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# REPORT ON THE INDUSTRY AFFAIRS SECTOR OF THE REPUBLIC OF LEBANON

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## Sector policy recommendations

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## Preliminary remarks

### The domestic context for industrial growth

#### a) Industrial productivity assets

Despite local and regional instabilities, the Lebanese industrial sector has proved rather **resilient**, as testified not least by the official figures concerning industrial production:

- **GDP growth rate** is estimated at 2 percent for 2017 (same as for 2016), with the main driver being services and tourism in particular.
- **Private consumption** is driving growth and reversing a three-year decline in the contribution to GDP growth (2014-2016).
- The country ranks extremely well in terms of **business sophistication, technological readiness** and **innovation**.

Lebanon has numerous **productivity assets** in its investment environment which many of its neighbors in the region lack:

- it offers one of the most liberal **investment climates** in the Middle East
- it has a **non-discriminatory legal framework** against foreign investors
- it enforces low **corporate tax rates** and competitive taxation schemes,
- it has one of the safest **banking systems**, with high liquidity and a recently instituted Banking Secrecy Law which is solid
- the national **crime rates** are low.

The **industrial sector** represents a large proportion of the national output, while manufacturing especially contributes significantly to the GDP. Although net exports have declined, largely as a result of the effects of the Syrian conflict, nevertheless there has also been a dip in imports, something which permits Lebanese industrialists to expand in the national market.

#### b) Productivity challenges

At the same time, domestic institutional and other factors as well as the regional crisis have led to a number of productivity challenges:

- Being heavily dependent on tourism and real estate (a sector which is in relative stagnation and provides a disproportionately small number

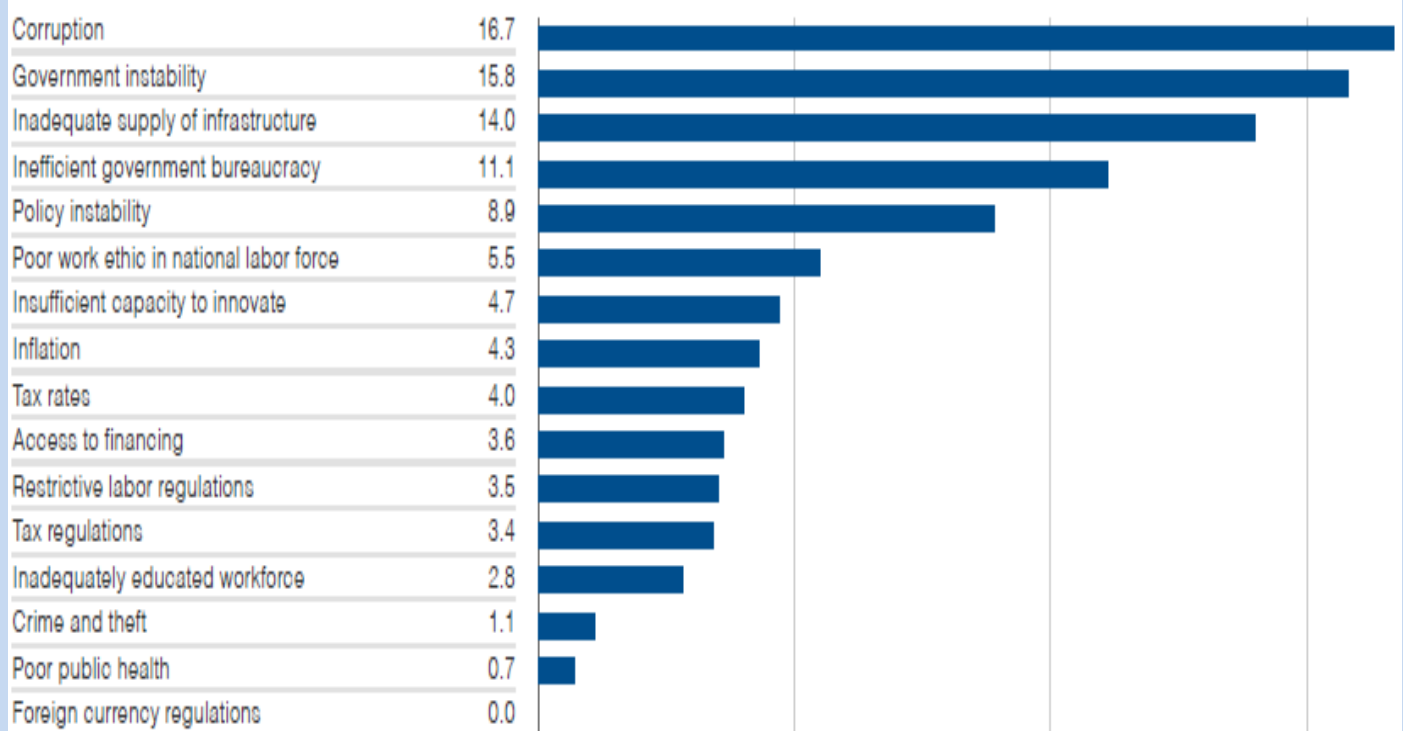
of jobs) at the expense of industry and agriculture, the country's macroeconomic structure renders the economy vulnerable to political and economic shocks. Lebanon needs to focus on its **industrial potential** and provide solutions to the numerous constraints hindering its industrial establishments from functioning at their full capacity.

- In this context, Lebanon faces four major **challenges** it must focus on in order to give an impetus to its industrial productivity:
  - Boost bureaucratic efficiency – transparency & accountability
  - Address infrastructural concerns
  - Improve access to financial instruments
  - Enhance labor skills

The need to focus on these areas in order to remove the obstacles which impede the rise of industrial productivity can be readily deduced by the findings of the *World Economic Forum's* latest executive opinion survey, which among other things found that Lebanon has dropped four places (to 105<sup>th</sup>) in the global competitiveness rankings:

## Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2016



<p><b>STRENGTHS</b></p> <ul style="list-style-type: none"> <li>▪ <i>Business sophistication, technological readiness and innovation</i></li> <li>▪ <i>Liberal investment climate, non-discriminatory</i></li> <li>▪ <i>Low corporate tax rates and competitive taxation schemes</i></li> <li>▪ <i>Stable and business-friendly banking system</i></li> <li>▪ <i>Low crime rates</i></li> </ul>	<p><b>WEAKNESSES</b></p> <ul style="list-style-type: none"> <li>▪ <i>Bureaucratic efficiency – transparency &amp; accountability</i></li> <li>▪ <i>Infrastructural concerns</i></li> <li>▪ <i>Access to financial instruments</i></li> <li>▪ <i>Issues with labor skills</i></li> </ul>
<p><b>OPPORTUNITIES</b></p> <ul style="list-style-type: none"> <li>▪ <i>Recognition of need for a comprehensive procedure relief policy</i></li> <li>▪ <i>Capital Investment Plan's emphasis on infrastructure</i></li> <li>▪ <i>National Renewable Energy Plan</i></li> <li>▪ <i>Credit Infrastructure Legislative Package</i></li> </ul>	<p><b>THREATS</b></p> <ul style="list-style-type: none"> <li>▪ <i>Regional turmoil and economic impact of safety and security concerns</i></li> <li>▪ <i>Inability to reverse brain drain</i></li> <li>▪ <i>SEZs fail to capitalize on comparative advantages and simply enhance rent-seeking activity</i></li> </ul>

Based on the aforementioned and other available qualitative data, it is possible to conduct a SWOT analysis for Lebanese industrial growth, which points to the sort of opportunities currently available to the government for addressing the weaknesses and countering the threats to its industrial productivity.

## [1a] Bureaucratic efficiency & transparency I

Let us start with the first area that needs to be addressed, **bureaucratic efficiency & transparency**. As corroborated by the project's findings, the industry sector bears the most administrative burdens. While the total number of information obligations (IOs) identified in the Ministry of Industry (MoI) is 26 (13 less than the Ministry of Tourism – MoT) **the total cost of all administrative burdens exceeds 21.5 billion LBP** (almost double than that of the MoT), which amounts to 99% of the total administrative burden in the MoI.

- a. With respect to the establishment and operational licensing of procedures, there are heavy burdens related with them. Businesses and citizens spend most of their time collecting the necessary documents from various public agencies (tax compliance, identity proof, social security obligations, etc). The *Standard Cost Model*, which is universally adopted to assess the net cost of IOs imposed by states, was applied in the case of the MoI, leading to the identification of **the most burdensome IOs** incurred by enterprises of which the first four (*in billions of LBP*) relate to the obligation to apply for:
  - i. *validation of origin* (9.9)
  - ii. *a construction permit* (4.5)
  - iii. *the establishment of a license* (3.3)
  - iv. *an industrial license certificate* (1.3)
- b. On the basis of this but also a broader analysis of the workings of the MoI and their effectiveness as well as their efficacy, a number of important conclusions were drawn by the project for administrative simplification which can be summarized as follows:
  - i. the MoI is oriented to **service delivery** rather than policy development, monitoring and evaluation.
  - ii. **licensing procedures** are over-burdened with bureaucratic check-points for legal conformity.
  - iii. there is an **over-concentration of decision-making authority** in the top echelons of the Ministry, thus also slowing down the process.

## [1b] Bureaucratic efficiency & transparency II

Relying on the project's findings and building on its more specific recommendations, it is possible to consolidate these within a comprehensive **procedure relief policy**. Its adoption will not only lend significant support to augmenting industrial investment but, judging by similar cases in international politics, can produce significant added-value as a government 'umbrella'-initiative likely to win broad popular support which goes even beyond the business community. This requires the type of customized interventions which the project has detailed in order to enhance bureaucratic flexibility, transparency and responsiveness to client's needs as well as to improve cost efficiency and service delivery. Such measures include:

- a. The **capacity building** of staff, the establishment of adequate **staffing** as well as in the long term the creation and consolidation of **fully fledged departments with clear mandate and tasks**.
- b. The implementation of **structural adjustments** that will eliminate fragmentation and overlaps as well as reduce the workload for some departments, through relocations and mergers as well as measures such as the decentralization of licensing functions to the regional administration.
- c. In accordance with a modernised system of delegation of authority, the consolidation of roles and responsibilities of institutions and staff in **job descriptions**, the establishment of **trust** in the competence of subordinate staff as well as the **scaling of authority** according to rank and competence and the **delegation of authority** based on territorial competence or value of the individual case.
- d. **Streamlining the role of departments** (Industrial Services, Standards and Quality Control, Service of Industrial Licensing). Recognized internationally as a general best practice, this would also serve as a means of identifying industrial bottlenecks and creating effective systems to manage processes and resolve policy issues.
- e. Improvement of **communication information** and **data management**.

## [1c] Bureaucratic efficiency & transparency III

In concurring with the findings of the project on the administrative front, one must add that **donors** and **international development agencies** can provide crucial capacity building and policy advice in co-designing and implementing additional policies aimed at reducing administrative burdens for industrial enterprises. Aligning donor support with industrial growth and sharing country experiences can provide Lebanon with much needed expertise and best practices which can help it avoid various pitfalls of industrialization. Such measures, built on international best practices and worth pursuing, could be adopted in the following areas:

### One-stop-shops (OSSs)

A widespread **decentralization** is needed along with a significant reduction of paperwork. This is a process that is not only *technocratic*, relating to legal and administrative reforms, but also *deliberative* in terms of engaging in exchanges with enterprises and citizens, e.g. by setting up online platforms for feedback and by ensuring responsibility sharing across government.

The **Licensing Committee**, which was an important initiative on the part of the Lebanese government to modernize the licensing procedure, could be upgraded to a comprehensive OSS, or a Citizen Service Centre, with an operational role which aims at more effective and faster procedures. This would mean enhancing it with an advisory mechanism for the interested citizens, and also regularly holding cross-departmental sessions for the joint reviewing of their applications.

The OSS needs to have the **authority** to approve various permits or else directly liaise with the relevant government institutions for approvals or on other issues which need to be followed up.

### Legislation

One may consider introducing a **Law of Tacit Approval Procedure** to industrial investment projects, which would make it possible for automatic approval of a license request after a specific period of time has elapsed and the state authority has not delivered its decision.



It must be noted that in the *European Union*, the principle of tacit approval of applications has been widely employed as an important means of reducing red tape, as attested by the fact that most member states have introduced it in their horizontal legislation while others have adopted it directly in sector-specific legislation relating to industry and to the private sector as a whole.

#### Bureaucratic accountability

Ahead of the exploration of its oil and gas reserves, Lebanon is set to join the Extractive Industries Transparency Initiative (EITI) which will provide greater **transparency and accountability** in the area of natural resource management. In fact, full implementation of the EITI standard is likely to entail recommendations for a wide range of public sector legislative reforms that increase accountability of officials, simplify and render more transparent the delivery of public services in the industrial sector as a whole. This should be translated into specific initiatives for mainstreaming the EITI processes aiming at the **simplification of tax reporting for extractive industries**, the enhancement of **contract transparency** and the qualitative improvement of **data collection on anti-corruption**. If this is coupled with a solid policy-monitoring and implementation regime, this can have an enormous impact on annual revenue lost due to the misallocation of resources but will also help Lebanon further boost the already positive image which it has as a business-friendly environment.

#### Implementation capacity

The effects of such interventions will likely spill-over into other areas as well. For example, the recently adopted national Capital Investment Plan, would greatly benefit from a cross-ministerial **strategy on addressing implementation challenges** and for augmenting the capacity of the institutions involved in implementing it.

The classic example of a 'success story' here relates to S. Korea in the 1960s, whose president pushed through public and private sector reforms to ensure the successful implementation of the country's industrial policy. He mandated far-reaching changes to the industrial structure of the economy that included the creation of a **super-ministry**, the *Economic Planning Board*, which consolidated industrial policy-formulation and implementation functions which had previously been diffused across various ministries.

## [2a] Industrial infrastructure I: context

According to the Global Competitiveness Index, out of 137 countries Lebanon ranks **130<sup>th</sup> in the quality of its infrastructure**, mainly water supply, electricity, waste management and transport. The weak supply of infrastructure oneis of the chief factors that are harmful to industrial production.

Lebanese manufacturing firms have identified some of the main productivity barriers as **electricity** and **transport** (WB Enterprise Survey). In particular, UNIDO has calculated that the **cost of energy** in over 4,000 industrial establishments accounts for about 5.7% of the average cost price, while in key national industries such as the energy intensive industries of plastic, paper, glass and ceramics, it exceeds 30%.

The \$16 billion **Capital Investment Plan** (CIP) which Lebanon has adopted is set to provide industry with productive gains by enhancing the critical infrastructure of the country. The 280 infrastructural projects covered in the plan also include the creation of **special industrial & economic zones**.

## [2b] Industrial infrastructure II: SIZs & SEZs

### Opportunities

Special Industrial and Economic Zones such as the ones currently in development in Lebanon are ideal vehicles for addressing several problems relating to regulatory simplification, as they provide businesses with a growth-inducing regulatory frameworks:

- ✓ They provide licensing schemes that are streamlined or pre-approved.
- ✓ They give access to inexpensive land and infrastructure.

### Challenges

While there are many success stories in the region and around the world in setting up well-functioning and growth-inducing SIZs and SEZs (Jordan, Turkey China, Europe), there are many unsuccessful attempt to set up SEZs/SIZs. E.g. Morocco lost many years due to an opaque and complex

legal framework with many conflicting responsibilities between government agencies for its administration.

- In Lebanon itself, the first attempt to create 100 small industrial zones across the country by the MOI and the Investment Development Authority of Lebanon (IDAL) in the 1990s, yielded some positive results but failed to achieve economic spillover and did not lead to sustainable industrial development. A rigorous examination by Lebanese economic historians and industrial policy experts of the factors which had led these early initiatives to atrophy would surely yield useful **policy conclusions** for today as well.
- There are several ways to ensure that the Special Zones benefit from international BPs and standards:
  - ✓ A **Regulatory and Licensing Regime** must be put in place. This could provide for the establishment of a **single-window clearance** (SWC) system, in the same spirit as the OSSs. The SWCs have proven crucial for eliminating the red tape as much as possible in multi-licensing industries.
    - In the case of the Lebanese construction industries, for example, a **SWC Committee** could be set up to handle construction clearances for electrical work, pollution control, city planning and public health. Similar committees could be set up for sectors which are prioritized because of their comparative advantage.
  - ✓ When it comes to designing the Masterplans and especially the PPP Business Plans for these Zones, the **environmental dimension** must be taken into consideration. This is something which the three industrial zones currently under development in Lebanon are already set to doing, which is a very positive step as it also conforms to the Sustainable Development Goals (SDGs) set by the UN.
    - On this basis, one could even go a step further and establish **eco-industrial parks** which are vehicles to simplify the logistics while reducing waste and transport costs.

- The Ministry of Trade, Industry and Energy of S. Korea, one of the leaders internationally on this front, has recently signed a MoU with the Ministry of Science, Industry and Technology of Turkey with the aim of jointly developing eco-friendly industrial parks in order to recycle waste and improve energy efficiency. In the context of its current policy of investing in waste management, Lebanon should pursue cooperation with countries such as South Korea, which has applied since 2005 an eco-industrial park programme aimed at reducing, re-using and recycling wastes and materials in major industrial complexes.
  - A major benefit from such an exchange would lie not only in the potential transfer of useful knowledge in innovative production processes, but also in highlighting the crucial means by which proper **infrastructure management** is intimately connected with the successful implementation of measures for **administrative simplification**.
- ✓ With respect to the **Revised Kyoto Convention** (RKC) Lebanon is on a path to accession to the RKC on Simplification and Harmonization of Customs Procedures, considered as ‘the mother document for drafting national customs laws’ – even by the World Customs Authority (WCO), with which Lebanon is also working closely. The adoption of the RKC provisions will render customs regulatory procedures as efficient as possible and **enhance transparency and predictability of customs actions**; it will strengthen **standardization** of the goods declaration; it will provide for **simplified procedures** for industrial firms, maximum use of **information technology** and minimum necessary customs controls to ensure compliance with regulations; it provides for wider use of **risk management** and **audit based controls** as well as coordinated interventions with other border agencies.
- The industrial zones currently being developed could benefit significantly from full implementation of the RKC provisions, as they are known internationally to help **reduce trade transaction costs** and contribute to **industrial competitiveness**. This is so because it will help to lower the costs of production and importation (thus also prices for Lebanese consumers), to increase economic competitiveness, to attract international trade

and investment and to gradually increasing national revenues. For Lebanese industrial firms, it will provide more transparent procedures, greater facilitation for compliant traders, lower business costs, and clearer guidance on their rights and obligations.

- Lebanon must also address its high **trade transaction costs** in order to give an impetus to **industrial efficiency in the zones**. According to a still-pertinent audit executed by the World Bank, unofficial costs of inadequate trade facilitation add 1.1% to total import value and 1.9% to total export value, while “together with ineffectiveness in trucking, container handling and high port fees, Lebanese trade suffers serious disadvantage in comparison with its regional and Mediterranean competitors”. Customs clearance is a slow and complex process, as exemplified in the case of the Industrial Research Institute's inspections of imports, which are arbitrary and unnecessarily add two additional days to clearance.
  - *Tunisia* achieved drastic reductions to its clearance time from 8 days to 3 through a series of measures which included provision of a pre-shipment export finance guarantee (PEFG) facility, the encouragement of commercial banks to lend, streamlining of customs while improving security and detection, and reducing time of manifest processing time cut via a SWC mechanism (Tunisia TradeNet). In this context, it recently reviewed and updated its Strategic Plan (2016-2020) to include a comprehensive **Customs Modernization Programme**, something which Lebanon would also benefit from replicating in its own Strategic Plan, customizing such a programme to the requirements of its industrial and economic zones.

## [2c] Industrial infrastructure III: Industrial energy reform

Industrial production would surely benefit from the establishment of a **National Electricity Regulatory Authority (NERA)**, which is already set out in *Law 462 (2002)*. Its objective should be to license new power producers and distributors. A properly functioning NERA would prepare all of the necessary regulations such as grid codes and power purchase agreements (PPAs) according to international BPs. This would **simplify the national power pricing structure** enormously and help bring down the costs enough to **incentivize expanding industrial production**.

Lebanon is a net importer of primary energy and the mandatory use of expensive diesel generators by domestic SMEs provides foreign businesses with an obvious competitive edge. With limited exceptions (for example joint projects, such as the EU-funded photovoltaic pilot program and the UNDP-funded Small Decentralized Renewable Energy Power Generation), **use of solar and other renewables** is not widespread and so Lebanese SMEs are ultimately forced to operate under a high cost structure.

In conformity with the **UN Sustainable Development Goals** with respect to Industry, Innovation and Infrastructure, investment in diversifying the energy sources of business ventures can help boost industrial growth, especially in the light of evidence which suggests that Lebanon is especially exposed to vulnerabilities from climate change (*estimated impact of climate change on economy: \$1.9 billion by 2020, according to MoEnv/UNDP*). Measures could include:

- A **green growth and low carbon emissions development strategy** for Lebanon, which would provide a significant opportunity for job creation. Morocco and Tunisia are managing to implement such strategies, which has led to the establishment of national legislation which has simplified their licensing procedures for industries and encouraged investments in the renewable energy sector, chiefly through tax incentives (in the form of VATs and tariffs).
- The setting out of a *national roadmap* for implementing the comprehensive package of public derisking measures, so as to achieve the 2030 investment objectives as set out in **Lebanon's National Renewable Energy Action Plan**. Such measures are already leading to successful



results in South Africa, Uruguay and Tunisia, whose governments are managing to implement policies designed to leverage private funding for large transformational energy projects which permit industries to run zero-carbon, climate-resilient sustainable development projects. One of the major tools for this is the simplification of procedures for obtaining clearances from various state agencies.

- *Energy Management Systems* (EnMS) have become a well-proven best practice methodology which ensures sustainable energy efficiency, improving performance in national industries. Ongoing projects based on **UNIDO's Global EnMS-ESO Programme** in *Turkey, Russia, Malaysia* and *Egypt* have supported their industrial enterprises and helped them to enhance their energy performance, productivity and environmental sustainability. Lebanon could greatly benefit from engaging in discussions with UNIDO on developing such projects in energy reform, which will lead to achieving **simplifications of industrial production procedures**, greater **interoperability** as well as global **standardisation**.

### [3] Financial instruments

**Access to finance** is seen as major constraint for 41.5% of Lebanese firms (*compared with 26.7% worldwide – WB Enterprise Survey*). The parliament will soon pass the *Credit Infrastructure Legislative Package*, a key law which aims at increasing access to finance for the private sector, especially for SMEs and start-ups, by modernizing the **insolvency regime**, strengthening **lenders' rights in movable assets** and establishing a mechanism for fast and cost-effective **commercial dispute resolution**.

- This novel framework could benefit from being supplemented by provisions for reducing the very high administrative burden on industries by **rationalizing the framework for annual financial and consolidated statements**. A better focus on essential financial information would result in better investment decisions as well as a better allocation of capital. In this regard, it is important to take into consideration the fact that the *EU* considers **accounting** as a key tool by which the administrative burden can be reduced in order to enhance the economy, and of course more specifically **industrial productivity**.
- More generally, a comprehensive **national financial inclusion strategy** that would help industries access finance, must include *support mechanisms* to industries for dealing with the greatest weakness they face when seeking finance: the preparation of the necessary documentation required by banks as part of their application (accurate financial statements, cash flow projections, quality business plans, etc.).
- Government and private sector initiatives in Lebanon have helped support the creation of a high added-value *ecosystem for the ICT industry* (Information and Communications Technology) which has the potential to make Beirut a regional tech hub. To achieve this, increased private funding must be complemented by more targeted initiatives such as **simplifying the tech start-up registration process** and the creation of a **OSS solely for tech startups**, which will reduce administrative expenses.
- **Agro-related activities** are funded by microfinance institutes but only peripherally (<8% according to one study), while they do not offer specialized technical support to improve the productivity of agribusinesses and their access to markets. Until a *bank for agricultural*



*development* can be set up (a longstanding demand of the Lebanese Farmers' Association), the government could collaborate with commercial banks to establish a **rural development fund** which can not only promote investment in agribusiness through loans and guarantees but can offer training, capacity building and technical assistance to clients.

- In this context, it is important to note that the Rural Development Foundation in *Estonia* has been a success story in helping to enhance its agribusiness industry by **simplifying the procedures for SMEs to access financial capital**, chiefly through the **harmonization of the rules** which pervade its funding instruments, such as the eligibility criteria.
- For the purposes of **bureaucratic simplification**, Lebanon could also encourage specialized banking actors to set up funds which provide **low-interest loans in the form of grants** for high tech projects in less advantaged areas of the country, a practice widely utilized in Europe and Canada, most successfully perhaps by the Austrian Federal Development Bank AWS.

## [4] Workforce development

Narrowing the skills gap is a key part in **rationalizing national investment resources** which are being spent on education and **simplifying the steps for an industry to gain quicker access to more abundant and inexpensive labor**: *Retraining, upskilling, reskilling* are all major factors in supply chain simplification and integration which help upgrade HR management to modern standards.

- A very positive effort towards this direction is already under way by the MoI in collaboration with UNIDO, which has two aims by 2020: to increase the number of training courses for industrial workers by 50% as well as to increase the number of loans and endowments to the industrial sector, especially by the Banque du Liban. In a more strategic direction, however, the government could explore all of the BPs available to help industries reduce the high cost burdens associated with specialized in-house training as well as with seeking more expensive, highly-trained employees.
- While Lebanon has one of the most highly-skilled workforces in the region, with the highest number of graduates and the best fitted to meet the needs of a competitive economy, among the factors that can boost industrial growth is **workforce development**. For example, there is an oversupply of doctors and lawyers, but an undersupply of technical professionals (e.g. machine operators). Because the economy is chiefly service-oriented there is a tendency to neglect technical education. But human capital can be enhanced through skills upgrading as well as technology accumulation by making industrial skills an integral part of the educational system and facilitating technological diffusion and innovation.
- In fact, according to the World Economic Forum Report, approximately 35% of the skills demanded for jobs across industries will change by 2020. Lebanon is ideally suited to engage in what is called **Workforce Reskilling for the Fourth Industrial Revolution (4IR)**, in light of its rate of digital transformation, which has the potential to grow its I.T. market to 82 billion LBP by 2019. In order to achieve this, however, emerging technological innovations (smart solar grids, artificial intelligence, digital patients records, etc) must be integrated into national industries as

smoothly as possible, which means that the government must take initiatives to ensure that the labor market disruption will be limited and there will not be a large gap between these innovations and the ability of the Lebanese workforce to adapt to them. This can be helped by:

- ✓ Setting up vocational training centers and implement a workforce development strategy based on Lebanon's **2020 Digital Telecom Vision**, something which *Jordan's* Agency for Enterprise Development has also included in its cross-sectoral strategy with the aim of boosting industrial growth.
- ✓ Adopting the successful **Manpower Group model**, whereby the government identifies declining sectors and works with industries and technical schools to retrain adults in order to integrate them into new industries and techniques (e.g. Italy, employees from declining sectors such as the textile industry were retrained and are now high skill wage earners in the motorsports manufacturing industry).
- ✓ More longterm investment in reskilling should be considered, through initiatives such as the establishment of a **center for adult learning**. Singapore's Institute for Adult Learning is a successful example of a centralized vocational system which enhances labor productivity and industrial efficiency.
- ✓ Encouraging major firms not just to receive trainees, but to adopt highly successful workforce development models such as those of *Saudi Aramco*, the Saudi Arabian national petroleum and natural gas company, which **recruits** many of its employees straight out of school or college and **subsidizes vocational degrees** run by the company itself. In terms of funding, **National Training Funds** (NTFs) should be considered to finance employee training within or outside Lebanese industrial enterprises, a novel and widely employed engine of financing usually achieved through payroll-training levies. Malaysia, for example, has adopted a 1% payroll tax through the HR Development Fund for all enterprises with over 50 employees.
- Regarding to on one of the main principles of establishing industrial zones, which is to allow industries to **access more inexpensive labor**, one crucial point must be put forth. While this is true for construction, other

industries, such as the growing Lebanese high tech industry, are in need of more highly skilled, not necessarily more inexpensive labour in order to take off. China is a case in point, where a number of its industrial zones have taken off because provisions were made to **attract highly skilled labor**, such as free access to housing, research funding, educational subsidies, etc. Investing in such measures for Lebanon's industrial zones could not only rationalize national expenditure on education but also give rise to a more highly skilled workforce: this would allow industries to benefit from a workforce which would be suited to lend momentum to the budding high tech industry of Lebanon.

## SECTOR POLICY RECOMMENDATIONS

To address the major challenges which limit Lebanon's industrial productivity, it would be helpful to consider certain measures that could be initiated in four specific areas:

### A] Bureaucratic efficiency & transparency

- ✓ The project has mapped out the full range of administrative bottlenecks and burdensome IOs and has set out a number of key recommendations which could form the basis for a **comprehensive procedure relief policy** which ensures flexibility, transparency and responsiveness to industrial client's needs
- ✓ In this context, a number of complementary policy options and initiatives could be adopted such as the establishment of a **fully fledged OSS** which can be endowed with the authority to approve permits, the adoption of legislation for **speeding up licensing procedures**, the adoption of a law of tacit acceptance procedure and the drawing up of a **strategy for addressing implementation challenges** with respect to the Capital Investment Plan.

### B] Industrial infrastructure

- ✓ Energy reform will have a major impact on industrial productivity with measures such as establishing a much-needed **electricity regulatory authority** that will regulate the market and minimize cost structure for industries as well as **investing in diversifying energy sources** with solar and other renewables, e.g. by adopting a green growth strategy and a roadmap for helping industries run zero-carbon, sustainable development projects.
- ✓ Lebanon should also consider engaging in discussions with UNIDO to launch projects based on its **Global EnMS-ESO Programme**, from which some of its neighbors in the region are already benefitting greatly by achieving major industrial productivity goals of **simplifications in their industrial production procedures**, greater **interoperability** as well as global **standardisation**.

- ✓ To maximize the productivity of industrial and economic zones a comprehensive **legal framework** must be instituted. This would benefit from the establishment of a Regulatory and Licensing Regime with special provisions for **single-window clearance systems** for industries in these zones.
- ✓ Accelerating the full adoption of the **Revised Kyoto Convention** provisions could become a major for simplifying customs procedures and the administrative burdens associated with them.
- ✓ Regulating the electricity sector by **establishing a national authority** would simplify the power pricing structure enormously and help reduce the industrial costs so as to incentivize expanding production.

## C] Financial instruments

Resolving obstacles in the process by which industries access finance is a key component for industrial productivity and it would greatly benefit by such measures as:

- ✓ Complementing the new law for credit infrastructure with a **framework for rationalizing the annual statements**.
- ✓ **Simplifying the tech startup registration process**.
- ✓ Developing a comprehensive **financial inclusion strategy**.
- ✓ Establishing a body such as a **rural development fund** (could include commercial banks and developments institutions) geared to help simplify the procedures which SMEs face to access financial capital.

## D] Workforce Development

Industrial productivity can be boosted by **rationalizing national investment resources on education** and **simplifying the steps** for an industry to gain quicker access to more abundant and inexpensive labor, through **skills upgrading** and **technology accumulation**. There is a wide variety of BPs to do this, from setting up **vocational training centers** to compelling the major industries to **subsidize vocational degrees** that can be **funded by NTFs**.

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