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Jobs For North Lebanon

September 2017

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Contents

<i>Acknowledgements</i>	9
<i>Abbreviations and Acronyms</i>	11
Executive Summary	13
Chapter 1 Introduction and Overview	23
A. Outline	23
1. Objectives	23
2. Methodology	23
3. Report Outline	24
B. Overview of the Economy in Tripoli and the North	24
1. The Socio-Economic Challenge Facing North Lebanon	24
2. The Economy in North Lebanon	26
Chapter 2 Jobs Outcomes in the North	29
A. Snapshot of the Labor Market in North Lebanon	29
B. Analysis of Labor Market Outcomes in North Lebanon	30
1. Labor Force Participation	30
2. Employment	32
3. Informality	36
4. Unemployment and Idleness	37
C. Summary: Quantifying the Jobs Challenge	38
1. Demographics and Labor Force Growth	38
2. Closing the Employment Rate and Waged Employment Gaps	40
Chapter 3 Labor Supply – The Access, Skills, and Skills Provider Ecosystem for Jobs in the North	44
A. Accessing Employment	44
B. Education and Skills Levels in North Lebanon	47
1. Education	47
2. Profile of Workers by Skill Levels	48

C.	The Skills Mismatch	48
	1. Current Situation	48
	2. Measuring Skills in a Multi-Dimensional Way	49
D.	Training and Skills Providers	52
E.	Conclusions on Labor Market and Skills	53
Chapter 4	Labor Demand – The Investment Climate and Trade Dynamics for Job Creation	56
A.	Firms and Job Creation in North Lebanon	56
B.	The State of Trade Competitiveness in Lebanon	59
	1. The Trade Sector and Jobs	59
	2. Trade Performance and Investment in Lebanon and North Lebanon	59
C.	The State of the Investment Climate in Lebanon	64
	1. The National Picture	64
	2. The Investment Climate in North Lebanon	66
D.	Institutions and Public-Private Dialogue (PPD)	70
Chapter 5	Assessing Value Chains for Jobs in the North	74
A.	Introduction: Why Value Chains?	74
B.	The Potato Value Chain	76
	1. Global and National Context	76
	2. The Potato Value Chain in North Lebanon	79
	3. Jobs in the North Lebanon Potato Value Chain	82
	4. Scenarios for Growth and Job Creation in the Potato Value Chain	84
	5. What Would it Take to Deliver These Jobs?	86
C.	The Solid Waste and Recycling Value Chain	92
	1. Global and National Context	92
	2. Municipal Waste Operations and Performance in North Lebanon	95
	3. Jobs in the North Waste Management and Recycled Products Value Chain	97
	4. Scenarios for Growth and Job Creation in the Solid Waste and Recycling Value Chain	98
	5. What Would it Take to Deliver These Jobs?	101
D.	Value Chain Conclusions and Priority Actions	108
Chapter 6	Conclusions	110
A.	The Job Market in North Lebanon	110
	1. The Challenge of Fragility – Weak Job Creation Leads to Poor Labor Market Outcomes and Marginalization	110
	2. The Potential for Job Creation – New Pathways	111

Contents

B.	Ways Forward for Job Creation in Lagging and Vulnerable Regions	112
1.	Short-Term Agenda: Supporting SMEs and Self-Employment	114
2.	Longer-Term Agenda: Sustainable Jobs through Value Chain Investments	115
3.	Ongoing Imperative: Strengthening the Competitive Position of North Lebanon	116

FIGURES

Figure 1:	INFORM Vulnerability Map	25
Figure 2:	Working Age Composition - North Lebanon	29
Figure 3:	Key Demographic Numbers by Governorate	31
Figure 4:	Labor Force Participation by Gender, Age and Education Level	32
Figure 5:	Employment Rates by Gender, Age and Education Level	33
Figure 6:	Employment Type by Gender	34
Figure 7:	Employment Type by Age Group	35
Figure 8:	Employment Type by Education Level	35
Figure 9:	Distribution of Employment by Type and Sector	36
Figure 10:	Informality by Gender, Age and Education Level	36
Figure 11:	Unemployment Rates by Gender, Age and Education Level	37
Figure 12:	Share of Youth Not in Employment, Education, nor Training (NEET) by Gender, Age and Education Level	38
Figure 13:	Trend in Fertility and Life Expectancy, Population Pyramids (2010- 2050) in Lebanon	39
Figure 14:	Population, Working Age Population and Labor Force Trends in Lebanon and the North	40
Figure 15:	Quantifying the Job Creation Gap	41
Figure 16:	Quantifying the Waged Employment Gap	41
Figure 17:	Methods of Search for a Job	45
Figure 18:	Preferences for Wage or Self-Employment	45
Figure 19:	Reasons for Preference for Wage Employment	46
Figure 20:	Reasons for Preference for Self-Employment	46
Figure 21:	Challenges to Self-Employment	46
Figure 22:	Active Population by Level of Education, Age and Gender	47
Figure 23:	Workers by Skills Level	48
Figure 24:	Education Level Mismatch by Skills Level and Type of Employment	49
Figure 25:	Types of Skills and Sub-Skills	50
Figure 26:	Share of Public and Private Jobs	57
Figure 27:	Share of Employment by Sector	57
Figure 28:	Distribution of Employment by Firm Size	57
Figure 29:	Distribution of Firms by Size (Employees) and Region	58
Figure 30:	Lebanon's Export Share Vis-à-vis its Comparative Advantage	60
Figure 31:	Share of Exporting Firms	60

Figure 32:	Lebanon's Export Share by Region, 2008-2013	61
Figure 33:	Incidence of the Use of Technology and Quality Certification Among Lebanese Firms	62
Figure 34:	Doing Business 2016: Time and Cost to Export (hours for border and documentary compliances)	63
Figure 35:	FDI in Tradable vs. Non-Tradable	63
Figure 36:	Distance to Frontier in Terms of Overall Doing Business	65
Figure 37:	Lebanon's Distance to Frontier and Reform Progress on Specific Doing Business Measures	66
Figure 38:	Investment Climate Constraints in North Lebanon Vis-à-vis Rest of Lebanon	66
Figure 39:	Corruption and Informal Competition - North Lebanon Vis-à-vis Rest of Lebanon	67
Figure 40:	Infrastructure Constraint by Sector and Size	68
Figure 41:	Electricity as a Major Constraint by Sector and Size	68
Figure 42:	Access to Finance in the North vs. Rest of Lebanon	69
Figure 43:	Bank Finance by Firm Size, MENA	69
Figure 44:	North Share of Kafalat Loans by Type (2013)	70
Figure 45:	Global Trade in Potatoes by Brand Type	76
Figure 46:	Lebanon Fresh Potato Exports by Market, 2005-14 (metric tons)	77
Figure 47:	The Potato Value Chain in North Lebanon	80
Figure 48:	Distribution of Main Customers by Value Chain Node	81
Figure 49:	Estimated Jobs Profile Across North Lebanon Potato Value Chain	82
Figure 50:	Share of Jobs Held by Lebanese by Node and Type	83
Figure 51:	Job Creation Across the Value Chain in an Export Expansion Scenario	84
Figure 52:	Job Creation Across the Value Chain in a Large-Scale Processing Investment Scenario	85
Figure 53:	Assessment of Lebanese Landed Costs Relative to Average Import Prices in Select Countries	86
Figure 54:	Value Addition Across the North Lebanon Potato Value Chain	87
Figure 55:	Cost Structure by Category and Node in the Value Chain	88
Figure 56:	Perceived Constraints to Operational Competitiveness	89
Figure 57:	Perceived Constraints to Growth	90
Figure 58:	Perceived Constraints to Hiring Workers	92
Figure 59:	Composition of Municipal Solid Waste in Lebanon (2010)	93
Figure 60:	Fate of MSW in Lebanon (2013)	94
Figure 61:	Supply Chain Map of Byblos Waste Management Facility	96
Figure 62:	Sample Comparison for Plastic, Metal, and Paper Products	103
Figure 63:	Value Chain Maps for Waste Management to Recycled Product Processing in North Lebanon (% total cost)	106
Figure 64:	Entry Points for Achieving Job Creation and Shared Prosperity	113

Contents

TABLES

Table 1:	Broad Structure of the Economy (Employment) in North Lebanon Relative to the National Economy (2009)	26
Table 2:	Distribution of Public Investments by Region	27
Table 3:	List of Public Projects in North Lebanon	28
Table 4:	Average Marginal Effect from Probit and Multinomial Logit Regressions	33
Table 5:	Demographic Characteristics of Inactive Population in the North	42
Table 6:	Demographic Characteristics of Active Labor Force in the North	43
Table 7:	Correlation Between Skill Indices at the Individual Level	51
Table 8:	Summary Results from the Value Chain Selection Assessments	75
Table 9:	Lebanon Fresh Potato Exports by Market, 2005-14 (metric tons)	78
Table 10:	Structure of Potato Production in North Lebanon	80
Table 11:	Distribution of Jobs by Type Across Value Chain Nodes	83
Table 12:	Female and Youth Share of Jobs in the Value Chain	84
Table 13:	Relationships with Main Customers in the Potato Value Chain	90
Table 14:	Education and Experience Levels Typically Hired in the Potato Value Chain	91
Table 15:	Waste Generation per District per Day in 2013	93
Table 16:	Estimated Waste Production in North Lebanon	95
Table 17:	Estimated Number of Workers in Waste	97
Table 18:	Estimated Number of Workers According to Type, Gender, Nationality and Age	98
Table 19:	Estimated Number of Jobs Along the Waste Management and Recycled Products Value Chains	99
Table 20:	Estimated Job Opportunities According to Type for 2020 and 2025	100
Table 21:	Potential Cost of Operating North Lebanon WMS and Possible Cost Recovery Options	101
Table 22:	Import Volume and Value of Recyclable Material and Comparative Unit Cost	102
Table 23:	Three Most Important Skills for Permanent High-Skilled Workers	107
Table 24:	Labor Skills as a Major Obstacle to Growth	108

BOXES

Box 1:	Definition of Key Labor Market Indicators - 2013 World Development Report: Jobs	30
Box 2:	Summary of Key Labor Market by Gender and Youth	53
Box 3:	Successful Models of Public Private Dialogue	72

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Abbreviations and Acronyms

BDS	Business Development Service
CAS	Central Administration of Statistics
CDR	Council for Development and Reconstruction
DTF	Distance to Frontier
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FTE	Full-time Equivalent
GCC	Gulf Cooperation Council
GCI	Global Competitiveness Index
GDP	Gross Domestic Product
GoL	Government of Lebanon
HSE	Health, Safety and Environment
ICT	Information and Communications Technology
IDAL	Investment Development Authority of Lebanon
IFC	International Finance Corporation
ILO	International Labor Organization
ITC	International Trade Centre
KILM	Key Indicators of the Labor Market
LFPR	Labor Force Participation Rate
MENA	Middle East and North Africa
MILES	Macro, Investment, Labor, Education, and Social protection
MoE	Ministry of Environment
MoET	Ministry of Economy and Trade
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
MT	Metric Tons
NEET	Not in Employment, Education, or Training
NEO	National Employment Office
NGO/INGO	Non-Governmental Organization / International Non-Governmental Organization
NLEDA	North Lebanon Local Economic Development Agency
OMSAR	Office of the Minister of State for Administrative Reform
PDCI	Partners for Democratic Change International
PPD	Public-Private Dialogue
RCA	Revealed Comparative Advantage

Abbreviations

RDF	Refuse-Derived Fuel
SCD	Systematic Country Diagnostic
SEZ	Special Economic Zone
SME	Small and Medium Enterprises
SOER	State of the Environment Report
SWEEP-NET	Regional Solid Waste Exchange of Information and Expertise Network
TA	Technical Assistance
TSEZ	Tripoli Special Economic Zone
UAE	United Arab Emirates
UN	United Nations
UNDP	United Nations Development Program
US	United States
VCA	Value Chain Analysis
WBES	World Bank Enterprise Survey
WITS	World Integrated Trade Solution

EXECUTIVE SUMMARY

Overview of Report Objectives and Methodology

This report provides an assessment of constraints and opportunities for the creation of more and better quality jobs for Lebanese in the more fragile and conflict-affected regions. The geographical focus is North Lebanon, including Tripoli. This analysis, accompanied by further dialogue with the key public and private sector professionals, can serve to inform the design and development of a jobs-focused program of financial support for North Lebanon. This diagnostic and program development approach can also be replicated in other high-priority, lagging regions of the country.

The diagnostic followed a three-pronged approach in order to assess the gaps that need to be overcome to respond effectively to job opportunities, foster productivity, and increase earnings: 1) an assessment of the investment climate in North Lebanon; 2) a value chain analysis (VCA) of selected sectors and the interventions required to unlock competitiveness and job creation; and 3) a review of the supply of labor and skills in the region, a stock-taking of training providers. Enterprise surveys were conducted of the key agents in two targeted value chains, as well as a household-level skills survey of the working age population in North Lebanon. Complementary semi-structured interviews and focus group meetings were also undertaken. Consultations with the Government and other stakeholders took place from May through August, 2016.

Social and Economic Characteristics of the North

The North of Lebanon faces significant structural, socio-economic challenges. The economy of North Lebanon is largely split between agriculture, dominant in Akkar and Minieh-Danniyeh, and the urban industrial and services economy centered in Tripoli. Productivity in these different sectors is relatively low. Decades of political, community, and social insecurity have impeded investment, curtailed growth, job creation, and fostered out-migration of talent. According to the latest poverty data, 36 percent of the population in the North are poor, significantly above the national average of 27 percent. This is second to the Bekaa, which has a lower absolute number of poor. Areas of Tripoli and its immediate northern hinterland including also areas of Akkar are assessed as some of the most vulnerable localities in the country. The evidence suggests that this region has high levels of inequality.

Employment challenges for the Lebanese in this region have been exacerbated, particularly for the poorest segments, by the country's fragility and history of conflict, and more recently by the influx of more than 1.5 million Syrian refugees. This is strongly impacting Tripoli and the North, where the ratio of refugees to population is almost 32 percent and which houses 29 percent of total refugees (or 445,000 individuals). This represents an increasingly unsustainable stress on social services and the job market.

Key Findings

A. The Jobs Challenge in North Lebanon

The working age population in the North is estimated at 610,000 individuals, of which 53 percent are inactive, leaving a total labor force of 289,000. Within the participating labor force, 20 percent are employers and 22 percent are self-employed – both largely informal. Just 49 percent of the labor force are wage employed and, of those, only 15 percent are formal wage workers. The remaining nine percent are unemployed.

Among those who are working in North Lebanon, the vast majority are in poor quality, low productivity jobs working in enterprises of less than ten employees. The majority of workers are employed in the wholesale and retail trade sector, characterized by low productivity.

The total labor force in the North is expected to increase from 289,000 to 362,000 people by 2025, due to existing trends in the growth rate of the Lebanese working age population and current labor market participation rates. This implies that the regional economy would need to create an average of 8,000 jobs each year simply to maintain a steady state situation in the labor market.

Addressing the employment gap in North Lebanon to bring performance in line with the national average requires substantial job creation. Closing the employment rate gap to the national average would require almost 14,000 new jobs in the region – or around 2,800 annually if a five-year target was set to reach this goal. An employment rate above 60 percent, typical of upper middle income countries, would require more than 120,000 jobs or 24,000 per year over a five-year period. To improve the quality of jobs and bring the region in line with the national average of 62 percent of the employed in waged jobs, an additional 21,000 waged jobs (or more than 4,000 per year over five years) would need to be created to replace existing self-employment.

The number of unemployed is relatively small (around 22,000 or nine percent of the active workforce) and they are younger and better educated than the population as a whole. This highlights a demand side problem – i.e. not enough good jobs are being created. But it also suggests that this group may be well-positioned to shift into employment with appropriate support.

B. The Labor Market in North Lebanon

The low labor force participation rates and low education levels limit both the quantity and quality of the workforce in North Lebanon. The participation rate in North Lebanon is amongst the lowest in the country, while the actual labor force is amongst the biggest given that the majority of its population is of working-age. This high inactivity is driven by the very low participation rates amongst women and youth in the labor market. Amongst those who are active, the majority has low levels of education, especially amongst the adults. Forty five percent of the active population has elementary education or below, while 31 percent have completed tertiary education. Youth and adults less than 34 years of age achieve higher levels of education with 31 percent (youth) and 42 percent (adults), respectively, having a bachelor degree or higher.

There are important variations in labor market outcomes between different population groups, especially among women:

- Only one in five working age women participate in the labor market, compared to 73 percent among working age men.
- The majority of active women are wage employees, while self-employment is more prevalent among men. For women, 80 percent are wage employees and only 20 percent are self-employed or employers, while the latter is 40 percent among men.
- Twenty-three percent of youth below age 25 are not in Education, Employment or Training (NEETs), and 13 percent are unemployed.

C. The Investment Climate for Job Creation in North Lebanon

Lebanon fares poorly in eight out of ten different dimensions of the doing business life-cycle measured in the Doing Business Indicators. Even in the two areas where Lebanon has made some progress — starting a business and getting credit — it remains far from the frontier of the best performers. Moreover, Lebanon has not made progress in any other Doing Business Indicator since 2006. Many investment climate constraints are more acute in the North:

- Informal competition and corruption represent major obstacles to investment in both formal and informal firms. In the North, 84 percent of firms indicate they compete against informal firms versus just 57 percent of firms nationally. In terms of corruption, 62 percent of firms in the region report they expect to pay bribes to public officials compared with 21 percent of the firms for the rest of Lebanon.
- The infrastructure constraint is greater in terms of electricity access and quality. Electricity connections in the North take almost twice as long as for the rest of Lebanon (which is already cumbersome). Additionally, firms in the North

also tend to have a higher number of electrical outages and a greater reliance on generators.

- Access to finance does not appear to be a leading constraint in Lebanon, however this finding conceals some critical gaps. In Lebanon, as in many other countries in MENA, smaller and more informal enterprises have significantly less access to finance than large firms, disproportionately impacting a region dominated by such firms.

Myriad constraints restrict firms in the North from taking sufficient advantage of exports as a source of growth and job creation. Close to 60 percent of all jobs in Lebanon are accounted for by large exporters. Yet just six percent of firms in the North export even one percent of their sales directly, around half the national average. Despite a strategic position and a production structure that aligns well with Lebanon's trade comparative advantage, firms face constraints in logistics, trade facilitation, and quality standards, along with disruption to traditional trade routes. This contributes to anemic levels of foreign direct investment in the region.

D. Value Chains as Sources of Inclusive Job Creation

Two value chains were selected in consultation with the Government of Lebanon to assess their potential to drive inclusive job creation in the North: potatoes and solid waste/re-cycling. The potato sector is one of the largest agricultural activities in the North. It has a strong reach into the rural areas of the region (particularly Akkar), while also connecting to urban areas through trade and processing. Whereas, the solid waste and recycling sector offers the opportunity to leverage substantial investments being made through the Office of the Minister of State for Administrative Reform (OMSAR) (funded through the European Union) in solid waste and sorting facilities across the North.

Potatoes

Around 9,000 jobs exist across the potato value chain, including 1,800 permanent and around 7,200 seasonal jobs. Converting seasonal workers into full-time equivalent (FTE) positions (40 hours a week, year-round) results in close to 3,000 FTEs in the value chain. The majority of these jobs are in farming, accounting for two-thirds of permanent jobs and 85 percent of seasonal jobs. Traders also account for a sizable number – more than 500 FTEs and almost 400 permanent jobs.

Lebanese occupy almost all high-skill jobs across the potato value chain, as well as the large majority of low-skill permanent positions in processing and trading activities. There is over 40 percent Lebanese female employment in permanent positions in input suppliers and processors. Most of the jobs for Lebanese youth are in trading (more than 80 percent of low-skill, permanent jobs). Foreign workers dominate seasonal employment and low-skill employment in potato farms.

The assessment of the jobs creation potential for Lebanese at the higher skill end of the employment spectrum resulting from growth in the potato value chain was based on two scenarios:

- An expansion of exports: Where Akkar farmers take half of the EU quota of 50,000 Metric Tons (versus none at present) over and above existing domestic and other export markets. This can create an estimated 350 additional permanent jobs and another 1,550 seasonal jobs. Around 70 percent of jobs would be in farms. The remaining jobs would be in trading and inputs.
- New large-scale investments in potato processing: At the high end of the scenario, close to 2,200 new permanent jobs can be created. This includes 1,200 in processing, trading, and input supply that tend to employ largely Lebanese workers, including significant skilled positions.

In practice, the number and nature of jobs created in any growth scenario for this value chain will depend to a large degree on the type of investment driving growth (e.g. expansion versus greenfield investment), as well as the decisions by firms on capital and labor mix.

Solid Waste and Recycling

A fully operational solid waste management and recycling supply chain infrastructure has an estimated employment capacity of close to 4,600 versus approximately 1,300 workers currently employed in this value chain. Female participation is low, only 6.7 percent of the labor force across the entire value chain. Foreign workers account for about 30 percent, mainly in low-skilled jobs.

Based on an annual growth rate of 1.6 percent, the estimated number of jobs along the entire value chain can be projected to reach 5,000 by 2020 and 5,400 by 2025. This calculation is based on the assumption that waste management facilities in North Lebanon are fully operational, accounting for the collection of at least 99 percent of municipal waste, and all sorting lines are operational with a functioning supply chain infrastructure for recyclable products.

The highest number of jobs is expected to be concentrated around traders of recyclable material (more than 1,900 jobs by 2025), followed by steel processing (more than 750 by 2025). A further breakdown of jobs according to type indicates that nearly one quarter of new jobs (approximately 475) would be permanent high-skilled jobs, while 70 percent would be permanent low-skilled jobs. The highest concentration of permanent high-skilled jobs (around 30 percent) is expected to be in the trading sector, followed by the paper sector (25 percent).

Analysis of these two value chains indicates both have significant potential to create better quality jobs for Lebanon, with further induced job creation effects through the impact of wage expenditures in the local economy. These value chains represent a relatively small share of the overall economy in North Lebanon. So, it is

not a ‘silver bullet’ to solving the jobs challenge. Moreover, substantial investment and other interventions across the value chain would be required to have a pronounced impact on job creation and quality.

Conclusions and Recommendations

As elucidated in this report, job creation challenges in North Lebanon are substantial. The North is a very informal, high poverty-level, regional economy facing significant and prolonged external shocks compounding an existing situation of persistent internal insecurity. It is a region that has a strong sense of neglect from the central government that has been unable to progress with the key reforms required to provide a broad-based competitive improvement to its economy. Nor has it been able to provide sufficient targeted support to this lagging region. This sense of marginalization was confirmed during the unexpected reversals that the leading political parties suffered in the recent 2016 Tripoli municipal elections.

In a labor market providing just one salaried job for every five working age adults, the crux of the problem lies on the demand side – a private sector that fails to generate productive jobs. Tens of thousands of relatively educated, working age adults are unemployed or outside of the labor force completely. More still are stuck in low quality jobs. The available evidence suggests a market dominated by small and micro businesses - too many in the informal sector with limited job creation capacity. Together with the limited growth potential currently prevalent among SMEs, future employment creation in the absence of new investment is highly constrained. Some inroads can be made through better job search and matching facilities, particularly for those better skilled unemployed workers. But substantial improvement will prove elusive without more being done to mobilize demand side investment.

This report highlights where opportunities exist. But it also recognizes there is significant distance still to be travelled to bring the supply and demand sides of the market into more effective partnerships. This effort needs to be undertaken with a keen sense of what is possible and where the regional economy can advance over the short, medium and long term. It also requires innovative enticement of private sector risk-taking and investment in fragile settings that are traditionally seen as antithetical to private investment.

There will be no one “transformative approach” to the jobs challenge in the North. A series of actions – calibrated to what is politically possible and a bit beyond – will need to be taken and implementation sustained over an extended period. Many of the significant constraints to business entry, growth, and job creation are long-standing problems in Lebanon. The solutions are well known but have not, for whatever reason, been implemented. While efforts should continue to promote such reforms, solutions to the regional jobs challenge should not depend in any way on these macro, national-level reforms coming to fruition.

Different strategies will be required over time. Over the shorter term this entails a focus on SMEs, taking as given the current policy and infrastructure environment. Over the longer term, an increased focus on higher potential value chains – through selective (i.e. “not-so-politically sensitive”) sector-specific reforms and supporting investments – can mobilize marked new private investment. In both cases, there are specific labor market and skills issues to be addressed and outcomes to be achieved.

Next Steps - Ways Forward for Job Creation in Lagging and Vulnerable Regions in Lebanon

1. Short-Term Agenda: Supporting SMEs and Self-Employment

Starting with a shorter 3-5 year period, no significant policy change can be expected to take full effect. This represents the time period before potentially growth-inducing new infrastructure investments – including the Tripoli Special Economic Zone and port and railway developments - come into effect. The challenges will be to support SMEs to improve market performance and develop new market niches. This focus should also include the informal sector where the majority of North Lebanon’s work force is concentrated. Micro-level, informal, locally oriented businesses dominate the employment landscape but lack the means to absorb even the relatively small active labor force. Some of the potential solutions to address short-term job creation and inclusion needs are:

- Delivering new forms of finance that can improve access to key inputs needed to start and expand MSMEs in ways that foster job creation and help mitigate lending risks;
- Supporting MSME and BDS/entrepreneurship;
- Developing targeted programs to support female and youth business start-ups.

Respondents in the labor market survey indicated access to finance and wage subsidies are some of the most critical elements in strengthening the performance of this sector and, ideally, in providing the inducement for firms to formalize. Getting the incentives right in developing such products and mitigating against market distortions - but recognizing that jobs created in highly fragile, policy constrained regions bring with them significant additional social externalities - requires distinct innovative approaches to address the heightened investment risks.

2. Long-Term Agenda: Sustainable Jobs Through Value Chain Investments

Efforts to bring about national level policy reforms in politically fragmented fragile settings often fall short, as the weight of politically vested interests takes its toll. This perspective - held even by senior Lebanese policy makers and almost all private sector stakeholders engaged in the preparation of this report - led to the focus on value

chains. It builds first on the notion that targeting sub-sectors from production to end-market offers a more tractable reform context and more targetable and measurable investment opportunities. It also allows for a better calculation of winners and losers. In other words, it is less threatening to the political and institutional rigidities that block wider change efforts.

The value chains analysis also indicated that while not a panacea, substantial job potential for Lebanese exists in selected value chains, provided that downstream value-adding activities can be instigated. To be successful, this requires clear determination of market opportunities, associated with new investments in facilities, labor force skills development, and some core infrastructure improvements. Far greater attention is also required to establish effective partnerships and networking within value chains and clusters operating in the region.

Interventions to support the development of competitive value chains need to be complemented with efforts to bring labor force supply closer to private sector needs. This means raising skills levels and making them more relevant to the evolving demands of the private sector. It also requires improving matching between workers and jobs through more effective registration and profiling of the labor force and improved information flows between public employment and training institutions and the private sector.

The value chain development approach proposed as part of a multi-phased job development program recognizes the specific enabling conditions on the ground in the North. To achieve larger-scale job creation, private sector investors willing to invest in the North as a base to serve wider markets are needed. This means building on sources of comparative advantage in the North. These include its strategic geographical position where the port of Tripoli provides connectivity to the wider region, as well as specific value chains (mainly agricultural). Serving wider markets is not simply about exporting, but also serving markets nationally and within the region. This, too, requires increasing connectivity (including to Beirut) and re-establishing Tripoli's central role in the regional and national economy.

3. Ongoing Imperative: Strengthening the Competitive Position of North Lebanon

It will be critical to build on the new infrastructure investments already underway and then look to the region's other key economic assets. This includes the further development of a relatively deep-birth seaport that can strengthen the region's longer-term competitive edge in terms of the GCC export market and the previously mentioned future reconstruction of Syria. Solutions to reinforce the strategic positioning of Tripoli and the North include:

- Continued investments (including customs) to develop the Port of Tripoli as a leading container terminal for regional shipping and, to the extent feasible, expanding private investment in various aspects of port development and operations;

- Investments in transport infrastructure to improve connectivity between Tripoli and other regions of Lebanon, as well as between Tripoli and key districts in the North;
- Investments in industrial infrastructure, such as special economic zones and industrial parks, to support a competitive manufacturing sector;
- Investments in urban infrastructure and municipal capacity to promote improved “livability” for residents of Tripoli;
- Investments to position Tripoli to support post-conflict reconstruction in Syria.

At some point, value chain development and associated targeted infrastructure development will experience diminishing returns, both in terms of private investment and jobs. Further attracting investment to establish and expand outward-oriented businesses in Tripoli and the North will, eventually, require addressing significant, long-standing investment climate constraints. This includes issues of governance and, most notably, electricity. Operating competitively without a robust and supportive investment climate is almost impossible, particularly for firms attempting to compete in export markets.

CHAPTER 1

Introduction and Overview

A. Outline

1. Objectives

This report assesses the opportunities and requirements to support the creation of more and better quality jobs in the more fragile and conflict-affected regions of Lebanon. By focusing on job creation in lagging regions, this activity is intended to contribute to the reduction of poverty and inequality. The geographical focus is Tripoli and the wider North Lebanon Governorate, referred to also in this report as “the North”.

This analysis, accompanied by further dialogue with key public and private sector stakeholders can also serve to inform the design and development of a jobs-focused program for North Lebanon. This diagnostic and program development approach can potentially be replicated in other high-priority lagging regions of the country.

2. Methodology

The diagnostic followed a three-pronged approach: 1) assessment of the labor supply and job demand environment in North Lebanon, covering labor market outcomes and the investment climate; 2) assessment of the structure of employment and the interventions required to unlock competitiveness and job creation through value chain analysis (VCA); and 3) assessment of the skills base of the region and the gaps that need to be overcome to respond effectively to job opportunities and foster productivity and earnings growth. The diagnostic entailed an enterprise survey of the key agents in two targeted value chains and a household survey of the labor market and skills profile of the population in North Lebanon. The survey work and complementary semi-structured interview and focus group meetings were undertaken between March-May 2016.

Results were presented to the Government Working Group chaired by the Director General of the Ministry of Economy and Trade on May 17th, 2016, with further meetings held on July 21st, and July 26th, 2016. A concluding meeting, hosted by the Tripoli Chamber of Commerce, Industry and Agriculture, involving Northern-based stakeholders took place on August 11th, 2016. Further details on the methodology

adopted is included in the relevant technical reports prepared as background to this final report.

3. Report Outline

This report is structured in six chapters. The remainder of Chapter I provides an overview of the social and economic development challenges facing Tripoli and the North. Chapter II provides an assessment of the jobs challenge in the North through an analysis of the labor market and of the nature of firm demand for labor. Chapter III looks at the supply side of the market, including education and skills and patterns of labor market participation. Chapter IV turns attention to the demand side by looking at the investment and trade environment that shapes firm investment and hiring decisions in Lebanon, and in North Lebanon in particular. Chapter V then reports on the results of the value chain analysis, providing a lens through which to assess both the demand and supply sides of jobs opportunities and challenges in the region. Chapter VI addresses the conclusions and next steps arising out of the diagnostic work done to date.

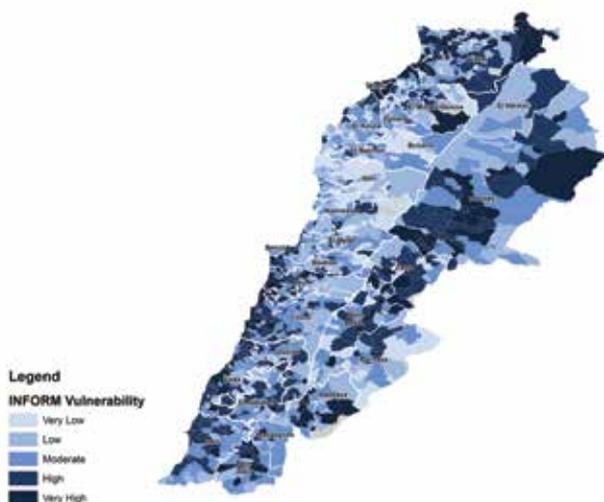
B. Overview of the Economy in Tripoli and the North

1. The Socio-Economic Challenge Facing North Lebanon

The North of Lebanon faces significant structural and socio-economic challenges. Decades of political and social insecurity have impeded investment, curtailed growth and job creation, and fostered out-migration of talent. Job creation has been largely restricted to low productivity agricultural and informal services.

The recently concluded World Bank Group *Systematic Country Diagnostic of Lebanon*¹ (SCD) highlights the disadvantaged condition of North Lebanon. According to the latest poverty data, the North has a poverty headcount measure of 36 percent, which is significantly above the national average of 27 percent. It is second only to Bekaa, which has a lower absolute number of poor (estimated at 170,000 versus 290,000 in the North). Based on socio-economic and other vulnerabilities², areas of Tripoli and its immediate northern hinterland together with significant parts of Akkar, are assessed as some of the most vulnerable localities in the country (Figure 1). The SCD notes that the North has the lowest elasticity of poverty to consumption growth, which suggests that the region has high levels of inequality. Such inequality most likely stems from weaker employment and earnings opportunities in the North. This is evidenced by the region having the poorest labor market outcomes in the country, which in turn results from an environment that undermines the incentive for job-creating private sector investment.

Figure 1: Inform Vulnerability Map



Source: Joint Research Center – EU: INFORM index³

The employment challenge has been exacerbated, particularly for the poorest citizens, by the country's fragility and history of conflict, and more recently by the influx of more than 1.5 million Syrian refugees. These factors are likely to continue exerting significant pressure on the Lebanese economic and social situation⁴. This reality is becoming more tenuous as Lebanon tries to cope with the deepening and prolonged impact of the refugee influx arising from the Syrian conflict. As of January 2016, since the commencement of the Syrian conflict in March 2011, over one million Syrian refugees/displaced persons are officially registered in Lebanon (representing over 25 percent of the Lebanese population). The GoL estimates the number at 1.5 million, which is in line with the estimation of total number of refugees, including those unregistered⁵. This is strongly affecting Tripoli and the North, where the ratio of refugees to population is almost 32 percent⁶ and which houses 29 percent of total refugees (or 445,000 individuals). This represents an increasingly unsustainable stress placed on the region.

The fragility confronting Tripoli and the North has its origins well before the onset of the current Syrian crisis. In Tripoli, there have been long-standing tensions between the Sunni area of Bab al-Tabbaneh and the Alawite community in Jabal Mohsen that have resulted in violent interludes. Tensions have since deepened as the sectarian groups in the city align to different interests at play in the Syrian crisis. This in turn has resulted in a heightened military presence and security alertness. But the sense of economic marginalization of the indigenous community, the evidence of which is further reinforced by the findings of this report, has played its part in this social conflict and proclivity to violence⁷. In focus group meetings and other consultations that took place in preparation of this report, stakeholders across the private sector

and civil society voiced their concern for what is seen as a longer trend of economic neglect toward the North.

What is clear, despite the cursory nature of this overview of the socio-economic and sectarian-driven depressed circumstances of North Lebanon, is the importance of a pro-active policy of economic inclusion, through the creation of meaningful employment that provides not just an income, but also generates a range of social externalities. This includes both human capital development and the inclusion in employment of the most marginal groups, such as women and youth. The starting point for determining options to best affect this economic outcome is to understand the endowments of the Northern economy and how this is manifesting in terms of the supply and demand for labor and the creation of jobs. From this vantage point, policy, programming, and investment options can be developed.

2. The Economy in North Lebanon

The economy of North Lebanon is largely split between agriculture, which dominates in Akkar and Minieh-Danniyeh, and an urban industrial and services economy centered in Tripoli. Within the national context, the region is specialized in agriculture (Table 1). Outside of agriculture, the economy is dominated by low productivity service sectors, namely wholesale and retail trade, as well as transport (mainly automotive repair). But the region also has a fairly sizeable industrial economy, in particular, food processing and wood products (furniture).

Table 1: Broad Structure of the Economy (Employment) in North Lebanon Relative to the National Economy (2009)

	<i>Share of total employment</i>			
	<i>Lebanon</i>	<i>Akkar & Minieh - Danniyeh districts</i>	<i>Remaining North Lebanon districts</i>	<i>Location Quotient- North (overall)</i>
Agriculture	6.3	17.8	3.6	1.67
Industry	12.1	7.9	14.0	0.92
Construction	8.9	10.4	6.7	0.95
Trade	27.0	21.1	29.0	0.93
Transportation, Post and Telecommunication	6.8	6.6	6.3	0.96
Financial intermediation and insurance	2.0	0	1.4	0.36
Other services	36.9	35.9	39.0	1.02
TOTAL	100.0	100.0	100.0	1.00

Source: Statistics Lebanon, Multiple Indicator Cluster Survey (2009)

Note: Bold indicates share of employment higher than the national average

Faced with an unfavorable investment and trade environment and a highly fragile wider regional political setting, the North is greatly disadvantaged in terms of job creation opportunities. This is exacerbated by a central government that has been unable to move forward with the economic reforms required to transform the economy. In this context, what can be done over the short, medium, and long term – within the bounds of what, from a political economy and policy perspective, is feasible – to address one of the overriding challenges in North Lebanon, that of good quality jobs?

The Government has reiterated the paramount importance of addressing the constraints to job creation, job quality, and access to jobs, including targeting impoverished neighborhoods where Syrian refugee communities live alongside lower income Lebanese. Such jobs-focused objectives in Tripoli and the North would address two explicit priorities of the Lebanese government simultaneously: reducing poverty and inequality, as well as improving social cohesion in the most conflict-prone region and in local communities with the heaviest presence of Syrian refugees. More specifically, the Government has been moving forward on a number of recent and prospective economic developments in the Tripoli area. These include: (i) the recent concession of container services at the Tripoli port and the prospective flow of further investments; (ii) significant public investments entailing port, rail, and road infrastructure development, and (iii) the planned Tripoli Special Economic Zone (TSEZ). As can be seen in Table 2, the Government is committing substantial new funding to the North.

Table 2: Distribution of Public Investments by Region

		<i>Public Investments (US\$)</i>	<i>Share of Regional Investments</i>	<i>Share of Total Investments</i>	<i>Population*</i>	<i>Investment/ Capita</i>
A. REGIONAL	North Lebanon**	386,069,454	35%	27%	914,227.10	422.29
	South Lebanon	75,499,463	7%	5%	789,737.59	95.60
	Bekaa Baalbeck Hermel	73,418,566	7%	5%	586,409.35	125.20
	Beirut	19,344,237	2%	1%	432,585.31	44.72
	Mount Lebanon	176,483,466	16%	12%	1,777,039.46	99.31
	Other cross regional	369,483,163	34%	25%		
	Total	1,100,298,349	100%	76%		
B. NATIONAL		348,857,517		24%		
TOTAL (A+B)		1,449,155,866		100%	4,500,000	322.03

*Population size calculated based on the Household living conditions survey's population size for the year 2007 with a population growth of 20%.

** Includes a project that overlaps with Metropolitan Area. Data from the CDR website.

Taking a closer look at the range of investments currently underway in North Lebanon, Table 3 indicates that approximately \$127.2 million or 33 percent of the total target infrastructure investment in the region could potentially have a direct impact on enterprise productivity and growth. While historical data is not available to determine trends, feedback from stakeholders in North Lebanon indicates that this volume of investment significantly increased over past periods

Table 3: List of Public Projects in North Lebanon⁸

<i>Kazaa</i>	<i>Sector</i>	<i>Start date</i>	<i>Expected End Date</i>	<i>Value US\$</i>
Koura/Bsharreh	Private land transportation	15-Jun-03	30-Jun-18	2,307,821
Minieh/Donnieh	Private land transportation	1-Nov-11	29-Dec-17	796,000
Minieh/Donnieh	Private land transportation	1-Nov-11	29-Dec-17	30,745,020
Bsharreh	Private land transportation	1-Jan-15	31-Oct-16	92,664
Bsharreh	Private land transportation	1-Jan-16	30-Jun-18	17,020,011
Tripoli	Multiple infrastructure projects in sectors	10-Jan-15	30-Jul-17	23,676,806
Tripoli	Multiple infrastructure projects in sectors	10-Jan-15	30-Sep-17	678,000
Tripoli	Logistics and wholesale markets	1-Sep-15	31-Aug-18	15,846,917
Tripoli	Shipping	1-Nov-15	28-Feb-17	20,295,455
Akkar	Private land transportation	13-Sep-07	31-Oct-17	432,000
Akkar	Private land transportation	1-Nov-15	31-Oct-17	15,273,404
Total				127,164,098

These port, TSEZ and other infrastructure initiatives, if they build on existing comparative advantages in the region, can open new prospects to reposition the region's economy and foster stronger job creation in the future. In the short term, this will likely come from exploiting opportunities to expand and add value in the agriculture sector. Moreover, by better utilizing the Information and Communication Technology (ICT) sector, the potential exists to build on the indigenous entrepreneurial capacity in the North. The relative proximity to Beirut – with its strong entrepreneurial culture and globally competitive firms - together with lower local costs (wages, rents) are potential competitive advantages of the North. Over the longer term, potential exists for Tripoli to become a key entrepot, logistics, professional and technical goods and services hub for the neighboring countries of the region, including the reconstruction of Syria, once the conflict is over.

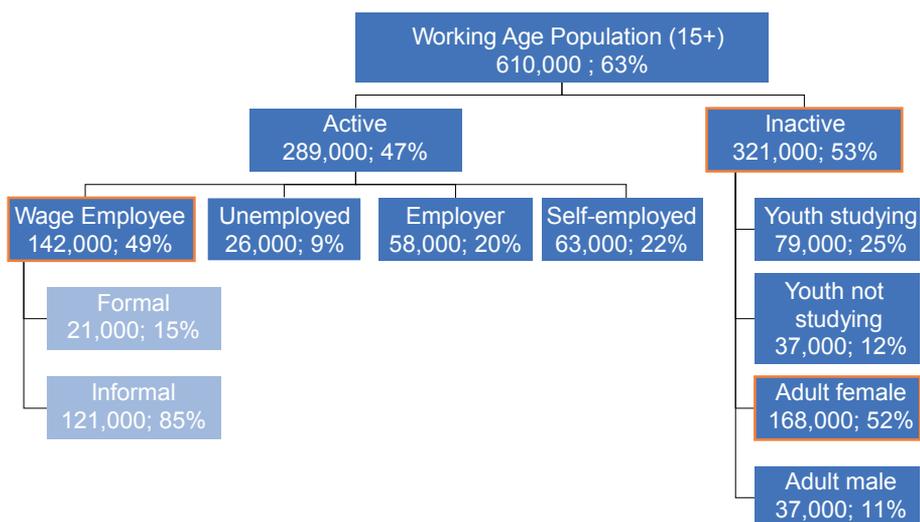
CHAPTER 2

Jobs Outcomes in the North

A. Snapshot of the Labor Market in North Lebanon

The data in Figure 2 illustrates the main components of the Lebanese labor market in North Lebanon, based on the Household Survey undertaken as part of the diagnostic work. It outlines several anomalies that will be discussed in more detail in subsequent sections. Most notably, while the North has a relatively large working age population (around 610,000), only 47 percent (289,000) are active. And, while the inactive population includes a fairly large number of youth who are still in school (79,000), the majority of the inactive population are working-age women (168,000). Among the active labor force, wage employment accounts for 49 percent (142,000), while 42 percent are either self-employed or employers. Unemployment is relatively low, at nine percent versus a national average of 11 percent.

Figure 2: Working Age Composition – North Lebanon



Source: Authors' calculations using 2016 North Lebanon Household Survey. Working age population estimated using 2009 CAS demographic data and applying constant annual growth rate.

For reference throughout the remainder of this report, some key terms and definitions used with respect to the jobs and labor market agenda are provided in Box 1.

Box 1: Definition of Key Labor Market Indicators – 2013 World Development Report: Jobs

Jobs: While precise definitions vary, jobs are labor activities that generate income, monetary or in kind, without violating fundamental rights and principles at work. Jobs can take the form of wage employment, self-employment, and farming. The concept of a job is much broader than wage employment. However, as an individual can be employed in multiple jobs which can be formal or informal.

Working age population: Persons aged 15 - 64 as a fraction of the total population; in percent.

Participation rate: Share of the working age population that is in the labor force, with the labor force defined as persons who work or are unemployed; in percent.

Inactivity rate: Share of the working age population that is not in the labor force. The sum of the participation rate and inactivity rate would be equal to 100 percent.

Unemployment rate: Share of the labor force that is unemployed, with the unemployed defined as persons who are available to work and are actively looking for a job during a reference period; in percent.

Employment by work status: Share of employment in wage, self-employment or employer; in percent.

Informal employment: Share of workers not contributing to social security.

Self-employment: Share of workers working alone with no employees; while employers have at least one employee.

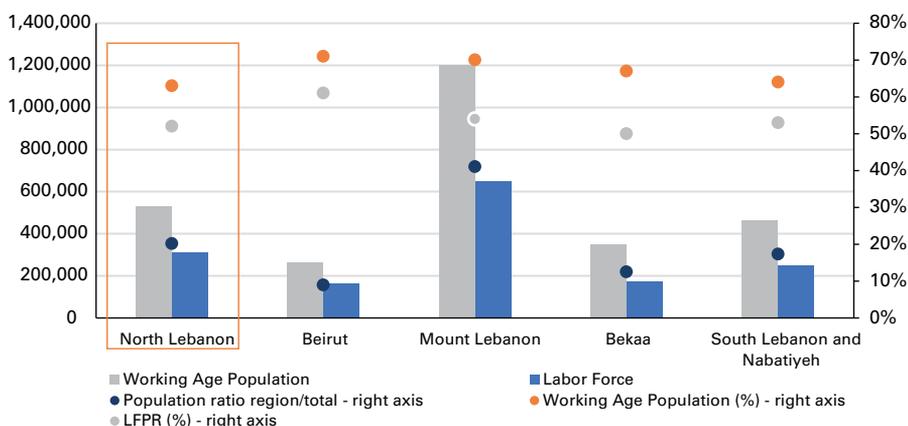
Youth not in education, employment or training (NEET): Share of the population aged 15–24 who is not engaged in education, employment, or training; in percent.

B. Analysis of Labor Market Outcomes in North Lebanon

1. Labor Force Participation

The majority of the Lebanese population in North Lebanon is of working age, but labor force participation is among the lowest in the country. Based on the latest available demographic data (2009), one-fifth of the Lebanese population resides in the North Governorate with almost two thirds of working age (15-64 years). Compared to other regions in Lebanon, the size of the working age population in the North is second only to Mount Lebanon (Figure 3).

Figure 3: Key Demographic Numbers by Governorate



Source: Central Administration of Statistics (CAS), 2009 Living Condition Survey

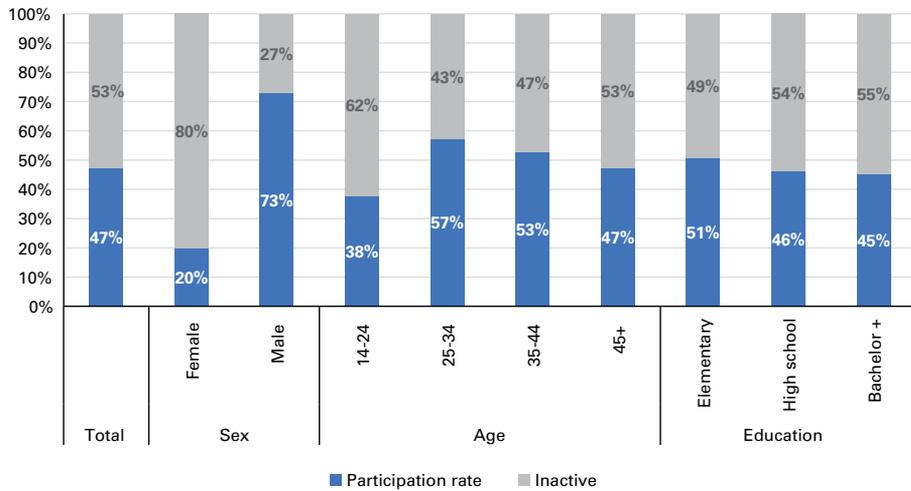
Notwithstanding the high absolute numbers in the labor force, North Lebanon is characterized by high inactivity. Less than half of the working age population is active in 2016, compared to 52 percent in 2009 (Figure 2). This is in line with the national average of 48 percent⁹ (based on the latest data available), but low by international standards. (See Section III.)

The low activity rate is primarily due to the very low participation rate among women and youth. Only one in five working age women participate in the labor market, compared to 73 percent among working age men (Figure 4). In addition, less than two out of five youth (between 15-24 years) are active. Participation rates are bell-curved as it is low among youth then increases to 57 percent among individuals aged 25-34 and decreases to 47 percent among those above 45 years of age. The level of education does not seem to affect the decision to be active, although it is slightly higher among those with elementary education or below. Recent evidence at the national level points to the fact that the economic slowdown and influx of refugees as a result of the Syrian civil war may have made it more difficult for young Lebanese to enter the labor market.¹⁰ There are significant differences between the participation rates of Syrian refugee youth compared to Lebanese, particularly among males. Only nine percent of host community men aged 15-19 are active, compared to over 70 percent among Syrian refugee men of similar age. This difference is also significant, although to a lesser extent, among those aged 20-24 as 71 percent of host community men are active compared to 88 percent among Syrian refugees.

The reported reasons for inactivity differ greatly by gender. The majority of women (64 percent) are inactive due to household duties and an additional 28 percent due to studies. Among those who reported “studies” as the main reason for inactivity,

83 percent are less than 34 years old and 75 percent are less than age 24. Among men, the majority is inactive due to studies (45 percent), 92 percent of which are less than 24 years old.

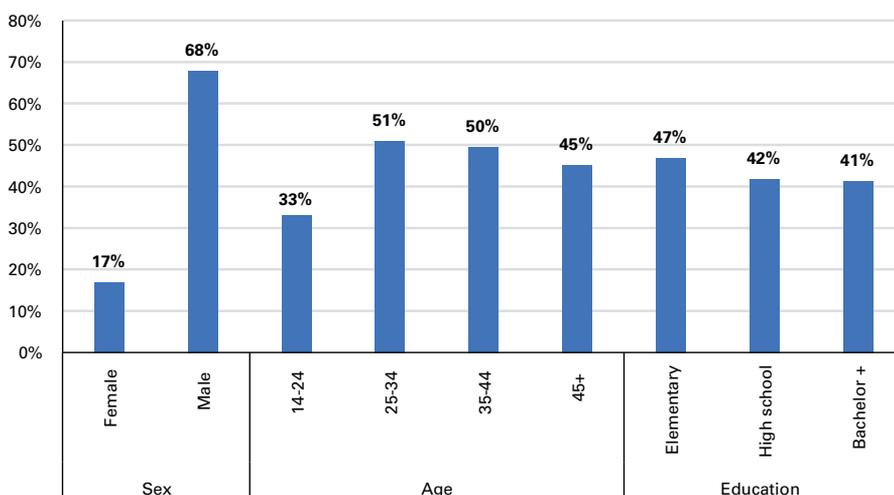
Figure 4: Labor Force Participation by Gender, Age and Education Level



Source: Authors' calculations using 2016 North Lebanon Household Survey

2. Employment

In line with the above, male adult employment rates¹¹ are higher with no major differences in education levels. Sixty-eight percent of the male working age population is employed, compared to only 17 percent among women (Figure 5). Only one-third of the working age youth is employed compared to half of the adults. The rest are either in education (around 40 percent), unemployed or inactive (Figure 5). In terms of education, workers with elementary education or below had a slightly higher employment rate (47 percent) than those with higher levels of education (41 percent). This could be explained by low-educated workers not being in the financial position to stay unemployed or inactive. Thus, they engage in any job they can find. Those with higher levels of education often can afford to stay unemployed until they find a satisfactory job.

Figure 5: Employment Rates by Gender, Age, and Education Levels

Source: Authors' calculations using 2016 North Lebanon Household Survey

Regarding employment type, keeping other characteristics constant, women are significantly more likely to be wage employees (22 percentage points) compared to men, and less likely to be self-employed or an employer (11 percentage points each). Age or education attainment does not seem to play an important role in the type of employment held (Table 4).

Table 4: Average Marginal Effect from Probit and Multinomial Logit Regressions

<i>VARIABLES</i>	<i>Out of Labor Force*</i>	<i>Active*</i>	<i>Employee**</i>	<i>Self-Employed**</i>	<i>Employer**</i>
Female	0.2818***	-0.0557**	0.2167***	-0.1101	-0.1066
	-0.025	-0.028	-0.077	-0.076	-0.071
Age 2	-0.0103***	0.0006	-0.0092***	0.0056***	0.0036**
	-0.001	-0.002	-0.002	-0.002	-0.002
Secondary education	0.0032	-0.0072	0.003	-0.0523	0.0492
	-0.027	-0.026	-0.046	-0.041	-0.036
Tertiary education	-0.0075	0.0132	0.0187	-0.0825**	0.0639*
	-0.026	-0.027	-0.046	-0.041	-0.035
Married	0.0201	-0.0569	-0.0041	-0.0008	0.005
	-0.043	-0.036	-0.077	-0.072	-0.067
Cohabitation	0.0731	-0.1783***	1.193	0.6142	-1.8072

	-0.08	-0.066	-97.946	-46.384	-144.33
Widow	0.2396***		-0.0026	-0.0375	0.0401
	-0.091		-0.208	-0.19	-0.162
Household Head	-0.2487***	-0.4463	0	0.0054	-0.0054
	-0.086	-22.954	-0.184	-0.177	-0.143
Spouse	0.0748	-0.4587	0.0735	-0.0523	-0.0212
	-0.088	-22.954	-0.211	-0.205	-0.17
Son	-0.2258***	-0.519	0.0455	0.0201	-0.0656
	-0.083	-22.954	-0.179	-0.173	-0.14
Household Size	0.003	-0.0208***	0.0158	-0.0096	-0.0062
	-0.006	-0.005	-0.011	-0.009	-0.009
Observations	1,479	718	620	620	620

*Average Marginal Effect (from Probit Regression)

**Average Marginal Effect (from Multinomial Logit Regression)

Standard errors in italics; *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations using 2016 North Lebanon Household Survey

Wage employment is most prevalent among women, youth, and workers with higher education. While over 80 percent of women are wage employees and only 15 percent are self-employed or employers, these rates are, respectively, 60 percent and 40 percent among men. In fact, more than half of those aged 45 and above are self-employed or employers compared to just 12 percent of youth. Workers with tertiary level education account for 69 percent of wage employees, versus 58 percent among those with low levels of education. The share of employers with low levels of education is much higher (26 percent) than those with tertiary education (14 percent). (See Figures 6 to 8).

Figure 6: Employment Type by Gender

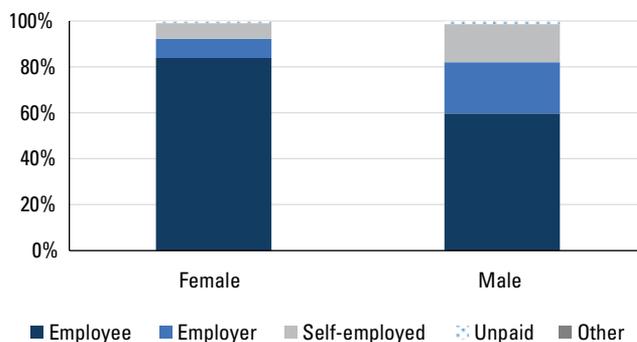


Figure 7: Employment Type by Age Group

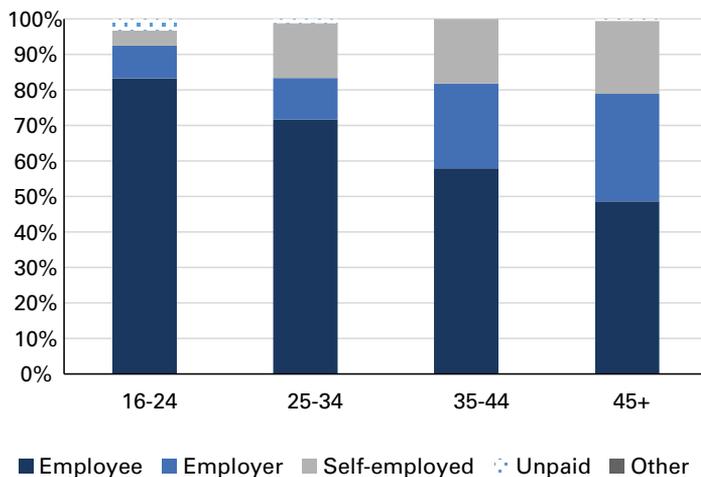
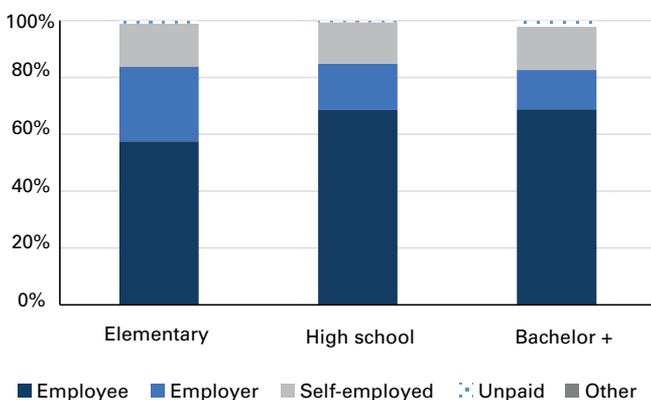


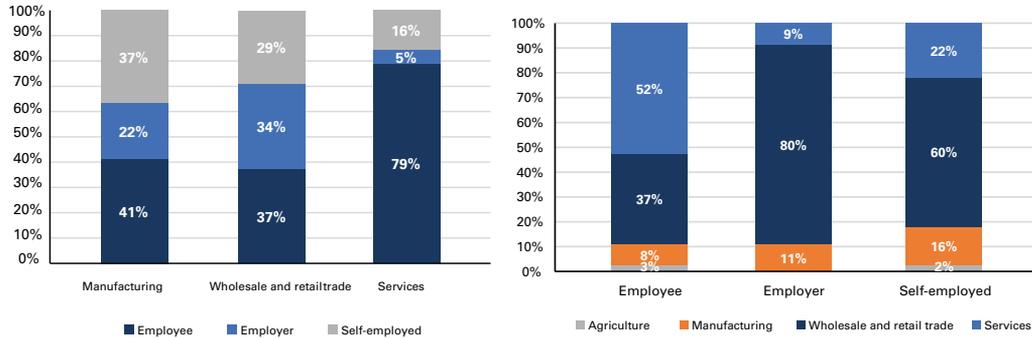
Figure 8: Employment Type by Education Level



Source: Authors' calculations using 2016 North Lebanon Household Survey

Wage employment is prevalent in non-trade services (79 percent), while self-employment and employers are prevalent in retail and wholesale trade (63 percent). Analysis shows that 80 percent of employers and 60 percent of self-employed work in wholesale and retail trade, while only 37 percent of wage workers are employed in this sector (Figure 9). Moreover, self-employment and employers represent the majority of jobs in manufacturing (59 percent), suggesting that this sector is dominated by artisanal rather than formal industrial activities.

Figure 9: Distribution of Employment by Type and Sector



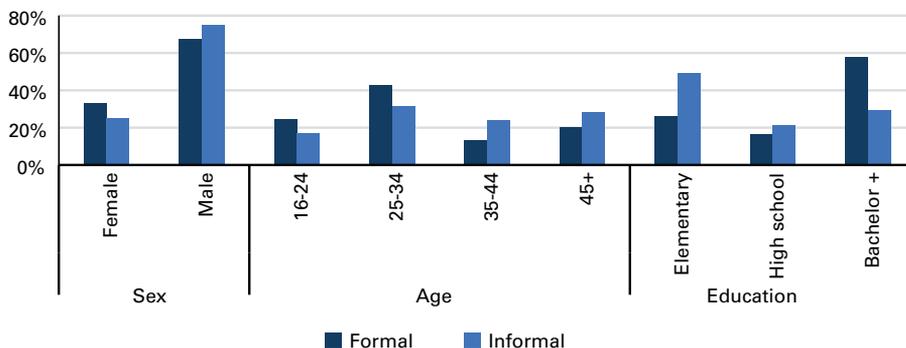
Source: Authors' calculations using 2016 North Lebanon Household Survey

Note: Number of observation in Agriculture is too low to make robust conclusion on the distribution of the type of employment in this sector (left graph).

3. Informality

Informality dominates the labor market in the North. Among the wage employed, more than 85 percent are employed informally, that is without access to social security. This is also the case among virtually all the self-employed and employers. Formal sector employees are more educated than informal employees. More than half of those in formal employment have higher education; around 20 percent have secondary or elementary education or below. Yet, among informal employees, half of workers have elementary education or less. (Figure 10.) Given the relatively higher educational attainment of youth, it is not surprising that youth are more likely to be formally employed.

Figure 10: Informality by Gender, Age and Education Level

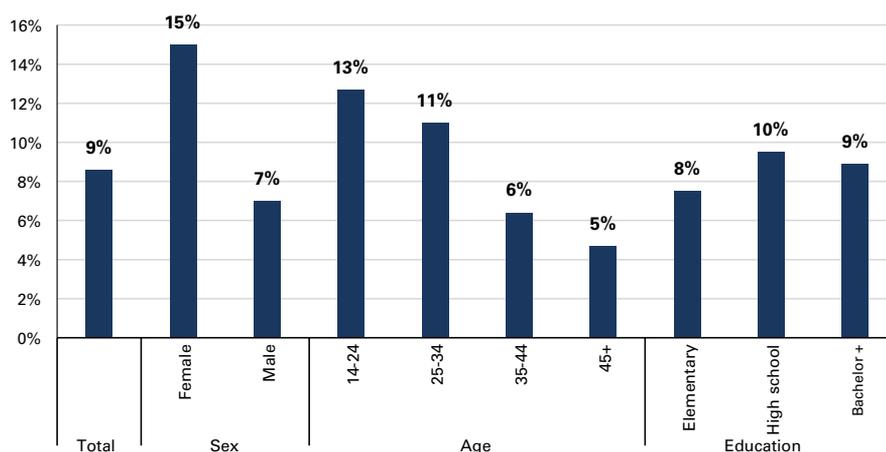


Source: Authors' calculations using 2016 North Lebanon Household Survey

4. Unemployment and Idleness

While unemployment overall is relatively low, unemployment is twice as high among women (15 versus 7 percent for men), higher among youth and slightly higher among high school graduates. Unemployment also decreases with age – from 13 percent among youth to five percent among those aged 45 and above. Ten percent of high school graduates are unemployed, compared to nine percent among those with tertiary education and eight percent among those with low levels of education. (Figure 11.)

Figure 11: Unemployment Rates by Gender, Age and Education Level



Source: Authors' calculations using 2016 North Lebanon Household Survey

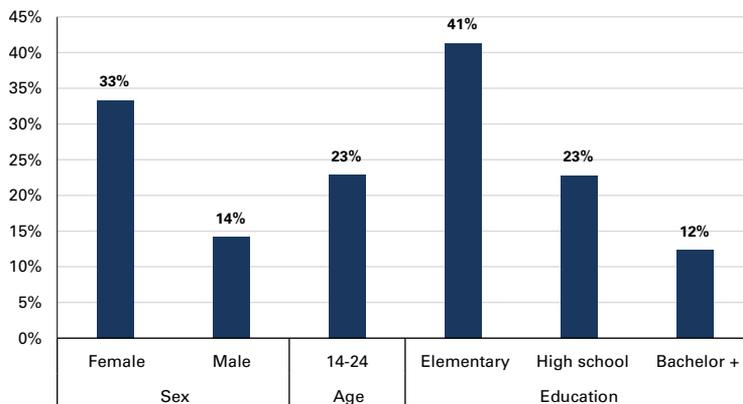
Women and youth are more likely to be out of the labor force. Controlling for a set of characteristics, women are 28 percentage points more likely to be out of the labor force. The level of education does not seem to play a role in the decision to be economically active or not. Concerning the age category, it is not surprising that younger individuals tend to be inactive since the majority are still in school. A widow is 24 percentage points less likely to be active, probably due to cultural reasons and care-taking responsibilities. Conversely, the male head of household is less likely to be inactive by the same margin at 25 percentage points. (See Table 4.)

Idleness is high among youth. While a large share of youth aged between 15 and 24 are studying, more than one in five is not in the labor force, education, nor training (NEET). (Figure 12.) This rate is even higher among young females (33 percent) compared to men (14 percent), and among low educated youth (41 percent).

Joblessness has worsened over time among Lebanese youth, particularly males. Among this population group, joblessness in areas with less than five percent of Syrian refugees decreased from 27 to 20 percent over the period 2010-2015. It

increased significantly, on average, from 10 to 36 percent over the same period in regions with more than 20 percent Syrian refugees.¹² There are no significant changes in joblessness among adult men in areas with a high prevalence of Syrian refugees compared to those with low prevalence.

Figure 12: Share of Youth Not in Employment, Education nor Training (NEET) by Gender, Age, and Education Levels



Source: Authors' calculations using 2016 North Lebanon Household Survey

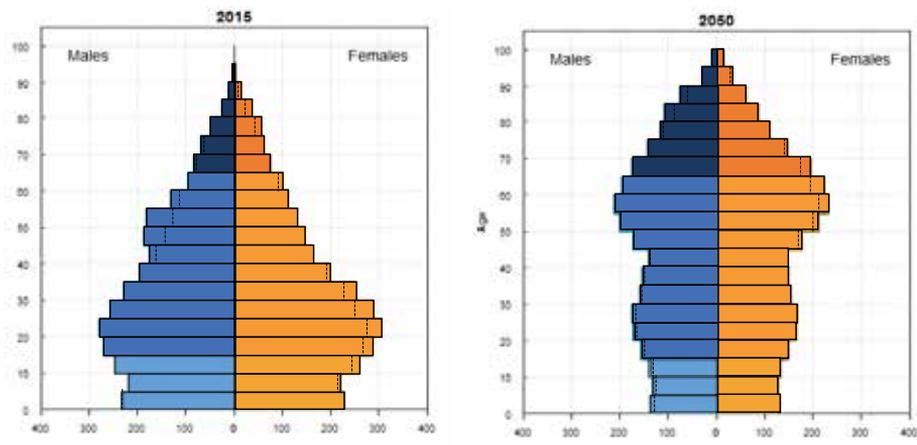
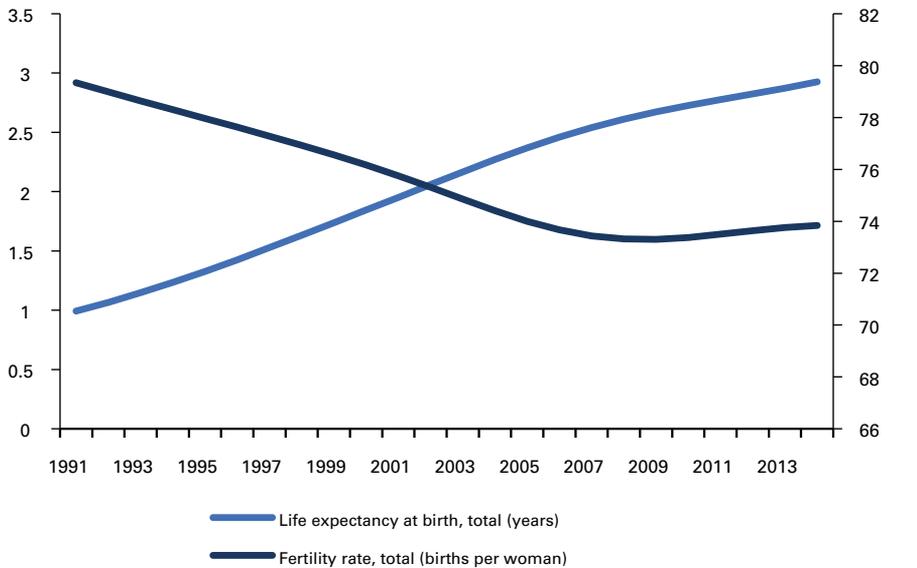
C. Summary: Quantifying the Jobs Challenge

Drawing on the labor market dynamics outlined above, this section quantifies the number of jobs needed to close the gaps in current labor market outcomes. It first discusses the annual job creation requirement based on demographic trends to maintain steady-state outcomes. Then, it assesses the scale of the gap in terms of overall employment and the availability of waged jobs.

1. *Demographics and labor force growth*

Demographic trends have important implications in shaping the labor market. Fertility rates dropped significantly in the 1990s and early 2000s in Lebanon. They started increasing again in the 2010s, reaching 1.7 children per woman in 2014. Life expectancy has also increased from 70 to 79 in two decades. These trends will have significant implications on the labor force (Figure 13). In the short-to-medium term, it will mean a somewhat reduced rate of new labor force entry in the coming decade, slightly lowering pressure on the labor market. The current population in the North, not including the Syrian refugees, is approximately one million.

Figure 13: Trend in Fertility and Life Expectancy, Population Pyramids (2010 and 2050) in Lebanon

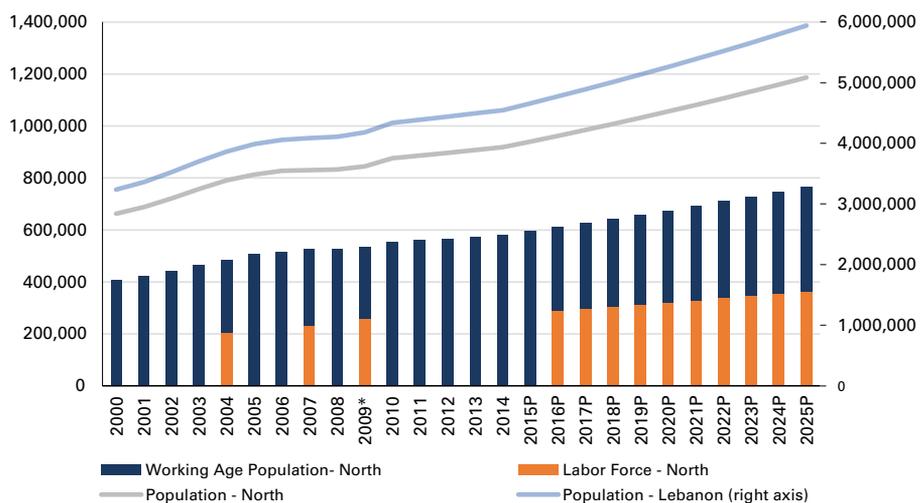


Source: Life expectancy and fertility rate from World Bank World Development Indicators. Population Pyramids: United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Prospects: The 2015 Revision.

Even with this slightly declining population rate and assuming that participation rates remain at current low levels, demographics alone will still push around 8,000 new Lebanese entrants into the labor market on average per year.¹³ Assuming that the population in Lebanon, in the North Governorate and the working age population each

continue to grow at annual compound rates of 2.5, 2.4 and 2.6 percent respectively (rates between 2000-2014), and that participation rates remain at 47 percent, the total labor force in the North is expected to increase to 362,000 people by 2025. This implies the regional economy would need to create approximately 8,000 jobs per year over the next five years and beyond, simply to maintain a steady state situation in the labor market (Figure 14).

Figure 14: Population, Working Age Population and Labor Force Trends in Lebanon and the North



Source: Central Administration of Statistics; population estimates by UN population database. Projections are based on a constant annual increase in the population, share of working age and share of residences in the North.

* Data for 2009 is based on the results of the CAS study.

2. Closing the Employment Rate and Waged Employment Gaps

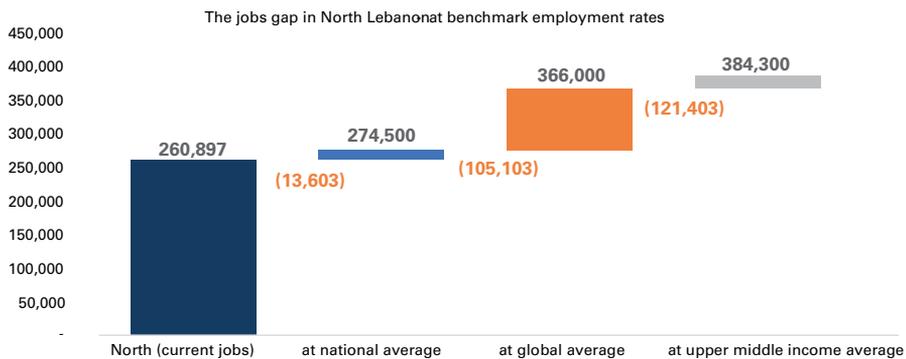
Addressing the gap in employment in North Lebanon and bringing performance in line with the national average requires substantial job creation. With an employment rate of just 42.8 percent of the working age population, the North region is behind the rest of Lebanon, which at 45 percent is already among the bottom 15th percentile globally.¹⁴ As Figure 15 shows, closing the gap with the national average would require almost 14,000 new jobs in the region – or around 2,800 annually if a five-year target was set to reach this goal. Reaching an employment rate above 60 percent, typical of upper middle income countries, would require more than 120,000 jobs or 24,000 per year over a five-year period.

But even this formula only addresses one component of the jobs challenge in the North. Among the relatively small share of the population that is employed, self-employment rates are exceptionally high (at 46 percent of the employed, according to

data from the Household Survey conducted). This suggests that a substantial share of the population may be forced into self-employment in the absence of available waged jobs.

Figure 16 shows that beyond the jobs required to close the employment rate gap, an additional 21,000 waged jobs (or more than 4,000 per year over five years) would need to be created to replace existing self-employment, in order to bring the region in line with the national average of 62 percent of the employed in waged jobs. To achieve the upper middle income benchmark of 64 percent would require more than 26,000 jobs.

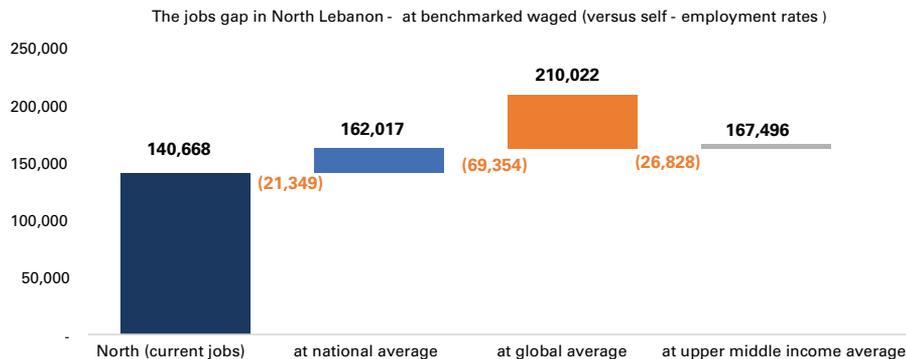
Figure 15: Quantifying the Job Creation Gap



Source: Authors' calculations and World Development Indicators (for national, global, and upper middle income averages).

Note: figures in (italics) represent cumulative jobs gap at each benchmark stage.

Figure 16: Quantifying the Waged Employment Gap



Source: World Development Indicators (for national, global, and upper middle income averages).

Note: figures in (italics) represent cumulative jobs gap at each benchmark stage.

Drawing on the labor market outcomes discussed above and the demographic characteristics of the working age population, it is possible to identify what needs to be addressed in order to face the jobs challenge in the North. Starting with the roughly 240,000 inactive population, Table 5 examines the characteristics of those for whom labor participation “activation” efforts would need to be targeted. The largest group – around 168,000 – is female adults. Almost 80 percent of this group is a partner to the male head of household and over the age of 35. The majority also has an elementary education or less, although there are 40,000 with a tertiary degree. The second key group is youth outside of education, training, and the labor force. Among the 37,000 of this group, the majority is again women who are non- “head-of-household” partners. The average education level of this group is slightly higher. Finally, another 37,000 of the inactive are adult males, the majority of which are above the age of 45 with an elementary education or less. Given these demographics, a target of reaching the national average employment by activating around 40,000 over a five-year period as suggested earlier would seem a challenging goal. However, within this group there are tens of thousands of relatively young, educated, (mainly) women who may have high potential for productive employment.

Table 5: Demographic Characteristics of Inactive Population in the North

		<i>Youth Neet</i>	<i>Adult Male</i>	<i>Adult Female</i>
Sex	Female	24,409	-	168,000
	Male	12,591	37,000	-
Age	15-24	37,000	-	-
	25-34	-	9,620	44,688
	35-44	-	3,330	39,480
	45+	-	24,050	83,832
HH Position	Head	592	28,231	8,400
	Spouse/Partner	23,865	-	132,720
	Son or Daughter	9,213	7,215	16,800
	Other	3,330	1,554	10,80
Education	Elementary or Less	16,650	23,051	90,720
	High School	12,950	7,141	36,960
	Bachelor	7400	6,808	40,320

Source: Authors’ calculations using 2016 North Lebanon Household Survey

Table 6 summarizes the characteristics of the active labor force. While the number of unemployed is relatively small (around 22,000), they are younger and more educated than the population as a whole. This suggests a demand side problem. Yet, it also suggests it is likely that this group may be well-positioned to shift into employment with appropriate support. Turning to the self-employed and employers, both are

older and overwhelmingly male. The main difference between the two is the higher education level of employers. Overall, there are 48,000 self-employed and employers with at least a secondary education.

Table 6: Demographic Characteristics of Active Labor Force in the North

		<i>Wage Employed</i>	<i>Self Employed</i>	<i>Employer</i>	<i>Unemployed</i>
Sex	Female	30,339	4,363	4,386	7,909
	Male	94,660	51,636	46,614	15,091
Age	15-24	39,838	6,556	3,366	8,665
	25-34	34,425	8,204	12,884	7,607
	35-44	19,143	11,394	10,107	2,637
	45+	31,593	29,845	24,642	4,091
Education	Elementary or Less	53,122	34,534	24,164	9,589
	High School	32,659	10,787	11,795	6,164
	Bachelor	39,219	10,679	15,040	7,246

Source: Authors' calculations using 2016 North Lebanon Household Survey

CHAPTER 3

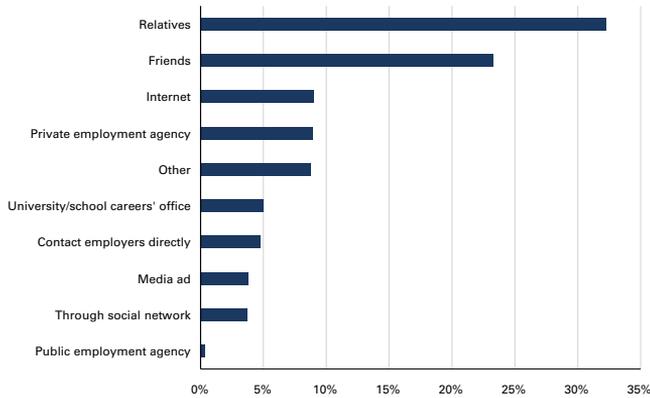
Labor Supply – The Access, Skills, and Skills Provider Ecosystem for Jobs in the North

A. Accessing Employment

Results from the Household Survey¹⁵ highlight a number of potential factors impeding labor market supply from income-earning opportunities. These encompass impediments to wage and self-employment labor, as well as cultural and other institutional factors (including job search methods) that result in labor market inactivity. These factors are considered, in turn, below.

The methods used by workers to search for jobs and by employers to fill vacancies are important determinants in labor market outcomes. In North Lebanon, private networks are by far the most prevalent mechanism. In North Lebanon, over half of the unemployed search for jobs through personal networks – 32 percent through relatives and 23 percent through friends (Figure 17) and only nine percent use the internet. The public employment office – the National Employment Office (NEO) – hardly plays any role. Therefore, individuals without useful social contacts (often young workers in low income families) might be less likely to access the best jobs, even if they have the right qualifications.

Figure 17: Methods to Search for a Job



Source: Authors' calculations using 2016 North Lebanon Household Survey

There are no major preferences among workers between self- and wage-employment. The data reflects that 55 percent of workers would rather be wage-employees and cite “less responsibility” (32 percent) and “higher income levels” (27 percent) as the two primary reasons, followed by access to social security (22 percent) and greater job flexibility (10 percent). As for the remaining 45 percent who would rather be self-employed, the vast majority (88 percent) explained this preference to be due to high flexibility, followed by higher income levels and better prospects but these two reasons seem to be less important. (Figure 18 to 20)

Figure 18: Preferences for Wage or Self-Employment

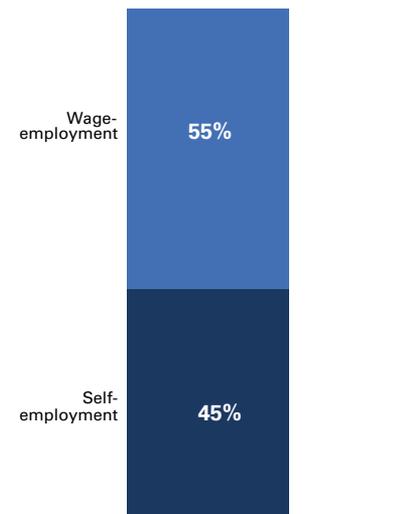


Figure 19: Reasons for Preference for Wage-Employment

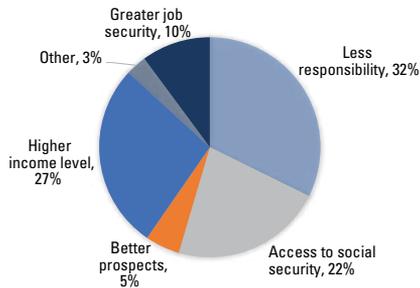
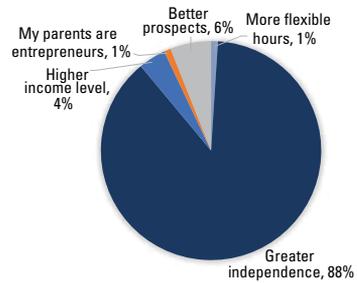


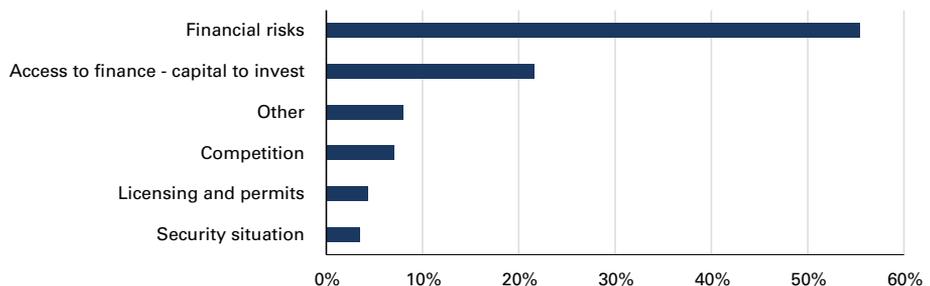
Figure 20: Reasons for Preference for Self-Employment



Source: Authors’ calculations using 2016 North Lebanon Household Survey

The main constraints, revealed in the Household Survey, faced in establishing or expanding a business relate to access to finance/credit and financial risks. In the Household Survey, 55 percent of workers identified “financial risks” and another 22 percent cited “access to finance/capital to invest” as the main constraints to starting their own business. Among those already self-employed (Figure 21), 42 percent would like to expand their business. However, 72 percent face constraints in doing so. The leading cited constraints are “financial risks” (55%) and lack of “access to finance/capital to invest” (22 percent). The challenge of accessing capital or finance can, in part, be related to the low capacity to develop robust business plans and all the necessary documentation when applying for a loan, as the majority of the active population only has primary education or below.

Figure 21: Challenges to Self-Employment



Source: Authors’ calculations using 2016 North Lebanon Household Survey

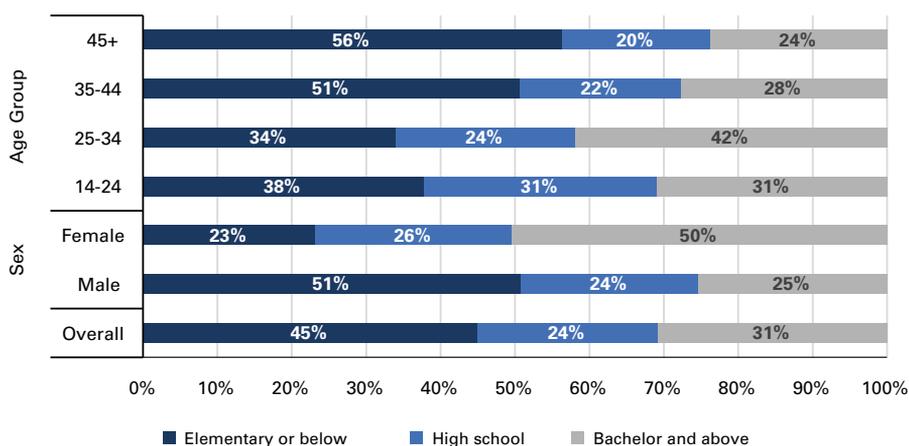
B. Education and Skills Levels in North Lebanon

Skills levels and acquisition are important factors in employment outcomes and productivity. Unemployment and low productivity employment is often attributable to skill mis-matches relative to the requirements of available job openings. In many countries, education and training systems often fail to close this gap due to poor quality and/or weak labor market relevance. This leaves workers ill-prepared for the labor market. This analysis aims to measure the level and type of skills of workers, both employed and unemployed, in North Lebanon. The aim is to identify accurately the gaps between the skills available and those needed by the selected value chains and to support the creation of specific jobs most suited to the skills available.

1. Education

The majority of the active population has low levels of education, especially among adults. The survey reveals 45 percent of the active population has elementary education or below, while 31 percent have completed tertiary education. Youth and adults less than age 34 achieve higher levels of education with 31 percent (youth) and 42 percent (adults), respectively, having a bachelor degree or higher. This decreases with age to reach only 24 percent among those aged 45 and above. Among this latter age category, more than half have only primary education or below. There are significant differences in education attainment by gender – half of women have completed tertiary education compared to just 25 percent of men (Figure 22).

Figure 22: Active Population by Level of Education, Age and Gender



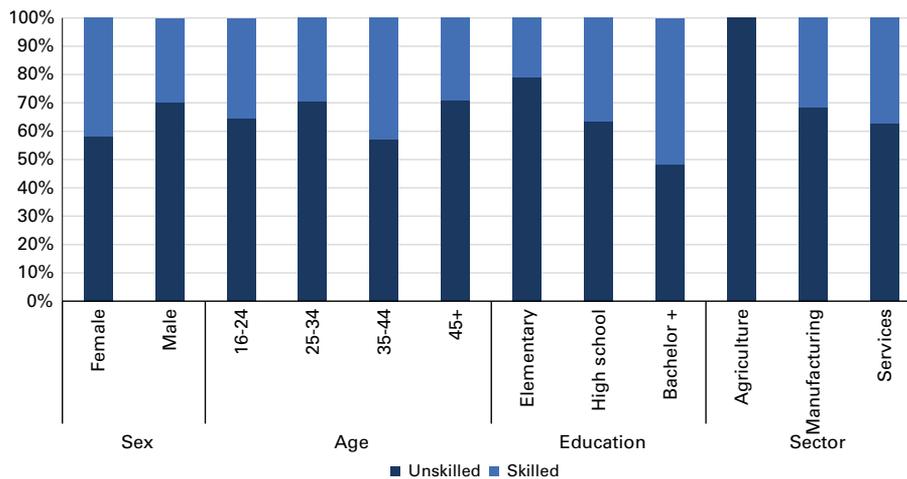
Source: Authors' calculations using 2016 North Lebanon Household Survey

Thirty-five percent of the active population with secondary education and above have completed their degree in the field of education; the rest of the field of study differs by gender.

2. Profile of Workers by Skill Levels

The majority of workers are in unskilled occupations, but women and workers in the services sector are more likely to be in skilled occupations.¹⁶ The survey reveals 42 percent of women are doing skilled work compared to 30 percent of men. Not surprisingly, a higher share of workers with tertiary education are in skilled occupations (52 percent) compared to those with primary education or below (21 percent). There are slightly more skilled workers in the services sector (37 percent) compared to the wholesale and retail trade sector (32 percent). (Figure 25.)

Figure 23: Workers by skills level

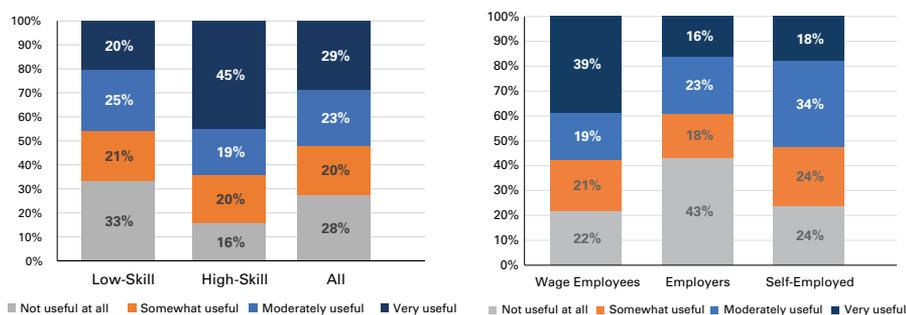


Source: Authors' calculations using 2016 North Lebanon Household Survey

C. The Skills Mismatch

1. Current Situation

Skills mismatches¹⁷ are common, particularly among low-skilled workers and employers. Consequently, 48 percent of workers report to have an education degree or studies that do not match at all, or only somewhat, those required by the job.

Figure 24: Education Level Mismatch by Skill Levels and Type of Employment

Source: Authors' calculations using 2016 North Lebanon Household Survey

Low-skilled workers reported a higher level of mismatch (54 percent) than high-skilled workers (36 percent). Additionally, 61 percent of employers reported a high mismatch between their education attainment and the job held (Figure 24). This rate is 48 and 43 percent among the self-employed and wage employees, respectively. Mismatches at the lower-skilled end suggest technical skills, over more traditional degree and professional training, to be a priority.

2. Measuring Skills in a Multi-Dimensional Way

To obtain further perspective on the skills base in North Lebanon and the implications in terms of potential areas for job initiatives, skills were also measured on a multi-dimensional level. This entails assessing the skill content embedded in the type of tasks performed for a given occupation.¹⁸ The best way to assess skills information is to unbundle the qualities required to perform “tasks” at work (for the employed) or in past jobs (specifically, for the unemployed). The “task approach” methodology breaks down a job in a series of tasks that can be mapped to a particular type of skill – or skills bracket. The proposed methodology thus allows for a multi-dimensional notion of skills. The self-reported answers as to the frequency or intensity of each of the tasks performed were then used to infer the skill levels of workers in North Lebanon.

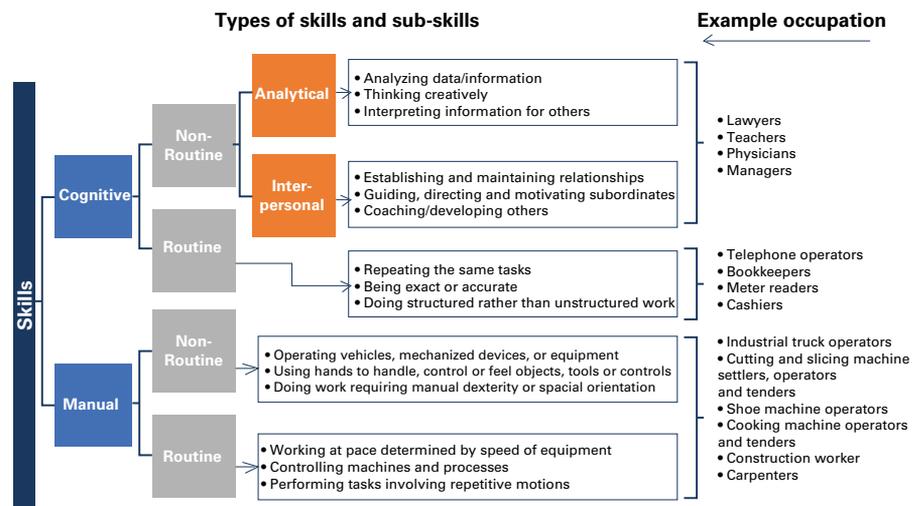
Five skill brackets were constructed to analyze the skills base in North Lebanon. This approach was initially developed by Autor, Levy and Murnane (2003) and later updated by Acemoglu and Autor (2010).¹⁹ The skills include:

- i. *non-routine cognitive analytical*: analyzing data/information, thinking creatively and interpreting information for others – examples of occupations are researchers and artists;
- ii. *non-routine cognitive interpersonal*: establishing and maintaining personal relationships, guiding and managing people, coaching and developing others – examples of occupations are managers, teachers and sales representatives;
- iii. *routine cognitive*: abstract activities that require repeating the same tasks, being

- accurate or exact, and doing structured work – examples of occupations are telephone operators, bookkeepers, and cashiers;
- iv. *non-routine manual*: operating vehicles/equipment, using hands to handle/control objectives/tools/controls, or any other manual tasks difficult for machines to perform as they require dexterity and spatial orientation – examples of occupations are truck drivers and janitorial services;
 - v. *routine manual*: working at pace determined by speed of equipment, controlling machines and processes or any other manual tasks that are intensive in repetitive, exact, and structured movements – example of occupations are machine operators and repetitive assembly.

Figure 27 provides an overview of the skills brackets, sub-skills and examples of corresponding occupations related to those skills. (Further technical details of this methodology are provided in the accompanying technical report.)

Figure 25: Types of Skills and Sub-Skills



Source: World Bank Group (2013). World Development Report: Jobs. Washington DC.

As previously mentioned, the “task approach” is used to infer the level of self-reported skills of workers, according to speed and repetitiveness, whether they are manual, analytical or interpersonal. Skill indices were calculated at the individual level and the analysis reveals significant differences in the skill mix used by workers, depending on gender, education level, age group and type of employment. The main results are:

- i. *By gender*: women and men tend to perform different tasks in their jobs. Men tend to use more cognitive interpersonal and manual non-routine skills than

- women. Women tend to use more cognitive routine skills.
- ii. *By education level:* workers with high levels of education use more cognitive analytical and interpersonal skills than those with lower levels of education. Cognitive routine and manual skills are more often part of the job for workers with secondary education or below.
 - iii. *By age group:* youth (age 16-24) use more cognitive routine skills than the average worker, while adults between 35-44 use cognitive analytical and interpersonal skills, as well as manual non-routine skills more often.
 - iv. *By employment type:* employees seem to be performing more cognitive routine tasks than average workers, in line with the majority of wage-employees working in the service sector. Self-employed use more manual skills (both routine and non-routine), also in line with the type of tasks required in the wholesale and retail sector.

Correlations among the five different skills brackets provide new insights into skill characteristics of different groups (see Table 7). In North Lebanon, analytical skills are positively correlated with interpersonal and manual non-routine skills but negatively correlated with routine skills (cognitive and manual). Interpersonal skills are highly correlated with manual non-routine and to a lesser extent with manual routine. Routine and non-routine manual skills are correlated. These correlations suggest that the skill dimensions are certainly not independent from one another. In other words, there is a certain degree of heterogeneity in the type of skills used to perform a job; i.e. workers do not use only one type of skill but a combination of skills. For example, workers using cognitive interpersonal skills to perform their job usually also use their analytical skills, given the positive correlation among those (Table 7). Therefore, if training is to be offered to certain occupations, it is important to provide a combination of technical, cognitive, and non-cognitive skills, as all those skills are needed for a given job.

Table 7: Correlation Between Skill Indices at the Individual Level

		<i>Cognitive</i>			<i>Manual</i>	
		<i>Analytical</i>	<i>Interpersonal</i>	<i>Routine</i>	<i>Non-routine</i>	<i>Routine</i>
Cognitive	Analytical	1				
	Interpersonal	0,3476	1			
	Routine	-0,0489	-0,0401	1		
Manual	Non-routine	0,2803	0,4889	-0,048	1	
	Routine	-0,0457	0,2617	0,1212	0,3338	1

Source: Authors' calculations using 2016 North Lebanon Household Surveya

D. Training and Skills Providers

The availability of skills training services to cater to demand and address the mismatches that exist in the North is another key factor. To better ascertain the market for service providers, a stock-taking was undertaken, which indicated the following in terms of registered education and skills training providers in the North:

- 10 Universities, including 1 public university
- 98 Technical Institutes: 41 public, 57 private
- Certified Trainings offered by Ministries of agriculture, labor and social affairs.
- Training Providers (NGOs, INGOs)
- 634 Schools (K-12): 347 public, 77 semi-public, 210 private

This analysis indicated that there were some 55,600 registered students²⁰ for certified degrees at the bachelor and technical levels in the North (2014/2015). At the bachelor level, the total number of registered students is 18,170.²¹ Within this group, 36 percent are female. At the technical degree level, the total number of students is 37,428, of which 44 percent are female, divided across public and private institutes. These numbers exclude those studying at unlicensed institutions. It is worth noting, while bachelor level students in the North constitute approximately ten percent of the national total, students at the vocational level represent approximately 40 percent of the registered total in the country. This suggests the region may have a comparative advantage in terms of the vocational training level of its workforce. Additionally, as of 2015, there were 4,970 students registered in short-term training courses in the North, excluding those registered in the numerous trainings offered by NGOs and INGOs. A number of conclusions about this landscape can be drawn from the assessment conducted:

- *Relevant specializations:* Many of the specializations required to support the growth of key value chains, such as in the agribusiness and waste management sectors, are offered in the North, with some key exceptions in technical specializations. A deeper review of the curricula would be needed to identify what exactly the current programs cover and what they lack for specific value chains.
- *Collaboration with the private sector:* There is limited private sector coordination, including on curricula amendments. Interviews with training providers indicate that public providers, and even private technical institutes, do not partner with the private sector. Also, changes to the curricula are tightly regulated by the government. Insofar as it takes place, it is limited to the private universities.
- *Financial access:* Private education is quite expensive whether at the bachelor level or at the technical level. Providers confirmed the survey results that the main reason behind dropouts is financial challenges. The exception to

this is agribusiness specializations at the technical level. Here, the Ministry of Agriculture provides all education at this level, covers the tuition fees and provides subsistence subsidy.

E. Conclusions on Labor Market and Skills

The above findings provide what is at times a stark picture of the labor market in North Lebanon. It is characterized by substantial informality that potentially amounts to more than 90 percent of all those employed, which is in itself just 38 percent of the working age population. It is further indicative of a fragile and vulnerable economy, one in which youth and women are highly disadvantaged, as summarized in Box 2:

Box 2: Summary of Key Labor Market Outcomes by Gender and Youth

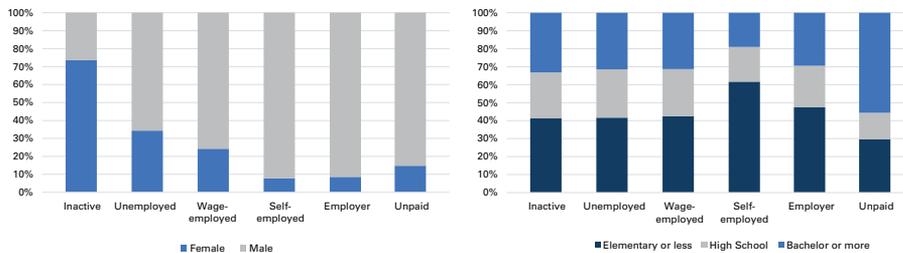
Gender

There are significant differences in key labor market indicators between men and women. This points to the need for labor policies and programs to be tailored to address the specific and different barriers to entry between men and women. Individuals may be able to work but face nonmarket constraints to joining the labor force (e.g. caretaking duties, lack of transportation to the work place, ability to decide to work). Understanding those constraints by gender would be crucial to improve labor market outcomes for both men and women. The analysis of the 2016 household level survey in North Lebanon reveals the following:

- Eighty percent of women do not participate in the labor market (compared to 73 percent among working age men), primarily for due to home duties (64 percent reported it as the primary reason).
- In line with low activity rate, 68 percent of the male working age population are employed, compared to only 17 percent among women.
- Exacerbating the very low share of working age women participating in the labor force, the unemployment rate is twice as high among women (15 percent) compared to men (7 percent).
- The majority of active women are wage employees. While self-employment is more prevalent among men, 80 percent of women are wage employees. Only 20 percent are self-employed or employers, while the latter is 40 percent among men.
- Women have higher education attainment than men, as half of active women have completed tertiary education compared to 25 percent of men. Consistent with higher education attainment, women represent a higher share of skilled labor - 42 percent of women are skilled compared to 30 percent among men.

box continues next page

- In line with the above findings and controlling for a set of characteristics, women are more likely to be out of the labor force (28 percentage points). If active, women are more likely to work as wage employees (22 percentage points) compared to men.
- Women and men tend to perform different tasks in their jobs - men tend to use more cognitive interpersonal and manual non-routine skills than women, while women tend to use more cognitive routine skills.



Youth

Age plays an important factor in the types of jobs and skills a worker attains. Although the active youth tend to be more educated than the older generation, it also has a high rate of idleness. The labor market indicators by age help identify the constraints faced by youth in accessing the labor market. Focusing on the youth age group, the analysis of the 2016 household level survey in North Lebanon reveals the following results:

- One-third of the total youth population within the working age is employed, compared to 50 percent among adults. The rest are either in education (around 40 percent), unemployed or inactive. Youth still in education is the main reason behind the inactivity.
- There is a high rate of idleness among youth as 23 percent of the youth aged below 25 are not in Education, Employment or Training (NEETs). This rate is even higher among young females (one third) compared to men (14 percent), and among low educated youth (41 percent).
- Youth have the highest rate of wage employment with an 80 percent share. Whereas, only 49 percent of workers above age 45 are wage employees.
- Youth seem to have achieved a higher level of education, with 31 percent having a bachelor degree or higher compared to 24 percent for adults older than 45.
- Formal employment is more prevalent among youth, possibly due to their higher education attainment.

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- Despite the general low level of skills, youth seem to be more skilled than their older counterparts. Sixty-five percent of the youth labor are unskilled compared to 71 percent of adults older than 45.
 - The skills used by youth (age 16-24) tend to lean toward routine-based work such as cognitive routine skills and manual routine. Whereas, adults between 35-44 use cognitive analytical and interpersonal skills, as well as manual non-routine skills, more often.
-

One of the most striking findings is the relatively limited mechanisms through which supply and demand sides of the market actually work together to address constraints. Barriers to entry into the labor force come in the form of poor job search capacities. People largely rely on personal networks to seek jobs. Training institutes show little engagement with the private sector pertaining to job opportunities and requirements. Furthermore, there is hardly any coordination on curricula. Given the significant levels of skills mismatch cited in the survey, this suggests a seriously short-sighted approach by the private sector and training institutions.

Despite these challenges, there are some positive aspects of the labor market in the North on which to build. First, labor market participants show significant flexibility. There is a readiness to switch between wage and self-employment depending on market conditions, no doubt out of economic necessity. Yet, such flexibility offers an important mechanism for managing labor market risks. Second, while the labor force as a whole has low levels of education, youth and women in particular are relatively well educated. Moreover, there are training and skills institutions in the region that appear to have a core of relevant training products. This is something upon which to build. This is particularly true for vocational skills which will be critical for the region to develop potential in key value chains.

CHAPTER 4

Labor Demand – The Investment Climate and Trade Dynamics for Job Creation

A. Firms and Job Creation in North Lebanon

With a labor market providing just one salaried job for every five working age adults, the main jobs challenge in the North is almost certainly on the demand side. Put simply - not enough firms are investing and hiring. The previous section described a number of gaps on the supply side of the labor market, both in terms of overall education, skills mismatches and, perhaps most importantly, social and cultural barriers to participation. Yet, there remains tens of thousands of relatively educated, working age adults outside of the labor force and more still that are stuck in low quality jobs. This suggests a gap in job creation by the private sector and a market dominated by small and micro businesses, with limited growth among SMEs, very few large employers, and almost no significant foreign investment.

On average, every nine out of ten jobs are created by the private sector.²² This is the case in Lebanon. In contrast to much of the Middle East, where public sector formal employment predominates, the Lebanese private sector is the provider of 87 percent of the total employment (Figure 28). Yet, while jobs in North Lebanon are dominated by the private sector, the public sector, share at 20 percent, is higher than in the rest of the country. Figure 29 provides the breakdown of private sector jobs across sectors for North Lebanon and the country as a whole.

Figure 26: Share of Public and Private Jobs

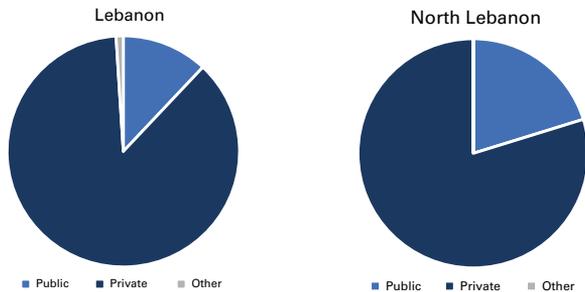
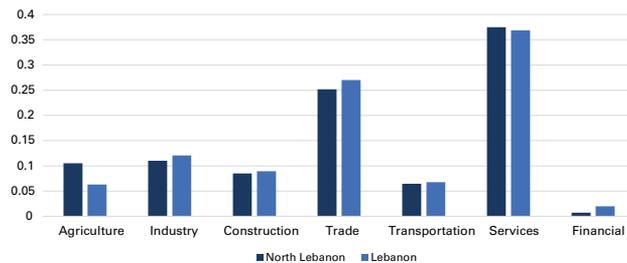


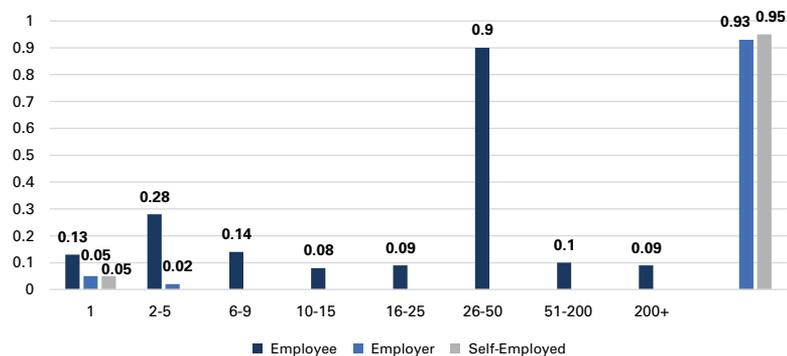
Figure 27: Share of Employment by Sector



Source: Multiple indicator cluster survey 2009 – CAS

Data from the household survey (Figure 30) indicates that the majority of wage employees (54 percent) work in firms with less than nine workers, out of which 41 percent in firms less than five workers. Factoring in the large share of workers who are self-employed, the data suggests that almost half the working population in the North works in establishments with no other employees, and well over 60 percent work in establishments with less than five employees (i.e. micro businesses).

Figure 28: Distribution of Employed by Firm Size

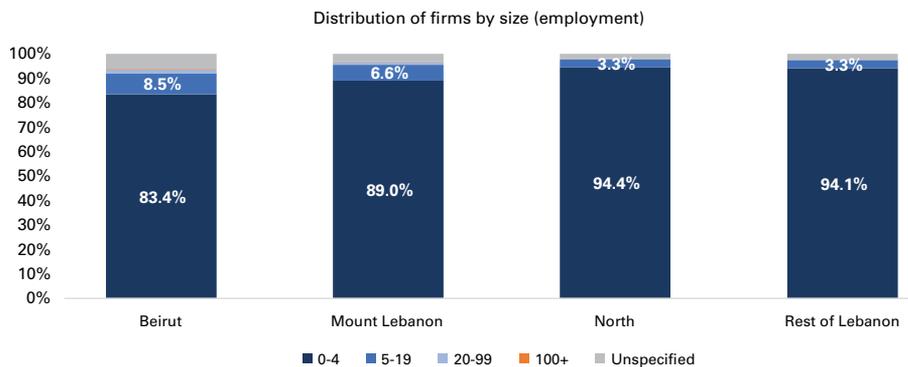


Source: Authors' calculations using 2016 North Lebanon Household Survey

Note: The majority of employers and self-employed did not respond to this question in the survey. It is understood, in most cases, this is because the question was skipped as they had no regular staff.

This finding is supported by available data on the size distribution of firms in Lebanon which indicates that almost 95 percent of establishments in the North have less than five employees, and 98 percent have fewer than twenty. While no recent data is available through national statistical sources, a 2004 census highlights significant differences in the firm size structure in Beirut and Mount Lebanon versus the North and other regions (Figure 29). Certainly, things will have changed over a decade, but it is unlikely that the broad structure will vary much. In fact, no new large employers have established in North Lebanon for some time. The census also reveals that just 15 percent of establishments in the North were registered (formal) compared with 37 percent in Mount Lebanon and 50 percent in Beirut. Again, this is indicative of a small-scale private sector that is unlikely to be oriented toward growth and job creation.

Figure 29: Distribution of Firms by Size (Employees) and Region



Source: Census of Buildings Dwellings and Establishments (2004)

A look at the largest employers in the North reinforces the image of a small-scale private sector. Data taken from various national employment directories²³ indicates that only six of the top 20 employers in the North are private sector companies – the rest being mostly hospitals, schools, and the electricity company. The largest company in the region – Hallab (a company producing sweets) – is a significant job creator, employing around 500. Beyond this, however, no private sector company employs above 200 workers and just five employ 100 or more. These include companies in food processing, tourism, textiles, and ICT.

Finally, available data suggests that major investments are highly concentrated in Mount Lebanon, with very limited activity in the North. Data from 2013 on industrial permits issued by the Industry General Directorate and required for large investments, indicates that Mount Lebanon accounted for 60 percent of all permits issued for construction and new investments. Only 17 of 285 permits issued in 2013 (six percent) went to investments in the North.

All of this gives a picture of a region where the private sector is insufficiently large and dynamic to generate the scale of employment required to provide adequate quality jobs for the labor force. In fact, the picture of the North shows an extreme case of what is already defined as the demand side problem for the country overall. What are the factors driving this and to what degree is the situation in the North different from the national picture? More importantly, are there specific barriers in the investment and business operating environment that, if addressed, could unlock investment and job creation in the North? The remainder of this section assesses the climate for trade and investment in Lebanon, including a focus on specific factors in the North.

B. The State of Trade Competitiveness in Lebanon

1. The Trade Sector and Jobs

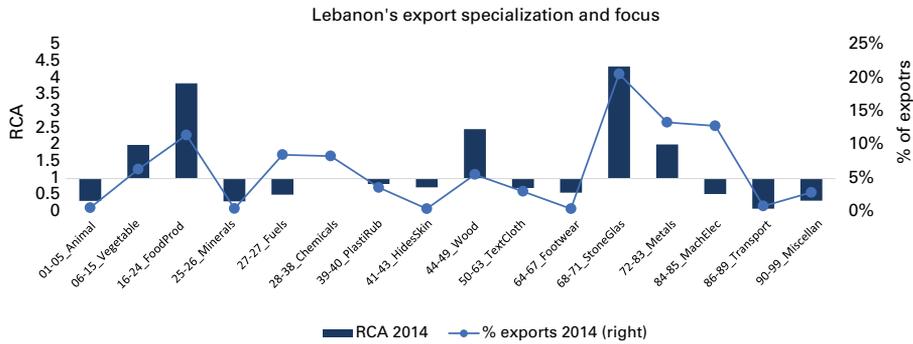
Expanding existing firms and attracting new ones in North Lebanon will rely on firms in the regional economy serving larger markets. Trade, therefore, will play a critical role in finding a sustainable solution to the jobs challenge. For a small economy like Lebanon with a limited domestic market, international trade – including both regional and global markets – should be a key vehicle for raising firm productivity and creating high-value jobs. Well positioned geographically, Lebanon borders the sea and enjoys close proximity to larger markets - notably Turkey, Egypt, and the European Union (EU). While Lebanon is a reasonably open economy, with trade comprising about 40 percent of GDP, it runs a large trade deficit. Goods exports account for just 11.2 of GDP, around half the regional average. This ranks Lebanon among the bottom 15 percent of countries globally.

Understanding the drivers of weak export performance is important as exporting firms are a significant contributor to jobs across MENA, including Lebanon. For a number of MENA countries, firms that export ten percent or more of their output provide the majority of the jobs.²⁴ For Lebanon, 58 percent of the jobs are provided by the firms that export ten percent or more. Thus, the nature and content of current exports, as well as the outlook for Lebanon's export potential, would have significant bearing on the nature and future job prospects in Lebanon.

2. Trade Performance and Investment in Lebanon and North Lebanon

Lebanon's trade structure aligns well with the comparative advantages of the North. The index of revealed comparative advantage (RCA) indicates the sectors in which Lebanon's share of exports exceeds the global export share of the same sector, suggesting that these are the areas in which Lebanon has a comparative advantage. Among the sectors in which Lebanon has the strongest RCA are vegetables, food processing, and wood processing, precisely those sectors in which the North is well-positioned (Figure 32).

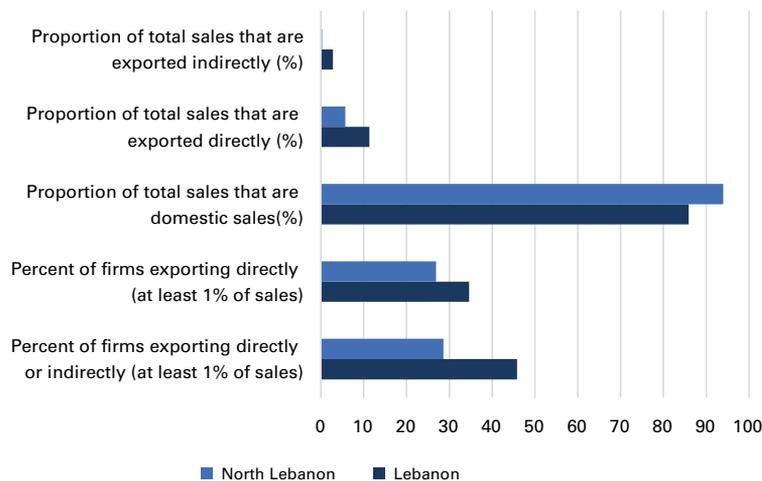
Figure 30: Lebanon's Export Share Vis-a-Vis its Comparative Advantage



Source: Authors calculations based on data from UN Comtrade via WITS

Despite this alignment, firms in the North play a limited role in Lebanon’s export sector. At a national level, only a small share of Lebanese firms export. According to data from the World Bank Enterprise Surveys, 68 percent of Tunisian and 54 percent of Jordanian firms export ten percent or more of their output compared to just 42 percent in Lebanon. Export propensity is even lower in the North, just 29 percent of firms export directly or indirectly at least one percent of their sales compared with 46 percent nationally (Figure 31). Also, the share of sales accounted for by direct exports for firms in the North is only half the level in the country overall.

Figure 31: Share of Exporting Firms

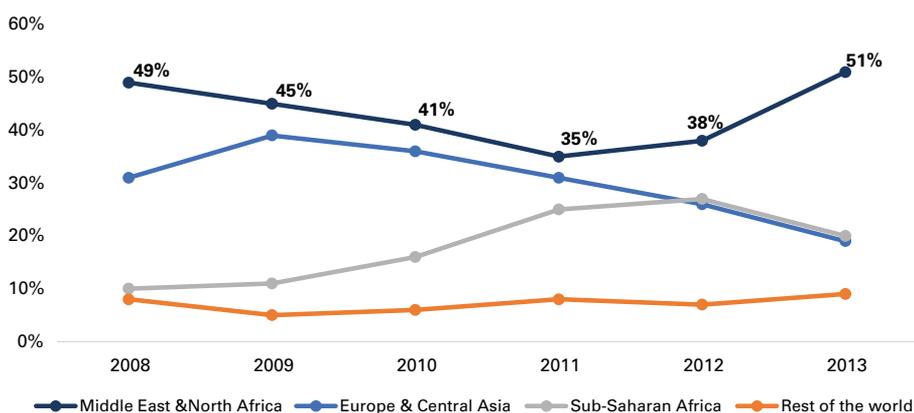


Source: World Bank Enterprise Survey, Lebanon (2013)

Lebanon has also experienced a decline in export volume due to the disruption of

traditional land export routes as a result of the Syrian crisis which is likely to have had a particularly negative impact on exporters in the North. After a period of strong relative growth, Lebanese exports slowed in recent years with average export growth of close to minus one percent during the period 2012-2014. Over half of Lebanon’s total export goes to the MENA region. Declining exports to this region are attributable in part to the Syrian crisis. Due to recent oil price declines, there is also a threat of further reduced demand from a number of key Gulf Cooperation Council (GCC) trading partners. Notwithstanding these negative regional market developments, the current decreasing export volume is characterized by a growing share to the MENA region since 2011, in part due to declines in exports to the EU since 2009 (Figure 32).

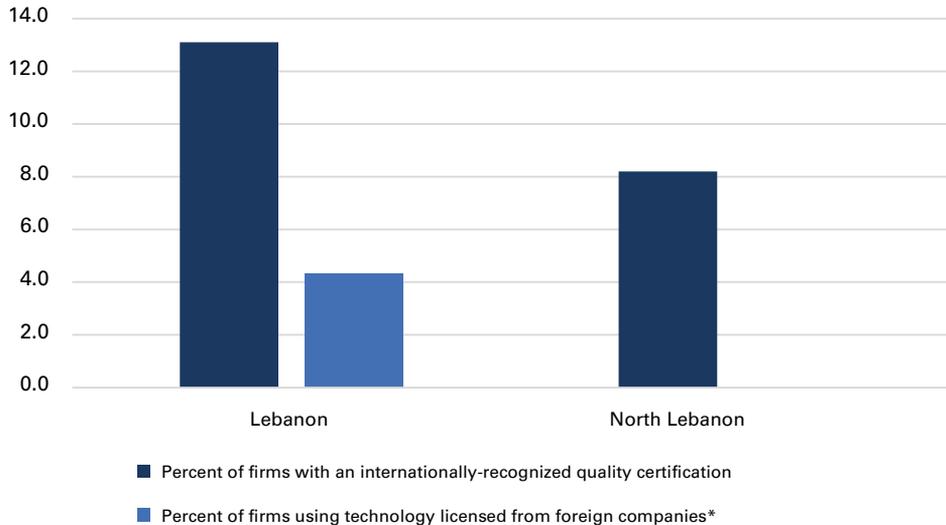
Figure 32: Lebanon's Export Share by Region, 2008-2013



Source: UN Comtrade via WITS

A salient factor behind Lebanon’s weak export competitiveness in Europe is the lack of quality standards. The majority of Lebanese firms do not have the capacity or means to meet the quality standards that would be required to enter into the EU and other high-value markets. This situation is even worse in the North. According to the World Bank 2013/14 Economic Survey (WBES), only 13 percent firms in Lebanon seem to have an internationally recognized quality certification, while that share is only four percent in the North (Figure 35).

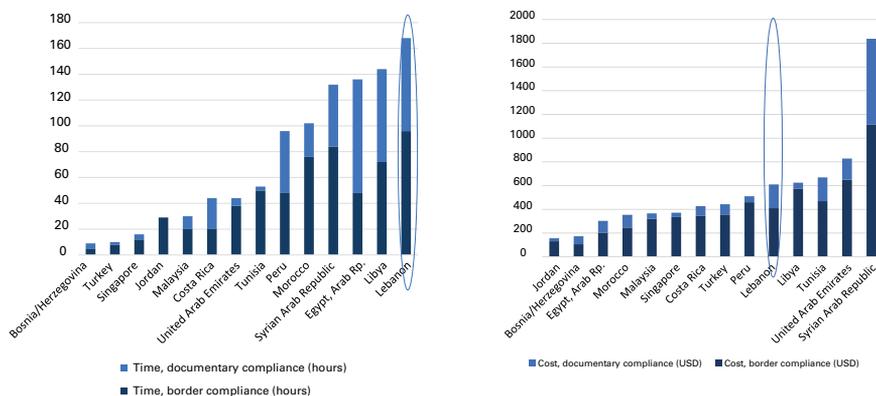
Figure 33: Incidence of the Use of Technology and Quality Certification Among Lebanese Firms



Source: World Bank Enterprise Survey, Lebanon (2013)

Finally, exporters in North Lebanon fail to take advantage of its strategic geographical position due to high costs of trade. The Tripoli Port has recently become a container port, having operated only in bulk in the past. For the North, this geographical positioning and the availability of critical trade infrastructure through the Tripoli Port is among its most important sources of comparative advantage. But, this is undermined by a weak customs and trade environment. Both border and documentary compliance are more burdensome in Lebanon than in any of the comparator countries (Figure 34). Similarly, the cost of exporting from Lebanon is also high by world standards. Not only is this detrimental to domestic investment, but also it is a major barrier to attracting foreign investment that might seek to use the North as a base for regional trade. For firms with a time-sensitive inventory model, this would be a significant deterrent to investing in Lebanon.

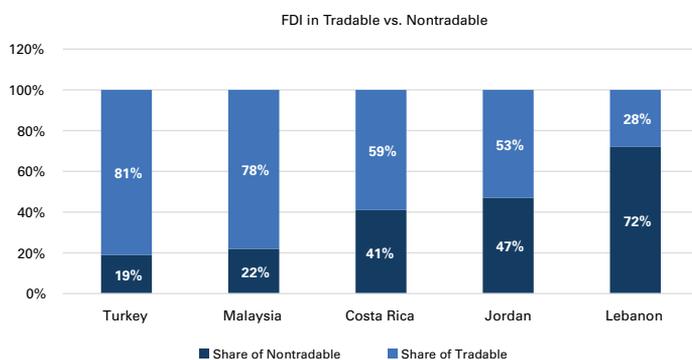
Figure 34: Doing Business 2016: Time and Cost to Export (hours for border and documentary compliance)



Source: World Bank, Doing Business (2016)

One impact of this failure to leverage sources of trade-related comparative advantage in Lebanon and the North in particular is low levels of foreign direct investment and a bias toward market-seeking investment. For a small country with scant natural resources to extract, the best option is to attract FDI to the host economy where the investor objective is to improve the global value chain distribution of its operations. This type of investment, called efficiency-seeking investment, tends to generate greater and higher paying jobs for the local population.²⁵ In comparison to benchmark countries shown in Figure 37, Lebanon has a dramatically higher share of FDI coming in non-tradable activities. Investors in tradables, particularly efficiency-seeking investors, are motivated by a low-cost, predictable, high-standard environment. The failure of Lebanon, and North Lebanon in particular, to attract this sort of investment, suggests gaps in the investment climate which are likely to impact not just foreign investors but domestic ones as well.

Figure 35: FDI in Tradable vs. Non-tradable



Source: Authors' calculations based on FDI Markets data

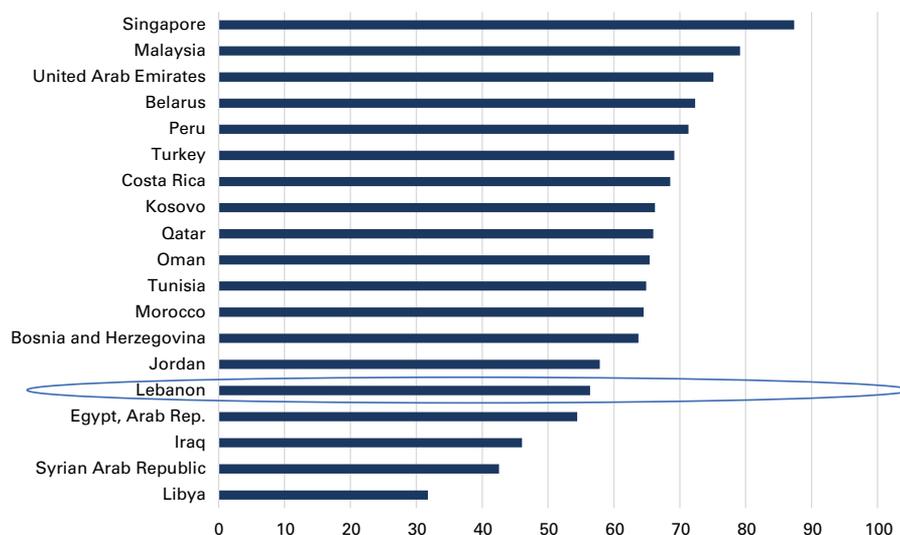
C. The State of the Investment Climate in Lebanon

Analysis in this chapter depicts firms in North Lebanon that are largely micro, informal, and predominately oriented to local markets. This suggests an investment climate that provides disincentives to job-creating investment by the private sector. There are three channels through which the investment climate can potentially create more jobs.²⁶ First, reforming barriers to entry spurs the creation of new formal firms, thus creating more and better jobs. The scope of entry barrier reforms could range from reforming the entry process to proactive government actions. Entry process reforms cover business registration, tax registration, obtaining necessary entry, and operating permits. Government efforts could focus on promoting competition and providing incentives to attract investments. Second, reforms relating to the business-operating environment (for instance efficient, predictable and transparent licensing and inspection authorities and tax and custom administration) foster firm productivity and profitability by reducing the transaction costs of doing business. Third, by making the business exit process more efficient and less costly, investment risk can be reduced. In Lebanon and the North, there are significant obstacles at all three stages of the enterprise life-cycle. This is effectively a multiple choke-hold on job creation in the economy.

1. The National Picture

Lebanon fares poorly in comparative measures of the investment climate. The World Bank Group's Doing Business indicators provide "distance from the frontier" (DTF) scores that measure how each country has improved overtime in comparison with the "frontier" (i.e., the global best practice). Based on the DTF measure of making progress in the doing business environment, compared with a set of countries that share some of Lebanon's characteristics – small market size, open economy, economic structure, conflict status or geographic region (Figure 38) – Lebanon appears to be far away from the frontier of best practices.

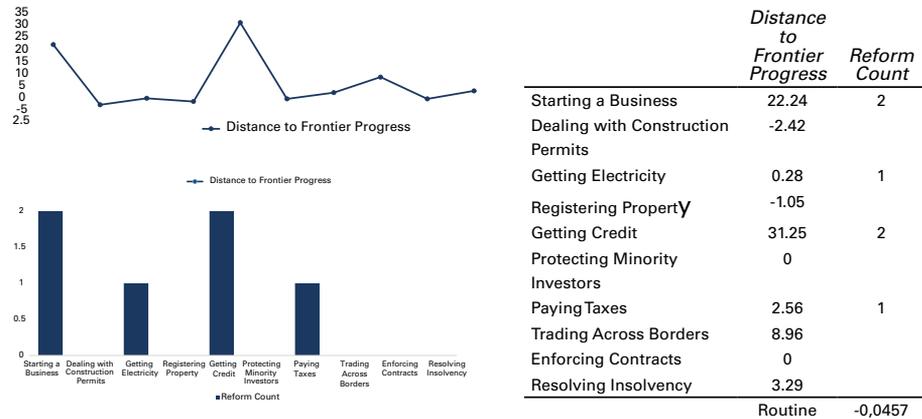
Figure 36: Distance to Frontier in Terms of Overall Doing Business



Source: World Bank, Doing Business (2016)

Other than the modest improvement in starting a business and getting credit, Lebanon has not made progress in any other Doing Business indicator since 2006. Lebanon performs poorly in eight out of ten different dimensions of the doing business life-cycle measured in the Doing Business study (Figure 39). Even in the two areas where Lebanon has made some progress – starting a business and getting credit – it remains far from the frontier. Lebanon also performs poorly among MENA comparators on a number of competitiveness pillars. Most notably this includes the World Economic Forum’s Global Competitiveness Index (GCI), in particular in respect of three key competitiveness pillars – institutions, infrastructure, and macroeconomic environment – where Lebanon’s performance falls short of the MENA regional average.

Figure 37: Lebanon's Distance to Frontier and Reform Progress on Specific Doing Business Measures



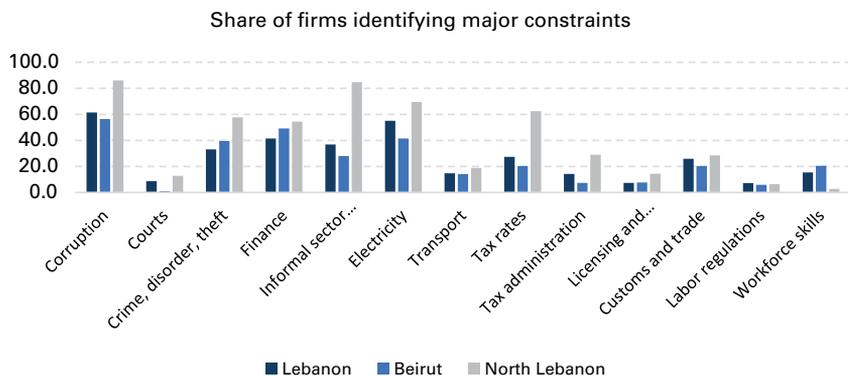
Note: Distance to Frontier (DTF) is the change in DTF points between 2006 and 2014, plus the change between 2015 and the last available year. Some countries were introduced after 2006. Getting Electricity indicator was only introduced in DB2010, so the first available year is 2010. For further methodological information go to the Distance to Frontier section in the Doing Business source linked below.

Source: Sources: Doing Business 2016 and Doing Business Reforms (world Bank Group)

2. The Investment Climate in North Lebanon

Results from the WBES highlight the key obstacles hindering formal businesses in Lebanon, principally political instability, electricity, and corruption. Many investment climate constraints are more acute in the North vis-à-vis the rest of the Lebanon. North Lebanon has fared worse than Beirut and the rest of Lebanon on almost all dimensions of the investment climate with the exception of labor regulations and skills (Figure 40). This is particularly the case in terms of informal competition, corruption, and infrastructure.

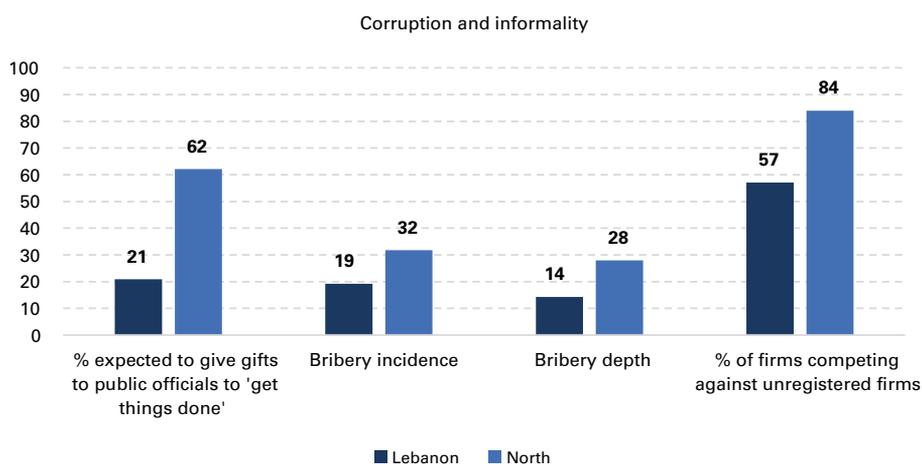
Figure 38: Investment Climate Constraints in North Lebanon vis-a-vis Rest of Lebanon



Source: World Bank Enterprise Survey, Lebanon (2013)

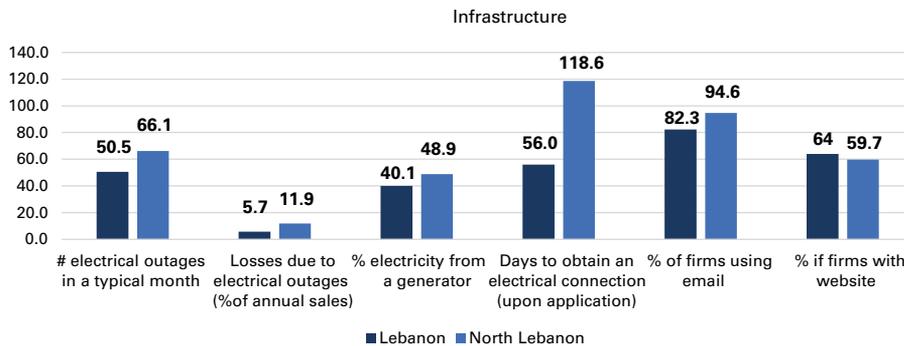
Informal competition and corruption represent major obstacles to investment in both formal and informal firms (Figure 39). In the North, 84 percent of firms indicate they compete against informal firms versus just 57 percent of firms nationally. In terms of corruption, 62 percent of firms in the region indicate they expect to pay bribes to public officials compared with 21 percent of firms for the rest of Lebanon. In the North, 32 percent of the firms have experienced at least one bribe request versus 19 percent of firms for the rest of Lebanon. The incidence of bribery seems to be particularly high regarding tax officials (34 percent) and obtaining a construction permit (32 percent).²⁷

Figure 39: Corruption and Informal \Competition - North vis-à-vis Rest of Lebanon



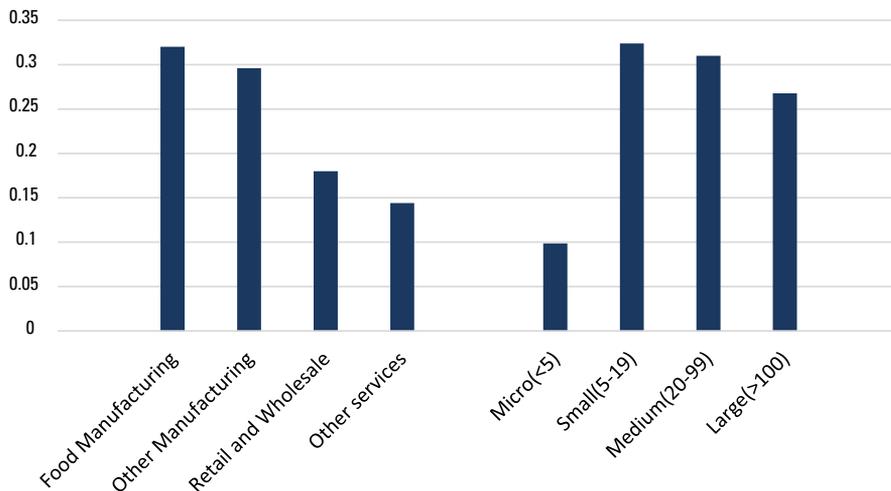
Source: World Bank Enterprise Survey, Lebanon (2013)

Infrastructure constraints in terms of electricity access and usage are also more acute in the North (Figure 42). The time to obtain an electricity connection in the North is almost twice that of the rest of Lebanon (which is already high). Firms in the North also tend to have higher numbers of electrical outages and greater reliance on generators than the firms in rest of Lebanon. This affects the cost of production and competitiveness of firms in the North vis-à-vis rest of the country. Losses (as a share of sales) appear to be much higher for firms in the North relative to those in the rest of Lebanon.

Figure 40: Infrastructure Constraint in the North v. Rest of Lebanon

Source: World Bank Enterprise Survey, Lebanon (2013)

Electricity as a constraint varies by size and sector. The lack of electricity does not seem to be a major constraint among micro-firms. This may reflect the fact that these firms typically operate in services activities that rely less on electricity. However, electricity is a severe obstacle to small firms, which could be due to the inability of smaller firms to afford alternative electricity sources (generators) on which larger firms rely. Not surprisingly, manufacturing firms are more affected by the shortage in electrical supply than the services firms (Figure 43).

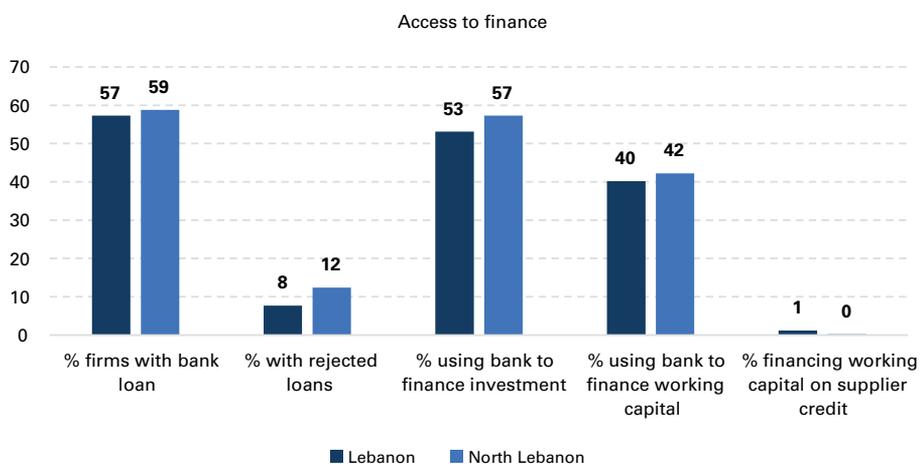
Figure 41: Electricity as a Major Constraint by Sector and Size

Source: World Bank Enterprise Survey, Lebanon (2013)

Overall, access to finance does not appear to be a leading constraint in Lebanon and the evidence indicates no substantial difference between firms in the North and those in the rest of the country (Figure 44). However, this conceals some critical gaps. In Lebanon, as in many other countries in MENA, small firms have significantly less

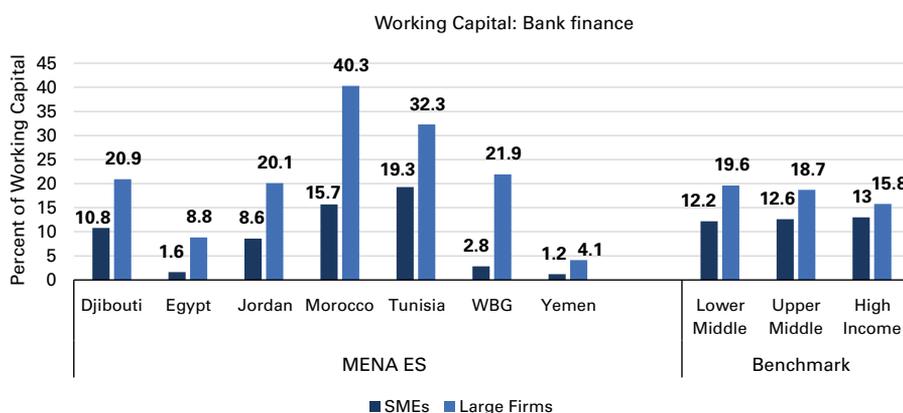
access to finance than large firms (Figure 45) and this does impede smaller firms disproportionately through their life cycle.

Figure 42: Access to Finance in the North vs. Rest of Lebanon



Source: World Bank Enterprise Survey, Lebanon (2013)

Figure 43: Bank Finance by Firm Size, MENA



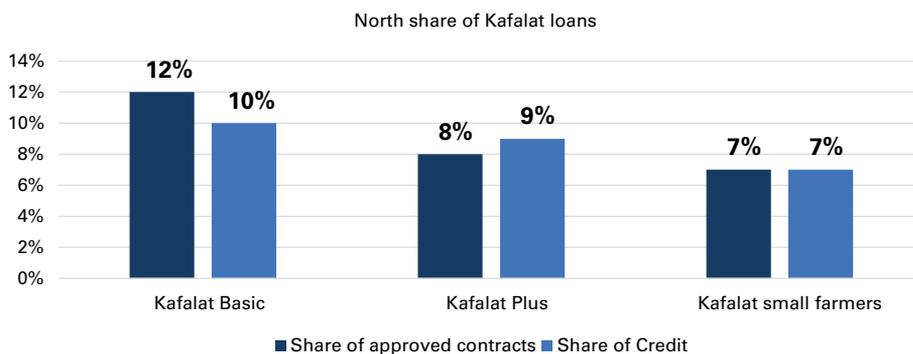
Source: Enterprise Surveys of MENA Countries, World Bank (different years)

Based on the WBES sample of 77 firms in North Lebanon that had been given access to a loan, small firms were the main contributors to job creation, adding 7.6 jobs per firm on average, double that of microenterprises. Jobs came predominantly (65 percent) in the tourism, wholesale, and retail sectors. Small firms also added more jobs for women and youth. Another key aspect appears to be supplier credit: less

than five percent of working capital is financed by supplier credit, which indicates an institutional weakness as well as a lack of robust trust within a network of relationships. These limitations have constrained the ability of Lebanese firms to integrate into the world – or even regional – economy, as finance and credit are necessary elements across all levels of a value chain.

Data on loans made available through Kafalat indicate limited provision in the North. For 2013, 12 percent of all Kafalat (Basic) loans went to firms in the North, amounting to ten percent of the total credit made available. This is half the level that might be expected given the North's share of the national population. The North's share in other parts of the Kafalat portfolio are even lower, notably in loans to small farmers, which might be expected to be much higher given the importance of agriculture in the regional economy (Figure 46).

Figure 44: North Share of Kafalat Loans by Type (2013)



Source: Statistical Yearbook 2013- Central Administration of Statistics

D. Institutions and public-private dialogue (PPD)

The enterprise surveys also reveal a notable lack of trust in public institutions. This distrust is reflected, in respect to corruption and “expectations about government predictability”. A strong public-private dialogue (PPD) process that facilitates consultations between government and private sector on policy priorities and augments trust and shared commitments can be a critical catalyst to investment and growth. These mechanisms – to be effective and not simply a vehicle for cronyism – need to operate with a clear mandate. This includes transparent and inclusive governance structures and implementation arrangements, as well as measurable outcomes. In the case of Lebanon, there have been minimal institutionalized PPD mechanisms to support policy reform. Private sector led initiatives are most commonly initiated by business associations and chambers of commerce to address and advocate specific policy constraints, and are terminated once the issues are resolved or blocked. There is generally little continuity or follow through on the issues raised.

Donor organizations and funding partners have attempted to establish more broad-based dialogue platforms to narrow the gap between private sector and government priorities. Impact to date is minimal. What currently exists is modest and not well targeted on policy agendas:

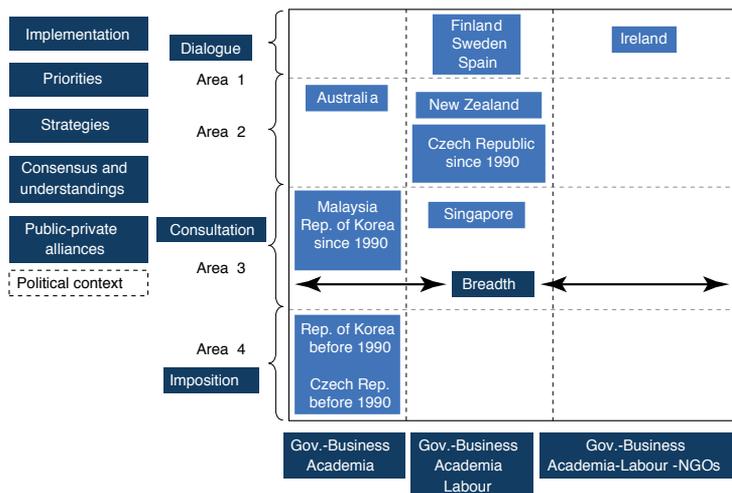
- In North Lebanon, a nonprofit organization was established in March 2011, to facilitate the implementation of economic development strategies in the North, from Batroun to Akkar. The *North Lebanon Local Economic Development Agency* (NLEDA) was initially established through a UNDP initiative. NLEDA is one example of collaboration and partnership between the public and private sectors, and civil society. This program, located within the Chamber of Commerce, Industry and Agriculture in Tripoli, provides program implementation, capacity building, and internship programs.
- The *Investment Development Authority in Lebanon* (IDAL) operates as both an investment promotion and export council. IDAL maintains administrative autonomy, as it reports to the President of the Council of Ministers. The authority is in a position to leverage public private collaboration, in line with its mandate. However, it has struggled to provide a robust forum for the promotion and retention of foreign direct investment. The last large foreign investment into Lebanon was in 2010, which was in the pharmaceutical industry.
- The *Economic and Social Council* in Lebanon was established in 1999 through a presidential decree to promote dialogue and cooperation between the different economic and social public and private sectors in Lebanon. The first general assembly comprised of 71 members representing all sectors, associations, syndicates, vocational and expatriate institutions. The tenure of the general assembly expired in 2002. A new general council has yet to be appointed.
- The *European Union*, in collaboration with the Ministry of Industry, is launching a project to enhance the business climate for SMEs, by opening up new markets and providing opportunities to producers. The initiative will leverage PPD to address the possible modernization and internationalization of the SMEs, with a focus on industrial exports. The PPD mechanism will be used as an export promotion tool to connect to regional and global value chains. The project will focus on three main sectors: ICT, Aromatic Herbs, and Electronic Boards. This project has not yet started, as it is still pending a ministerial decree.
- Between 2007 and 2009, the *European Commission* organized a series of dialogue fora, to address key economic and social reform challenges in Lebanon and push for reform through dialogue. The fora brought together parliamentarians, professional associations and academics to discuss four key issues: economic and social development, social policy, competitiveness of Lebanese enterprises and completion and, finally, agriculture. The fora reached common agreement on the reform priorities. However, no actual reforms were initiated due to the absence of the primary decision-makers at the fora.

What is striking about the list above is the absence of a proactive private sector engagement. Initiated too often by donors and/or financed by grants, the question arises as to the degree of ownership on the part of the private sector and their readiness to use this mechanism to leverage reforms that lead to new private investment. Box 3, provides a summary of the range of types of PPD arrangements in place around the world. The example of the Malaysian PPD “PEMANDU”, has a record of performance to date and targets the creation of 3.3 million jobs and over US\$440 billion in investment by 2020. This is the type of vision and measurable results-based goal that Lebanon should aspire to emulate.

Box 3: Successful Models of Public Private Dialogue

Public Private Dialogue fora can vary in structure and composition, based on the context and political economy. The diagram below²⁸ exhibits the wide range of possibilities present; a dialogue to reach consensus between all parties prior to the implementation of a government strategy to the possibility of the imposition of the strategy by the government, with some degree of understanding between stakeholders. Stakeholders invited to participate in the dialogue process may also vary from a focused approach to a broader approach involving the majority of the active groups in the society. The countries covered by this research piece have used a different dialogue structures. Finland, Singapore and Ireland have benefited from setting up structured formal dialogue fora, while Australia preferred the more ad hoc formal structure using focused committees and councils to address specific issues, Spain and Sweden relied on informal structures and the Czech Republic, Malaysia, New Zealand and Republic of Korea resorted to a Hybrid model, combining various approaches mentioned above.

Public-private alliances: positioning of countries



box continues next page

Malaysia's PEMANDU Model²⁹



Under Prime Minister Mahathir Mohamad (1981-2003), Malaysia started its industrial reform program, focusing on attracting foreign direct investment in export-oriented manufacturing. To achieve that goal, decision making became centralized with strong linkages with the private sector. This provided an opportunity for the private sector to become engaged in policy dialogue with the government officials. This was the starting point for the creation of the public-private platform PEMANDU, which was formed in 2009. Its mandate is to monitor the Government of Malaysia's government transformation program (GTP) and economic transformation program (ETP), whose target is for Malaysia to become a high-income nation by 2020. PEMANDU is a facilitation vehicle for the design, development, monitoring, evaluation and revision of Malaysia's reform plans. PEMANDU originated in Malaysia and has recently been replicated in Tanzania, India, and South Africa.

The PEMENDU process starts with the development of a detailed action plan that is broken down into time bound subject focused working groups (6 to 9 weeks Labs). The 'Labs' bring together key public and private stakeholders in the selected area of focus. The goals are transformed into key performance indicators (KPIs). The KPIs are verified to ensure availability of resources for implementation and then raised approved by a steering committee. Progress is regularly monitored across the different departments and entities involved, to identify any implementation issues or bottlenecks. Disputes are raised to a higher level for resolve. During the evaluation stage, goals may be readdressed or redefined. The research indicates that at least 30% of the initial plans are implemented without modification or revision. The remaining 70% are subject to revision as implementation proceeds.

Malaysia is on track for its 2020 ETP income target with an annual growth rate of more than 4 percent per annum, with public and private investment high in absolute terms, and GNI per capita has risen to US\$10,060 in 2013. GDP growth in Q1 2014 exceeded expectations, at 6.2 percent year-on-year. Almost two thirds of the original 13 GTP targets from 2010 have been met in 2011, and one-half were met in 2012. Indicators that did not meet their targets, in either year, did show an increase in absolute performance during that period. (For example, the public transport modal share in KL increased from 12 to 21 percent from 2009-13, but this was below the original target of 25 percent). In the ETP, similarly, key sectors like of oil and gas, palm oil and electronics, have achieved approximately 70 percent of the core KPIs.

CHAPTER 5

Assessing Value Chains for Jobs in the North

A. Introduction: Why Value Chains?

This section reports on the results of assessments carried out on two value chains in North Lebanon – potatoes and solid waste/ recycling. The value chain analyses were designed to achieve two objectives: (i) to provide a sector (value chain) specific lens through which to explore the opportunities and challenges of job creation in the North; and (ii) to consider the scale and nature of the job creation potential available in specific, high priority/high potential value chains. Given the unlikelihood – in the current political and legislative environment - of pursuing significant economy wide reforms to support private sector investment and growth, value chains represent one avenue of opportunity that, requiring less national level policy and legislative action, could – with targeted support - be encouraged to grow and generate new jobs. These value chain assessments can identify what may be achievable in terms of delivering more and better jobs and what is required for this to happen.

In selecting two value chains for the initial analysis, a shortlist was developed based on key sectors in the region. A shortlist of value chains was assessed through a set of selection criteria that provided a high-level evaluation of each sector in terms of: i) existing scale, sustainability, and competitiveness; ii) potential jobs impact (quantity and quality) of growth in the sector; and iii) readiness of the sector to engage in upgrading and the degree to which an initiative would offer additionality with respect to recent and ongoing initiatives. Table 8 summarizes the results of the assessment. Four value chains stood out: vegetables (potatoes), fruits (apples), construction, and solid waste/recycling.

Following a presentation and discussion with the Government Working Group in January 2016, it was decided to focus the initial analysis on potatoes and solid waste/ recycling. Potatoes were selected primarily because it is one of the largest agricultural activities in the North, with a strong reach into the rural areas (particularly Akkar) of the region, while also connecting to urban areas through trade and processing. Solid waste and recycling was chosen primarily because of the opportunity to leverage substantial investments being made through OMSAR (funded through the European Union) in

solid waste and sorting facilities across the North. This provides the possibility to generate significant spillover benefits that could accrue both to downstream industries (paper, plastics, metals), and to the society more broadly (positive environment externalities).³⁰ This, in turn, offers potential job opportunities at higher skill levels.

Table 8: Summary Results from the Value Chain Selection Assessment

	<i>Scale, Sustainability & Competitiveness</i>	<i>Jobs Impact</i>	<i>Readiness & Additionality</i>	OVERALL	Comments
Vegetable (potato)					<ul style="list-style-type: none"> • Opportunities for fresh & processed exports • Robust skills development path, incl. industrial • On-farm jobs non-lebanese; post-harvest & processing Lebanese incl. female
Fruit (apple)					<ul style="list-style-type: none"> • Est. 7,000 rural jobs-mainly household workers • Harvest & post-harvest jobs more Lebanese workers • Potential expansion of fresh & processed exports • Earnings v jobs; short v longer term
Construction					<ul style="list-style-type: none"> • Largest source of non-agricultural jobs • Substantial skills path & opportunities for Lebanese • Potential expansion with crisis / reconstruction • Strong youth employment; limited female
Waste & Recycling					<ul style="list-style-type: none"> • Large spillover benefits • Potential for rapid job creation
Olive					<ul style="list-style-type: none"> • Large number of existing programs (sufficiently covered)
ICT					<ul style="list-style-type: none"> • Best Addressed through other World Bank / partner initiatives (incl through Tripoli SEZ support)
Wood Furniture					<ul style="list-style-type: none"> • Limited value chain reach; well covered through existing EU / UN program

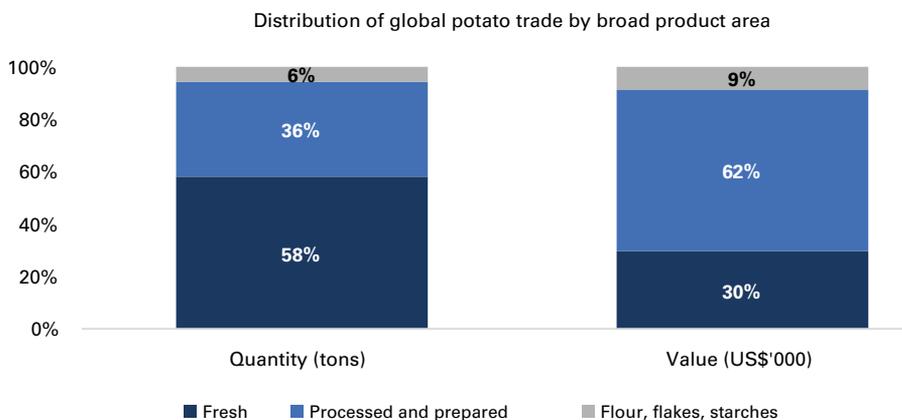
Source: Authors' calculations using 2016 North Lebanon Household Surveya

B. The Potato Value Chain

1. Global and National Context

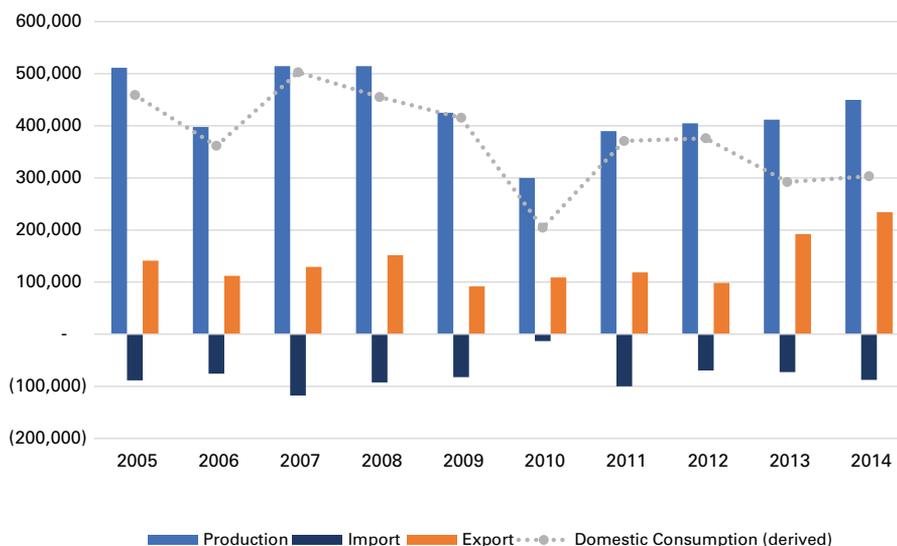
Potatoes are a major staple crop with global production reaching around 500 million metric tons and global trade US\$10-15 billion annually.³¹ Increasingly, production is concentrated in Asia (especially China, India, Pakistan, and Bangladesh), although Europe (especially France, Belgium, Germany, and Poland), and the US remain significant players. Global trade in potatoes grew more than seven percent annually, while production increased almost four percent.³² Fresh potatoes account for almost 60 percent of global trade by volume but just 30 percent by value, while trade in processed products dominates in value terms and starches represent the highest value product. Large processors are beginning to spread their operations globally, not only to access supply but also to establish production facilities closer to markets. This includes North American-based McCain's, Lamb-Weston, and J.R. Simplot (the largest supplier of McDonald's French fries). The Netherlands-based Farm Frites and Aviko have also recently set up large-scale processing operations in China, India, Turkey, and Egypt among other locations (Figure 45).

Figure 45: Global Trade in Potatoes by Broad Type



Source: ITC Trademap

Lebanon has long been a significant potato producer, with relatively large domestic per capita consumption and a competitive position in regional markets. Figure 46 shows that production peaked just below 515,000 tons in 2008, declining sharply thereafter, to below 300,000 tons in 2011 and 2012, due in part to a weak regional export markets. But, production then rose sharply, reaching 450,000 tons in 2014. In most years, domestic producers capture a 70-75 percent share of the local market for fresh potatoes.

Figure 46: Lebanon Fresh Potato Production and Trade, 2005-14

Source: ITC Trademap

With production yields at about 25 tons per hectare, Lebanon is competitive in regional markets. Yet, it remains squeezed out of global markets by the highly productive exporters (mainly in EU and US, with yields over 40 tons per hectare, primarily for industrial use) and the large volume, low cost producers like China and Pakistan (with yields in the 15-20 ton per hectare range). Syria, Jordan, UAE, and Saudi Arabia together account for 90 percent of exports over the past decade (Table 9). In the early 2000s, Syria was the leading export market, accounting for around 35,000 tons a year, but volumes declined through the decade and then collapsed after the start of the war – from over 15,000 tons in 2011 to just 1,300 in 2012. This contributed to a significant decline of exports in 2012. However, by 2013 exports recovered sharply with large increases to Jordan, UAE, Kuwait, and Egypt making up for the decline in Syria (as well as Saudi Arabia). This export growth comes despite large transport cost increases incurred when exports were no longer able to route through war-torn Syria to the regional markets. Despite this robust export performance, Lebanon does run a trade deficit in value terms, with export unit values much lower than import unit values. This is explained in part because Lebanon imports substantial, high value potato seed and exports only raw potatoes.

Table 9: Lebanon Fresh Potato Exports by Market, 2005-14 (metric tons)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	CAGR'05-14	CAGR'10-14
UAE	25,174.0	22,999.0	23,254.0	38,145.0	13,779.0	19,669.0	27,783.0	25,896.0	42,064.0	51,438.0	8%	27%
Jordan	28,094.0	19,867.0	19,734.0	29,220.0	19,170.0	10,221.0	14,776.0	13,358.0	48,885.0	38,610.0	4%	39%
Kuwait	18,901.0	18,070.0	22,874.0	28,364.0	18,409.0	24,488.0	23,473.0	20,366.0	31,944.0	36,798.0	8%	11%
Syria	32,360.0	16,820.0	27,503.0	5,834.0	13,791.0	15,313.0	15,435.0	1,336.0	5,298.0	19,773.0	-5%	7%
Saudi Arabia	19,022.0	24,724.0	20,496.0	30,075.0	17,029.0	23,937.0	200,825.0	23,082.0	7,223.0	22,666.0	2%	-1%
Other regional	17,261.0	7,933.0	15,463.0	19,822.0	9,409.0	12,233.0	13,862.0	13,377.0	53,380.0	58,878.0	15%	48%
Russia	30.0	1,350.0	-	-	248.0	3,031.0	2,337.0	1,000.0	3,299.0	6,111.0	81%	19%
Other regional	162.0	380.0	125.0	184.0	1.0	58.0	236.0	95.0	49.0	133.0	-2%	23%
	141,004.0	112,143.0	129,449.0	151,644.0	91,836.0	108,950.0	298,727.0	98,510.0	192,142.0	234,407.0	6%	21%

Source: UNComtrade via WITS

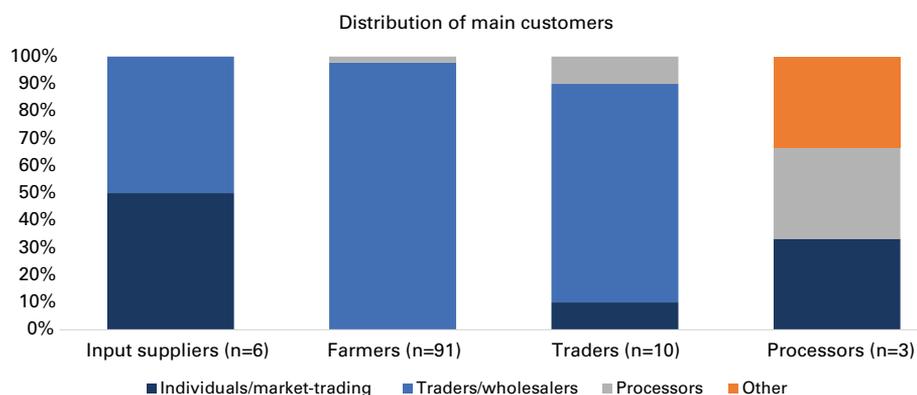
2. The Potato Value Chain in North Lebanon

Overview: The North region represents Lebanon's second largest concentration of potato production, with approximately 80,000 tons of output, coming mainly from the Akkar plain. The main players in the value chain are summarized below and Figure 49 provides a summary of the basic structure of the potato value chain in the North:

- *Potato seed production:* Most seeds are imported, mainly from the EU. Some farmers in Akkar produce seed for their own use and for sale into the late-season Bekaa potato crop.
- *Input dealers:* There is a small number of key input providers, who tend to supply fertilizers, equipment and imported seeds. The market is seen as an oligopoly in the North.
- *Farmers:* This is the primary activity in the North (see further discussion below).
- *Traders and exporters:* Around 30 traders are set up in the North. Traders tend to be segmented between those who serve local markets and those who package for export markets. This is a powerful part of the value chain in the North, as it controls distribution and dominates the investment in post-harvest infrastructure.
- *Retailers:* The majority of potatoes are sold through the smaller-scale retail distribution network. Substantial volumes also go through large retailers like Spinney's and small volumes, via one or two farmers in North go to Carrefour in Beirut.
- *Processors:* Two processing facilities exist in the North producing frozen chips – Master Frites and Super Frites.

The production system and post-harvest infrastructure (including cold storage and packing facilities) is less developed in the North relative to Bekaa. This results from and contributes to a market system that is much more reliant on timing. Producers in the North tend to plant immediately after receiving seed and market right after harvesting. Timing on the latter is driven by the North’s advantage of coming to the market from mid-April until early June ahead of Bekaa’s June and July harvest. The market system is dominated by traders. Figure 48 shows that not only do virtually all farmers sell primarily to traders, but most input suppliers and traders are selling to other traders. Among 91 farmers responding to the survey, 66 have three or fewer customers and 36 sold all their output to a single trader, while the average small farm sold 80 percent of its output to one trader. Larger farms appear to be more diversified, with only 60 percent of their output, on average, going to a single trader. Only two surveyed farmers export directly and only one had a contract arranged to sell directly to a processor.

Figure 48: Distribution of Main Customers by Value Chain Node



Source: Authors calculations based on Value Chain Survey (2016)

Performance of the potato value chain in the North has been greatly impacted by the Syrian crisis in recent years, on both the production costs and market demand sides:

- *On production costs:* The Syrian crisis has contributed to rising input prices for farmers, including increasing costs of fertilizers and pesticides (which used to be obtained across the Syrian border) and dramatically raising the costs of land rental for farmers, given high demand from Syrian refugees needing shelter. Rental rates are said to have increased three to four times over the past five years, and can now reach the equivalent of LBP100 per kilogram (US\$67 kilogram), becoming the single largest cost category for farmers. These market factors have been aggravated by periodic climatic shocks (including hail storms

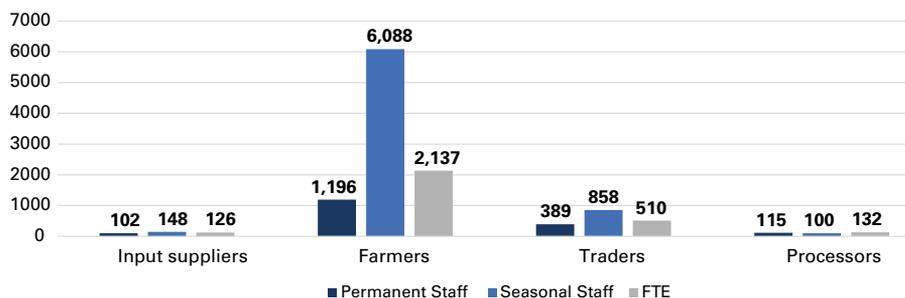
and flooding) which impacted production in parts of Akkar in recent years and by the rising transport costs required to reach other major markets in Jordan and the Gulf, with the closure of the Syrian route.

- *Additional demand and supply factors:* The dramatic decline of Lebanon's main export market and rising costs have hit fresh potato exports hard and forced a delay to the opening of a major new processing investment made by Daher (Masterchips) in Bekaa. The farmers from the North have also reported dumping of Syrian product into the Lebanese market in recent years (as they are unable to sell in their domestic market). Perhaps of more concern was the opening to cheap Egyptian imports that coincided with the Akkar harvest in 2015. According to farmers, Egyptian product came onto the market at prices as low as LBP 250 per kilogram (US\$167 per ton), virtually halving the domestic market price.

3. Jobs in the North Lebanon Potato Value Chain

Jobs in the current value chain: Drawing from the survey responses and secondary data, Figure 51 provides an estimate of the jobs profile of the current potato value chain in the North.³³ It indicates that around 9,000 overall jobs exist across the value chain, including 1,800 permanent jobs and around 7,200 seasonal positions which are very short term in nature. The evidence suggests farms are making use of large workforces during harvest time – up to 30 workers per hectare. But seasonal workers often get employment only four hours per day and only two or three days during the week. Converting seasonal workers into full-time equivalent (FTE) positions (40 hours a week, all year) results in close to 3,000 FTEs in the value chain. The large majority of these jobs come in farming, accounting for two-thirds of permanent jobs and 85 percent of seasonal jobs (Table 11). Traders also account for a significant number of jobs – more than 500 FTEs and almost 400 permanent jobs.

Figure 49: Estimated Jobs Profile Across North Lebanon Potato Value Chain



Source: Authors calculations based on Value Chain Survey (2016)

As Table 11 shows, there are big variations across the value chain nodes in the types of jobs available. Almost 85 percent of jobs on potato farms are seasonal as are close

to 70 percent of jobs in trading. Conversely, over half of jobs in processing plants are permanent and these require a slightly higher mix of skilled labor. Jobs in processing as well as input supplies are relatively limited at this point in time, given the current level of development of the value chain.

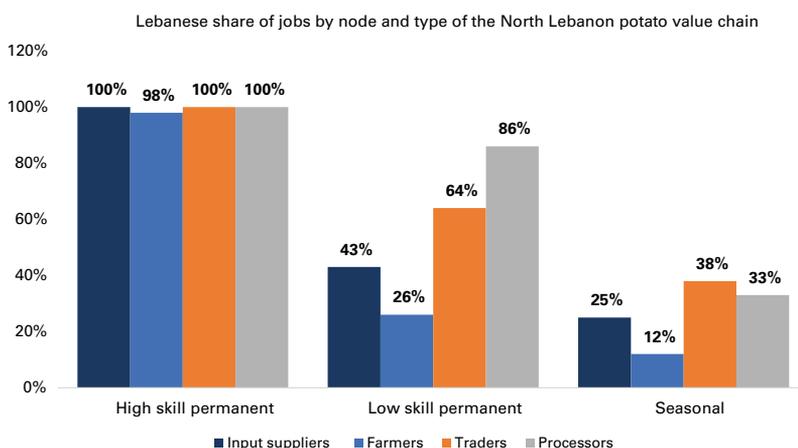
Table 11: Distribution of Jobs by Type Across Value Chain Nodes

	Node share of total VC jobs	Share of total Jobs		Share of FTEs	
		Permanent	Seasonal	High skill	Low skill
Input suppliers	4%	41%	59%	28%	72%
Farmers	73%	16%	84%	19%	81%
Traders	18%	31%	69%	16%	84%
Processors	5%	53%	47%	20%	80%

Source: Authors calculations based on Value Chain Survey (2016)

Lebanese workers take almost all high-skill positions across the value chain, as well as the large majority of low-skill permanent positions in processing and trading activities. Foreign workers dominate seasonal employment and low-skill employment on potato farms (Figure 52). This is nothing new – potato farms have long relied extensively on migrant (mostly Syrian) labor for seasonal jobs such as harvesting and planting. Women tend to be employed in the low-skill activities. While the majority of these jobs are coming through seasonal employment there is a significant employment (over 40 percent) of Lebanese females in permanent positions in input suppliers and processors (Table 12). For Lebanese youth, most jobs are coming in trading, where more than 80 percent of low-skill permanent jobs are held by youth.

Figure 50: Share of Jobs Held by Lebanese by Node and Type



Source: Authors calculations based on Value Chain Survey (2016)

Table 12: Female and Youth Share of Jobs in the Value Chain

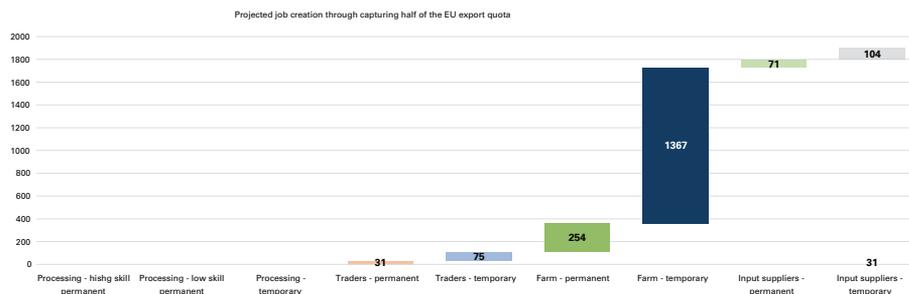
	Women			Youth		
	High skill permanent	Low skill permanent	Seasonal	High skill permanent	Low skill permanent	Seasonal
Input suppliers	27%	0%	48%	13%	92%	52%
Farmers	0%	31%	62%	11%	14%	34%
Traders	4%	5%	13%	0%	81%	27%
Processors	0%	41%	0%	0%	0%	28%

Source: Authors calculations based on Value Chain Survey (2016)

4. Scenarios for Growth and Job Creation in the Potato Value Chain

This section provides a brief overview of growth scenarios that ascertain their implications for jobs in the region.

The first scenario is a significant expansion of exports, based on the recent European quota of 50,000 tons that was opened up for exporters from the North and Bekaa. The analysis suggests this scenario would create just over 350 permanent jobs and another 1,550 seasonal jobs, with around 70 percent of jobs coming on farms and the remaining in trading and inputs. Under this scenario, it is assumed that Akkar farmers take half of the quota (at present they are using almost none of it) and that all of this comes from new production rather than diverting from existing domestic or export markets – i.e. an increase in production and exports of 25,000 tons. Figure 53 illustrates the impacts of this change through the value chain.

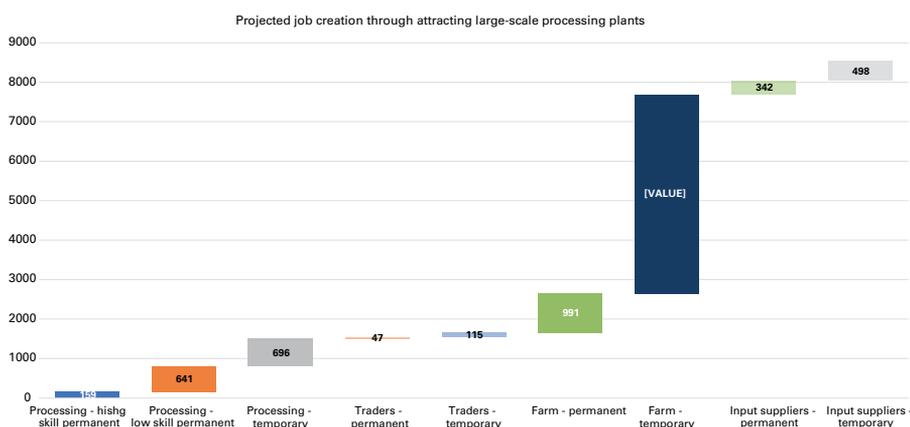
Figure 51: Job Creation Across the Value Chain in an Export Expansion Scenario

Source: Authors calculations based on Value Chain Survey (2016)

A second scenario focuses on attracting large-scale investment in potato processing. Overall, this scenario would result in close to 2,200 permanent jobs of which 1,200 would be in processing, trading, and input supply activities that tend to employ largely Lebanese workers, including significant skilled positions. This scenario is based on the recent processing plant investment made by Daher Foods in Bekaa³⁴ which has the

capacity to process 120,000 tons of potatoes. It is assumed that all demand is met by new production from the North. Given the large scale of such a project, employment impacts on the farms would also be much higher than in the first scenario. Figure 54 shows that the processing scenario would create substantial jobs across all parts of the chain. If, on the other hand, it is assumed that Akkar producers capture just one-quarter of processing demand, this would result in an increase in potato production of 25,000 tons, equivalent to the increase under the export scenario. The difference is that processing demand still delivers strong job creation through the chain. Compared to 350 jobs under the export scenario, the processing scenario would deliver almost 1,100 permanent jobs.

Figure 52: Job Creation Across the Value Chain in a Large-Scale Processing Investment Scenario



Source: Authors calculations based on Value Chain Survey (2016)

In practice, the number and nature of jobs created in any growth scenario will depend to a large degree on the type of investment driving growth (e.g. expansion versus greenfield investment), as well as the decision by firms on the mix of capital and labor they deploy. The jobs figures quoted in the scenarios above are subject to overstatement, if marginal rather than average employment to output ratios are used. Analysis suggests the creation of high-skilled permanent jobs could be up to 75 percent lower and low-skilled permanent jobs up to 50 percent lower than reported above taking into account scale economies.

What is clear from the analysis is that delivering large-scale, quality jobs will require a strategy to develop a competitive agri-processing sector in the North. In this respect, it is important to keep in mind that the assessment of the potato sub-sector is intended to be illustrative of the wider agribusiness sector in the North. While potatoes are among the most important crops in the region, this accounts for no more than ten percent of regional agricultural output. So, scaling this opportunity up, through

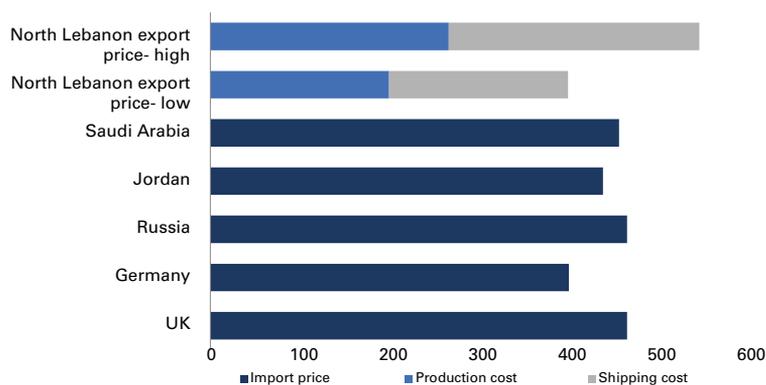
a strategy to upgrade the competitiveness of the wider regional agribusiness sector, would offer the potential for the creation of not just a few thousand, but possibly tens of thousands of jobs.

5. What Would it Take to Deliver These Jobs?

Market Opportunities and Competitiveness: What is realistic for the potato sector in the North? Export-led growth will require tapping into new markets, particularly given that Lebanon's traditional market in Syria is not expected to recover in the near future. Lebanese exporters have not yet taken advantage of the 50,000-ton quota from the EU made available to Akkar and Bekaa producers up until at least 2017. Can Lebanese exporters compete in these more sophisticated markets? At present, average import prices in the European markets are US\$400-500. Farmers from North Lebanon can typically produce as low as US\$200 per ton, although recent price increases have pushed prices above US\$250 toward US\$270. Shipping costs, given the loss of overland route through Syria, can rise to as high as US\$7,000 per container, according to exporters. This can push landed costs into these markets above US\$500 per ton (Figure 53). This excludes the costs and margins borne by the traders who organize export. At these shipping rates, it appears difficult for Lebanese producers to take advantage of European export markets. Regional markets look more attractive with slightly higher prices. In the short term, however, transport barriers will even make competing in these markets challenging for Lebanese potato exporters.

Figure 53: Assessment of Lebanese Landed Costs Relative to Average Import Prices in Select Countries

Average Lebanese potato export prices versus average import prices (US\$/ton) in select countries (2015 average)

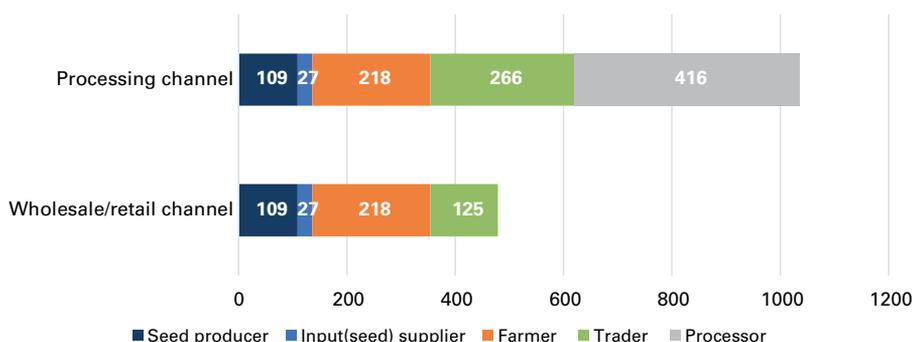


Source: ITC Trademap (import prices)

The difficult external environment suggests a focus on the processing end of the value chain. Here, timing risks in the market can be managed better and higher value added potential can mitigate the impact of some of these extraordinary costs. Figure 54 gives

a sense of the additional value available in the processing channel, where reported buying and selling prices from the survey suggest that even trader margins in this channel are higher than in the domestic retail and export channels.

Figure 54: Value Addition Across the North Lebanon Potato Value Chain

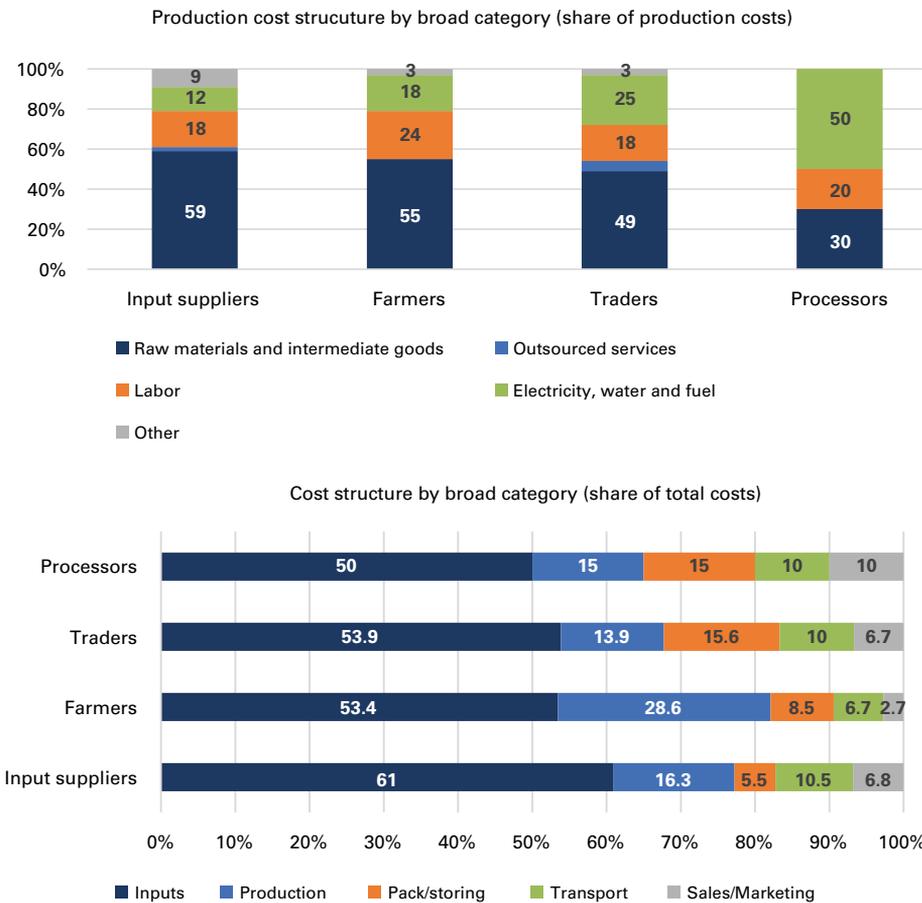


Source: Authors' calculations based on Value Chain Survey (2016)

Some Lebanese processors have already had success in exporting frozen fries and branded potato chips to regional markets. But can this translate into success on a larger scale? The investment patterns of the largest global potato processors suggest that competitiveness is driven primarily by production scale and efficiency. It also tends to be driven more by access to inputs than to markets. This is because the perishability and low-value-to-weight ratio of potatoes makes shipping processed potatoes more economically efficient than shipping raw potatoes for most processed product (one exception is potato chips which, due to fragility and high volume-to-weight ratio, are more typically produced closer to end markets). Thus, investors looking to establish a potato processing facility will seek locations with: i) access to large volumes of quality, competitively priced potatoes; ii) land for relatively large factories; and iii) an environment where they can operate relatively capital intensive production and cold storage facilities cost effectively.

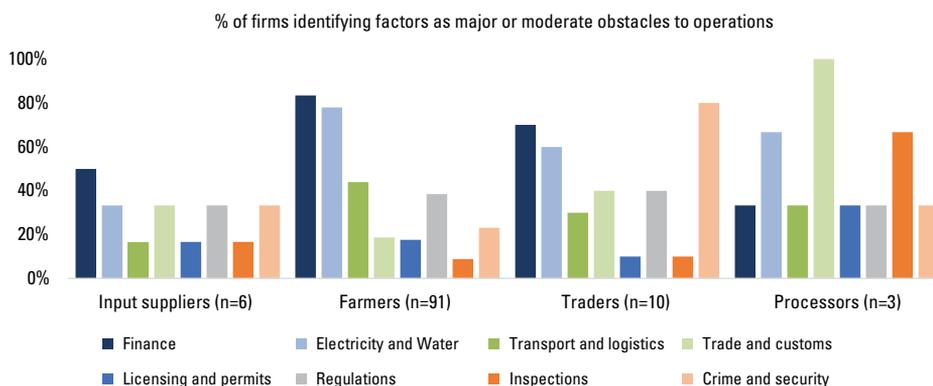
Comparing the structures of production costs in Figure 57, what stands out is that 50 percent of the production cost of processors comes from electricity and fuel costs. This does pose a challenge in Lebanon where electricity reliability is so poor.

Figure 55: Cost Structure by Category and Node in the Value Chain



Source: Authors' calculations based on Value Chain Survey (2016)

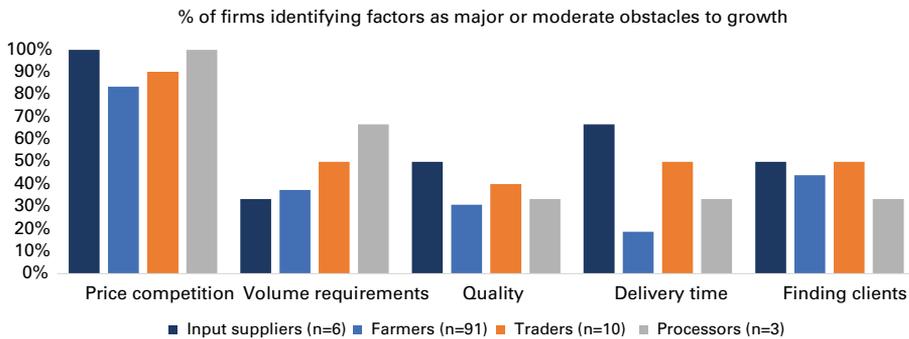
Figure 58 summarizes the main constraints to operational competitiveness across firms in each node of the value chain. Two constraints show up most clearly: access to finance and utilities (electricity and water). For farmers, the biggest constraint faced in production relates to irrigation and pesticide application. Akkar farmers tend to use overhead sprinklers rather than drip irrigation, increasing water usage and raising risks of moisture-related crop problems. The second main constraint farmers face that impacts level and quality of output is access to high yielding seeds. Purchasing these more expensive seeds is the primary reason farmers give for seeking improved access to credit. Farmers are currently only able to access credit through some traders. The provision of supplier credit is the only support that exists in the current supply chain.

Figure 56: Perceived Constraints to Operational Competitiveness

Source: Authors calculations based on Value Chain Survey (2016)

Processors face a somewhat different set of constraints. Electricity is consistently identified as the biggest constraint to manufacturing. Data presented earlier on the cost structure of processors shows that electricity and fuel costs (to run generators) accounts for 50 percent of all costs in processing firms. This makes competitive production extremely difficult. Two other important constraints are identified by processors. The first is the environment for trade and customs, which is seen to impact processors both in terms of exporting and accessing important inputs (in particular, technology). The second constraint is factory inspections by authorities, which were identified as a major constraint by two out of three processing firms.

Other Constraints to Competitiveness: Figure 57 summarizes the perceived constraints to business expansion by firms in each node of the value chain. Across the board, the main constraint identified is market competition, in particular, price competition. This was highlighted as particularly acute among farmers, who have in recent years faced major competition from Egyptian imports. According to farmers, the government allowed traders and processors to import large quantities of Egyptian imports duty-free just prior to the 2015 harvest, which resulted in prices collapsing from LBP350 per kilogram to LBP 250 per kilogram in the domestic market. Finally, another key factor holding back growth of potato farmers is the existing market system, whereby farmers operate without any control over the market and are therefore subject to fluctuations in prices on both the input and output sides. At present, no integration exists in the supply chain, with virtually all sales coming through ad hoc trading arrangements. Just five percent of farmers surveyed have a formal contract, and just one of three processors sells with a formal contract. And, when formal contracts do exist, they typically do not guarantee price but specify volume commitments (from both sides, subject to quality) at prevailing (daily) market prices. Focus group discussions with farmers uncovered issues of lack of trust between farmers and processors on contract arrangements.

Figure 57: Perceived Constraints to Growth

Source: Authors' calculations based on Value Chain Survey (2016)

The lack of supply chain integration not only has implications for managing prices and costs, it also prevents learning and technological upgrading in the chain. Table 13 shows how few actors in the value chain receive training support from their clients. Survey results also show low levels of technical support and technology transfer. One implication of poor training and technology transfer in the value chain is that farmers struggle to meet the quality standards required in key markets, such as Europe where GlobalGAP-type standards are the norm.

Table 13: Relationships with Main Customers in the Potato Value Chain

	<i>Share of firms with formal contract with main customer</i>	<i>Share of firms receiving training from main customer</i>	<i>Share of firms receiving supplier credit from main customer</i>
Processors (n=3)	33	0	0
Traders (n=10)	20	10	0
Farmers (n=91)	5	2	27
Input suppliers (n=6)	0	17	17

Source: Authors' calculations based on Value Chain Survey (2016)

Finally, it is worth considering how access to skilled labor may hold back future growth in the value chain, particularly development of the processing sector. While the greatest demand in the value chain is for workers with no educational background (and often no experience), this is at the farming node where demand for higher skilled workers is very limited. The higher skill opportunities are much better at the other nodes of the chain, including processing, where hiring of secondary and even tertiary education workers is far more frequent.

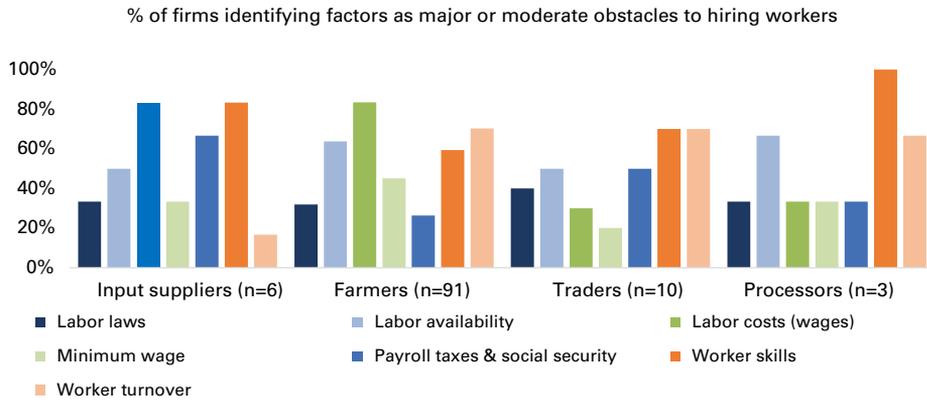
Table 14: Education and Experience Levels Typically Hired in the Potato Value Chain

	<i>No education, no experience</i>	<i>No education, experience</i>	<i>Secondary education, no experience</i>	<i>Secondary education, experience</i>	<i>Tertiary education, no experience</i>	<i>Tertiary education, experience</i>
Input suppliers (n=6)	100%	50%	50%	83%	17%	67%
Farmers (n=91)	91%	62%	30%	26%	5%	3%
Traders (n=10)	73%	90%	70%	90%	50%	60%
Processors (n=3)	67%	100%	33%	67%	33%	67%

Source: Authors' calculations based on Value Chain Survey (2016)

Note: share of firms indicating they hire workers with this educational profile 'often' or 'occasionally'.

Evidence from the surveys suggests that some labor shortages and /or skills gaps exist in the current value chain. For example, when asked why they make extensive use of seasonal labor, in addition to seasonality (the main reason), 60 percent of farmers and traders and all three processors indicated skills or labor shortages. It is unclear which of these predominates. In the case of farming, it is likely to be an issue of labor shortage, or more specifically that Lebanese workers are unwilling to take on seasonal farm labor at the low wages (at or below national minimum wages) on offer. This may also be the case for trading and processing. But, there is also evidence in these activities that actual skills gaps exist. For example, Table 14 shows that all three processors, 80 percent of input suppliers and 70 percent of traders identify skills as a barrier to hiring. What are the specific skills that appear to be both important and missing? In addition to job-specific technical skills (for input suppliers and farmers), problem-solving skills were highlighted as most critical and difficult to find for processors and traders. Other key skills gaps appear to exist in both cognitive (ability with calculations and numbers) and non-cognitive (leadership) skills. For low-skilled workers, the emphasis was on physical strength and dexterity, although gaps were identified also in teamwork and time management skills.

Figure 58: Perceived Constraints to Hiring Workers

Source: Authors calculations based on Value Chain Survey (2016)

Despite skills gaps, firms do not appear to see training as a solution. This is understandable in the context of seasonal activities and possibly for low-skilled activities where high turnover of workers is a problem. Yet, firms even fail to invest in training skilled, permanent workers. No processors and just one farmer out of the 91 surveyed provided even one day's worth of formal training to their workers in the past year. None provided training to skilled workers. Even on-the-job training is minimal for high-skilled workers— just eight farmers reported providing on-the-job training for high-skilled workers, while processors provided an average of just three hours of on-the-job training annually.

C. The Solid Waste and Recycling Value Chain

1. Global and National Context

The global municipal solid waste (MSW) generation level in 2010 was approximately 1.3 billion MT per year. It is expected to increase to approximately 2.2 billion MT per year by 2025. This represents a significant increase in per capita waste generation rates, from 1.2 to 1.42 kg per person per day. However, global averages are broad estimates only, as rates vary considerably by region, country, city, and even within cities.

Generation: According to the Regional Solid Waste Exchange of Information and Expertise Network in Mashreq and Maghreb Countries (SWEEP-NET), Lebanon produced 2,040,000 tons of MSW per year. The per capita MSW generation in rural areas is 0.85 kg/person/day on average, whereas, MSW generation ranges from 0.95kg/person/day to 1.2 kg/person/day in urban areas. The high production rate of 1.2 kg/person/day pertains to the region of Beirut and parts of Mount Lebanon.³⁵ The daily waste generation of each major district in Lebanon is summarized in Table 15.

The Ministry of Environment (MoE) of Lebanon has projected an annual national growth rate of waste generation of 1.65 percent rising from 1.57 million MT to 2.4 million from 2009-35. This growth rate varies by region depending on the rate of urbanization, growing consumption, lifestyles, and level of environmental awareness.

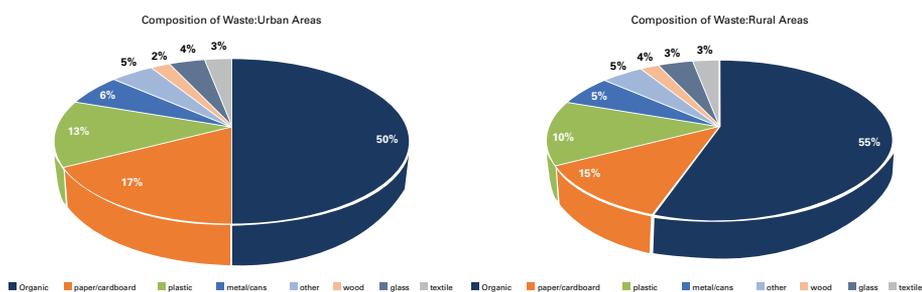
Table 15: Waste Generation per District per Day in 2013

<i>District</i>	<i>MT/day</i>	<i>%</i>
Beirut	600	11%
Mount Lebanon	2,250	40%
South Lebanon and Nabatiyeh	1,000	18%
North Lebanon	1,000	18%
Bekaa	750	13%
Total	5,600	100%

Source: Country Report on the Solid Waste Management in Lebanon SWEEP-NET, 2014

Composition: Several studies have been conducted to analyze the waste composition in Lebanon since 1994.³⁶ According to the State of the Environment Report (SoER 2001) by the MoE, about 90 percent of the total solid waste stream generated in Lebanon is MSW. The main sources of MSW are households, commercial establishments, street markets, street cleaning operations, and public garden pruning. Organic waste is by far the single largest component of the MSW stream, representing 50-55 percent of waste output (Figure 61).

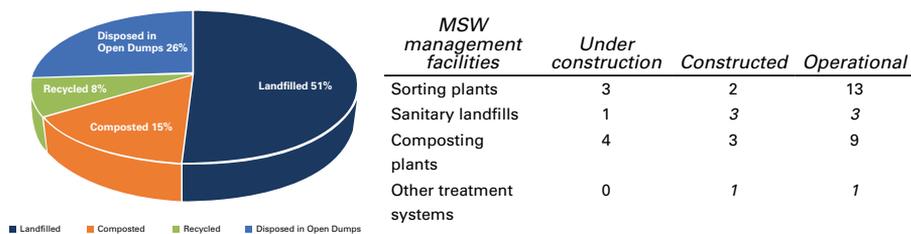
Figure 59: Composition of Municipal Solid Waste in Lebanon (2010)



Source: Ministry of Environment, 2010

Municipal Waste Management: Waste collection in Lebanon is mainly contracted to private companies or managed by municipalities and local contractors. Although there is a generally high level of waste collection coverage, the systems in rural areas are poor compared to urban areas. This is because contractors often lack sufficient equipment, and municipalities may not always have adequate enforcement capacity.³⁷ Despite progress in recycling since the 2006 conflict with Israel, 77 percent of MSW still ends up in landfills and open dumps (Figure 62).

Figure 60: Fate of MSW in Lebanon (2013)



Source: Waste management assessment in Lebanon by UNV Green jobs. Country Report on the Solid Waste Management in Lebanon SWEEP-NET, 2014.

While there are opportunities to compost organic material, in the absence of pre-sorting, the organic material contains a substantial amount of metals and plastics, and is considered too “hot” to compost. Pre-sorting and on-site sorting of recyclable material, particularly metals, plastics, and paper will be an important first step toward reducing reliance on landfill and dumps, while expanding composting and recycling. Currently, only eight percent of Lebanon’s MSW is recycled. Collection of recyclable materials is, to a large extent, carried out by scavengers operating at various waste collection sites in urban areas. It is thought that somewhere between 2,000 and 4,000 scavengers operate in Lebanon.

While scavenging continues to be an informal activity, recycling is a relatively well organized and profitable business with a set hierarchy of scavengers, collection point owners, and recycling plants. Collection points are scattered throughout urban centers and suburbs in empty lots and other empty wide spaces. These are “owned” by individuals who normally deal with a single recycling plant depending on the goods available for recycling. The collection point owners have their own groups of scavengers working for them, to whom they provide homemade carts to haul scavenged goods, along with food and shelter. The recycling plants, on the other hand, provide the collection point owners with pick-up trucks to transport recyclable items from the collection points to the recycling plant.

2. Municipal Waste Operations and Performance in North Lebanon

According to SWEEP-NET (2014), North Lebanon produces over 1,000 MT of waste per day - approximately 18 percent of the total national waste output. Based on an estimated population of 1.1 million inhabitants producing an average of 0.92kg of waste per person per day, the total annual waste production in North Lebanon is approximately 369,380 MT (Table 16).

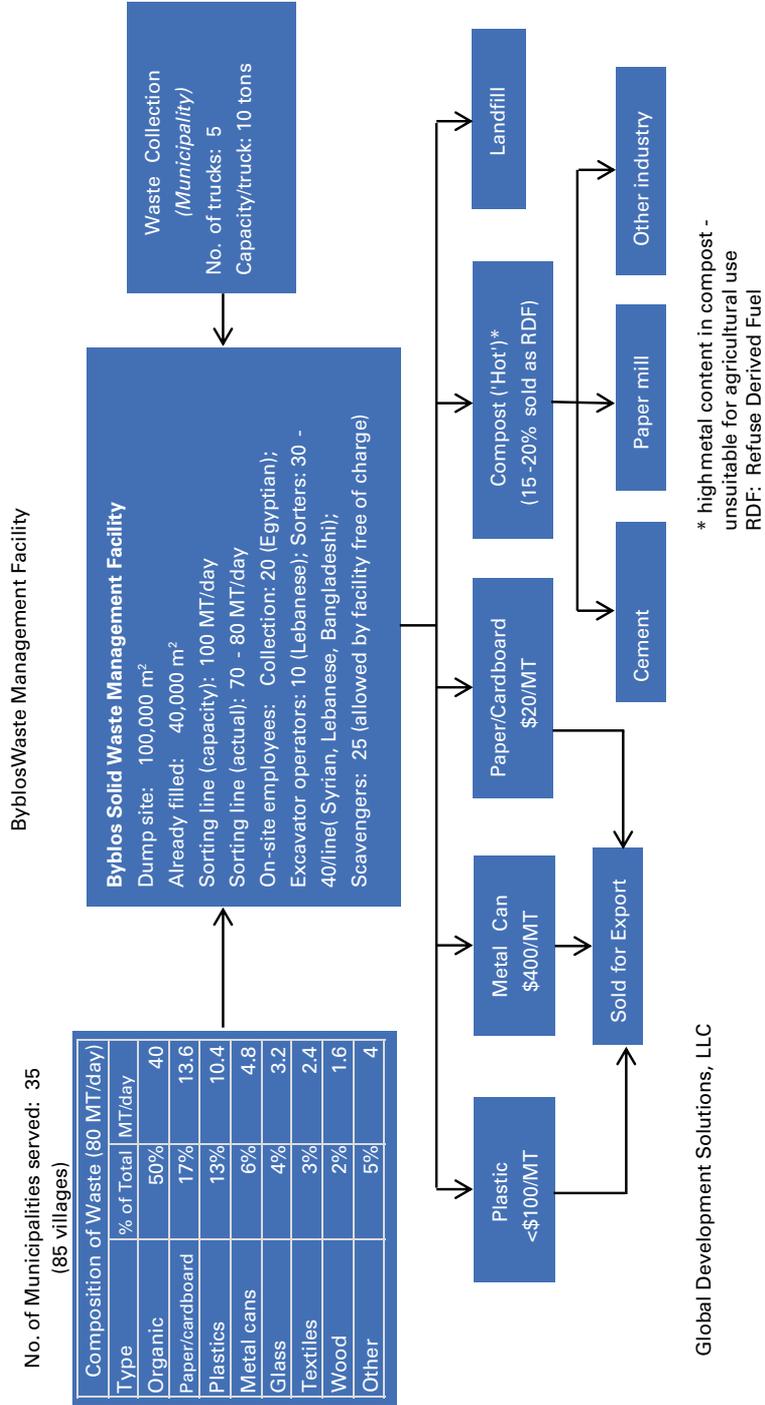
Table 16: Estimated Waste Production in North Lebanon

<i>Estimated Waste Production in North Lebanon</i>	
Population (est)	1,100,000
Waste	
kg/person/day	0.92
kg/person/yr	335.8
Total waste production (MT)	369,380
Organic waste	203,159
Paper/cardboard	55,407
Plastics	36,938
Metals	18,469

Source: Authors' calculations based on Value Chain Survey (2016)

Taking into consideration the weakness and in some locations, complete absence of structured MSW collection and transport infrastructure in North Lebanon, the estimated cost of collection and transport in Tripoli, for example, is US\$64/MT. This represents twice the cost in Greater Beirut and Mount Lebanon (US\$32/MT) where more established MSW collection and transport systems are currently in operation.³⁸ The supply chain for the municipal solid waste management facility in Byblos is representative of how a waste management facility in Lebanon is generally structured. It is, however, not operating at the level of international best practice. Specifically, no pre-sorting is currently taking place, and the on-site sorting line is not operational due to equipment breakdown (Figure 61). Currently, the facility allows 25 scavengers to collect recyclable products from the landfill site free of charge. When on-site sorting equipment was operational, the facility sold recyclable material (uncleaned), namely plastic, paper, and metals (aluminum and steel) to traders.

Figure 61: Supply Chain Map of Byblos Waste Management Facility



Source: Global Development Solutions, LLC.

Due to the absence of pre-sorting, organic material at the facility contains high concentrations of metals and plastics, making it unsuitable for composting for agricultural use. Additionally, in the absence of an operational on-site sorting line, all forms of municipal waste are currently bulldozed into a landfill.

3. Jobs in the North Waste Management and Recycled Products Value Chain

The municipal waste management and recycled products value chain is divided into four major market segments: (i) hauling; (ii) municipal waste management; (iii) recyclable product trading; and (iv) processing of recyclable products.³⁹ While there are no official figures for the number of jobs in each of the four market segments, survey data makes it possible to estimate the number of workers currently engaged in this market in North Lebanon. With a fully operational waste management and recycling supply chain infrastructure, the sector could be employing approximately 4,577 workers (Table 17).⁴⁰ In reality, however, the actual number of workers employed in this sector is currently a fraction of this estimate.

Table 17: Estimated Number of Workers in Waste⁴¹

Market Segments	<i>Fully Operational</i>	<i>99% Collection Rate</i>	<i>8% Recycle Rate</i>
Haulers	169	167	167
Waste Management	822	814	210
Traders	1,629		130
Metals			
Aluminum	95		8
Steel	656		52
Paper	430		34
Plastic	776		62
TOTAL	4,577		655

Assumptions

Approximately 70% of labor force in waste management facility are sorters (2 sorting lines)
% of waste recycled 8% Global Development Solutions, LLC

Source: Authors calculations based on Value Chain Survey (2016)

Of the relatively small number of workers in the waste management and recycled product sectors, approximately 17 percent are permanent high-skilled and 79 percent permanent low-skilled workers. The number of seasonal and temporary workers is relatively low. However, this does not account for the scavengers who collect recyclable material from the landfill (Table 18).⁴² Female participation in the sector is low, at 6.7 percent of the workforce across the entire value chain. Foreign workers account for about 30 percent of the jobs, but mainly in low-skilled work. Workers under the age of 25 years of age were nearly 13 percent of the total.

Table 18: Estimated Number of Workers According to Type, Gender, Nationality and Age ⁴³

2015	Traders			Metals				Total	% of Total
	Waste Management	Plastics	Metals	Aluminum	Steel	Paper	Plastic		
Permanent: High skill	16	14	23	2	11	9	9	83	16.8%
Permanent: Low skill	187	30	50	6	40	26	52	391	79.0%
Seasonal/ temporary	7	4	7	0	1	0	0	20	4.1%
Women	18	0	0	1	4	1	10	33	6.7%
Foreign	66	14	23	1	9	6	29	148	30.0%
People under 25 years of age	41	0	0	0	0	3	19	64	12.9%
TOTAL	210	48	81	7	52	34	61	494	

Source: Authors' calculations based on Value Chain Survey (2016)

4. Scenarios for Growth and Job Creation in the Solid Waste and Recycling Value Chain

Based on a fully operational waste management to recycled products value chain, the estimated number of jobs along the entire value chain is expected to reach 4,968 by 2020 and to 5,390 by 2025. This potential job growth was calculated based on two assumptions. First, that waste management facilities in North Lebanon are fully operational, accounting for the collection of at least 99 percent of municipal waste, and all sorting lines are operational with a functioning supply chain infrastructure for recyclable products. While it is not likely that 100 percent of the waste management and recycled product supply chain infrastructure can be operationalized for a number of years, the following estimate is based on the survey data which indicate the potential job creation and income generating opportunities available in these sectors. Second, an annual growth rate of 1.6 percent resulting in an estimated municipal waste output in North Lebanon reaching 400,876 MT by 2020 and 435,058 MT by 2025. (Table 19).

Table 19: Estimated Number of Jobs Along the Waste Management and Recycled Products Value Chain

<i>Market Segments</i>	<i>2020</i>	<i>2025</i>
Haulers	183	199
Waste Management	892	968
Traders	1,769	1,919
Metals		
Aluminum	103	111
Steel	712	772
Paper	467	507
Plastic	842	914
TOTAL	4,968	5,390

Source: Authors' calculations based on Value Chain Survey (2016)

The highest number of jobs is expected to be concentrated around traders of recyclable material (ranging from 1,769 in 2020 to 1,919 jobs by 2025), followed by steel processing (ranging from 712 in 2020 to 772 by 2025). Further breakdown of jobs according to type indicates that approximately 24 percent of new jobs will be permanent high-skilled jobs, while 70 will be permanent low-skilled jobs (Table 20). The highest concentration of permanent high-skilled jobs (29 percent) is expected to be in the trading sector, followed by the paper sector (25 percent). In part, this is explained by the fact that recyclable products are exported and require skilled employees to manage such trading activities. Women are expected to account for less than six percent of jobs. People under 25 years of age will account for even fewer jobs (4.1 percent) in the waste management and recyclable products value chain. Foreign workers are expected to account for about 30 percent of the jobs, but mostly low-skilled.

Table 20: Estimated Job Opportunities According to Type for 2020 and 2025

2020	<i>Traders</i>			<i>Metals</i>				<i>Total</i>	<i>% of Total</i>
	<i>Waste Management</i>	<i>Plastics</i>	<i>Metals</i>	<i>Aluminum</i>	<i>Steel</i>	<i>Paper</i>	<i>Plastic</i>		
Permanent: High skill	214	191	320	22	153	117	122	1,140	23.8%
Permanent: Low skill	577	413	690	78	543	350	713	3,364	70.3%
Seasonal/ temporary	101	58	97	2	15	-	7	280	5.9%
Women	77	0	0	7	50	9	140	284	5.9%
Foreign	279	191	319	18	125	76	403	1,410	29.5%
People under 25 years of age	173	0	0	1	0	3	19	197	4.1%
TOTAL	892	662	1,106	103	712	467	842	4,784	

2025	<i>Traders</i>			<i>Metals</i>				<i>Total</i>	<i>% of Total</i>
	<i>Waste Management</i>	<i>Plastics</i>	<i>Metals</i>	<i>Aluminum</i>	<i>Steel</i>	<i>Paper</i>	<i>Plastic</i>		
Permanent: High skill	233	208	347	24	166	127	133	1,237	23.8%
Permanent: Low skill	626	448	749	85	590	380	774	3,651	70.3%
Seasonal/ temporary	110	63	105	2	17	-	7	304	5.9%
Women	84	0	0	8	54	10	152	308	5.9%
Foreign	303	207	346	19	135	82	438	1,530	29.5%
People under 25 years of age	188	0	0	1	0	3	19	212	4.1%
TOTAL	968	719	1,201	111	772	507	914	5,192	

Source: Authors' calculations based on Value Chain Survey (2016)

Since only eight percent of municipal waste is currently recycled, there are substantial opportunities for waste management facilities to engage in cost recovery activities. A critical challenge for municipalities revolves around financing collection and on-site waste management, including sorting, so that tradable products are sold to local companies for recycling, repurposing, and trade. According to SWEEP-NET (2014), the total cost from collection to disposal is estimated to be US\$92/MT in Tripoli. Based on this figure, the estimated cost associated with operating waste management facilities in North Lebanon is expected to reach approximately US\$36.9 million by 2020, and US\$40.0 million by 2025. If revenue from sales of recyclable products can be realized (outlined in Table 21), Northern municipalities would be able to cover approximately 85 percent of waste management facility operating costs, while creating over 5,000 jobs.

Table 21: Potential Cost of Operating North Lebanon WMS and Possible Cost Recovery Options

	2015	2020	2025
Estimated Volume of Municipal waste (MT/yr)	369,380	400,876	435,058
Total cost from collection to disposal w/ sweeping (USD/MT)	\$92.00	\$36,880,612	\$40,025,340
Cost recovery from sales of recyclable products		\$31,369,992	\$34,044,842
% coverage of operating costs	85.1%		

5. What Would it Take to Deliver These Jobs?

Market Opportunities and Competitiveness: The key elements to be addressed in order for this sector to create the number of jobs estimated include:

- Awareness raising at the household level of pre-sorting waste;
- Establishing a supply chain infrastructure for collection of pre-sorted waste;
- Installation and efficient operation of on-site sorting at waste management facilities; and
- Strengthening the supply chain infrastructure for sales of recyclable products to local and regional processors.

Central to the above actions is the installation and efficient operation of on-site sorting of recyclable products at waste management facilities. The EUR14 million EU investment support project (Upgrading Solid Waste Management Capacity in Bekaa and Akkar Regions in Lebanon - SWAM) managed through the Office of the Minister of State for Administrative Reform (OMSAR) is installing sorting lines in seven sites in North Lebanon. This is an essential element for creating the anticipated number of jobs, while contributing to reducing Lebanon's reliance on imported metal, plastic, and paper through efficient utilization of locally available recyclable material. The

investment covers 253 municipalities with a population of 1.15 million and an installed MSW handling capacity of 1,085 MT/day. It includes: (i) construction of sanitary landfill-related infrastructure such as access roads; (ii) procurement of disposal and collection equipment (bins, trucks, and compactors); and; (iii) construction of solid-waste treatment plants with sorting and composting facilities.

These activities are essential elements for efficient operation of a waste management to recycled products value chain. According to OMSAR, support will be targeted in the poorest regions, namely Baalbek, Zahle, Jeb Jannie (Bekaa), and Srar (Akkar). Installations at the proposed facilities are not expected to be completed for several more years. Continued support to ensure timely installation of the facilities and collaboration with the 253 impacted municipalities to implement household level pre-sorting activities, will be critical for the success of additional job creation along the waste management and recyclable products value chain.

Lebanon is an importer of major recyclable products including aluminum, steel, plastic, and paper with import values ranging from US\$166 million/year for plastics to US\$813 million/year for steel, some of which could be sourced domestically using recycled material (Table 22). Price differentials between the import price of virgin material and the price of local scrap for each product suggest economically viable alternatives for replacing imported material with similar, if not the same, materials made from locally available recyclable material.

Table 22: Import Volume and Value of Recyclable Material and Comparative Unit Cost

2014	<i>Volume and Value of Imports</i>		<i>Comparative Material Costs (\$/MT)</i>	
	<i>MT</i>	<i>Value (USD)</i>	<i>Imported</i>	<i>Local Scrap</i>
Steel	1,434,755	\$813,505,813	\$684	\$150
Aluminum	132,593	\$203,000,000	\$1,531	\$500
Plastic*	104,228	\$165,984,161	\$1,600	\$300
Paper	na	\$297,003,463	\$ 625(1)	\$250

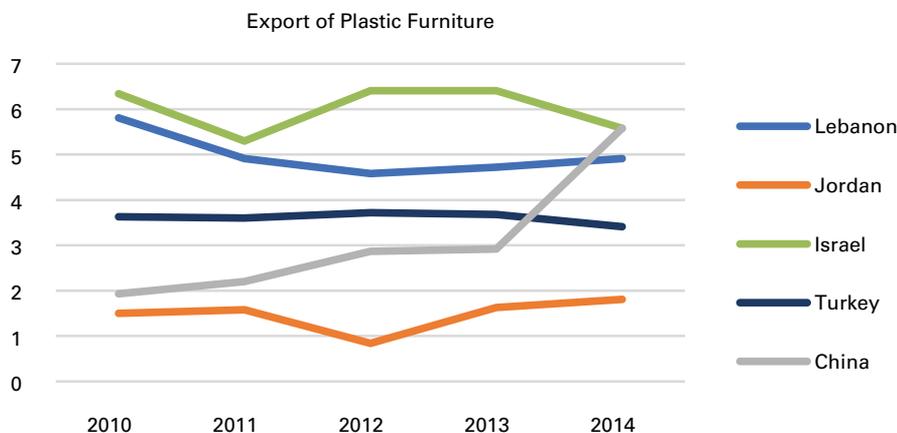
* includes polyethylene terephthalate, polyethylene gravity<0.94, and polyethylene gravity>0.94

(1): price of paperboard and packaging paper
International price of scrap paper, was around \$120/MT

Source: UNComtrade

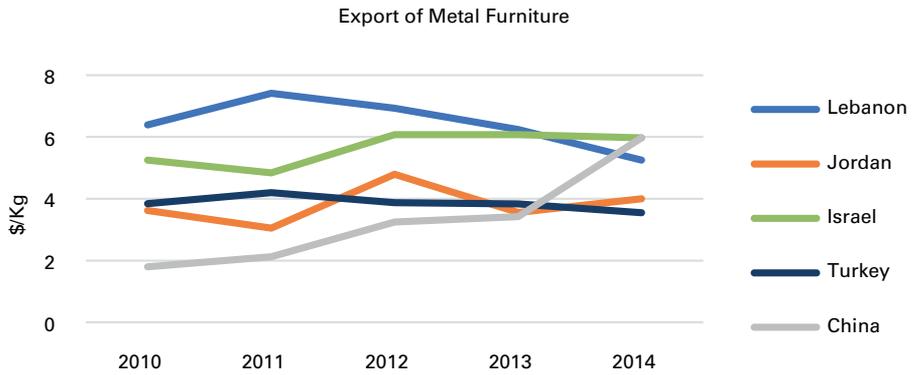
To assess whether Lebanon is a competitive manufacturer of products using plastic, metal, and paper and whether it has the potential to improve its competitive position in the regional market, three proxy products were selected as comparators between a number of regional countries and China. Specifically, plastic and metal furniture and articles made from paper (scrap) were chosen as comparators as recycled material is commonly used to fabricate these products. More importantly, there are a number of companies currently operating in Lebanon that manufacture these products for export. As the figures below indicate, Lebanon is not competitive, particularly against Jordan and Turkey, in plastic furniture within the region (Figure 62). For metal furniture, Lebanon is moderately competitive, but still lags behind Jordan and Turkey. However, for products made of paper and paper articles, Lebanon is highly competitive. Taking into consideration that raw material costs can account for 15-45 percent of production cost for plastic and metal furniture (depending on the production process and the type of material used), these figures suggest that switching from imported plastics and metals to locally manufactured materials from recycled products could possibly tip the competitiveness scale in Lebanon’s favor.

Figure 62: Sample Comparison for Plastic, Metal, and Paper Products



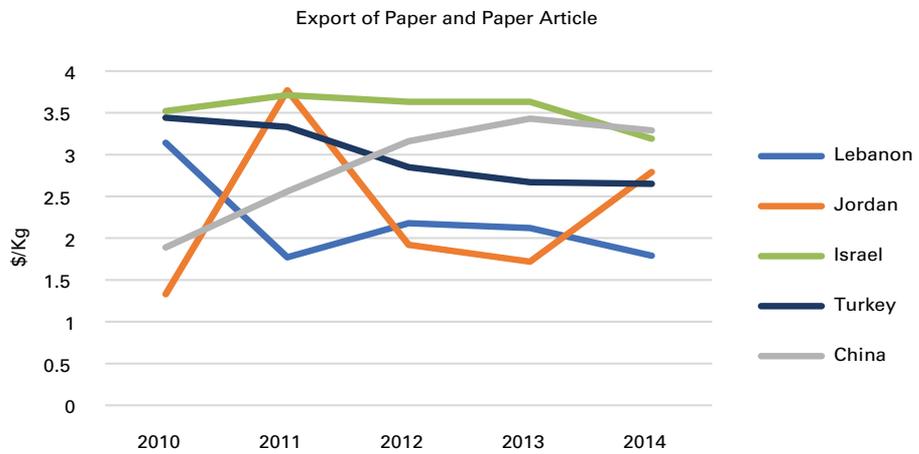
<i>Unit price in Kg</i>	<i>Lebanon</i>	<i>Jordan</i>	<i>Israel</i>	<i>Turkey</i>	<i>China</i>
2010	\$5.81	\$1.50	\$6.34	\$3.63	\$1.93
2011	\$4.91	\$1.58	\$5.30	\$3.60	\$2.20
2012	\$4.58	\$0.84	\$6.41	\$3.72	\$2.87
2013	\$4.72	\$1.63	\$6.41	\$3.68	\$2.92
2014	\$4.91	\$1.81	\$5.58	\$3.41	\$5.58

Source: UN Comtrade



Unit price in Kg	Lebanon	Jordan	Israel	Turkey	China
2010	\$6.39	\$3.62	\$5.25	\$3.84	\$1.80
2011	\$7.41	\$3.05	\$4.84	\$4.20	\$2.12
2012	\$6.93	\$4.79	\$6.07	\$3.87	\$3.25
2013	\$6.24	\$3.56	\$6.07	\$3.83	\$3.42
2014	\$5.25	\$4.00	\$5.97	\$3.55	#5.97

Source: UN Comtrade



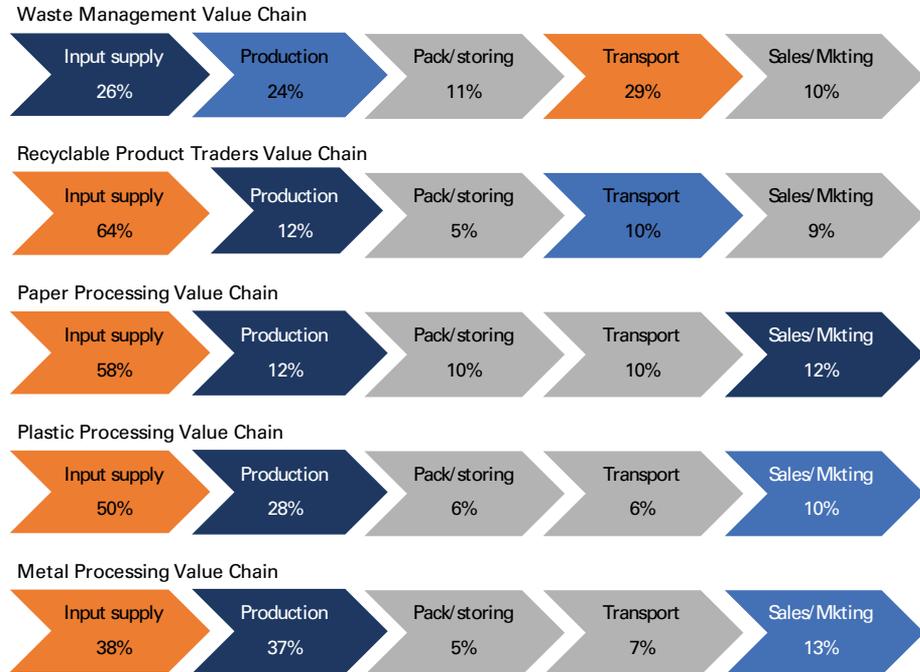
<i>Unit price in Kg</i>	<i>Lebanon</i>	<i>Jordan</i>	<i>Israel</i>	<i>Turkey</i>	<i>China</i>
2010	\$3.14	\$1.32	\$3.52	\$3.44	\$1.89
2011	\$1.77	\$3.77	\$3.71	\$3.33	\$2.56
2012	\$2.18	\$1.92	\$3.63	\$2.85	\$3.16
2013	\$2.12	\$1.72	\$3.63	\$2.67	\$3.43
2014	\$1.79	\$2.79	\$3.19	\$2.65	\$3.29

Source: UN Comtrade

Analysis of the Cost Structure: Value chain maps⁴⁴ were created based on the survey data which highlights the distribution of costs across five basic stages of value addition, namely input supply, production, packing/ storing, transport, and sales and marketing. The maps clearly indicate that the highest cost associated with the waste management to recycled product processing is input supply. For all value chains (with the exception of waste management where transport cost is the highest), input supply is the dominant cost, followed by production cost, which consists mainly of labor and electricity (Figure 63).

While a large majority of entities surveyed tend to source their input material from local sources, their sources are generally traders/importers, and thus only a limited number of recyclable products are being utilized as a part of the operation's input. The value chain map suggests that recycled material usage could potentially reduce a major portion of the cost incurred by companies currently operating in these key sectors. Furthermore, the value chain map also indicates that production cost is a major cost driver. In this regard, lower electricity cost could potentially be realized through the use of Refuse-Derived Fuel (RDF) in power plants, which could help to improving the competitiveness of industries operating in North Lebanon. In addition to the value chain map, further breakdown of input costs from the survey shows that raw material is a dominant cost driver followed by electricity, labor, and fuel. As the figures indicate, raw material costs ranged from 26 percent to 67 percent of the production cost, which suggests that reducing raw material costs is a key driver of competitiveness along the waste management to recycled products value chain in North Lebanon. In this regard, the availability of high quality, cost competitive recycled material to replace more expensive imported inputs could be an important factor. However, in order for this to be realized, an efficient supply chain structure starting from household level pre-sorting of household waste to an efficient supply chain infrastructure for waste collection, on-site sorting and sales of recyclable products is required.

Figure 63: Value Chain Maps for Waste Management to Recycled Product Processing in North Lebanon (% total cost)



Global Development Solutions, LLC

Obstacles to Current Operations: What is the view of operators at the different stages of the value chain to business potential and constraints? While stakeholders anticipate demand growth in the coming years, they were also asked to rank key obstacles based on eight variables which could be considered obstacles to current operations. Survey results indicate that managers of waste management facilities, traders, and plastic and metal processors found financing to be a moderate to high obstacle to current operations. Electricity and water were found to be moderate to high obstacles to current operations among all in the value chain except for operators of waste management facilities. Transport and logistics were considered a moderate obstacle among managers of waste management facilities and recycle product traders. Only traders found regulations to be a moderate to high obstacle to current operations, while crime and security ranked high as an obstacle for plastic processors. There were no clear indications why crime and security was a concern only for plastic processors.

Obstacles to Increasing Sales: Stakeholders were also asked to rank obstacles to increasing sales. For traders and plastic, paper, and metal processors, price competition ranked high. This obstacle may however be attributable to the fact that recyclable products are exported and subject to international prices. Reducing unit costs is the most effective way to address this market reality. Other variables were not seen as prominent obstacles to increasing sales.

Importance of Skills in the Workplace: Stakeholders were also asked to rank the importance of certain skills in the workplace. Skills were divided into the thirteen categories, including both cognitive and non-cognitive. For permanent high-skilled workers, nearly all stakeholders along this value chain considered almost all of the skills categories as somewhat to very important. The top three most important skills are provided in Table 23. When stakeholders were asked about the importance of labor skills, companies found them to be a significant obstacle to growth, particularly in industries like plastics and paper processing where companies are engaged in high value adding activities. Technical training in these areas is likely to have a role to play in improving the competitiveness and job outcomes in these target sectors.

Table 23: Three Most Important Skills for Permanent High-Skilled Workers

Waste management	Job specific technical skills
	Leadership skills
	Time management skills
Traders	Job specific technical skills
	Ability to work independently
	Time management skills
Plastic processor	Job specific technical skills
	Ability with calculations and numbers
	Ability to read and write English
Paper processor	Creative and critical thinking
	Time management skills
	Ability to work independently
Metal processors	Job specific technical skills
	Ability with calculations and numbers
	Teamwork skills
	Ability to work independently
	Time management skills

Source: Authors' calculations based on Value Chain Survey (2016)

Table 24: Labor Skills as a Major Obstacle to Growth

Is labor skills a major obstacle to growth?	YES
Waste Management	17%
Traders	11%
Plastic processing	60%
Paper processing	50%
25%	25%

Source: Authors' calculations based on Value Chain Survey (2016)

D. Value Chain Conclusions and Priority Actions

The analysis of the potato and solid waste/recycled products value chain indicates that both sectors have significant potential for job creation, particularly when taking into account induced impacts. The value chain represents a relatively small share of the overall economy in North Lebanon. Therefore, this is not a 'silver bullet' for solving the jobs challenge. Moreover, substantial investment and other interventions across the value chain would be required to have a meaningful impact on job creation and quality.

Regarding the potato value chain, it is clear that development of the downstream processing sector significantly changes the jobs outcome story for Lebanese. The large majority of existing jobs are low-skilled, seasonal activities on farms with limited opportunities for Lebanese workers. Downstream processing provides substantial opportunities for higher skilled permanent jobs both in processed potato products (e.g. potato chips, french fries, and other potato products) and further downstream, in starches and other industrial applications. Development of processing would also drive job creation and improve competitiveness and earnings in the farming sector, assuming that land could be made available to scale up production in response to demand.⁴⁵ Key challenges to unlock jobs potential in this value chain include actions to improve:

- Electricity and other infrastructure to attract large-scale processing;
- Post-harvest facilities and quality systems;
- Access to finance to facilitate access to higher quality inputs;
- Farmer practices for irrigation and pesticide application;
- Supply chain coordination and integration;
- Farm-level coordination and strengthening cooperatives; and
- Skills for the future of the value chain.
- Within solid waste/recycling, in order to realize the direct and indirect employment and economic impacts of operationalizing an efficient and effective "waste management to recyclable products" value chain, a number of

interventions (policy, technical assistance, and financing) are needed. Among the priorities in each stage of the value chain are:

- **Hauling:**
 - Municipal level resource needs assessment
 - Municipal level capacity building on international best practice
 - Prepare and distribute handbook on waste sorting
 - Pilot deposit-refund system in select municipalities
 - Pilot curbside and public drop-off collection schemes
 - Establish municipal level waste collection data system

- **Waste management:**
 - Public-private dialogue (PPD) between MSWM facilities and processors to estimate demand, price, and quality of recyclable products
 - Establish waste intake and output data collection system
 - Collaborate with OMSAR to deliver international best practice training
 - Support for Parliament to pass the Integrated Solid Waste Management law

- **Traders:**
 - Formalize waste collection network to increase participation of scavengers until sorting lines at MSWM facilities come online
 - Improve compliance with health, safety and environmental (HSE) regulations
 - PPD to engage haulers and traders for pickup and transfer of pre-sorted recyclable products to processors
 - Establish supply chain infrastructure for RDF

- **Processors**
 - PPD between processors and MSWM facilities to estimate demand, price, and quality
 - Assess merit of issuing tax credit for use of recycled feedstock
 - Introduce penalty for purchasing recyclable material from unlicensed traders
 - Assess merit of introducing investment incentives for establishing processing line using recycled feedstock

CHAPTER 6

Conclusions

A. The Job Market in North Lebanon

1. The Challenge of Fragility – Weak Job Creation Leads to Poor Labor Market Outcomes and Marginalization

As portrayed starkly in this report, job creation challenges in North Lebanon are substantial. The North is a highly informal, high poverty-level, regional economy facing significant and prolonged external shocks combined with a pre-existing situation of persistent internal insecurity. Notwithstanding a recent period in which public investment has increased, it is a region that has a strong sense of neglect. Central government has not been able to move forward with the key reforms required to provide a broad-based competitive improvement to the economy of North Lebanon, or to provide sufficient targeted support to this lagging region. This sense of marginalization was confirmed during the unexpected reversals that the leading political parties suffered in the 2016 Tripoli municipal elections.

The labor market in the North, relative to much of the rest of the country, can be characterized as “poor, excluded, dangerous, and limited”. Poor for reasons clearly portrayed in the poverty data; excluded because – as evidenced in this report – just 43 percent of the working age population are working and over 90 percent of those are informally employed without access to social security; dangerous because of the persistent underlying conflict issues of the region; and limited, because so many are consigned to under-employment and seasonal work. This is a labor market that has exceptionally low female participation and high levels of youth NEETs, resulting in significant marginalization of the most educated groups in the population. Overall, this contributes to a cycle of alienation and insecurity.

The crux of the problem lies on the demand side – a private sector that fails to generate productive jobs. Weak labor market outcomes in the region stem directly from a weak environment for private sector investment and growth. This report highlights that the North is dominated by micro-enterprises operating in the informal economy. Large, growth-oriented, export-oriented firms are severely in short supply. Moreover, cooperation among firms, much less integration in supply chains, is extremely limited. This failure of the private sector to create good jobs is, of course, not surprising in an environment of market and policy instability, poor infrastructure, and a variety of other significant shortcomings in the investment climate.

2. The Potential for Job Creation – New Pathways

What is also evident in the North is the clear commitment by so many to overcome these challenges. Discussions with value chain stakeholders, the Tripoli Chamber of Commerce, Industry and Agriculture, other civil society stakeholders and survey findings of the labor force revealed this commitment. Driven no doubt by necessity, the informal sector is a powerful measure of readiness and willingness to work. The fact that so many have found a living in the informal sector is a testament to this. Despite the brain drain and the reality that over half of the region's population has only primary education and lower, there are important levels of untapped and misaligned expertise. For instance, as noted earlier (Table 6), the estimated 22,000 who are unemployed are generally younger and more educated than the general population. Creating new job opportunities for this group must be a first step. Given so many have ICT and related training and that wage employment growth will not meet demand, especially over the short-term, these opportunities are likely to come first in the self-employment space. Attention needs to be paid to foster improved entrepreneurial outcomes.

Then, there is fostering greater labor market participation for women. It is not just the young who are generally better educated. It is also women, of whom some 23 percent possess first degrees and above. They have a stronger set of cognitive interpersonal and manual non-routine skills than the average worker. If avenues can be found to address effectively cultural factors and provide support (e.g. acceptable forms of child care) to assist with family responsibilities, a greater possibility would exist to bring a larger share of the working age female population into the active workforce. And, if additionally, incentives and facilities could be developed to encourage more women into entrepreneurship, it would most likely open up more wage employment opportunities for women. Research in conservative, fragile markets has shown that female-headed businesses tend in turn to create proportionately more job opportunities for women.⁴⁶ Presented earlier in the report, Box 2 summarizes some of the key findings on women and youth. It provides guidelines as to what needs to be addressed and what can be done to engender this segment of the labor force to a more proactive engagement with opportunity.

The evidence that many employers (61 percent) consider there is a mismatch between education and job offers, *prima facie*, suggests a significant opportunity to improve productivity. The evidence shows that, even in the most hostile investment climates, investment in good business management practices – one aspect of which is firm investment in staff training – reaps significant gains to the business in terms of turnover.⁴⁷ In turn, this encourages investment, growth, and job creation. As this report elucidates, there is a substantial body of training institutes that could support this effort. A greater focus on entrepreneurship, particularly at the secondary level, is an area of curriculum development that also needs to be encouraged and promoted.

However, requisite training has to be conducted differently and more inclusively. The stocktaking of the training institutes in North Lebanon points to insufficient attention to linkages with the private sector. While they may be privately run, they nevertheless fall short in coordinating with that part of the private sector that will

actually employ their graduates. New ways of targeting specific training programs to market demands and remaining agile to adjust programs and curriculum accordingly needs to be developed to maintain sustained improvements in job outcome results. Given the training drop-out rate or failure to engage in the first place, effective mechanisms to extend tuition support are required, and must have a clear focus on achieving job results. In other words, these two innovations would need to go hand-in-hand to be fully effective.

Two other important conclusions need to be highlighted relating to the importance of investment growth and the time this will entail. First, the overall solution to job challenges in the North cannot be fixed solely by addressing skills gaps and facilitating better job search and skills training. The problem's scale necessitates new investment, growth, and recognition that increased wage employment, even with new investment, will only offer part of the solution. While this diagnostic does see the potential of considerable permanent, better quality jobs available through the further development of selected value chains in both agri-processing sectors and new industries, such as recycling, this will take time to develop. It will not, on its own, be sufficient to close the jobs gap. Moreover, these transformations will require significant capital investments in infrastructure and some related policy shifts – notably in the power sector. These policy shifts rest with a central government that, while entirely cognizant of what needs to be done, has not for many years been able to make it happen. There is no reason to believe this can change in the near future.

Finally, there is significant distance still to be travelled to bring the supply and demand sides of the market into more effective partnerships in order to close skills gaps and open up new opportunities for job creation. This effort needs to be undertaken with a keen sense of what is possible and where the regional economy can go over the short, medium and long term. It also requires new ways of more effectively enticing private sector risk-taking and investment in fragile settings that are traditionally seen as antithetical to private investment. This can involve, for instance, use of more targeted, market-oriented financial support to what are fundamentally viable commercial ventures negatively impacted by the greater (market and government failure) risks resulting from the region's fragilities. This support could be output and outcome-based to incentivize performance, including job creation.⁴⁸

B. Ways Forward for Job Creation in Lagging and Vulnerable Regions

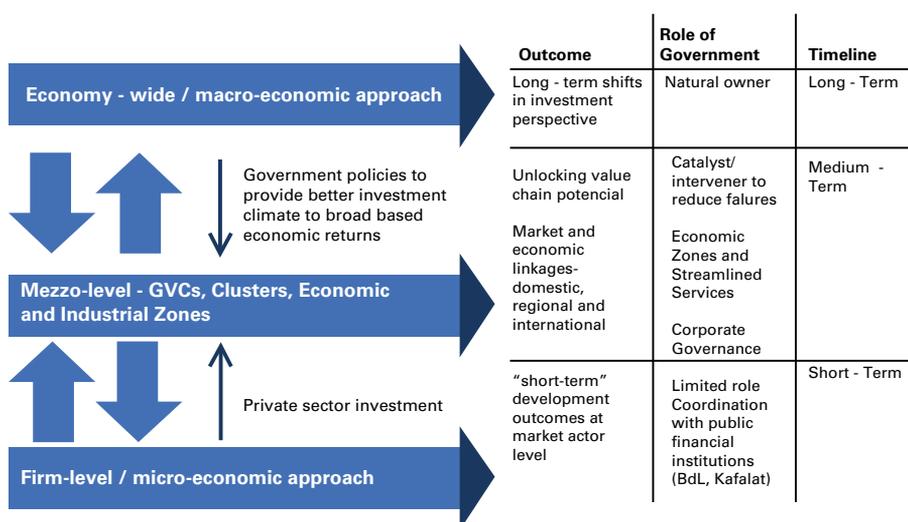
This report provides a diagnostic of the opportunities and challenges to the creation of additional, inclusive jobs in North Lebanon. This section presents suggestions on how to move forward in addressing these challenges. Finding solutions in North Lebanon, or in any lagging region in Lebanon, two key principles should be considered.

First, there will be no one “transformative approach” to the jobs challenge in the North. A range of actions – always calibrating to what is politically possible and a

bit beyond – will need to be considered with sustained implementation achieved over an extended period. Critical throughout this period, in addition to a sustained implementation effort, will be crowding in new private sector activity and investment. This will entail various strategies at different points of time, often overlapping and reinforcing. Over the shorter term, this entails a focus on SMEs, taking as given the current policy and infrastructure environment. Over the longer term, an increased focus on higher potential value chains – through selective (i.e. “not-so-politically sensitive”) sector-specific reforms and supporting investments – can in turn mobilize significant new private investment. In both cases, there are specific labor market and skills issues to be addressed and outcomes to be achieved.

Second, as noted earlier, major macro (economy wide) reforms are highly unlikely. Many of the significant constraints to business entry, growth, and job creation are long-standing problems in Lebanon. Solutions are well known but which have not, for whatever reason, been implementable. While efforts should continue to promote such reforms, solutions to the regional jobs challenge should not depend in any way on these macro reforms coming to fruition. Thus, the entry points that are recommended are at the mezzo-level, through value chains, clusters, and spatial solutions like SEZs and industrial zones, and at the micro-level, through interventions directly to firms and individuals (entrepreneurs and job-seekers). (Figure 64.)

Figure 64: Entry Points for Achieving Job Creation and Shared Prosperity



1. Short-Term Agenda: Supporting SMEs and Self-Employment

Starting with the shorter term – a period of maybe three to five years over which no policy change can be expected and before potentially growth-inducing infrastructure investment of the sort currently underway and/or in the pipeline comes into effect, the challenge will be to support SMEs to improve market performance and develop new market niches. This focus should also include the informal sector in which so much of the Northern labor force work. Micro-level, informal, locally oriented businesses dominate the employment landscape but lack the means to absorb even the relatively small active labor force.

The current environment in Lebanon is favorable to this focus. In 2014, the Ministry of Economy and Trade launched “*The Lebanon SME Strategy – A Roadmap to 2020*”⁴⁹ which together with the BdL Circular 331 initiative, has created a much stronger eco-system for SME growth, providing new sources of financing that complements ongoing efforts of the different Kafalat guarantee schemes and other BdL subsidized lending program. An important challenge is to foster greater coordination and synergies across these initiatives. Pathways need to be found to achieve this and direct the resources they entail with more purpose to the specific needs of the SMEs, the self-employed and the incipient entrepreneurship class in the North.

Another notable development has been the entrepreneurship eco-system in Lebanon. The country has always possessed a dynamic entrepreneurial culture, as has been highlighted in the recently published BdL report “*Lebanon’s Start-Up Eco-System Roadmap*”.⁵⁰ This is being complemented by an increasing number of business development service (BDS) providers supporting potential and existing entrepreneurs to follow up on business ideas and/or take investment risks to grow their businesses. This growing support sector – all non-governmental – has also more recently described in the recent World Bank Economic Monitor entitled “*A Geo-Economy of Risks and Rewards*”.⁵¹ A further example of this is the uptake of business proposals under the IBRD-funded iSME project which has provided 46 concept development grants worth US\$698,000 providing support to entrepreneurs to build out their products and services and improve capacity and market linkages to attract early stage capital.

The challenge is to foster job-creating activity in the North. A particular focus on the needs of women and youth and a strong commercial, market-based approach is required. Some of the potential solutions to address short-term job creation and inclusion follow:

- Delivering new forms of finance that can improve access to key inputs needed to start and expand MSMEs in ways that foster job creation and better mitigate lending risks;
- MSME and BDS/entrepreneurship support;
- Targeted programs to support female and youth business start-ups.

Respondents in the labor market survey indicated that access to finance and wage subsidies are some of the most important considerations in strengthening the

performance of this sector and, ideally, also providing the inducement for firms to formalize. Getting the incentives correct in developing such products, mitigating against market distortions but recognizing that jobs created in highly fragile, policy constrained and under-invested regions bring with it significant additional social externalities requires innovative approaches both to market interventions and addressing investment risks.

2. Longer-Term Agenda: Sustainable Jobs through Value Chain Investments

Recent analysis suggests that efforts to bring about national level policy reforms in politically fragmented fragile settings often fall short as the weight of politically vested interests take their toll.⁵² It is this perspective - held even by senior Lebanese policy makers and almost all private sector stakeholders engaged in the preparation of this report - that led to the focus on value chains. It builds first on the notion that targeting sub-sectors from production to end-market offers a more tractable reform context, more targetable and measurable investment opportunities. It also allows for a better calculation of winners and losers - in other words less threatening to the political and institutional rigidities that block wider change efforts.

The value chains analysis also indicated that while not the whole solution, substantial and real job potential exists in selected value chains, provided that downstream value-adding activities can be instigated. As discussed earlier in the report, there are a number of pre-requisites including clear determination of market opportunities, associated new investments in facilities and labor force skills development, and some core infrastructure changes. Development of these job opportunities and related value chains in the agricultural and processing sectors, will also require far greater attention to support effective partnership and networking within value chains and clusters operating in the region, as well as upgrading capabilities in key parts of the value chains. To reiterate, some of the priority interventions are:

- Improved quality management and implementation of certification to support quality in both processes and in products, to meet the needs of global markets;
- Investments in key quality and market supporting infrastructure, including post-harvest and market facilities and export infrastructure, as well as key supply chain infrastructure to support the recycling sector;
- Ongoing support to promote productive coordination and integration of actors across the value chains, including developing appropriate contract farming arrangements (in potatoes and other agricultural value chains) and public-private dialogue;
- Support for improved compliance on HSE and other standards along with training to support higher quality, higher value adding jobs;
- Facilitating investment in post-harvest facilities and quality systems in key agricultural value chains; and building capacity among farmers and agricultural cooperatives/producer organizations.

Interventions to support the development of competitive value chains need to be complemented with efforts to bring labor force supply closer to private sector needs. This requires raising skills levels, making them more relevant to the evolving skills demands of the private sector. It also requires efforts to improve matching between workers and jobs, through more effective registration and profiling of the labor force and improving information flows between public employment and training institutions and the private sector.

The VCA approach proposed as part of a multi-phased job development program is also in recognition of the specific enabling conditions on the ground in the North. To recap, the North has a relatively narrow economy. In order to achieve large-scale job creation, private sector investors willing to invest in the North as a base to serve wider markets are needed. This means first building on sources of comparative advantage in the North, specifically its strategic geographical position. The port of Tripoli provides connectivity to the wider region, as well as (at least initially) from specific value chains (mainly agricultural) where the region has already proven to compete in regional markets. The idea of serving wider markets is not simply about exporting, but also about serving markets nationally and within the region. This, too, requires improving connectivity (including to Beirut) and re-establishing Tripoli's central role in the regional and national economy.

3. Ongoing Imperative: Strengthening the Competitive Position of North Lebanon

It will be critical to build on new infrastructure investments already underway and then look to the region's other key economic assets. This includes the further development of a relatively deep-birth seaport that can strengthen the region's longer-term competitive edge. And, as previously mentioned, it could play a pivotal role in future reconstruction of Syria. Solutions to reinforce the strategic positioning of Tripoli and the North include:

- Continued investments (including customs) to develop the Port of Tripoli as a leading container terminal for regional shipping and, to the extent feasible, expanding private investment in different aspects of port development and operations;
- Investments in transport infrastructure to improve connectivity between Tripoli and Lebanon, as well as between Tripoli and key districts in the North;
- Investments in industrial infrastructure, such as special economic zones and industrial parks, to support a competitive manufacturing sector;
- Investments in urban infrastructure and municipal capacity to promote improved "livability" for residents of Tripoli;
- Investments to position Tripoli to support post-conflict reconstruction in Syria.

Beyond this, there is the Tripoli SEZ that has an independent legislative mandate that

allows for autonomous development and a unique potential to provide best practice services to businesses. This legislative capacity is further strengthened by a Board that is actively looking to attract private sector investment and management expertise. These are the sorts of assets that can attract not just the private sector as users, but also potentially as investors and providers, through “Public Private Partnership” financing and management arrangements. This should be pursued on a priority basis.

Eventually, value chain development and associated targeted infrastructure development, will experience diminishing returns – both in terms of private investment and jobs. Further attracting investment to establish and expand outward-oriented businesses in Tripoli and the North will also, eventually, require addressing significant, long-standing investment climate constraints. This includes issues of governance and, most notably, electricity, that make operating competitively almost impossible, particularly for firms attempting to compete in export markets.

Notes

1. Lebanon “*Promoting Poverty Reduction and Shared Prosperity*” World Bank Group Publication, 2016.
2. Vulnerability dimension contains two categories: Socioeconomic covering development and deprivation indices, inequality, and aid dependency, and vulnerable groups such as uprooted people, and other identified vulnerable persons that have special health and nutrition insecurities.
3. JRC, EU (2016). Index for Risk Management- INFORM: Concept and Methodology, version 2016. <http://www.inform-index.org/Portals/0/InfoRM/2016/INFORM%20Concept%20and%20Methodology%20Version%202016%20updated%20cover.pdf>
4. World Bank (2015).
5. Based on data from UNHCR (registered Syrians refugees) and estimated registration rates in: World Bank (2016). “*The impact of the Syrian refugee crisis in Lebanon*”. Forthcoming.
6. The refugees are spread throughout the country with concentration in urban centers in North Lebanon and the Bekaa. Until recently, and over the past four years of Syrian conflict, Lebanon adopted an “*Open Door*” refugee policy characterized by the liberal admission of refugees from the Syrian conflict. Around half of Lebanese villages in North Lebanon have seen their population more than double since the start of the Syrian conflict. Even prior to the arrival of the refugees, the host areas in Lebanon (including the North) had already the highest incidence of poverty as compared with other regions in the country. Source: World Bank (2015).
7. The link between economic marginalization and its impact on social disaffection and radicalization in Tripoli was recently made in “*The Roots of the Crisis in Northern Lebanon*”, Carnegie Middle East Center, April 2014. The same concerns were raised also in a 2013 report of the Partners for Democratic Change International (PDCI) in a report entitled “*Community Conflicts in Northern Lebanon*”.
8. Council for Development and Reconstruction http://www.cdr.gov.lb/arabic/select_projects_hm_location.asp as accessed on June 12, 2016. CAS – Household Living Conditions survey 2007.
9. World Bank (2012) “*Lebanon, Good Jobs Needed: The Role of Macro, Investment, Labor, Education, and Social Protection Policies*”.
10. World Bank (2016). “*The impact of the Syrian refugee crisis in Lebanon*”. Forthcoming.
11. Defined as the employed over the working age population.
12. World Bank (2016). “*The impact of the Syrian refugee crisis in Lebanon*”. Forthcoming.
13. The analysis excludes the Syrian refugee workforce and focuses exclusively on the Lebanese.
14. Source: World Development Indicators, based on data from ILO KILM database.
15. It should be noted that although Syrians were not excluded from the survey, less than two percent were randomly selected and, thus, were not a representative sample to conduct meaningful analysis.
16. Skilled is defined here by the type of occupation held. High-skilled are defined as Managers,

- Professionals and Technicians and low-skilled as all the other occupations.
17. Skills required by a given job relative to the education attainment of the worker holding the job.
 18. This methodology builds on seminal work of Autor, Levy and Murnane (2003); Acemoglu and Autor (2011); and Autor and Handel (2013), who analyzed the skill content of tasks within occupations and their changes over time due to technology changes in the United States. One of their main findings is that employment is shifting toward occupations that are more intensive in Non-Routine Cognitive skills (such as management or social care services which are difficult to computerize) and moving away from occupations that are intensive in Routine skills (telemarketers, for example, which are easier to computerize).
 19. Dicarlo E., Lo Bello S., Monroy-Taborda S, Oviedo A-M, Sanchez-Puerta M-L, Santos I. (2016). The Skill Content of Occupations across Low and Middle Income Countries: Evidence from Harmonized Data. Forthcoming.
 20. This number includes an estimate of students (7,000) in the Lebanese University in the North, based on the information currently available, but still pending confirmation from the university.
 21. Same as above.
 22. See World Development Report 2013: Jobs, World Bank, Washington DC.
 23. Source: InfoPro.
 24. World Bank, European Bank for Reconstruction and Development, European Investment Bank (2016). “What’s Holding Back the Private Sector in MENA? – Lessons from the Enterprise Survey”, 2016.
 25. The caveat here is that efficiency should not depend on labor exploitation.
 26. See Rahman, Aminur. 2014. “Investment Climate Reforms and Job Creation in Developing Countries: What do we know and what should we do?” World Bank Policy Research Working Paper 7025, World Bank, Washington DC.
 27. No data was available for the region on obtaining operating or import licenses or securing a government contract.
 28. Diagram 3: Public-private alliances for long-term national development strategies, Robert Devlin and Graciela Moguillansky, CEPAL Review 97 – April 2009.
 29. Doing, Learning, Being: Some Lessons Learned from Malaysia’s National Transformation Program - Charles Sabel and Luke Jordan - January 2015 – CIIP Competitive Industries and Innovations Program.
 30. Note that the construction and ICT value chains are expected to be covered through other planned analytical work in the region.
 31. Trade figures vary widely depending on the source. FAO reports global potato trade at US\$6.44b (2013); UN Comtrade reports around US\$10 billion (2014); ITC reports US\$14.4 billion (2014).
 32. According to data from UN Comtrade 2010.
 33. The analysis aims to estimate only jobs relevant to the potato value chain and, therefore, calculates proportionally activities related to potatoes in firms that do other activities – for example, traders that sell other products and farms that produce secondary products.
 34. Daher Foods made a US\$35m investment in a 120,000-ton capacity potato processing plant

for their Masterchips brand. The 20,000 square foot facility in Ferzol, Bekaa was expected to open in January 2016, although market conditions (in key export markets of Syria, Iraq, and Jordan) have delayed its opening.

35. Country Report on the Solid Waste Management in Lebanon SWEEP-NET (2014), <http://www.sweep-net.org/sites/default/files/LEBANON%20PROFIL.pdf>.
36. Legal framework for solid waste management in Lebanon, 2004.
37. Country Report on the Solid Waste Management in Lebanon SWEEP-NET, 2010.
38. Country Report on the Solid Waste Management in Lebanon SWEEP-NET, 2014.
39. The products are covered under this analysis are metals (including aluminum and steel), plastics, and paper.
40. The figure is based on current population and estimated waste production in North Lebanon.
41. Estimate for haulers is based on five haulers collecting 30 MT of municipal waste per day with a total annual waste production of 369,380 MT in North Lebanon.
42. Currently, there are 2,000 – 4,000 scavengers operating throughout Lebanon. Given that North Lebanon accounts for 18% of total waste production in Lebanon, 18% of 3,000 scavengers is approximately 540 scavengers working in North Lebanon.
43. Distribution of workers according to type, gender, nationality, and age is based on survey data of proportional distribution of workers in these categories from formal and informal operators currently operating in North Lebanon. The figure does not include a breakdown for haulers.
44. Red highlight indicates the highest cost along the value chain, followed by yellow, then green.
45. An initial assessment identified no specific, insurmountable barriers to shifting production over to potatoes from other crops in the region. Other reports (c.f. International Rescue et al, 2013) suggest there are constraints to expanding the land area available for potato crops in Akkar.
46. See “Somaliland’s Private Sector at a Crossroads – Political Economy and Policy Choices for Prosperity and Job Creation”, World Bank publication, 2015.
47. This was seen to be the case in the Nigeria. See chapter “An Assessment of the Investment Climate in Nigeria”,
48. These considerations will be explored in more detail following further consultations with government.
49. Ministry of Economy and Trade (2014). Lebanon SME Strategy: A Roadmap to 2020.
50. Banque du Liban (2016). Accelerate 2015 – Lebanon’s Startup Ecosystem Roadmap: Challenges, Opportunities and International Best Practices.
51. Harake, Wissam; Matta, Samer Naji; Hasna, Zeina. 2016. Lebanon Economic Monitor: A geo-economy of risks and reward. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/2016/06/26412099/lebanon-economic-monitor-geo-economy-risks-reward>.
52. See “Creating Value Chains in Africa’s Fragile States: Are Value Chains the Answer”, World Bank publication, 2013.

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The North of Lebanon is a region of great potential that has shown remarkable resilience to recent adversity. A historic center of culture and trade, a region of rich agricultural land with a dynamic population, the North of Lebanon faces significant structural socio-economic challenges. The recent period of political, community and social insecurity has significantly undermined investment and growth. The consequences can be seen in the region's low levels of job creation, out-migration of talent and increasingly informality of jobs and businesses. These challenges have been exacerbated by the influx of Syrian refugees over the past several years.

This report provides an assessment of these constraints and the opportunities for the creation of more and better quality jobs for Lebanese in North Lebanon.

This analysis, accompanied by further public and private sector dialogue can inform the actions that can be taken to create the jobs and new enterprises so urgently needed.