

IMPACT OF POLITICAL INSTABILITY PERIODS ON LEBANESE
EXPATRIATES REMITTANCES TO LEBANON

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ABSTRACT

Purpose – With the growing importance accorded to the subject of Lebanese Emigration, many studies have discussed the impact of the emigrants' contributions to Lebanon on the social and economic levels, notably remittances. Fewer studies have discussed the effect of political instability factors on the flow of these remittances; therefore this thesis will study the impact of several political risk components on expatriates remittances to Lebanon between 1985 and 2016 while taking into consideration other factors in Lebanon and in a host country like deposit interest rate and growth rate.

Design/methodology/approach – This study uses two multivariate techniques. First, it used a Factor analysis in order to group the 12 ICRG indicators of political risk into fewer factors and eliminate the effect of multicollinearity. Once done, multiple linear regressions were done to study the effect of political instability on remittances in addition to considering economic conditions in Lebanon and another host country.

Findings – The major finding of this research paper is that, unlike what most of people believe, Lebanese expatriates have shown more willingness to send remittances to Lebanon during times of conflict and instability.

Research limitations – The main limitation of this study is the limited time period it covers, since it is only studying the period going from 1985 to 2016 and this is mainly to the unviability of sufficient data for Lebanon. In addition, when studying the effect of instability while taking into account economic factors in other countries, the study was limited to Canada for data availability issues.

Practical implications – Financial institutions can benefit from the findings of the research paper especially during times of crisis and conflict to develop channels to facilitate the fund transfers and benefit from it.

Originality/value – While many studies focused on emigration in general, the role remittances play in supporting local economies and during or after periods of instability, this study focuses on the impact of the political instability on remittances sent by Lebanese. This is the first study in Lebanon that tackles this particular subject.

Keywords – Emigration, political risk, remittances, factor analysis, linear regression.

Chapter 1

Introduction

1.1. General background of the topic

According to Hourani (2006), migration from Lebanon, that goes back the beginning of the 19th century, was widely affected by both the socio political situation in Lebanon and host countries. Emigration, that became one of the characteristics of the modern Lebanon, has witnessed many waves (Ahmed et al, 2012), each wave characterized by particular push and pull factors (Fersane, 2012).

According to Tabar (2009), push factors can be divided into 2 main periods: the period of economic hardship, characterized by the increase of unemployment rates - when Lebanese people emigrated looking for better opportunities outside Lebanon and the periods of war and continuous conflict when the humanitarian reasons were the major push factors. Pull factors include the prosperity in the economy of the Gulf countries, mainly following the opulence of the oil production. In addition to that, the facilitation of migration policies and procedures for Lebanese people during the periods of conflict that acted as pull factors to Lebanese emigrants and motivated them to emigrate for their safety and the safety of their families.

Emigration had positive impacts on Lebanon on the social and economic levels: emigrants' contributed to the creation of the middle class in Lebanon in addition to increasing the level of education. Going from there, it is important to mention that remittances are considered the most important aspect of emigration.

Emigrants' remittances are considered as an important factor to the Lebanese economy since they account for a considerable percentage of the local GDP. Many theories explained the incentives behind sending remittances to the country of origin

by expatriates. While some remittances act as a form of insurance for the emigrant and his family, - are sent for the purpose of making investments. Most of the studies focused on the roles remittances play in supporting local economies, especially in periods of war and conflict. However, rare are the researchers who studied the impact of political instability on the remittances sent by expatriates to their country of origin.

1.2. Need for the study

Lebanese emigration and Lebanese Diasporas has always been a subject of major importance in Lebanon for what they represent of value for the Lebanese society and economy as well. The Lebanese Diaspora Energy held by the Ministry of Foreign Affairs and Emigrants first in 2014 and became a highly anticipated event year after year, is an evidence of the need to foster relationships with Lebanese people living abroad, to establish connections between the diaspora and the Lebanese residents to share experience and build social and business relationships in addition to exploring potential investment opportunities.

In addition to the cultural and social benefits of Lebanese emigration, it is also known that Lebanon is a country that relies heavily on expatriates remittances in its economy. Throughout history, the remittances that were sent by Lebanese emigrants to their parents and relatives in Lebanon served in enhancing the living conditions of the residents receiving the funds in addition to helping them to overcome many crises and periods of instability. Therefore, remittances are perceived as a protection factor against the repercussions of political instability and conflict, especially in a country like Lebanon, a country suffering from continuous periods of instability on the political and economic level.

Many studies have studied the impact of remittances on the local economy, how remittances act as a stabilizing factor for the economy of countries in periods of instability, very few have studied the impact of political instability on the flow of remittances sent by expatriates to their country of origin, especially in Lebanon.

This thesis is important for many reasons: First, it will tackle the impact of political stability on the remittances of Lebanese expatriates to Lebanon that was not widely discussed. Second, while most of the studies used qualitative methods; questionnaires and interviews, this thesis uses data from trusted sources like the World Bank and the International Monetary Fund to understand the response of emigrants to instability in sending remittances.

Finally, the findings of this study will define in what ways expatriates react in sending remittances versus political instability.

1.3. Purpose of the study

Remittances are considered as a key factor in supporting local economies. Expatriates, by sending remittances to their country of origin, have contributed to the development of their societies and to the enhancement of their living conditions.

The main aim of this paper is to empirically explain the variance of the remittances' flow sent by Lebanese expatriates to Lebanon in terms of the political stability in Lebanon. In order to achieve the main objective of the study, the following will be done:

First, the study will determine the components of political instability in Lebanon; afterwards these components will be grouped under major factors by conducting a factor analysis.

Once determined, the relationship between the factors determined, the amounts of remittances sent to Lebanon and economic factors such as the growth rate and GDP in both Lebanon and the country of residence of the emigrant will be studied to determine the behavior of the remittance flow in terms of political instability.

1.4. Overview of the chapters

The research paper is divided into five chapters. The first chapter includes an overview of the topic: Lebanese emigration in general, its positive proceeds notably remittances and their importance in periods of conflict and political instability. In addition, the first chapter explains the need for the study in terms of originality and the purpose behind it. The second chapter presents the historical background of the Lebanese emigration and remittances, a review of the most relevant theories related to the remittances and the motives behind sending them. In addition, the chapter includes the available empirical studies that discussed the topic of the impact of political instability caused by wars and periods of conflict on the remittances sent by expatriates to their countries of origin in several countries including Lebanon.

The third chapter defines the population and the sampling approach as it explains the research methodology used in the thesis; it defines the components of political instability, in addition to explaining the need for a factor analysis in grouping the mentioned components under a lower number of factors. In chapter 3, are suggested the tested hypothesis as well as the research models and the analysis.

Chapter 4 validates the use of factor analysis which is done to group the components of political instability. In addition to the factor analysis, regressions were done to test the suggested hypotheses.

The fifth and last chapter serves as a conclusion where the main results are explained in addition to discussing the limitations and implications of the thesis.

Chapter 2

Literature Review

2.1. Historical background

Lebanese emigration was considered an integral element of population's international movement that is a characteristic of the modern world, according to Kerbage (2002). Starting the middle of the 19th century, Lebanon began to experience the phenomenon of emigration. Ever since and till today, Lebanese people have been attracted toward finding better opportunities abroad, encouraged by the combination of several factors such as the political instability, the geographical location and the unbalanced economic development (Tabar, 2009).

One and a half century after the beginning of emigration, Lebanese emigrants succeeded to form communities in almost everywhere around the globe, from the Americas to Africa to the Arab Gulf countries and among them have emerged many successful entrepreneurs and prominent figures (Zafar, 2012).

Going back to the history of emigration from Lebanon, it can be divided into major waves, each distinguished by particular push and pull factors.

According to Issawi (1993) in Fersane (2012) emigration from Lebanon started to increase starting mid-19th century in the period when Mount Lebanon was witnessing conflicts on the regional and international levels. According to Tabar (2009), before the 1870s the inhabitants who emigrated were those who were sent to Rome by the Maronite Catholic Church, to study there and go back to Mount Lebanon and assume the role of clergy. The return of these emigrants after pursuing their education in Europe in addition to the European missionaries and nuns who came to Lebanon to

open schools had a profound impact on the increase of number of educated people in the mountains.

The emergence of an educated class created an urgent need to find better working opportunities. Referring to Tarazi (1983) in Fersane (2012), the European missionaries who worked on spreading education by opening schools, also founded dispensaries which lead to a remarkable decrease in mortality. According to Khater (2001) the population grew up to 280,000 in the 1880s and reached 414,800 habitants in Mount Lebanon. This latter fact combined to the increase in education, had a considerable impact on the Mountain's demographical composition: the growth in population and the deficit in job opportunities caused by the increase in educated people pushed the Mountains habitants towards urban areas in an attempt to find jobs that better fit their newly acquired skills.

On the economic level, during this same period, silk production boomed and was considered to be the backbone of the Lebanese industries (Fersane, 2012). The prosperity of the silk industry that constituted the major percentage of Lebanon's exports, pushed peasants to solely focus on growing mulberry trees, needed for silk production. This focus created a "mono production" of exportation as stated by Labaki (1987) in Fersane (2012). However, this prosperous situation did not last long, since at the beginning of the twentieth century, precisely in 1890, the Lebanese silk could not withstand the competition with its Chinese and Japanese rivals that were sold at cheaper prices, not to mention the introduction of synthetic fabrics that were also considered as main rivals for the Lebanese silk industry. The deterioration of this industry pushed many Lebanese people to immigrate to other countries, seeking better job opportunities.

In addition to the above stated factors, escaping military service during the Wiliyat periods was also a major reason for emigration (Fersane, 2012).

From a different perspective, prior to the eruption of World War One (WWI), Lebanese emigrants have had important contributions on many levels. The remittances they sent to their parents in Lebanon had an important impact on the country's economy. In addition, the return of the emigrants who brought with them funds and cultural insights from their host countries, contributed profoundly to the emergence of a new social active class, the middle class. This newly formed class was the main supporter of the development and emergence of new economic sectors like hospitality, services and commerce (Khater, 2001).

The WW I marked another phase in the history of Lebanese emigration. This wave also refers to the period between the two world wars. Following the outbreak of WWI and the sea blockade, emigration witnessed a slowdown until 1918 (Fersane, 2012). However as soon as the blockade was removed, the emigration activities resumed. This period witnessed a remarkable outflow of women who left the country to reunite with their families abroad. According to Tabar (2009), the economic depression that hit the world in 1929 laid its negative shadows on the Lebanese emigrants which explain the decrease in the number of emigrants during this period. In addition to the crisis, other factors negatively affected the emigration movements towards western countries like the new US regulation that implemented emigration quotas.

The third wave of emigration goes from the period shortly preceding World War II (WWII) until the outburst of the Lebanese civil war. Tabar (2009), stated that as of 1945, emigration continued and observed a sharp growth in the 1960s. The emigration rates reached a peak during the Arab Israeli War in 1967.

The post-war outcomes such as unemployment at high rates, the increase in living costs and political turbulence pushed many Lebanese to migrate.

This instability resulted in massive emigration where it was noted that 40% of the Lebanese population accounting for around one million people have emigrated between 1975 and 1989 (Tabar, 2009).

Referring to Labaki (1992) in Hourani the period between 1975 and 1990 was marked by multiple political incidents, such as, the Israeli invasion and partial withdrawal, the conflicts between the Syrian Army and Palestinian commandoes and the ongoing inter and intra local conflicts among different Lebanese parties. These dramatic events led to a profound destruction of the country's economy; according to Salam (1998) in Ahmed *et al.* (2012), a considerable part of the population lost their houses and many services systems collapsed; notably the health and the social systems. Unemployment reached the unperceived rate of 21% in 1985 and the minimum monthly salary dropped by 253 \$ between 1983 and 1987 (Labaki, pp.606 -607: 1992 in Hourani...). This period was also marked by family reunions and lasting settlements in the host countries.

It is also important to mention that during the periods of conflicts the host countries such as France, Germany, Grand Britain and Canada facilitated the process of emigration for Lebanese emigrants, in this regard "of all emigrants of Lebanese origin living in Canada in 2001 (their number was 144,000), 36% had come to Canada in the 1980s. In Contrast, 10% had come to Canada before 1971" (Lindsay, 2001).

In parallel and during the latter period, the emigration to the Gulf started and was also a major phase in the Lebanese emigration history. According to Hourani (2006), Lebanese migrants were attracted to oil-producing countries in the gulf, where Saudi

Arabia was the major employer of Lebanese emigrants followed by Kuwait and UAE in 1980 (Tabbarah, 1982).

Most of the Lebanese people who migrated to the Gulf worked initially in construction than moved to work in other sectors like trade, tourism and financial services. Most of the Lebanese who worked in the Gulf were educated people, holders of university degrees with high salaries and they could be divided into two main categories: on one hand, the wealthy looking to explore new investment opportunities in the Gulf and on the other extreme the less fortunate looking to make better achievements overseas.

Following these periods, emigration boosted again following the eruption of 2006 war in Lebanon that led to intense damages (Hourani, 2006).

To summarize, throughout history Lebanon has witnessed important waves of emigrations some of which happened during periods of economic struggle where emigrants, who were pulled by better opportunities abroad integrated in the host countries' communities and many of them emerged as successful entrepreneurs. Others waves were marked by war, turbulence and political instability. During these hard times, security in the host countries was the main attractor while the perils of the war and post-war periods including life corruption, economy deterioration, inflation and unemployment were the main push factors. During these periods of conflict and instability emigrants fled the country as seekers of shelter and were granted visas by many countries on that basis allowing them to benefit from the flexible emigration policies in the host countries at that time.

Despite their emigration and integration into the societies of the host countries, most of the Lebanese emigrants kept strong bonds with their families in Lebanon. This attachment to the homeland transformed emigration into a development factor that

had positive impact on Lebanon on the social and economic levels notably through remittances (Tabar, 2009).

“Remittances are a significant contributor to the Gross Domestic Product (GDP) of many countries” (ESCWA, 2006) and it is certainly the case of Lebanon where, in 2008 their gross inflow formed 20% of the GDP. Hourani (2006) states that Lebanese expatriates remittances to Lebanon are considered as “the country’s most stable financial flow” especially in the periods of instability. Upon Lebanon’s recovery from the civil war in 1990, “remittances represented 64.7% of GDP” (ESCWA, 2006) representing 1.818 billion US dollars. The flow of remittances, that showed a constant increase over the years due to the increase in emigrants number on one hand and an increase in their earnings on another hand (Hourani, 2006), witnessed another massive increase in 2006 by reaching 25.8% of the GDP (Charara 2009 in Tabar 2009). Remittances have also had an undeniable impact on the reformation of the Lebanese middle class that disappeared as one of the direct effects of the Lebanese civil war. Plus it was noted that remittances played a vital role in lowering poverty levels (Page and Van Gelder, 2002 in ESCWA, 2006).

From a different angle, it was noted that when the economy witnessed a recovery the flow of remittances to Lebanon decreased from 15% in 1995 to 13.5% in 2004 as stated by ESCWA (2006). The latter fact shows clearly a relationship between the expatriates’ flow of remittances and the stability within the home country.

2.2. Theoretical background

Carling (2008) in Lubambu (2014) noted that remittances senders are not necessarily migrants along with questioning the utility of the definitions that tried to explain remittances. At the contrary, other researchers did not address much importance to the

sender of the remittances along with their nature (i.e. monetary, social...). In this regard, many factors can also be taken into consideration when defining remittances: senders, migrants or not, whether the remittance is coming from employment revenue or not... Going from there and for the purpose of this thesis, remittances refer to inflow of emigrants transfers of their income.

Numerous studies have discussed the importance of expatriates' remittances to their country of origin and their impact on the country's economic development. However, it was noted that the research papers studying the factors impacting the flow of remittances are scarce, especially in the MENA region, notably in Lebanon.

As a start it is important to define the determinants of remittances and to explore the theories explaining why expatriates do transfer funds to their country of origin. Gallina (2006) in Hamadi *et al.* (2013) differentiates between four models for the determinants of remittances.

The first approach, the "endogenous migration approach" focuses on the remitter's relationship with his/her family. Referring to Solimano (2003) who calls this approach "The altruistic Motive", the well-being of the remitter's family is the main driver behind transferring funds. In general, emigrants in this category are of a higher educational level than their family members and they usually earn higher incomes. VanWey (2004) in Van Dalen and Groenewold and Fokkema (2005) highlighted the fact that within this approach, the strength of the bonds between family members plays a vital role in the remittances transfer process; which explains the gradual decrease of the flow of remittances to families where family ties are weakened with time and distance.

In the second model, in contrast to the first model, the remitter puts his/her interest first. In this case the earnings of the expatriates are either kept with the expatriate in

the host country, or sent to their families in the home country. The decision is mainly based on the rate of return in both countries. Earnings are invested in the home country when the remitter judges that as a good investment opportunity, when the investment rate of return in the home country is higher than the host country. Expatriates usually invest in buying lands and properties, in starting a business or in investing in saving accounts to accumulate wealth. Here the family plays the role of the investment administrator (Hamadi *et al.*, 2013).

Solimano (2003) states that the third approach, named “Loan repayment” is based on an unwritten contract between the expatriate and his/her family. Under this model the family supports of on its members to emigrate and makes an investment by supporting his/her education. Once the emigrants starts working the remittance he/she send back home are considered as part of the loan repayment to the other family members.

The last model is the “co-sharing of risk and insurance”. This approach is similar to the one above however in this case the risk related to the emigrant’s success in foreign countries is shared with the family members; it is based on risk diversification (Solimano, 2003). Following this model, the family member with the highest chances of success is selected to emigrate to leverage the family’s economic level. However, an unstated agreement between the family members dictates that the emigrants return home is secure in case of failure (Hamadi *et al.*, 2013).

UNCTAD (2013) noted that the motives of the migrants are subject to change over time with the constant change of needs: the sender’s need as well as his/her family’s needs. In many cases the sender decides to settle and found a family in the host country which leads to the interruption of the flow of remittances.

Referring to Carrasco ad Ro (2007) in Hamadi *et al.* (2013) remittances have considerable effects on the development, such as, improving the living of the families

in addition to helping them withstand hard times and crisis as it was noted that expatriates increase their remittances to their country of origin during periods of conflict and hard time. However, the effect of political instability on Lebanese expatriates' remittances is still unclear.

“Remittances are less volatile than other international private capital flows, and they are counter- cyclical. This contrasts with other international private flows that tend to be strongly pro-cyclical” (Gabel, 2008, p.9). The insurance function that remittances fulfill mostly in developing countries, is translated in the fact that the flow of remittances sent by expatriates to their home countries seem to increase in hard times periods: during economic crisis, wars and conflicts and following natural disasters (Ratha, 2007). In the same framework, literature shows that poverty, a direct effect of political instability and notably wars, is profoundly affected by expatriates' remittances. Following a study that covered 71 developing countries, Adams and Page (2005) in Gabel (2008, p.10) state that remittances sent by expatriates to their home countries significantly “reduce the level, depth and severity of poverty”. Moreover their study showed that expatriates remittances reduce poverty more than does the income coming from local economic activities.

2.3. Previous research

The trends in remittances flow were the subject of several studies made by many economists who focused on the macro/micro economic perspective, the motivation factors behind sending remittances and on the importance of remittances for the economies of the countries of origin and their impacts on these economies. Economists noted the importance of political instability for economic performances (Agbegha, 2006) where they noted that political instability can be a cause in the

decrease in investment as well as in productivity; representing direct reasons for an economic downturn. However, the studies that tried to elaborate the relationship between political stability and expatriates remittances flow are less. Political instability can result in a decrease in remittances as a consequence of an altered economic environment which leads to changes in domestic expenditures among others (Aydas *et al*, 2005). The following articles and studies elaborated on the relationship between political instability and remittances flow.

Iuliia Kuntsevych (2016) analyzed the remittances sent to Ukraine by Ukrainian Emigrant, specifically during the periods of instability in 2004 linked to the Orange Revolution and the Presidential Elections that followed. In her research paper, Kuntsevych studied the impact of the remittances received by Ukrainians by emigrants on saving and donation decisions against a backdrop in the political situation in 2004; in addition to exploring the dependence of the remittances flow on the political views of the recipients of these funds among other criteria during the instability period. Ukraine is considered as a major receiver of emigrants remittances in the EEC (European Economic Community).

According to the National Bank of Ukraine, in 2015 the remittances to Ukrainian households exceeded 5 Billion Dollars. Referring to the European Investment Bank in De Haas (2005), remittances are used mainly for daily expenses. During modern times, Ukraine witnessed drastic political incidents that were considered turning points in its history. According to Goncharuk (2007) in Kuntsevych (2017), the fraudulent presidential elections of 2004 was the cause of “The Orange Revolution” that led to changes in the political power, influencing by that people’s expectations for the economic future of the country. The study noted the emigrants’ behavior when it comes to sending remittances to their relatives in Ukraine and was able to

differentiate between optimistic emigrants who seemed to send larger amounts and pessimistic emigrants who refrained from sending. The research paper used data from The Ukrainian Longitudinal Monitoring Survey that is data collected from three waves of a survey done in 2003, 2004 and 2007. The third wave data was used for this study because it includes additional subjects such as the presidential elections of 2004, the Orange Revolution and remittances. Respondents were also asked to specify whether they were, at the time of the survey, supporters of the revolution or not. Variables are remittances received, savings, donations and education. The explanatory variables consisted of the characteristics of the Orange Revolution such as the political views, the satisfaction with the results of the elections in addition to the financial situation of the household. The results of the study showed that the election and its results had an effect on the likelihood of the respondents to receive remittances based on their political views. It is worth mentioning that based on the study; supporters of the winning political party were less likely to receive remittances from emigrants. This comes from the optimism of the emigrants and belief in a better economic future that held them from sending funds back home.

Hourani (2009) studied the impacts of the Global Financial Crisis of 2008 on Lebanese expatriates. The impact on their remittances was also discussed. The Global Financial Crisis of 2008 that resulted from weak regulations in the financial markets had negative consequences in almost every country in the world. GCC (Gulf Cooperation Council) countries including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates that were the main focus of the study for being host countries for a considerable portion of Lebanese emigrants, however, the above mentioned countries were affected by the crisis differently, depending on each country's economy.

Since 2006 and till the occurrence of the crisis in 2008 these countries witnessed exceptional economic growth that was the result of the increase in oil prices. This growth was a major attraction factor for foreign skilled labor among whom Lebanese emigrants. Referring to Behrendt et al (2009) in Hourani (2009), following the crisis, Lebanese Emigrants in the Gulf transferred their savings to Lebanon which led to an increase in liquidity. However the country was at risk, knowing that the Lebanese economy was relying heavily on the expatriate's remittances (Shanahan et al, 2009). The research paper studied the period going from September 2008 to July 2009 covering the crisis. The data was gathered through a survey addressed to 500 Lebanese Emigrants in the Gulf who met the selection criteria. The survey included 10 questions focusing on the impact that the crisis had on employment, economic situation, remittances and strategies to overcome the crisis. The data was analyzed using SPSS 11.5. The results showed that the ability of expatriates to send home was heavily affected by the crisis and resulted in a decline in the remittances sent home by Lebanese emigrants in the Gulf. The obtained results suggested that the remittances inflow were significantly correlated with economic growth of the host countries. Precisely, in case the economy of the Gulf countries does not show growth, the remittance flow to Lebanon from the emigrants in that country might eventually decline.

Hourani and Sensenig-Dabous (2007) studied the impact of the July 2006 War on migration and its related matters in addition to weighing the significance of the war and post-war crisis on multiple levels. The study also focused on the impact the war had on networking between Lebanese migrants and the Lebanese residing in Lebanon during the war and post-war periods. When it comes to networking, remittances are considered an essential form of networking between emigrants and their families in

Lebanon. The research paper included quantitative and qualitative methods: 2 questionnaires, one designed for the locals and another destined to the emigrants (270 Lebanese living abroad received the questionnaire) in addition to 11 interviews with experts and CEOs of small and medium size enterprises in addition to 8 in-depth interviews with Lebanese residents focusing on the economic and political situation. The results showed that as of Summer 2006 War, 34.9% of the Lebanese residents stated that the remittances they were receiving increased. In parallel, 17% of the emigrants who were surveyed stated that they increased their remittances to their home country during the studied period.

However, it is important to mention that based on previous literature, the questionnaire that was administered omitted any item reflecting a decrease in the sent or received remittances. In addition, the interviews revealed that the formed network of remittances was by the emigrants who are still connected to their home country. The support received by Lebanese residents in the forms of remittances acts as pressure reliever to the Lebanese economy which gives them the profound importance they have.

Finally, a research paper by Fagen and Bump in 2006 studied the subject of remittances and focused on three countries that suffered from wars, conflicts, crisis and unstable political situations over considerable periods of time. Precisely, the paper discussed the case of Afghanistan; Sri Lanka and Somalia. In the case of Afghanistan, the research showed that following the decline of the Taliban system that left the country in a very fragile state. Emigrants are put under profound pressure to send remittances to their families and the dependence of families on emigrants' remittances is growing constantly. In the case of Sri Lanka, most of the emigrants are laborers, the majority of whom are located in South Asia and the Middle East.

Remittances by expatriates aimed initially to help families to depart the country. It is important to note that the government of Sri Lanka has put in place mechanisms and policies to encourage and facilitate receiving of transfers from expatriates. On another note, it was noted that a particular category of the Sri Lankan population, the Tamils, sent massive funds to support the Liberation Tigers of Tamil Eelam (LTTE), their political party, whether by sending funds for military purposes or to support the families of the party's supporters. In Somalia, the expatriates kept sending remittances despite the deteriorating political situation in the country and most of their funds were sent for investment, business and non-vital purposes and their sending contributed to maintaining the private sector and the vital services.

2.4. Conclusion

In the light of the importance of Lebanese Emigration that has started in the nineteenth century and continues till today, this study goes deeper into analyzing one the most important components associated to emigrations and diaspora energy: remittances. Remittances goes beyond being simple fund transfers from an emigrant to his country of origin, in our case Lebanon, to being a vital factor that affects the country's economy. Political risk that is considered one of the major risks in any country and in Lebanon it is known that risk is one of the prevailing risks for the ongoing conflicts and perturbation caused by internal regional and global factors. The main objective of this study is to analyze the behavior of the value of remittances in terms of political instability. The used political risk indicator includes 12 ICRG risk indicators that will be the subject of many approached instead of using the index arbitrary. The intended study has need been done before in Lebanon which will be an

opportunity to have a new framework to study remittances, to build upon for further implications.

Chapter 3

Procedures and Methodology

3.1. Introduction

This main purpose of this paper is to explain the behavior of the value of the remittances to Lebanon in terms of the political stability in Lebanon. To fulfill this purpose, a clear and accurate assessment of the political stability in Lebanon was needed and thus a worldwide used index for the assessment of political stability is used in this study as we shall explain in details later. However, knowing that the index that is used in the paper assesses the political stability under several variables or components, a factor analysis was first used for the purpose of dimension reduction, or in other words, to decrease the number of variables representing the political stability assessment thus facilitating the analysis that shall follow. Finally, to reach the purpose of the paper and be able to generate a relationship between the variables, a regression analysis aiming to detect causal relationships between the value of the remittances and the political stability was conducted.

In this chapter the methodology that is used to fulfill the purpose of this paper is explained in all the sections. Section two explains the population and sampling approach. Sections three and four explain the research strategy and methodology, respectively. In section five, the variables under study, are clearly and individually represented with their related suggested hypotheses. In section six we shall illustrate the suggested models representing the hypothesized relationships. The need and purpose for the tests that shall be conducted is clearly explained in the analysis

framework found in section seven. Finally, a conclusion for the chapter is found in section eight.

3.2. Population and sampling approach

The population under study in this paper is the Lebanese people sending remittances to Lebanon. Due to the time constraint given for the fulfillment of this paper and due to the scarcity of data concerning Lebanon, the data available on remittances was found starting year 1985 till year 2016 giving us a total of 32 observations to be used for our analysis. Knowing that the only available data was for these specific years, data on all other variables was collected for these specific years too.

3.3. Research Strategy

As previously mentioned, the main purpose of this paper is to understand the behavior of Lebanese remittances from abroad based on several variables representing the political stability in the country.

In order to reach the purpose of this study accurate and detailed numeric data is needed which cannot be personally collected. Therefore, the research strategy in this paper is archival data where secondary data shall be retrieved from well known and trusted sources.

The first source of data in this paper is the World Bank which was used to retrieve data on the value of remittances, as well as data on some of the control variables that shall be used in the regression analysis as we shall be explaining at a later stage in details. These variables are mainly the interest rate on deposits in Lebanon and in Canada, Canada being among the top countries from which Lebanese expatriates send

remittances (Awdeh, 2014). In addition, the second source of data that was used for the collection of data on the political risk components is the Political Risk Services (PRS) Group which provides the International Country Risk Guide (ICRG) ratings.

Finally, the last source of data which was used to retrieve data on the annual growth rate in Lebanon and Canada which shall be also used as control variables is the International Monetary Fund (IMF).

3.4. Research methodology

The content analysis methodology shall be used in this paper knowing that the retrieved secondary data shall be analyzed and used to conduct different statistical tests. Through this method the bulk of data shall be explained first by conducting some descriptive statistics on the data collected from the chosen sample and second by conducting inferential statistics where the data shall be analyzed for the purpose of retrieving relationships and conclusions on the behavior of the variables.

Annual data on the remittances of the Lebanese people is retrieved from year 1985 till 2016, a total of 32 observations. Concerning the political risk components, monthly data was available from the years mentioned above, however, in order to coincide with the data on remittances and be used in the analysis, the 12 observations pertaining for each year were represented by one single value based on the average of all 12 values for that year for each component of the political risk components. This came up to 32 observations too. It is worth mentioning that the classification of the political risk components is based on the International Country Risk Guide (ICRG) ratings provided by the Political Risk Services (PRS) Group, as previously mentioned, which actually includes 22 variables under three sections: political, risk and

economic. However, knowing that the focus of our paper is the political risk, the other two sections were not used in this study.

The Political Risk index is based on 100 points and represents and evaluates the political stability of the countries based on a comparable basis through the allocation of points to each of 12 chosen factors having political and social characteristics each representing a political risk component (found in table 3.1 below). These points range from zero to 12, 4 or 6 depending on the weight given for each component also clarified in table 3.1 and the lower the assigned point, the higher the risk.

Finally, data for the other four variables used as control variables in this study was retrieved annually from the World Bank and from the IMF for the same specified years.

Political Risk Component	Max Points
Government Stability	12
Socioeconomic Conditions	12
Investment Profile	12
Internal Conflict	12
External Conflict	12
Corruption	6
Military in Politics	6
Religious Tensions	6
Law and Order	6
Ethnic Tensions	6
Democratic Accountability	6
Bureaucracy Quality	4
Total	100

Table 3. 1: Political Risk Components, source: The PRS Group

3.5. Variables and suggested hypotheses

In an attempt to detect whether political stability affects the value of remittances in Lebanon, several variables were used. In addition, for the assessment of political stability based on the ICRG index several components were also used. All the variables shall be explained in this section.

Furthermore, the suggested hypotheses translated from the research questions of this paper are also represented in this section to be tested using the inferential statistics at a later stage.

3.5.1. Remittances

Being the main topic of interest, the remittances represent the dependent variable in this paper. Data for this variable was retrieved annually from 1985 till 2016 from the World Bank as previously mentioned.

3.5.2. The Political Risk Components

Annual data on the scores given for each component for Lebanon has been collected from the Political Risk Services (PRS) Group from 1989 till 2016, giving a total of 32 observations for each political risk component. A brief explanation of each component is found below with the explanation of the basis of assigning the scores for each separately.

Government Stability

This component represents the ability of the government to perform its planned projects and to stay in office. The maximum score that can be assigned for this component is 12 points, divided into 3 subcategories, mainly, government utility, legislative strength and popular support. Scores for each subcategory range from zero to 4, where a score of 4 points represents very low risk and a zero score represents very high risk.

Socioeconomic conditions

This component represents the socioeconomic factors or conditions at work in a certain economy that could have influence on the performance of the government through hindering social satisfaction. The maximum score that can be assigned for this component is 12 points, divided into 3 subcategories, mainly, unemployment, consumer confidence and poverty. Scores for each subcategory range from zero to 4, moving from very high risk to very low risk.

Investment Profile

This component represents all the risk factors hindering investment and not included in the political, economic and financial risk components. Again, the maximum score that can be assigned for this component is 12 points, divided into 3 subcategories, mainly, contract viability and expropriation, profits repatriation and payment delays. Scores for each subcategory range from zero to 4, where a score of 4 points represents very low risk and a zero score represents very high risk.

Internal Conflict

This component signifies the level of political violence in a country and its level of influence on governance. Scores range from zero, usually given for countries involved in continuous civil wars, to 12 for countries that have no armed or civil opponents to the government. The rating depends on 3 subcategories, mainly, civil war, terrorism and civil disorder. Scores for each subcategory range from zero to 4, moving from very high risk to very low risk.

External Conflict

This component measures the external conflict in a country mainly the diplomatic pressures and territorial disputes and other non-violent external pressures, in addition to wars and cross-border conflicts and all violent external pressures. Here too, the maximum score that can be assigned for this component is 12 points, divided into 3 subcategories, precisely, war, cross-border conflicts and foreign pressures. Scores for each subcategory range from zero to 4, where a score of 4 points represents very low risk and a zero score represents very high risk.

Corruption

This component assesses corruption within the political system. , directly financial corruption, and Although all types of corruption are measured and included in such a measure, this component directly measures financial corruption and mainly measures corruption involved in excessive patronage, nepotism, job reservations, ‘favor-for-favors’, secret party funding, and suspiciously close ties between politics and business. The score for this component ranges from zero representing very high risk to 6 points signifying very low risk.

Military in Politics

This component measures the involvement of the military in politics knowing that such an involvement diminishes democratic accountability in addition to other threats. The score for this component ranges from zero indicating a high political risk level with a greater degree of military involvement in politics to 6 points signifying very low risk or a very low degree of military involvement in politics.

Religious Tensions

This component evaluates the religious tensions found in the country which mainly emerge from one religious group attempting to dominate the society and exclude other religions from politics, economics and other. In addition, such a group might attempt to replace civil law by law based on its religion which represents high risk to the overall situation in the country. The score for this component ranges from zero to 6, varying from severe religious tensions to almost none, signifying very low risk.

Law and Order

This component is divided into two divisions, the law division and the order division, each scoring from zero to 3 points. The “law” division evaluates the strength and objectivity of the legal system. The “order” division assesses the popular observance of the law. Combined together, the total score for this component ranges from zero to 6 points.

Ethnic Tensions

This component estimates the degree of ethnic tensions within a country related to differences in races, nationalities or languages. The risk associated to such tensions is

usually caused by intolerant parties that are refusing any compromises with the other parties. Scores for this component range from zero to 6 points, moving from high ethnic tensions (very high risk) to minimal tensions (very low risk).

Democratic Accountability

This component measures the extent of the responsiveness of the government to its people with more responsiveness denoting lower risks. The points in this component are assigned based on the type of governance found in the country. The different types of governance include five types, precisely, Alternating Democracy, Dominated Democracy, De Facto One-Party State, De Jure One-Party State and Autarchy.

The scores assigned for this component range from zero to 6 points, where generally speaking, the lowest score (zero), denoting the highest risk, is assigned to Autarchies, while the highest score (6 points), signifying the lowest risk, is assigned to Alternating Democracies.

Bureaucracy Quality

This last component measures the institutional strength and quality of the bureaucracy in the country which signifies the ability to operate without severe changes in policy or disruptions in government services and denotes being independent from political pressure. Low-risk countries with appropriate bureaucracy are given a maximum score of 4 moving to zero as such risks increase.

The Interest Rate on Deposits

This variable measures the rate paid by commercial or similar banks for demand, time, or savings deposits. Knowing that the interest rate given on deposits in banks could either encourage or discourage people from depositing their money in banks,

the interest rate on deposits was chosen as one of the control variables in the 1st two models to be conducted in this paper. Data for this variable was retrieved annually from 1985 till 2016 from the World Bank as previously mentioned.

The Economic Growth Rate

One of the major measures of performance in an economy is the growth rate, where the rate of change in a nation's gross domestic product (GDP) is computed from one period to another. For that reason, knowing that the performance of an economy might either encourage or discourage people to send money to their home country, it was chosen to be one of the control variables in the 1st two models to be conducted in this paper. Data for this variable was retrieved annually from 1985 till 2016 from the IMF as previously mentioned.

3.5.3. The Interest Rate Differential

This variable takes into consideration the deposit interest rate in one of the top sending countries, Canada. It is computed through the simple difference between the deposit interest rate in Lebanon and the deposit interest rate in Canada.

3.5.4. The Growth Rate Differential

This variable takes into consideration the growth rate in one of the top sending countries, Canada. It is computed through the simple difference between the annual growth rate in Lebanon and the annual growth rate in Canada.

3.6. The Suggested Hypotheses

Originating from the results and aims of the literature tackling the topic of remittances and political risk, and in order to fulfill the purpose of this study, we suggest the following hypotheses:

H1: Government stability increases the value of remittances to Lebanon.

H2: Socioeconomic conditions affect the value of remittances to Lebanon.

H3: The investment profile affects the value of remittances to Lebanon.

H4: Internal conflict decreases the value of remittances to Lebanon.

H5: External conflict decreases the value of remittances to Lebanon.

H6: Corruption decreases the value of remittances to Lebanon.

H7: The involvement of military in politics decreases the value of remittances to Lebanon.

H8: Religious tensions decrease the value of remittances to Lebanon.

H9: Law and order increase the value of remittances to Lebanon.

H10: Ethnic tensions decrease the value of remittances to Lebanon.

H11: Democratic accountability increases the value of remittances to Lebanon.

H12: Bureaucracy quality affects the value of remittances to Lebanon.

H13: The political risk components affect the value of the remittances given some economic conditions in other top sending countries.

3.7. The Generated suggested models

As mentioned earlier, several hypotheses might be tested together in one model depending on the variables that shall be included under the same factor and based on the number of factors that shall be generated in the factor analysis that shall be

conducted in the 4th chapter of this study. Thus, after the completion of the factor analysis and before conducting the regression analysis some modifications shall be applied on the suggested hypotheses.

The main purpose of this study is to generate models representing the potential relationships between the value of remittances to Lebanon and the 12 political risk components, where secondary data for the variables was collected from well trusted sources as previously mentioned. First, as we have already explained, the 12 political risk components will be reduced to a lower number by combining several components under one factor. Therefore, the suggested hypotheses will be translated into models based on the results of the Factor analysis approach and then tested using the regression analysis. All the statistical tests and approaches shall be applied and conducted using the commonly acknowledged software, the Statistical Package for the Social Sciences (SPSS).

3.7.1. Model 1

This model combines all the factors generated from the factor analysis in one model with two control variables related to Lebanon. The purpose of this model is to determine the factor(s) that are significant while taking into consideration all the political risk components to rank their effects on the remittances while controlling for the growth rate in Lebanon and the deposit interest rate.

$$\text{REMITTANCES} = \beta_0 + \beta_1 \text{FACTOR}_i + \dots + \beta_n \text{FACTOR}_n + \beta_a \text{GROWTH} + \beta_b \text{INTEREST} + \varepsilon$$

Remittances to Lebanon: (denoted by REMITTANCES, proxied by the published data on the value of remittances to Lebanon from the World Bank): measures the amount of money transferred by Lebanese workers working abroad to Lebanon.

Factor_i and Factor_n: Present each factor generated by SPSS under which several political risk components are combined, based on the results of the Factor Analysis approach. The number of factors to be included in this model depends on the number of factors that shall be generated in the Factor Analysis method as applies in the individual models.

Growth Rate (denoted as GROWTH, proxied by the growth rate published data from the IMF): measures the rate of growth in real GDP in the country for the specific period of time.

Interest Rate (denoted as INTEREST, proxied by the interest rate data from the World Bank): measures the interest rate on deposits in Lebanese Liras in Lebanon.

Error term (denoted as ϵ): measures the error term of the model.

All the factors are expected to increase the value of remittances, thus, the expected signs of the estimated coefficients are: $\beta_0 > 0$, $\beta_1 > 0 \dots \beta_n > 0$, $\beta_a > 0$ and $\beta_b > 0$.

3.7.2. Model 2 including the foreign sector

In order to include the effect of foreign countries on the value of remittances to Lebanon, the same model that was explained previously shall be conducted again however with a comparison in the growth rate and interest rate on deposits between

Lebanon and Canada. The selection of this country was based on two criteria. First, it is one of the top sending countries, in terms of remittances to Lebanon, and second due to the availability of data in that country knowing that data on the growth rate and the interest rate on deposits for that country are needed annually from 1985 till 2016. The purpose of this model is to determine the factor(s) that are significant while taking into consideration all the political risk components, however, this time by taking into consideration the growth rate and the interest rate on deposits in Canada, thus controlling for the difference between the growth rate in Lebanon and that in Canada and the interest rate in Lebanon and that in Canada.

$$\text{REMITTANCES} = \beta_0 + \beta_1 \text{FACTOR}_i + \dots + \beta_n \text{FACTOR}_n + \beta_a \text{GROWTH Diff} + \beta_b \text{INTEREST Diff} + \varepsilon$$

Remittances to Lebanon: (denoted by REMITTANCES, proxied by the published data on the value of remittances to Lebanon from the World Bank): measures the amount of money transferred by Lebanese workers working abroad to Lebanon.

Factor_i and Factor_n: Present each factor generated by SPSS under which several political risk components are combined, based on the results of the Factor Analysis approach. The number of factors to be included in this model depends on the number of factors that shall be generated in the Factor Analysis method as applies in the individual models.

Growth Rate Differential (denoted as GROWTH Diff, proxied by the difference in the growth rates between Lebanon and Canada which was self-computed using published data on growth rates from the IMF): measures the difference between the rate of

growth in real GDP in Lebanon and the rate of growth in real GDP in Canada for the specific period of time.

Interest Rate Differential (denoted as INTEREST Diff, proxied by the interest rate differential data from the World Bank): measures the difference in the interest rate on deposits in Lebanon and the interest rate on deposits in Canada for the specific period of time.

Error term (denoted as ϵ): measures the error term of the model.

All the factors are expected to increase the value of remittances, thus, the expected signs of the estimated coefficients are: $\beta_0 > 0$, $\beta_1 > 0 \dots \beta_n > 0$, $\beta_a > 0$ and $\beta_b > 0$.

3.8. Analysis Framework

Quantitative research analysis is employed in this paper. At the first stage, some descriptive statistics will be conducted to understand the previous behavior of the variables under study. At the second stage, in order to reduce the number of components and combine the correlated ones under one unique factor in an effective way, the Factor Analysis approach shall be conducted on the data of the 12 political risk components. At the third and final stage, in order to analyze the effect of political risk and to detect any potential causal relationships between the value of the remittances to Lebanon and the political risk components, multiple regression analysis shall be conducted.

3.9. Conclusion

In this chapter the methodologies and approaches that shall be applied in our analysis to reach the purpose of our study, explained in the 1st section, were demonstrated. Second, the population, specifically Lebanon, and the chosen sample of 32 observations starting year 1985 till year 2016 to be used for our analysis were stated.

Next, archival data was stated as the strategy of this paper, where secondary data are collected from trusted sources. In addition, the methodology being used was revealed to be the content analysis methodology, where the collected secondary data would be analyzed using the inferential statistics.

After that, each of the variables under study was explained in detail and the related suggested hypotheses were stated. Accordingly, the suggested models to be used in the regression analysis were generated and their expected outcomes were demonstrated.

Finally, through the analysis framework the purpose and need of each of the factor analysis approach and the regression method were highlighted.

Chapter 4

Findings

4.1. Introduction

With the growing volume of remittances sent by Lebanese expatriates to Lebanon year on year, Lebanon's economy seems to give greater importance to their subject to benefit from their contribution whether in investment projects or developing and funding business opportunities. Unfortunately, Lebanon is a country that is heavily affected by political instability which could possibly be a push factor for expatriates to invest their funds in Lebanon; or at the contrary can be a reason for expatriates to support their families and enhance their living conditions.

Taking into consideration the scarcity of data available for Lebanon, this chapter will analyze the impact of political instability on Lebanese expatriates remittances between 1985 and 2016, while accounting for economic factors. As mentioned previously the thesis uses secondary data from trusted sources like the World Bank and the International Monetary Fund. The study will use a combination of two techniques which are a factor analysis followed by multiple linear regressions.

The chapter includes the dimensions reduction using factor analysis, the validation of the distribution of the variables, revising the suggested hypothesis in the previous chapter, confirming the assumptions of the regression analysis, testing the hypotheses using regressions in addition to the main findings to conclude at the end of the chapter.

4.2. Dimension Reduction using the Factor Analysis

As previously mentioned in the methodology chapter, in order to be able to conduct the regression analysis, without the complications of multicollinearity, the 12 variables understudy in this paper, which represent the political risk factors based on the ICRG, were reduced into a smaller number of variables using the factor analysis method which, through the SPSS, groups different variables under one dimension or so called factor.

4.2.1. Validating the use of Factor Analysis

In order to achieve the aim of the factor analysis method, the first step is to ensure that there are enough correlations among the variables in order to provide a solid ground or basis for the method and thus validate its use. As a first step, a visual examination would be enough where the number of significant correlations is computed based on the correlation matrix represented in table 4.1 which was generated by SPSS. In our case, 56 of the 66 unique correlations (around 85%) are significant, and specifically, 48 are significant at the 99 % level and 8 are significant at the 95% level.

Correlations												
	Bureaucracy Quality.L	Corruption F	Democratic Accountability. K	Ethnic Tensions. J	External Conflict.E	Government Stability.A	Internal Conflict.D	Investment Profile.C	Law and Order.I	Military.in. Politics.G	Religious Tensions. H	Socioeconomic Conditions.B
Bureaucracy Quality.L	1.000	-.523**	.978**	.842**	.388*	.602**	.351*	.872**	.810**	.105	.295	.643**
Corruption.F		1.000	-.489**	-.555**	-.098	-.620**	-.380*	-.561**	-.458**	.078	-.185	-.306
Democratic Accountability.K			1.000	.880**	.530**	.617**	.461**	.875**	.874**	.196	.415*	.722**
EthnicTensions. J				1.000	.517**	.763**	.668**	.821**	.967**	.351*	.583**	.750**
ExternalConflict .E					1.000	.292	.532**	.511*	.596**	.431*	.600**	.644**
Government Stability.A						1.000	.764**	.648**	.763**	.513*	.652**	.632**
InternalConflict. D							1.000	.452**	.735**	.767**	.865**	.662**
Investment Profile.C								1.000	.802**	.108	.289	.830**
LawandOrder.I									1.000	.440*	.647**	.815**
Military.in.Politic s.G										1.000	-.891**	-.379*
Religious Tensions.H											1.000	.486**
Socioeconomic Conditions.B												1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 4. 1: Correlation Matrix, source: SPSS

This sufficient number of significant correlations validates the use and need for factor analysis in grouping the highly correlated variables under one unique factor making the next stage of our analysis, the regression analysis, more feasible.

As a second step in our validation process, it is necessary to measure the overall significance of the correlation matrix, or in other words the significance of the correlation of the variables when taken collectively through the Bartlett's test of sphericity, in addition to the pattern of these correlations using the measure of sampling adequacy (MSA).

In our case, Bartlett's test of sphericity indicates significance of the correlations and thus is accepted. In addition, the value of the overall MSA (0.775) is also accepted being above 0.5, as shown in table 4.2 above.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.775
Approx. Chi-Square	745.679
Bartlett's Test of Sphericity	
Df	66
Sig.	.000

Table 4. 2: KMO and Bartlett's Test, source: SPSS

4.2.2. The Extraction of Factors

For the purpose of extracting the right number of factors from the 12 political risk components, three tools were used simultaneously. First, shown in figure 4.1 are two of these tools. The scree test is based on finding the point on the curve where the soft decline in eigenvalues ends or in other words, where the curve suddenly changes its direction to the right of the plot and thus retain the number of factors found to the left of this point (Cattell, 1966). In our case, based on this test, only 2 factors should be retained. The second tool that is generated from the same figure is the latent root

criterion of retaining factors with eigenvalues greater than 1, and again based on this test, only 2 factors should be retained.

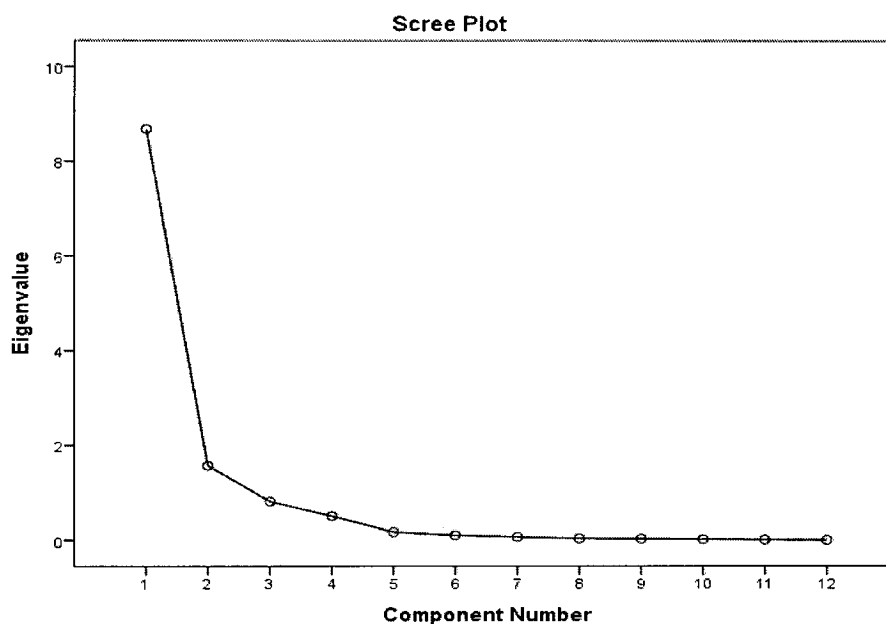


Figure 4. 1: Eigenvalues and the Scree test, source: SPSS

The third tool is shown in table 4.3 was the cumulative variance where the 2 factors retained represent 85.437% of the variance of the 12 variables understudy which is considered sufficient in terms of total variance explained. As a conclusion, the number of factors to be retained and moved to the next stage of analysis based on the coinciding results of the three tools is two. In the next stage, the variables under each factor shall be identified and thus the factor analysis method would be completed.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.680	72.332	72.332	8.680	72.332	72.332
2	1.573	13.106	85.437	1.573	13.106	85.437
3	.819	6.824	92.261			
4	.508	4.231	96.493			
5	.167	1.396	97.888			
6	.101	.841	98.729			
7	.066	.549	99.278			
8	.034	.283	99.562			

9	.028	.234	99.795		
10	.015	.129	99.924		
11	.007	.061	99.985		
12	.002	.015	100.000		

Extraction Method: Principal Component Analysis.

Table 4. 3: Total Variance explained (unrotated matrix), source: SPSS

4.2.3. Grouping the variables

As shown in table 4.4, all communalities which represent the shared variance of each variable fall in the acceptable range (above 0.5).

Communalities

	Initial	Extraction
BureaucracyQuality.L	1.000	.824
Corruption.F	1.000	.714
DemocraticAccountability.K	1.000	.890
EthnicTensions.J	1.000	.973
ExternalConflict.E	1.000	.688
GovernmentStability.A	1.000	.712
InternalConflict.D	1.000	.904
InvestmentProfile.C	1.000	.914
LawandOrder.I	1.000	.960
Military.in.Politics.G	1.000	.871
ReligiousTensions.H	1.000	.917
SocioeconomicConditions.B	1.000	.885

Extraction Method: Principal Component Analysis.

Table 4.4: Communalities source: SPSS

The Unrotated Matrix

As a first step in identifying the variables which lie under each factor is generating the unrotated matrix which reveals the factor loadings for each variable on each factor.

Although most researchers consider loadings of 0.5 and above as significant,

however, as a rule of thumb, for a small sample of 50 or below, it is better to consider any factor loading around 0.7 and above significant on a 0.05 significance level. In our case, we have marked in red all the factor loadings which are considered significant in table 4.5 below and the other related tables that shall follow and represent factor loadings.

Component Matrix^a

	Component	
	1	2
BureaucracyQuality.L	.822	-.386
Corruption.F	-.403	.743
DemocraticAccountability.K	.915	-.227
EthnicTensions.J	.986	-.021
ExternalConflict.E	.816	.150
GovernmentStability.A	.844	-.022
InternalConflict.D	.922	.232
InvestmentProfile.C	.909	-.295
LawandOrder.I	.980	-.010
Military.in.Politics.G	.556	.749
ReligiousTensions.H	.920	.266
SocioeconomicConditions.B	.928	.156

Table 4.5: The unrotated matrix, source: SPSS

Based on table 4.5 found above, 10 variables were loading on component 1, and only 2 variables were loading on component 2. Although no cross loadings¹ were found, this unbalanced distribution of variables among the 2 selected components imposed the generation of the rotated matrices in order to find a more valid and balanced distribution of variables among the two groups. This final step shall ensure the most adequate results for our factor analysis.

The Varimax Rotation

Rotated Component Matrix^a

¹ A cross loading is a significant loading in 2 different components.

	Component	
	1	2
BureaucracyQuality.L	.479	.771
Corruption.F	.067	-.842
DemocraticAccountability.K	.644	.689
EthnicTensions.J	.815	.555
ExternalConflict.E	.766	.319
GovernmentStability.A	.696	.478
InternalConflict.D	.900	.308
InvestmentProfile.C	.602	.743
LawandOrder.I	.816	.542
Military.in.Politics.G	.874	-.325
ReligiousTensions.H	.916	.278
SocioeconomicConditions.B	.863	.374

Table 4.6: The Varimax Rotation matrix, source: SPSS

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.680	72.332	72.332	6.571	54.756	54.756
2	1.573	13.106	85.437	3.682	30.681	85.437
3	.819	6.824	92.261			
4	.508	4.231	96.493			
5	.167	1.396	97.888			
6	.101	.841	98.729			
7	.066	.549	99.278			
8	.034	.283	99.562			
9	.028	.234	99.795			
10	.015	.129	99.924			
11	.007	.061	99.985			
12	.002	.015	100.000			

Table 4.7: The Varimax Rotation sums of squared loadings, source: SPSS

Three different rotations were conducted in order to find the best solution. It is worth mentioning that in the three rotations again 2 factors were extracted based on the rotation sums of squared loadings. The first rotation was the Varimax rotation found

in table 4.6, where a more balanced distribution was generated with 8 variables loading on component 1 and 4 variables loading on component 2.

The Quartimax Rotation

The second rotation was the Quartimax rotation found in table 4.7, which gave the same results as the unrotated matrix, very different from that of the first rotation.

	Component	
	1	2
BureaucracyQuality.L	.814	-.402
Corruption.F	-.389	.750
DemocraticAccountability.K	.911	-.245
EthnicTensions.J	.985	-.041
ExternalConflict.E	.819	.134
GovernmentStability.A	.843	-.038
InternalConflict.D	.927	.214
InvestmentProfile.C	.903	-.313
LawandOrder.I	.980	-.029
Military.in.Politics.G	.571	.738
ReligiousTensions.H	.925	.248
SocioeconomicConditions.B	.931	.138

Table 4.8: The Quartimax Rotation matrix, source: SPSS

Component	Total Variance Explained					
	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.680	72.332	72.332	8.677	72.309	72.309
2	1.573	13.106	85.437	1.575	13.128	85.437
3	.819	6.824	92.261			
4	.508	4.231	96.493			
5	.167	1.396	97.888			
6	.101	.841	98.729			
7	.066	.549	99.278			
8	.034	.283	99.562			
9	.028	.234	99.795			
10	.015	.129	99.924			
11	.007	.061	99.985			

12	.002	.015	100.000		
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Extraction Method: Principal Component Analysis.

Table 4.9: The Quartimax Rotation sums of squared loadings, source: SPSS

The Equamax Rotation

Due to those different results, a final rotation was conducted to reach conclusive results, which is the Equamax rotation that usually represents a compromise between the Quartimax and Varimax approaches. Its results, revealed in table 4.8, coincided with the results of the Varimax rotation with 8 variables loading on component 1 and 4 variables loading on component 2.

	Component	
	1	2
BureaucracyQuality.L	.479	.771
Corruption.F	.067	-.842
DemocraticAccountability.K	.644	.689
EthnicTensions.J	.815	.555
ExternalConflict.E	.766	.319
GovernmentStability.A	.696	.478
InternalConflict.D	.900	.308
InvestmentProfile.C	.602	.743
LawandOrder.I	.816	.542
Military.in.Politics.G	.874	-.325
ReligiousTensions.H	.916	.278
SocioeconomicConditions.B	.863	.374

Table 4.10: The Equamax Rotation matrix, source: SPSS

Component	Total Variance Explained					
	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	8.680	72.332	72.332	6.571	54.756	54.756
2	1.573	13.106	85.437	3.682	30.681	85.437
3	.819	6.824	92.261			
4	.508	4.231	96.493			
5	.167	1.396	97.888			
6	.101	.841	98.729			
7	.066	.549	99.278			
8	.034	.283	99.562			
9	.028	.234	99.795			
10	.015	.129	99.924			
11	.007	.061	99.985			
12	.002	.015	100.000			

Extraction Method: Principal Component Analysis.

Table 4.11: The Equamax Rotation sums of squared loadings, source: SPSS

Naming the factors:

To sum up, the 12 variables are now distributed into two separate groups each represented by a factor. Using the SPSS regression factor scores based on the Equamax approach were generated to be used in the regression analysis in the coming stage. The two factors were named accordingly:

- Factor 1 was named “**Conflict Risk**”.

It includes the variables: Ethnic tensions, external conflict, government stability, internal conflict, law and order, military in politics, religious tensions and socioeconomic conditions.

- Factor 2 was named “**Institutional Risk**”.

It includes the variables: Bureaucracy quality, corruption, democratic accountability, and investment profile.

4.3. Validating the distribution of the variables

As a final step before modifying the suggested hypotheses and proceeding with the regression analysis to test them, a simple regression analysis was conducted for each variable with its factor. This process was conducted in order to reexamine the distribution and make sure that each risk component is a significant explanatory variable of the factor that it belongs to according to the results of the factor analysis.

Accordingly, the 8 risk components that were combined under factor 1, conflict risk, were each separately regressed, being the independent variables, with factor 1 representing the dependent variable, and the results were as shown in tables 4.12 to 4.19 shown below.

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.594	.219		-7.287	.000
1 EthnicTensions.J	.415	.051	.831	8.190	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.12: Regression of ethnic tensions with factor 1, source: SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.391	.238		-5.840	.000
1 ExternalConflict.E	.252	.038	.772	6.654	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.13: Regression of external conflict with factor 1, source: SPSS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.780	.361		-4.933	.000
GovernmentStability.A	.271	.051	.694	5.284	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.14: Regression of government stability with factor 1, source: SPSS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.725	.161		-10.743	.000
InternalConflict.D	.278	.023	.911	12.108	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.15: Regression of internal conflict with factor 1, source: SPSS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.193	.286		-7.669	.000
LawandOrder.I	.667	.082	.831	8.185	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.16: Regression of law and order with factor 1, source: SPSS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.016	.230		-8.767	.000
Military.in.Politics.G	.874	.092	.867	9.520	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.17: Regression of military in politics with factor 1, source: SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.963	.228		-12.994	.000
ReligiousTensions.H	1.271	.093	.928	13.597	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.18: Regression of religious tensions with factor 1, source: SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-2.887	.300		-9.621	.000
SocioeconomicConditions.B	.624	.062	.878	10.042	.000

a. Dependent Variable: REGR factor score 1 for analysis 1

Table 4.19: Regression of socioeconomic conditions with factor 1, source: SPSS

All 8 tables reveal that each of those 8 risk components is a significant variable of conflict risk on the 99% confidence level since the p-values are all below 0.01.

Similarly, a simple regression analysis of the four risk components that were combined under factor 2 named institutional risk was conducted and each component separately represented the independent variable of factor 2 the dependent variable, and the results were as shown in tables 4.20 to 4.23 shown below. Here, the results were also similar revealing that the four risk components are significant variables of institutional risk having p-values less than 0.01 too.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-1.922	.312		-6.166	.000
BureaucracyQuality.L	1.251	.189	.771	6.629	.000

a. Dependent Variable: REGR factor score 2 for analysis 1

Table 4.20: Regression of bureaucracy quality with factor 2, source: SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	1.592	.216		7.353	.000
	Corruption.F	-.918	.111	-.834	-8.273	.000

a. Dependent Variable: REGR factor score 2 for analysis 1

Table 4.21: Regression of corruption with factor 2, source: SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	-1.831	.385		-4.756	.000
	DemocraticAccountability.K	.463	.091	.679	5.063	.000

a. Dependent Variable: REGR factor score 2 for analysis 1

Table 4.22: Regression of democratic accountability with factor 2, source: SPSS

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	-1.779	.320		-5.555	.000
	InvestmentProfile.C	.284	.047	.739	6.001	.000

a. Dependent Variable: REGR factor score 2 for analysis 1

Table 4.23: Regression of investment profile with factor 2, source: SPSS

4.4. The modified set of suggested hypotheses

As previously explained in the methodology chapter, the selection of the factors shall necessitate some modifications in the suggested hypotheses that were already demonstrated in chapter 3.

H1: Government stability increases the value of remittances to Lebanon.

H2: Socioeconomic conditions affect the value of remittances to Lebanon.

H3: The investment profile affects the value of remittances to Lebanon.

H4: Internal conflict decreases the value of remittances to Lebanon.

H5: External conflict decreases the value of remittances to Lebanon.

H6: Corruption decreases the value of remittances to Lebanon.

H7: The involvement of military in politics decreases the value of remittances to Lebanon.

H8: Religious tensions decrease the value of remittances to Lebanon.

H9: Law and order increase the value of remittances to Lebanon.

H10: Ethnic tensions decrease the value of remittances to Lebanon.

H11: Democratic accountability increases the value of remittances to Lebanon.

H12: Bureaucracy quality affects the value of remittances to Lebanon.

H13: The political risk components affect the value of the remittances given some economic conditions in other top sending countries.

After the distribution of several variables under one factor, the previously suggested hypotheses shall be rearranged. First, the hypotheses that were originally under number 1, 2, 4, 5, 7, 8, 9 and 10 shall be combined under one hypotheses representing H1 in this paper, saying:

H1: Conflict risk decreases the value of remittances in Lebanon.

Second, the hypotheses that were previously numbered as 3, 6, 11 and 12 shall be combined under H2 in this paper, specifically:

H2: Institutional risk decreases the value of remittances in Lebanon.

Finally, the last hypotheses that were stated under H13 shall be divided to two separate hypotheses representing H3 and H4 of this paper.

H3: Conflict risk decreases the value of the remittances given some economic conditions in other top sending countries.

H4: Institutional risk decreases the value of the remittances given some economic conditions in other top sending countries.

4.5. Confirming the assumptions of the regression analysis

Three important assumptions for regression should be confirmed in order to validate the use and the results of a regression analysis. These three assumptions are normality, multicollinearity and heteroscedasticity.

Normality shall be tested using the Jarque Bera test which is based on the skewness and kurtosis and thus histograms revealing the bell shape of the variables distributions shall be displayed.

As for the issue of multicollinearity, although factor analysis was conducted to solve this issue, since it combines the collinear variables under 1 factor, we have retested multicollinearity using a correlation matrix to show that the 2 factors are not correlated and thus can be used in 1 model together as explanatory variables. Finally, heteroscedasticity which measures the normality of the residuals has also revealed good results; however its results shall be displayed after displaying the results of each model.

4.5.1. Normality

In order to test normality of the variables, the Jarque Bera (JB) test was applied using the skewness and kurtosis. The values are shown in table 4.24 below. All values are accepted showing that the variables are normally distributed. In addition, the histograms of the variables are shown below.

Variable	Remittances	REGR factor score 1	REGR factor score 2	Growth Rate Leb	Dep. Int. Rate Leb	Growth Rate Diff	Dep. Int. Rate Diff
N	31	32	32	32	32	32	32
Skewness	.327	-.716	-.722	-1.033	.393	-.768	.779
kurtosis	-1.644	.704	-.788	5.196	-1.019	5.285	-.360
JB	33.83	104.87	46.72	84.45	45.79	101.38	55.97

Table 4.24: JB values to test normality

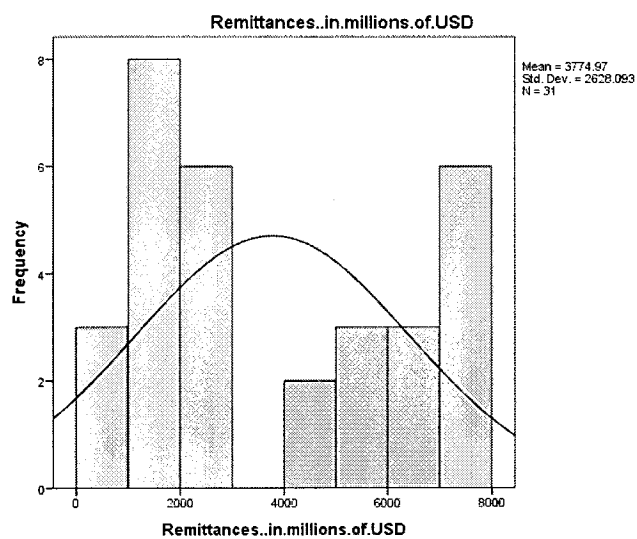


Figure 4.2: Histogram of Remittances, source: SPSS

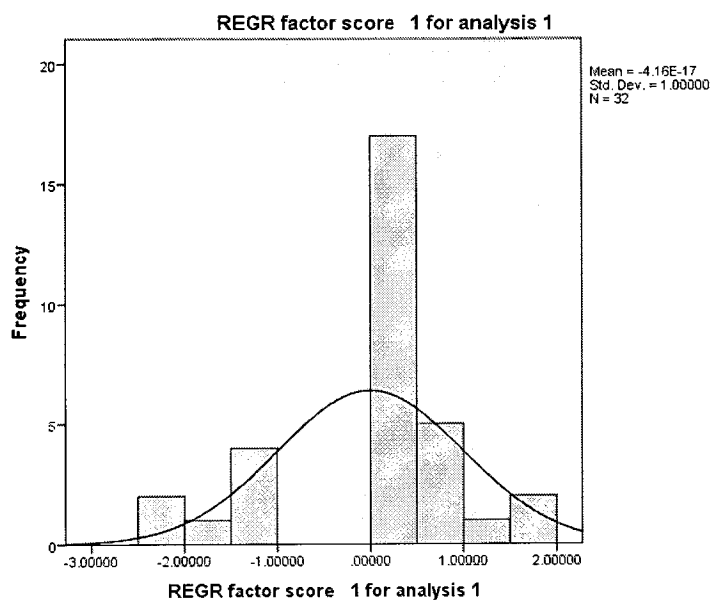


Figure 4.3: Histogram of factor 1, source: SPSS

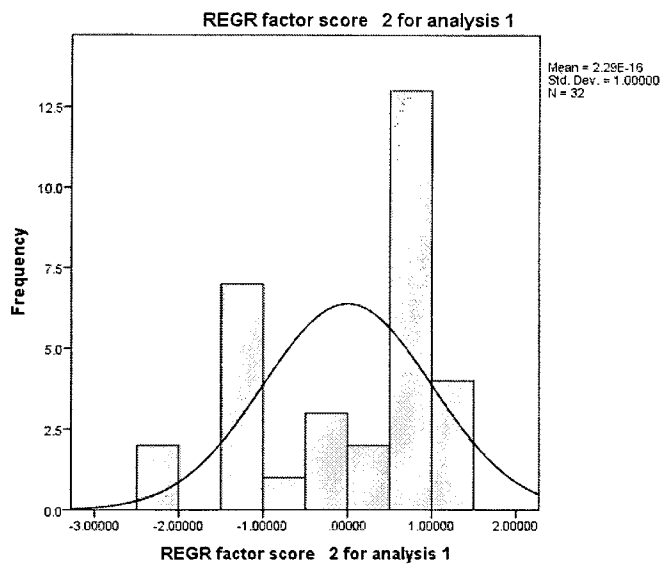


Figure 4.4: Histogram of Factor 2, source: SPSS

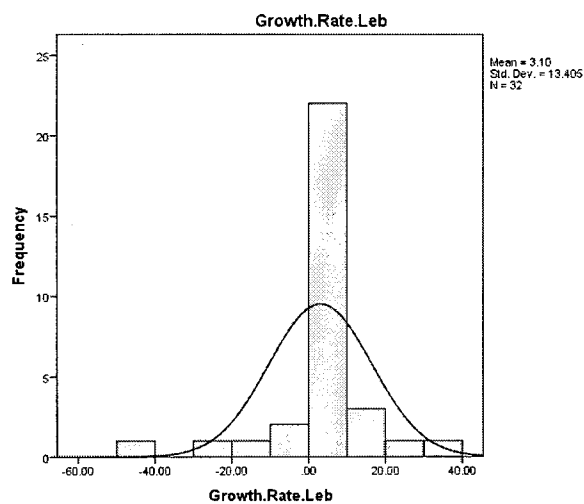


Figure 4.5: Histogram of the Growth Rate in Lebanon, source: SPSS

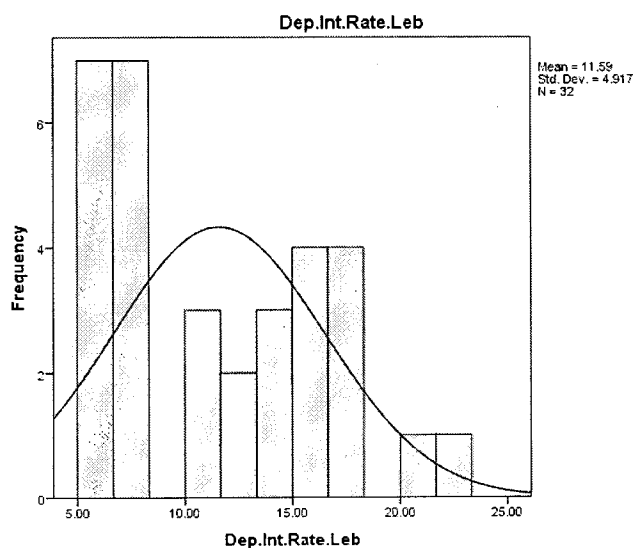


Figure 4.6: Histogram of the Deposit Interest Rate in Lebanon, source: SPSS

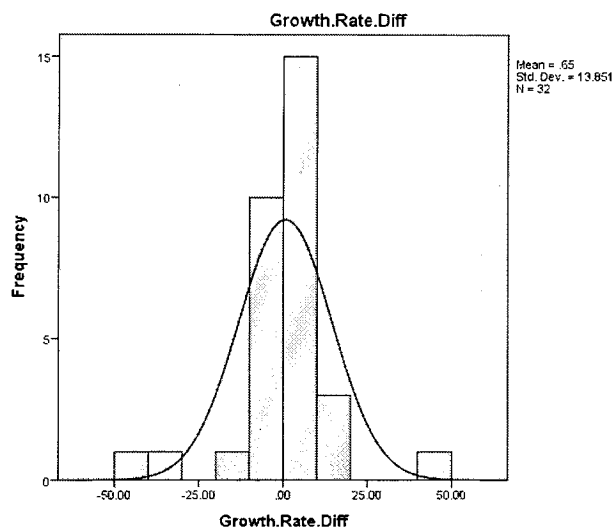


Figure 4.7: Histogram of the Growth Rate Differential, source: SPSS

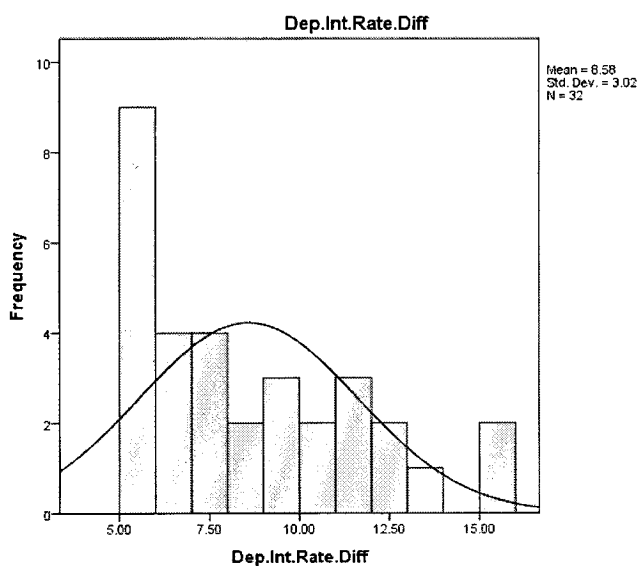


Figure 4.8: Histogram of the Deposit Interest Rate Differential, source: SPSS

4.5.2. Multicollinearity

In order to be able to apply multiple regression analysis, we should make sure first that there are no collinear explanatory variables. For that reason, we applied the correlation test in order to make sure there are no significant correlations which are revealed in table 4.25 below, and thus be able to conduct models three and six of this paper.

		REGR factor score 1 for analysis 1	REGR factor score 2 for analysis 1
REGR factor score 1 for analysis 1	Pearson Correlation	1	.000
	Sig. (2-tailed)		1.000
	N	32	32
REGR factor score 2 for analysis 1	Pearson Correlation	.000	1
	Sig. (2-tailed)	1.000	
	N	32	32

Table 4.25: correlation matrix, source: SPSS

4.6. Hypotheses testing using the regression analysis

In order to test the four final hypotheses that were suggested four regression analyses were conducted, each for one hypothesis. In addition, two comprehensive models were added in order to rank the significance of the factors taken collectively.

4.6.1. Testing Hypothesis 1

The first hypothesis was tested using the 1st model explained in the methodology chapter, including the remittances as the dependent variable and conflict risk (factor1) as the explanatory variable with the specified control variables.

H1: Conflict risk decreases the value of remittances in Lebanon.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	9422.668	646.812		14.568	.000
1 REGR factor score 1 for analysis 1	-460.976	274.438	-.161	-1.680	.105
Growth.Rate.Leb	-6.309	22.633	-.026	-.279	.783
Dep.Int.Rate.Leb	-489.907	51.285	-.909	-9.553	.000

a. Dependent Variable: Remittances..in.millions.of.USD

Table 4.26: Regression test: Testing hypothesis 1, source: SPSS

As per table 4.26 shown above, conflict risk and the growth rate are not significant at the 95% confidence level since their p-values are greater than 0.05. However, the deposit interest rate and the constant (β_0) are significant at the 0.01 level (99% confidence interval), since their p-values are all less than 0.01 (are both equal to 0.000).

As a conclusion, we are 99 % confident that conflict risk does not affect the value of remittances in Lebanon, and thus H1 is **rejected**.

However, since the deposit rate is significant we shall include it in the model, knowing that R squared which measures the goodness of fit is accepted being 77.3%.

It is worth mentioning that its coefficient is negative, unlike what was expected.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879 ^a	.773	.748	1319.727

a. Predictors: (Constant), Dep.Int.Rate.Leb, Growth.Rate.Leb, REGR

factor score 1 for analysis 1

Table 4.27: R-squared for model 1, source: SPSS

This relationship can be translated to the following generated equation:

$$\text{REMITTANCES} = 9422.668 - 489.907\text{INTEREST} + \varepsilon$$

We conclude, based on this multiple regression analysis that we reject hypothesis 1.

Testing Heteroscedasticity for Model 1

To test this assumption using the Glejser Test we conduct a regression using the residual of the 1st model as the dependent variable with the same independent variables as that of the 1st model.

The significance is above 0.05 for all the independent variables so there is no heteroscedasticity problem.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	631.621	339.724		1.859	.074
1 REGR factor score 1 for analysis 1	-140.854	144.143	-.183	-.977	.337
Growth.Rate.Leb	14.318	11.888	.218	1.204	.239
Dep.Int.Rate.Leb	29.178	26.936	.202	1.083	.288

a. Dependent Variable: Residual.model1

Table 4.28: Heteroscedasticity Model 1, source SPSS

4.6.2. Testing Hypothesis 2

The second hypothesis was tested using a model similar to model 1 however with institutional risk (factor 2) as the explanatory variable with the specified control variables and the remittances as the dependent variable.

H2: Institutional risk decreases the value of remittances in Lebanon.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	9561.019	1063.293		8.992	.000
1 REGR factor score 2 for analysis 1	-207.726	423.282	-.080	-.491	.628
Growth.Rate.Leb	-12.765	24.028	-.052	-.531	.600
Dep.Int.Rate.Leb	-502.354	87.999	-.932	-5.709	.000

a. Dependent Variable: Remittances..in.millions.of.USD

Table 4.29: Regression test: Testing hypothesis 2, source: SPSS

As per table 4.29 shown above, institutional risk and the growth rate are not significant at the 95% confidence level since their p-values are greater than 0.05. However, the deposit interest rate and the constant (β_0) are significant at the 0.01

level (99% confidence interval), since their p-values are all less than 0.01 (are both equal to 0.000). As a conclusion, we are 99 % confident that institutional risk does not affect the value of remittances in Lebanon, and thus H2 is **rejected**.

However, since the deposit rate is significant we shall include it in the model, knowing that R squared which measures the goodness of fit is accepted being 75.2%.

It is worth mentioning that its coefficient is negative, unlike what was expected.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.867 ^a	.752	.724	1380.823

Table 4.30: R-squared for model 2, source: SPSS

This relationship can be translated to the following generated equation:

$$\text{REMITTANCES} = 9561.019 - 502.354 \text{ INTEREST} + \varepsilon$$

We conclude, based on this multiple regression analysis that we reject hypothesis 2.

Testing Heteroscedasticity for Model 2

Here we use the residual of the 2nd model as the dependent variable with the same independent variables as that of the 2nd model. The significance is above 0.05 for all the independent variables so there is no heteroscedasticity problem.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-493.728	526.475		-.938	.357
1 REGR factor score 2 for analysis 1	464.809	209.582	.619	2.218	.055
Growth.Rate.Leb	22.279	11.897	.314	1.873	.072
Dep.Int.Rate.Leb	125.939	43.571	.806	2.890	.060

a. Dependent Variable: Residual.model2

Table 4.31: Heteroscedasticity Model 2, source SPSS

4.6.3. Testing Hypothesis 1 and 2 collectively

This third model takes both, factor 1 and factor 2, as explanatory variables to test the first and second hypotheses again however while taken collectively with the specified control variables and the remittances as the dependent variable.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	10680.336	1133.919		9.419	.000
1 REGR factor score 1 for analysis 1	-624.737	296.753	-.218	-2.105	.045
REGR factor score 2 for analysis 1	-586.671	437.449	-.226	-1.341	.191
Growth.Rate.Leb	-11.511	22.640	-.047	-.508	.615
Dep.Int.Rate.Leb	-596.480	94.178	-1.106	-6.334	.000

a. Dependent Variable: Remittances..in.millions.of.USD

Table 4.32: Regression test: Testing hypothesis 1 &2 collectively, source: SPSS

As per table 4.32 shown above, institutional risk and the growth rate are not significant at the 95% confidence level since their p-values are greater than 0.05. However, the conflict risk is significant at the 95% confidence level since its p-value is less than 0.05, while the deposit interest rate and the constant (β_0) are significant at the 0.01 level (99% confidence interval), since their p-values are all less than 0.01 (are both equal to 0.000).

As a conclusion, we are 95 % confident that conflict risk affects the value of remittances in Lebanon when taking into consideration all potential risks however H1 is still rejected since the expected value of the coefficient of risk was positive knowing that an increase in the score of the risk means less risk and the decrease in the score means low risk. As specified in chapter 3. Here, the coefficient is negative,

meaning that as the score of the conflict risk decreases (i.e when the risk increases), the remittances shall increase, and thus H1 and H2 are still both **rejected**.

It is worth mentioning that this model better represents the value of remittances in Lebanon knowing that R squared which measures the goodness of fit is higher than those in models 1 and 2 being 78.8%.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.888 ^a	.788	.755	1300.632

Table 4.33: R-squared for model 3, source: SPSS

This relationship can be translated to the following generated equation:

$$\text{REMITTANCES} = 10680.336 - 624.737 \text{ CONFLICT RISK} - 596.480 \text{ INTEREST} + \varepsilon$$

Every time the score of “conflict risk” grows by 1 score, the actual risk decreases by 1 score, and thus the remittances decrease by 624.737 scores; and every time the deposit interest rate grows by 1 score, the value of remittances decreases by 596.48 scores.

We conclude, based on this multiple regression analysis that we reject hypotheses 1 and 2.

Testing Heteroscedasticity for Model 3

Here we use the residual of the 3rd model as the dependent variable with the same independent variables as that of the 3rd model.

The significance is above 0.05 for all the independent variables so there is no heteroscedasticity problem.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	403.725	630.750		.640	.528
1 REGR factor score 1 for analysis 1	-356.760	165.071	-.404	-2.161	.052
REGR factor score 2 for analysis 1	8.634	243.334	.011	.035	.972
Growth.Rate.Leb	22.827	12.594	.303	1.813	.081
Dep.Int.Rate.Leb	35.621	52.387	.215	.680	.503

a. Dependent Variable: Residual.model3

Table 4.34: Heteroscedasticity model 3, source: SPSS

4.6.4. Testing Hypothesis 3

The third hypothesis for this paper was tested using the 3rd model explained in the methodology chapter, including the remittances as the dependent variable and conflict risk (factor 1) as the explanatory variable while controlling for conditions in one of the top sending countries, Canada. Thus, two new control variables were used, the growth rate differential and the deposit interest rate differential.

H3: Conflict risk decreases the value of the remittances given some economic conditions in other top sending countries.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	9091.081	1031.371		8.815	.000
1 REGR factor score 1 for analysis 1	279.987	377.945	.098	.741	.465
Growth.Rate.Diff	1.682	30.661	.007	.055	.957
Dep.Int.Rate.Diff	-622.294	112.734	-.727	-5.520	.000

a. Dependent Variable: Remittances..in.millions.of.USD

Table 4.35: Regression test: Testing hypothesis 3, source: SPSS

As per table 4.36 shown above, conflict risk and the growth rate differential are not significant at the 95% confidence level since their p-values are greater than 0.05. However, the deposit interest rate differential and the constant (β_0) are both significant at the 0.01 level (99% confidence interval), since their p-values are both less than 0.01 (are both equal to 0.000).

As a conclusion, we are 99 % confident that conflict risk does not affect the value of remittances in Lebanon given some economic conditions in top sending countries, and thus H3 is **rejected**.

However, since the deposit rate differential is significant we shall include it in the model, knowing that R squared is relatively accepted being 53.5%. However, similar to the previous models, the coefficient of the control variable is negative, unlike what was expected.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.731 ^a	.535	.483	1889.332

a. Predictors: (Constant), Dep.Int.Rate.Diff, REGR factor score 1 for analysis 1, Growth.Rate.Diff

Table 4.36: R-squared for model 4, source: SPSS

This relationship can be translated to the following generated equation:

$$\text{REMITTANCES} = 9091.081 - 622.294 \text{ INTEREST Diff} + \varepsilon$$

Every time the deposit interest rate differential grows by 1 score, the value of remittances decreases by 622.294 scores.

We conclude, based on this multiple regression analysis that we reject hypothesis 3.

Testing Heteroscedasticity for Model 4

Here we use the residual of the 4th model as the dependent variable with the same independent variables as that of the 4th model.

The significance is above 0.05 for all the independent variables so there is no heteroscedasticity problem.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1659.238	584.601		2.838	.009
1 REGR factor score 1 for analysis 1	-435.647	214.227	-.364	-2.034	.052
Growth.Rate.Diff	3.382	17.379	.035	.195	.847
Dep.Int.Rate.Diff	-27.661	63.900	-.078	-.433	.669

a. Dependent Variable: Residual.model4

Table 4.37: Heteroscedasticity model 4, source: SPSS

4.6.5. Testing Hypothesis 4

The fourth hypothesis for this paper was tested using a 4th taking the remittances as the dependent variable and institutional risk (factor 2) as the explanatory variable with the two new control variables, the growth rate differential and the deposit interest rate differential.

H4: Institutional risk decreases the value of the remittances given some economic conditions in other top sending countries.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7361.570	1309.239		5.623	.000
1 REGR factor score 2 for analysis 1	870.452	442.019	.336	1.969	.059
Growth.Rate.Diff	10.555	29.089	.045	.363	.720
Dep.Int.Rate.Diff	-421.638	146.334	-.493	-2.881	.008

a. Dependent Variable: Remittances..in.millions.of.USD

Table 4.38: Regression test: Testing hypothesis 2, source: SPSS

As per table 4.38 shown above, institutional risk and the growth rate differential are not significant at the 95% confidence level since their p-values are greater than 0.05. However, the deposit interest rate differential and the constant (β_0) are significant at the 0.01 level (99% confidence interval), since their p-values are both less than 0.01 (are both equal to 0.000).

As a conclusion, we are 99 % confident that institutional risk does not affect the value of remittances in Lebanon given some economic conditions in other top sending countries, and thus H4 is **rejected**.

R squared, which is 58.5% is accepted as shown in table 4.35.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.765 ^a	.585	.539	1784.576

a. Predictors: (Constant), Dep.Int.Rate.Diff, Growth.Rate.Diff, REGR factor score 2 for analysis 1

Table 4.39: R-squared for model 5, source: SPSS

We shall include the deposit rate differential in the equation of the model; however, its coefficient is negative, unlike what was expected.

This relationship can be translated to the following generated equation:

$$\text{REMITTANCES} = 7361.57 - 421.638 \text{ INTEREST Diff} + \varepsilon$$

Every time the deposit interest rate differential grows by 1 score, the value of remittances decreases by 421.638 scores.

We conclude, based on this multiple regression analysis that we reject hypothesis 4.

Testing Heteroscedasticity for Model 5

Here we use the residual of the 5th model as the dependent variable with the same independent variables as that of the 5th model.

The significance is above 0.05 for all the independent variables so there is no heteroscedasticity problem.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2200.289	655.142		3.358	.002
1 REGR factor score 2 for analysis 1	-164.977	221.186	-.192	-.746	.462
Growth.Rate.Diff	.020	14.556	.000	.001	.999
Dep.Int.Rate.Diff	-89.753	73.226	-.316	-1.226	.231

a. Dependent Variable: Residual.model5

Table 4.40: Heteroscedasticity model 5, source: SPSS

4.6.6. Testing Hypotheses 3 and 4 collectively

This final comprehensive model takes both, factor 1 and factor 2, as explanatory variables to test the third and fourth hypotheses again however while taken collectively with the remittances as the dependent variable and the new set of control variables, the growth rate differential and the deposit interest rate differential.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7363.876	1318.366		5.586	.000
1 REGR factor score 1 for analysis 1	284.787	359.486	.099	.792	.435
REGR factor score 2 for analysis 1	872.853	445.109	.337	1.961	.061
Growth.Rate.Diff	8.721	29.383	.038	.297	.769
Dep.Int.Rate.Diff	-424.002	147.384	-.495	-2.877	.008

a. Dependent Variable: Remittances.in.millions.of.USD

Table 4.41: Regression test: Testing hypothesis 3 & 4 collectively, source: SPSS

As shown in table 4.41, conflict risk, institutional risk and the growth rate differential are not significant at the 95% confidence level since their p-values are greater than 0.05. However, the deposit interest rate differential and the constant (β_0) are significant at the 0.01 level (99% confidence interval), since their p-values are both less than 0.01.

As a conclusion, we are 95 % confident that conflict risk and institutional risk do not affect remittances in Lebanon by taking into consideration some economic conditions in other top sending countries, and thus H3 and H4 are again **rejected**.

It is worth mentioning that this comprehensive model better represents the value of remittances in Lebanon given the economic conditions in other top sending countries knowing that R squared which measures the goodness of fit is higher than those in models 4 and 5 with a value of 59.5%.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.771 ^a	.595	.532	1797.012

a. Predictors: (Constant), Dep.Int.Rate.Diff, REGR factor score 1 for analysis 1, Growth.Rate.Diff, REGR factor score 2 for analysis 1

Table 4.42: R-squared for model 6, source: SPSS

This relationship can be translated to the following generated equation:

$$\text{REMITTANCES} = 7363.876 - 424.002 \text{ INTEREST Diff} + \varepsilon$$

Every time the deposit interest rate differential grows by 1 score, the value of remittances decreases by 424.002 scores.

We conclude, based on this multiple regression analysis that we reject hypotheses 3 and 4.

Testing Heteroscedasticity for Model 6

Here we use the residual of the 6th model as the dependent variable with the same independent variables as that of the 6th model. The significance is above 0.05 for all the independent variables so there is no heteroscedasticity problem.

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1599.915	662.659		2.414	.023
1 REGR factor score 1 for analysis 1	-240.288	180.691	-.252	-1.330	.195
REGR factor score 2 for analysis 1	33.182	223.728	.038	.148	.883
Growth.Rate.Diff	-2.052	14.769	-.027	-.139	.891
Dep.Int.Rate.Diff	-20.385	74.081	-.072	-.275	.785

a. Dependent Variable: Residual.model6

Table 4.43: Heteroscedasticity model 6, source: SPSS

4.7. Conclusion

The thesis starts with the idea that the 12 political risk indicators cannot be used as they are as there would be high multicollinearity between them. Therefore, a factor analysis was done with the aim of coming up with a fewer number of factors before proceeding with the multiple linear regressions. The factor analysis lead to two factors: the first one included and the second one included.

Once obtained, multiples linear regressions were done in order to determine the impact of political instability on remittances flow. In this regard, it is important to mention that it was noted that when the risk increases, expatriates seem to be more in favor of sending remittances.

Chapter 5

Conclusion and recommendations

5.1. Introduction

Research studies that analyzed the effect of political instability on remittances, sent by expatriates to their home country, focused on many aspects of the subject. Instead of solely focusing on the impact of political instability on sending remittances, the studies looked more onto the overall impact that the crisis had on the expatriates: their living conditions, their employment/ employment, the strength of their bonds with their families ... the components of the political risk indices were not widely studied especially in Lebanon for they might look slightly different and somehow similar. Since there is massive multicollinearity between components of political risk index studied in this research paper, namely ICRG, the study started by closely examining the 12 components of ICRG political risk indicator to eliminate the effect of multicollinearity, coming up with two factors that will be used in multiple linear regressions to come up with valid results on the effect of political instability on the flow of remittances sent by expatriates to their country of origin.

5.2. Main findings, analysis of the results and comparison to chapter 2

In order to answer the research questions of this study, the empirical work included two main phases: a factor analysis of the components of political risk index followed by multiple linear regressions.

Following the factor analysis using the Equamax Rotation the 12 variables were distributed into two separate factors that are going to be used in the regressions.

The first factor that was named “Conflict Risk” includes ethnic tensions, external conflict, governmental stability, internal conflict, law and order, military in politics, religious tension and socioeconomic conditions. The second factor named “Institutional Risk” includes bureaucracy quality, corruption, democratic accountability and investment profile. In addition to the factor analysis, a regression was done for each variable with its factor just to make sure that it falls correctly within the factor and that it is a significant explanatory variable of the factor it belongs to. Following the regressions done, it was confirmed that every components falls well under its factor.

Normality, multicollinearity and heteroscedasticity were tested to validate the use of regression analysis. The variables used in addition to the factors obtained in the Factor Analysis are Growth Rate in Lebanon, Deposit Interest Rate in Lebanon, Growth Rate Differential (Lebanon vs. Canada) and Deposit Interest Rate Differential (Lebanon vs. Canada).

Going from the results obtained in the linear regression, it was shown that conflict risk and institutional risk taken separately don't seem to have an effect on remittances however when taken together, both factors were found significant. When taking into consideration all potential risks combined remittances are affected; taking one step further, although hypothesis 1 and 2 were rejected since they show that when actual risk increases the remittances also show an increase. This result meets with what Rahta (2007) stated when he explained that remittances tend to increase during periods of hardship, remittances acting as a factor of insurance and stabilization. Furthermore, this result can be linked to the theory called “Altruistic Motive” that states that the remitters care the most for his family's well-being that is the major reason for sending funds.

The other hypothesis were rejected showing that economic factors in Lebanon and other countries (growth rate and interest rate) do not seem to encourage Lebanese expatriates to remit funds, even when these factors were taken into consideration in another country, which is in this paper Canada. This latter fact suggests further studies to elucidate more about the issue.

5.3. Limitations of the research

As mentioned previously the study is limited to the years between 1985 and 2016. This is due to the unavailability of data especially for the countries in the MENA regions, including Lebanon which reduces the number of observations. This can explain the insignificance of some variables and the unexpected results like the negative effect of the increase in interest deposit rate on Lebanese expatriates remittances to Lebanon.

On another note, Canada was the only country with complete data in terms of growth rate and deposit interest rate during the studied period why it was the only country to be studied in terms of comparison to Lebanon for the two mentioned variables. It is true that Canada is considered among the countries with the most remittances to Lebanon; however the study would have been more representative if it had included one of the GCC countries, like Kingdom of Saudi Arabia, Kuwait and Qatar, known for having the highest numbers of Lebanese remittent and thus the highest level of sent remittances. Falling in the MENA region, the data unavailable is insufficient and cannot be used for this study.

5.4. Managerial implications

Theoretical implications

The previous research papers studying the subject of risk and its effects of the flow of remittances sent by expatriates focused mainly on the economic and financial risks and did not discuss the political widely. And even when they did the studies revolved around interviews and questionnaire with, most of the times, a limited number of expatriates. Political risk was not widely discussed previously, especially by combining two methods like it was done in this research paper.

For the case of Lebanon it is the first time that a research paper studies the effect of political instability on expatriates' remittances using ICRG risk index in an empirical way and in an arbitrary way like it used to be done before. The study combined the factor analysis and multiple linear regressions to come up with a robust result.

Practical implications

The results obtained from this research paper can be informative for financial institutions, banks and local firms since there was a belief that expatriates would tend to be more reluctant in sending remittances during times of crisis and conflict however it was found that it was not the case. Lebanese expatriates seemed to be more in favor to send remittances to Lebanon during periods of high instability which was linked to the altruistic motive that focuses on the familial support.

Therefore, financial institutions can benefit from this finding to elaborate policies and procedures to encourage emigrants on sending more remittances when the situation is not stable in addition to developing channels that facilitate the funds transfers.

5.5. Recommendations

As mentioned previously, empirical studies on political instability and its effects on remittances transfer are scarce in the MENA region and this is mainly due to the lack of data. However data is becoming more available everyday which suggests further research to elaborate more on the results obtained from this research paper. Moreover, the PRS through which we got the data is a private institution which requires payments in order to get the data. In order to facilitate the data acquisition by researchers, governmental units such as the Ministry of Foreign Affairs and Emigrants, international organizations like IMF, World Bank should make the data available so it can be of greater use. Regarding research on Emigrants and especially in Lebanon, the government should foster similar studies as they will serve clarifying many concepts related to Diaspora and emigration.

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