemployment)	-0,002	-0,007	-0,012
Part III (Extra Inactivity)	0,109	0,171	0,130
P x ni x yi	$ 2 208 939 407,68	$ 267 861 721,41	$ 6 728 172,48

Minimum	**Moderate + Mild**	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	370 661	94 715	20 791

Productivity Adjustment factor (yi)	0,18	0,24	0,12
Part I (Disabling Environment)	0,09	0,08	0,02
Part II (Extra Unemployment)	-0,002	0,003	-0,009
Part III (Extra Inactivity)	0,090	0,155	0,104
P x ni x yi	$ 2 001 436 164,63	$ 261 226 706,57	$ 5 651 274,73

Maximum	**Moderate + Mild**	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	370 661	94 715	20 791
Productivity Adjustment factor (yi)	0,22	0,27	0,17
Part I (Disabling Environment)	0,09	0,08	0,02
Part II (Extra Unemployment)	-0,002	0,003	-0,013
Part III (Extra Inactivity)	0,128	0,186	0,156
P x ni x yi	$2 416 442 650,73	$ 295 296 996,77	$ 7 904 203,86

Elaborated by the author using data from the Hashemite Kingdom of Jordan (2015)

Appendix C

The Economic Impact of the Non-integration of Females with Disabilities in the Jordanian Labor Market

GDP (current US$)	38587017944
Average Labour Productivity (GDP constant 2011 international $ in PPP--ILO modelled)	45598
Employed	2078291
Unemployed	311789
Inactive	1237273

Total Loss Related to Disability	$ 626 642 378,04	2%	(%GDP)
Minimum Total Loss	$ 536 390 378,77	1%	(%GDP)
Maximum Total Loss	$ 686 850 214,73	2%	(%GDP)

		No Disability	**Moderate + Mild**	**Severe**	**Very Severe**
Labour Productivity	People with Disabilities (n)	2 831 319	313 942	84 548	19 036
	% of Labour Productivity (β)	100%	65%	25%	5%
	Minimum	100%	50%	20%	0%
	Maximum	100%	80%	30%	10%
	of Labour Productivity (%β*)	100%	85%	55%	25%
	Minimum	100%	70%	50%	20%
	Maximum	100%	100%	60%	30%
	Labour Productivity (P)	$ 45 597,79	$ 29 638,56	$ 11 399,45	$ 2 279,89

	Minimum	$ 45 597,79	$ 22 798,90	$ 9 119,56	$-
	Maximum	$ 45 597,79	$ 36 478,23	$ 13 679,34	$ 4 559,78
	Potential Labour Productivity (P*)	$ 45 597,79	$ 38 758,12	$ 25 078,78	$ 11 399,45
	Minimum	$ 45 597,79	$ 31 918,45	$ 22 798,90	$ 9 119,56
	Maximum	$ 45 597,79	$ 45 597,79	$ 27 358,67	$ 13 679,34
Part I	Employment Rate (e)	13%	8%	3%	2%
Part I	Productivity Spread (β*-β)	0%	20%	30%	20%
Part II	Unemployment Rate	7%	4%	3%	1%
Part II	Unemployment Spread (ui-u)	0%	-2%	-4%	-5%
Part III	Labour Force Inactivity	80%	87%	94%	96%
Part III	Labour Force Inactivity Spread (di-d)	0%	7%	14%	16%
	Total Productivity Loss	-	$ 548 906 717,37	$ 76 315 063,69	$ 1 420 596,98

	Moderate + Mild	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	313 942	84 548	19 036
Productivity Adjustment factor (yi)	0,06	0,08	0,03
Part I (Disabling Environment)	0,016	0,010	0,005
Part II (Extra Unemployment)	-0,018	-0,007	-0,012
Part III (Extra Inactivity)	0,061	0,076	0,040
P x ni x yi	$ 548 906 717,37	$ 76 315 063,69	$ 1 420 596,98

Minimum	**Moderate + Mild**	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	313 942	84 548	19 036
Productivity Adjustment factor (yi)	0,05	0,06	0,03

Part I (Disabling Environment)	0,02	0,01	0,00
Part II (Extra Unemployment)	-0,015	-0,020	-0,010
Part III (Extra Inactivity)	0,050	0,069	0,032
P x ni x yi	$ 478 588 959,12	$ 56 662 423,55	$ 1 138 996,10

Maximum	**Moderate + Mild**	**Severe**	**Very Severe**
Number of People in Disability in Level Group (ni)	313 942	84 548	19 036
Productivity Adjustment factor (yi)	0,07	0,07	0,04
Part I (Disabling Environment)	0,02	0,01	0,00
Part II (Extra Unemployment)	-0,022	-0,024	-0,016
Part III (Extra Inactivity)	0,072	0,082	0,048
P x ni x yi	$ 619 224 475,63	$ 66 023 031,83	$ 1 602 707,28

Elaborated by the author using data from the Hashemite Kingdom of Jordan (2015)