

QATAR UNIVERSITY

COLLEGE OF ENGINEERING

EFFECTIVE STRATEGY PLANNING OF QATAR LABOUR MARKET

DATA-DRIVEN SYSTEM DEVELOPMENT APPROACH

BY

MUNA SALEM ALFADHLI

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in Partial Fulfillment of the Requirements for the Degree of  
Masters of Science in Engineering Management

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## COMMITTEE PAGE

The members of the Committee approve the Thesis of  
Muna Salem Al Fadhli defended on 14/12/2019.

---

Dr.Murat Kucukvar  
Thesis/Dissertation Supervisor

---

Name  
Committee Member

---

Name  
Committee Member

---

Name  
Committee Member

---

Add Member

Approved:

---

Dr. Khalid Kamal Naji, Dean, College of Engineering

## ABSTRACT

Al Fadhli, Muna Salem, Masters: January: 2020, Master of Science in Engineering Management

Title: Effective Strategy Planning of Qatar Labour Market Data-Driven System Development Approach.

Supervisor of Thesis: Murat Kucukvar

The state of Qatar has kept its labour market as one of a critical success factors in Qatar Nation Vision 2030, which is consisting of four pillars, labour market sustainability and development is coming under the human development pillar of QNV-2030. Despite of consistent strategic formulation and implementation, Qatar labour market is still facing some critical deficiencies in its supply and demand equilibrium, skills mismatching management and Qatarization implementation.

Being a director of IT department in Ministry of Administrative Development Labour and Social Affairs, I am proposing a fully integrated Labour Market Information System (LMIS) based on the latest versions of the existing information technologies. The proposed LMIS will collect actual data from all stakeholders of Qatar labour market including public as well private sectors, it will process the data and will be able to disseminate the most authentic and reliable labour market information and trends about the labour market supply, demand, skills matching and Qatarization goals.

On successful design implementation of the proposed LMIS, the policy makers will have the most relevant and reliable information for effective decision making which is required for an effective and realistic strategic planning. Therefore, it is

assumed the proposed LMIS will add value to the state efforts of creating equilibrium in workforce supply and demand, it will also help in monitoring and controlling the skill mismatching phenomenon and implementation of Qatarization program.

## DEDICATION

*Being a wife and a mother, I am dedicating this thesis to my great mother Thuraya, my dear husband Abdulla, my lovely daughter Fatima, my sons Mohammed, Abdulrahman, Abdulaziz and Ghanim for their highly support during my long working hours in my home without giving them enough time.*

*to Dr. Khalid Abdul-Jabbar who supported me and gave highly positive energy in Master years.*

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## **CHAPTER 1: INTRODUCTION**

Labour market or job markets are functionally based on the concept of supply and demand, in case the supply of labour or the availability of more labour in the market than its demand or job opportunities, it will result in the increase of unemployment in the market and a drop in the salary packages as well.

In case the job opportunities (demand) are more and the availability of labour (supply) is less, in that case a shortage of labour will affect the operations and cost of the products and services leading to inflation and increase in the wages and salaries.

Therefore, shortage of any factor supply or demand will result in unstable labour market, however, the ideal labour market is the one when the supply of labour are equal to the job opportunities or demand in the market, which is also call an equilibrium status of the supply and demand of Labour Markets.

### **1.1. Background and Context**

The globalization of economy removed the traditional geographical barriers and technological barriers, fostering high competition in the business environment. Nowadays, the labour market decisions are made based on the economic as well as social trends that effect the situation of the country. Market studies aim to understand the main drivers that effect the human development, growth and wellbeing of the society, both in economic and social basis. These drivers may include the technology, demographics, and global economic trends that have a major effect in adjusting the market requirements and as result increasing skills mismatch. In the other hand, some other factors can also have a dramatic effect in increasing skills mismatch such as lack of reliable information regarding labour market or sufficient wages mechanisms. As perfect systems never exist, no idle systems can exactly deliver the skills mismatch issues, however, decision and policy makers can benefit from information systems as a

tool to analyze and highlight market trend and needs and make decisions accordingly. For this, the main objective of Labour Market Information System (LMIS) is raising awareness for policy makers to reduce the risk of generation of large employment gaps and skills mismatch.

In the State of Qatar, the human development is a major part of the country vision, which was emphasized by His Highness the Amir Sheikh Tamim bin Hamad al-Thani in different occasions. While addressing the 47th ordinary session of the Advisory Council, HH said: (Qatar Advisory Council, S-47 November 2018)

"We have achieved great and rapid progress in nation-building, living standard and human development in health and education. We have many challenges ahead in these areas, and we have to ascertain commitment to the work ethics and the act of giving to the society. "In addition, In July 2017, HH addressed citizens and residents on the Gulf crisis saying:

*"We require diligence, creativity, independent thinking, constructive initiatives and interest in academic achievement in all disciplines, self-reliance and fighting indolence and dependency. This is not just wishful thinking, and these are not mere dreams".*

For this, Qatar Vision 2030 that define the country long-term outcomes, prioritize human development and has a major pillar regarding sustainability development and high living standard for its people. (QNV-2030).

The implementation plans includes improved educations as well as increased employment opportunities. To continue the path towards vision accomplishment, the Qatar's Second National Development Strategy (NDS-2) 2018-2022 focused at human beings as the ultimate goal. The emphasis was to increase the skilled labour and citizen's participation in the labour market. NDS-2 aim to improve education by improving the quality of education outcomes to match with labour market demand.

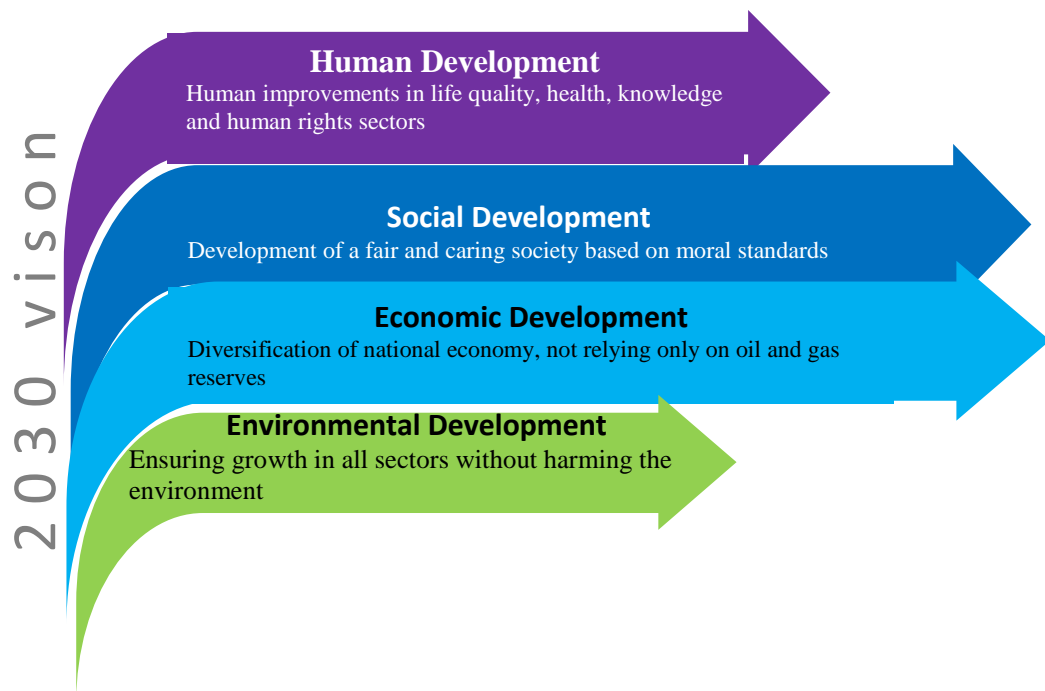


Figure 1-1: Qatar National Vision 2030

Figure 1-1 shows the four pillars of QNV-2030, and the very first one is Human Development which is directly related to the Qatar workforce development and empowerment.

Part of the main outcome if the strategy regarding committed workforce sector is “a modern and transparent information system that provides data on both the supply and demand sides of recruitment and training”. While the intermediate outcome is: “A labour market governance that ensures meeting current and future needs for reliable data.”

This thesis provides a new lens for understanding Labour Market Information Systems (LMIS) and offers platforms that guides toward the methodology to develop the system in Qatar. The thesis address the following problem statement: what are LMIS supposed



to be and do?

A competitive labour market enables all residents of Qatar to participate in development, build a thriving society and meet the needs of the current generation without compromising the needs of future generations through active participation of labour market workers, high productivity, attracting and retaining highly skilled labour and a modern and transparent information system that provides data on both supply and demand For recruitment and training.

The typical indicators are taken into account in most labour market studies and analysis, such as unemployment rates, reason for unemployment lack of Experience, lack of Suitable work, Lack of Adequate Academic Qualifications, the reason for willing to work in private sector or not, specialization.

The qualitative indicators are also based on the specific needs of the authorities, such as the number of students in specific disciplines or studies related to workers.

This study helps to make decisions based on real information as well as to develop policies and improve procedures.

## **1.2. Scope of LMIS.**

The scope of this thesis is to review and understand the work done on the subject of benefits and challengers of Labour Market Information System (LMIS), to understand its possible contribution in the stability and sustainability of a healthy labour market. As most countries are committed to the development of labour market information systems .The scope of the thesis is to develop a methodology toward building labour market information systems (LMIS) specifically in Qatar. This will help in developing employment and labour policies, as well as monitoring and evaluation the effectiveness of the current policies.

### **1.3. Objectives of LMIS**

Collection and storing of data from all sub-organs of Labour Market who are having any direct or indirect influence over the Labour Market, using different methodologies of data collections.

1. Storing of data collected in a well-structured combination of hardware and software database system.
2. Processing of data stored automatically with pre-defined formulas to reflect the updated Labour Market information at any particular time.
3. Providing relevant and reliable information on employments, workforce immigrations, trends of jobs search, trends of employee layoffs, trends of new jobs opportunities, trends of salaries and incentives.
4. Providing signals and alerts related to threats and risks to the stability and sustainability of the Labour Markets.
5. Providing information needed for effective and on time decision making related to Labour Market.

Providing recommendations for the guidance of educational sectors for proper grooming and training their students in the required and accepted methodologies.

### **1.4. Significance**

Qatar National Development Strategy 2030 emphasized on human capital development. Development of Labour Market Information System will encourage investment on human capital and enhance market governance by meeting the current and future needs of reliable data. In the other, labour market efficiency will be enhanced by striking a balance between supply and demand for labour in the public and private sector. According to International Labour Organization- ILO (2019), the three main functions of Labour Market Information Systems are:

1. Providing authentic and reliable information to the policy makers of the state responsible for unemployment control, skill development, job matching strategies and overall labour market stability.
2. Providing reliable information to the students and parents to plan their career according to the future forecasted jobs opportunities.
3. Providing statistical data about the future jobs opportunities in Qatar for the guidance of local and international job hunters and job suppliers.
4. To monitor the number of increasing or decreasing demands of the jobs and react accordingly with diverting the new workforce towards the careers best matching with their abilities and the market requirements.
5. Acting as a shared mechanism for information exchange between actors and institution to utilize and analyses labour market information.
6. Integrating the information about the jobs and its requirements by the public and private organizations with the educational institutes to prepared the students for the expectations of the employers.
7. Sharing the information about the most required and suitable jobs career selection not only to students but to the parents and teachers as well.
8. Recording the reasons of employees' resignations and terminations to work on the weak areas for better working environment and supporting employment contracts.
9. Recording the complaints filed against each other by the employees and employers to know the root causes of disputes between them and to forward the

information to legal departments for proper legislation to control the root causes of disputes between the employees and employers.

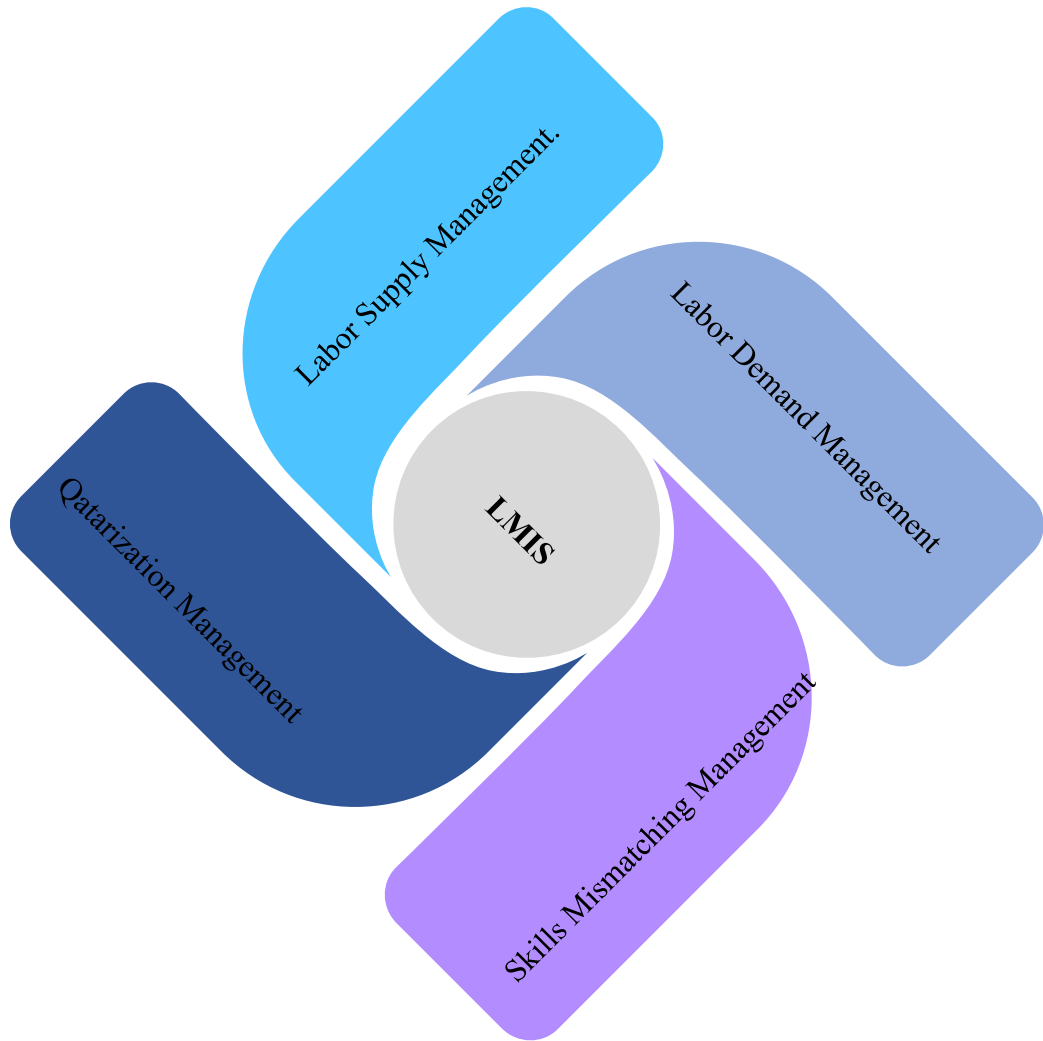


Figure 1-2: Major Functions of Proposed LMIS

Figure 1-2 shows all four major areas of improvements of the proposed LMIS to address the challenges of Qatar labour market. LMIS will provide authentic and relevant information to the policy makers in order to formulate effective strategic planning in above mentioned areas.

## **1.5. Overview of Thesis**

### **Chapter no. 1 (Introduction)**

It represents the definitions of basic labour market dimensions, the background and concepts of the labour market information systems, the indication of Qatar labour market challenges and stakeholders identification.

### **Chapter no. 2 (Literature Review)**

Literature review, shows the previous studies done on the labour market information systems and its implications in shape of market stability and development, the conclusions drawn from the previous studies of the Qatar labour market regarding its challenges and possible solutions. The review of state policy formulation to address the labour market challenges.

### **Chapter 4 (Design Methodology)**

This chapter represents the theory of design methodology of the proposed LMIS, explaining different design criteria and assumption to get an effective and efficient LMIS considering all critical issues and challenges of Qatar labour market.

### **Chapter 5 (Conclusions and Recommendations)**

Chapter 5 is the conclusions and recommendations, which is simultaneously highlighting the current status and challenges of Qatar labour market along with the recommendations to address those challenges with the help of proposed LMIS due to the availability of right information at right time to the policy makers of Qatar labour market for its development and sustainability.

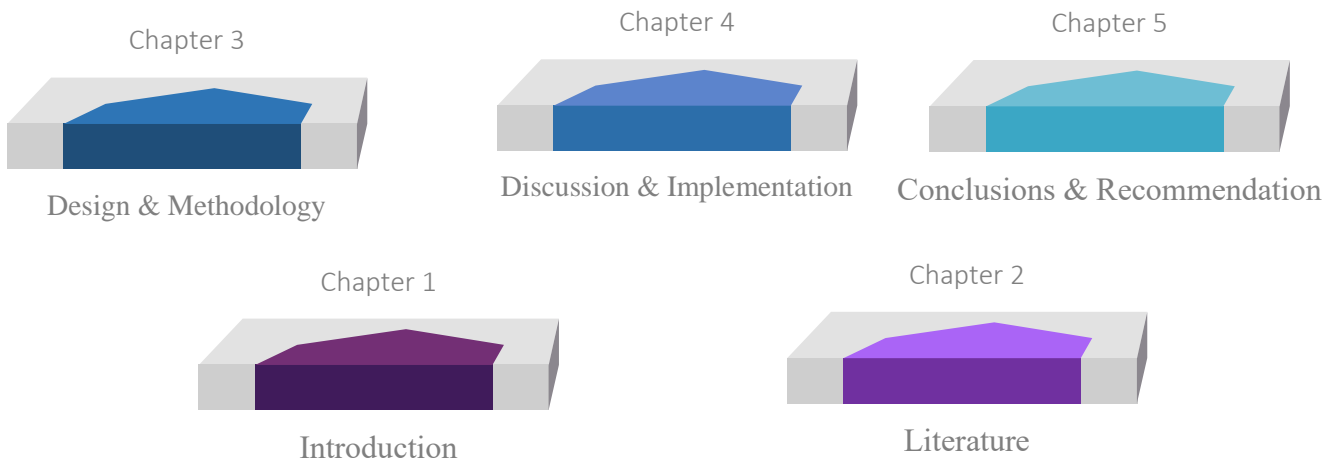


Figure 1-3: Flow chart of this Thesis chapter by chapter

## **CHAPTER 2 : LITERATURE REVIEW**

### **2.1. Impact of Information Technologies on the Labour Market**

The interrelationships between the information technologies, workforce supply and demand, and sustainability has attracted a lot of attention recently. It is due to the fact that labour market development needs consistent and continual strategic planning and high level policy formulation to achieve the targeted goals of achieving a stable and sustainable labour market.

Such effective strategic planning need effective decisions which cannot be possible without having authentic information and prevailing trends of market dimensions like, labour supply and demand, unemployment, skills mismatching, overemployment and delays in retirements.

According to the Skills Anticipation Background Note, February 2017, the following significance are witnessed with the successful implementation of LMIS to the labour market of Europe.

#### **Impact of LMIS on Labour Market of European Union**

The EU Skills Panorama is an online tool providing central access to data, information and intelligence on skills needs in occupations and sectors. It provides a European perspective national data and sources. The EU Skills Panorama is managed by Cedefop. (<http://skillspanorama.cedefop.europa.eu/en>) (ETF, 2017).

#### **Impact of LMIS on Labour Market of Canada**

The Canadian Occupational Projection System (COPS) has been producing analytical outputs and labour market information for nearly 30 years. The outputs of COPS are widely available to policy and labour market analysts.

More importantly, COPS disseminates labour market information to the public through publications or online. (ETF, 2017).

## **2.2. Qatar Labour Market**

The Gulf Research Centre has published a comprehensive report on Gulf Labour Market, with its document no.3/2017, this document has also provided some valuable information about the most important dimensions of Qatar Labour Market which are summarized in the following paragraphs. (GRC-2017)

### **Labour Definitions.**

According to the dictionary definition, Labour is a situation of a person who acts to produce something within the usual economic meaning, Labour is paid employment which allows the production of goods and services.

With capital, it is an economic factor of production. For neoclassical economists, labour is considered a standard commodity, a raw material needed as a part of input, which follows the rules of supply and demand and adjusts according to quantities and prices, according to International Labour Organization: “labour is not a commodity” it shall be treated as human resource not a raw material.

### **Labour Market Definitions.**

In economics, in comparison to the market for goods and services, the labour market refers to the theoretical market where labour supply and demand meet. Labour supply consists of employees and jobseekers, labour demand is the needs of enterprises (factors of production).

### **Labour Market Segmentation**

- Geographic location (Gulf Labour Market, European Labour Market)
- Industrial sector (Construction, Agriculture, Oil and Gas, Industry and Production)
- Profession (Doctors, Engineers, Professors, general workforce etc.)



As quoted by BBC, non-Qatari expatriates are 88.4% of the Qatar total population and Qatari are only 11.6% of it. Additionally, this country is heavily male populated, currently split at 74.91% male and only 25.09% female according to the Qatar population statistics published in February 2019 with a total population of 2,772,947 ( (News, 2019)).

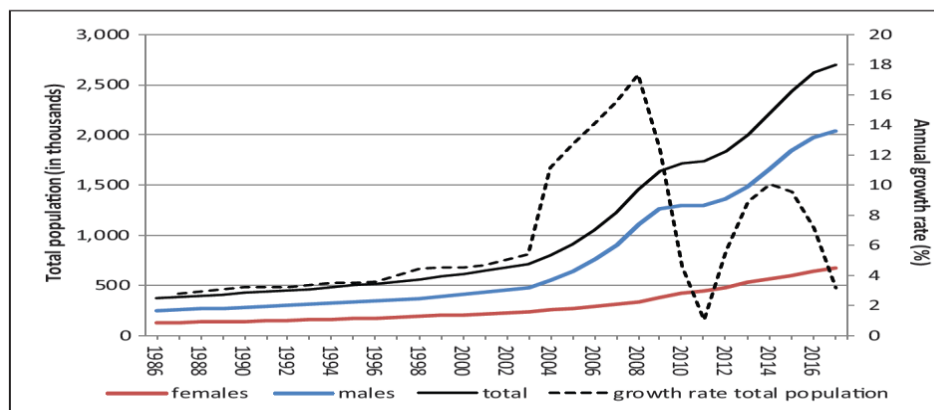
**Table 2-1: Qatar Total Population**

#	Qatari Citizens	Expatriates Workers	Total Population
1	321,662	2,451,285	2,772,947
2	11.6%	88.4%	100%

Source: Qatar Total Population as of February 2019.

Above table 2-1 shows that 88.4% of Qatar total population are expatriates and only 11.6% are Qatari citizens, this has remained a critical challenge for the policy makers and planners of Qatar labour market.

**Figure 1: Evolution of Qatar's population and growth rate (1986–2017)**



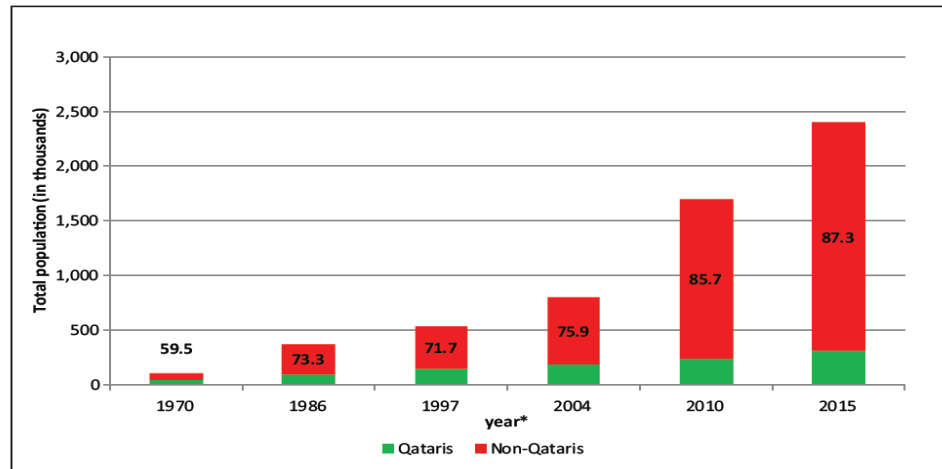
Source: QSA (Statistical Yearbook, 2016 and monthly figures on total population, June 2017).

**Figure 2-1: Evolution of Qatar Population (1986-2017)**

Above figure 2-1 shows the gap between the Qatari citizen and expatriates always remain huge ranging from 80 to 90% throughout the history since 1970s when the immigrant workers started arriving Qatar on work visas. (Qatar Statistics – Population, 2017)

Qatar gained independence in 1971, however the immigrant arrivals started even before 1970 and some reports says that arrival of expatriates in Qatar has notice in 1960s. The first population census conducted by Qatar, it was published with figures of total population at 111,113, of which 45,039 were Qataris and 66,094 foreigners. Initial statistics show that the proportion of Qatari citizens against the expatriates was above 41% while the non-Qatari were only 59% in 1970s reached to 87.3% in 2015 and now it is about 88.4% in February 2019. (QSA, (Statistics, Population , 2017)

Figure 2: Qatar's total population and estimates of the proportion of non-nationals in census years (1970-2015)



\* 1986; 1997; 2004: mid-year population estimate. GLMM calculations using QSDA/MDPS data.

Figure 2-2: Qatari vs Non-Qatari Population Growth.

Figure 2-2 shows an exponential growth of Qatar population due to the growth of labour market to participate in huge development plans of Qatar. As construction of the facilities for the processing and extraction of the hydrocarbon resources of Qatar was one of the core area which attracted a large number of expatriates from different countries.

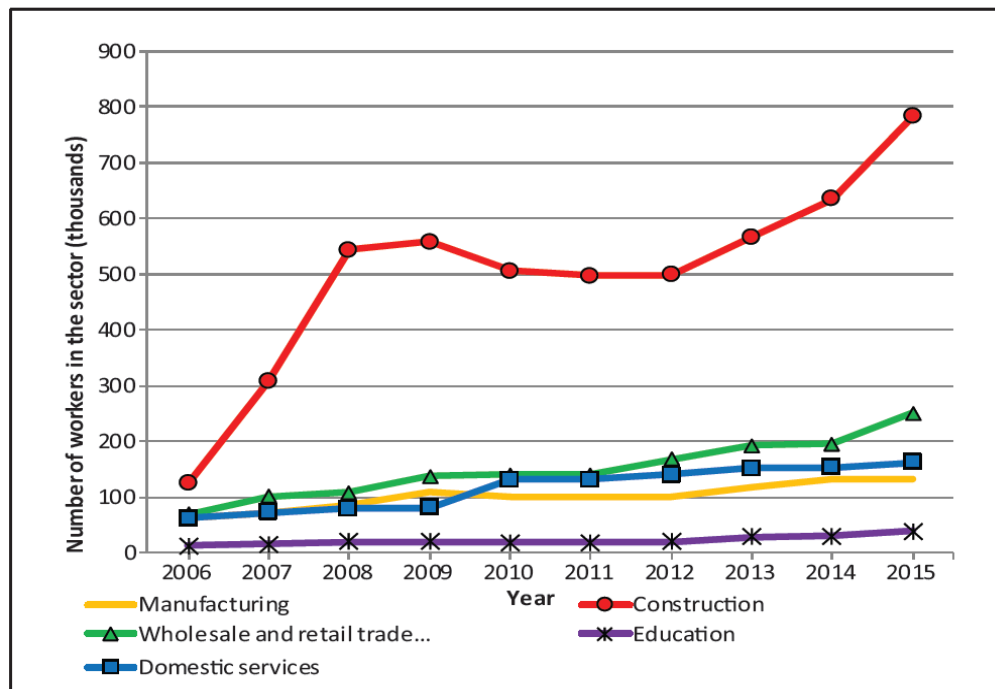
To facilitate the economy growth Qatar needed to explore more and more underground resources which also needed an infrastructure development to make the finding, extraction, processing, exporting and maintaining the facilities for maximum output and export of crude oil as well as Gas and other hydrocarbon products. (Statitics, 2016)

Therefore, construction industry remained dominant on all other sectors of Qatar to attract more workforce to Qatar, every development plan and award of any project

immediately created a job opportunity for the expatriates because of the unavailable local workforce especially for the construction industry as shown in the following figure.

The following figure 2-3 shows the inflow of expatriates to Qatar for different sectors of Qatar labour market. The majority of the workforce is associated with the construction industry due to mega developmental projects in Qatar.

**Figure 4: Foreign labourers by activity (Qatar, 2006-2015, selected activities)**



Source: Labour Force Surveys, 2006 to 2015 and Population Census 2010.

**Figure 2-3: Foreign Expatriates in Qatar by Jobs Categories (Statistics, 2016)**

### 2.3. Challenges and Opportunities of Qatar Labour Market

According to the article published by the Middle East Institute, written by Claude Berrebi, Francisco Martorell, and Jeffery C. Tanner, with the exponential increase in

the economy of Qatar due to huge reserves of natural oil and gas, Qatar's perspective of development and infrastructure reforms has completely changed, Qatar has approved a Qatar National Vision 2030, which is a mega developmental program and institutional revival for economic, social, human and environmental development. Additionally Qatar has won the bidding for hosting FIFA-2022 football event, which itself has a huge developmental package with huge projects of infrastructures and state of the art football stadiums. (Middle East Journal, 2015)

With all above adventurous development plan, Qatar is supposed to be a potential market for the skilled and unskilled labour. Qatar's national population, as shown in figure 2.2, was hardly 12.7% of the total population due to huge inflow of workers from different countries of the world, out of which about 50% are non-active workforce in shape of housewives, unfit and unwilling to work, about 6 to 7 % of the total population are active Qatari and most of them are associated with public sector and extremely unwilling to work in private sector due to more working hours and less attractive salary packages. The following figures show the factors resulting in the unwillingness of Qatari workforce to join the private sector jobs. The other reason of high demand for the international workforce is insufficient Qatari skilled workers as most of them are expertise in administrative sector due to their attraction towards the public sector, this phenomenon has become one the most critical challenge for the policy makers of Qatari labour market strategies and planning. (Middle East Journal, 2015)



Figure 2-4: Public & Private Jobs Comparison (Qatar Statistics-2016)

Figure 2-4 shows the difference in job packages of public and private sectors, in public sectors the weekly working hours are only 40 hours while private sector has 54 working hours per week, it is mainly because private sector works six days a week while public employees work only five days a week, however, the average monthly salaries of public sector are more than private.

The dependency on expatriates and the shortage of Qatari skilled and specialized workforce with matching required areas, is a critical issue for the leadership of Qatar, due to which a well-known Qatarization was introduced, however, due to the attraction towards the public sector, Qatari citizens have shown minimum interest to achieve the target set under the Qatarization programme and the root causes are shown in above

figure, in addition to a clear and sharp difference between the working hours and salary packages of public and private sectors, there is difference between the authority and responsibilities as well.

Qatar is leading the world economy with the highest GDP rate in the world due to its rich hydrocarbon resources , The state is spending all money open heartedly on its people in shape of free education, energy, high salaried government positions, interest free loans and land for houses, to empower and strengthen Qatari citizens its leadership is hiring them in public sector against attractive salary packages and authorities, this incentive has become the loss of Qatari citizen's interest in working outside public sector.

*The news brief published by International labour organization on 1st November 2018,* published one of the long waiting Qatar labour law reforms which is supposed to will play a considerable role not only to satisfy the critics of old kafalah system but also will protect the rights of employees as well as employers equally.

There was an event which was organized on 17-18 October 2018 by the Qatar chamber of commerce and industry, and the Ministry of administrative development, Labour and Social affairs incorporation with the International Labour Organization and the institute for human rights and business.

During this event, the challenges to adapt the new regulatory environment and private sectors initiatives were discussed by 300 participants. It was concluded that all sectors and companies shall support and adopt the new reforms in labour law to maximize its benefits. (Challenges of Qatar Labor Market., 2018)

Some of the most appreciated and waited articles of the reforms were following.

- Minimum wage limit.
- Workers dispute settlement committee
- Changing the strict exit permit law
- Changing the strict transfer of employers
- Removal of No Object Certificate from previous employer to enter Qatar.
- Establishment of workers support insurance fund.

H.E. the Minister of Administrative Development, Labour and Social Affairs mentioned the state intentions to support an effective implementation of the reforms, as Qatar has taken many steps to make the reforms effective implementation and follow up its implications. The reforms are specially formulated to address not only the protection of workers' rights but also support the local economy and businesses.

One of the most attractive and appreciated decision taken by The Supreme Committee for Delivery and Legacy which is monitoring and controlling the building of infrastructure for the 2022 World Cup was the instructions to the employers for the reimbursement of the recruitment fees paid by the workers to secure their job in their Qatar, some of the workers paid the recruitment fee by getting finances on interest and tough conditions and then spend years to payback their debts with interests.



## **2.4. Education Level and Courses Selection**

Before the extraction of crude oil, education was not part of national strategic priority and records show that more than 66% of Qatari citizens were illiterate in late 1960s, however, in 1970 the government considered education as one of the main pillar of its strategic planning, and the seriousness towards education was seen in the shape of Qatar University which was opened in 1977, Qatar university started giving education to Qataris and some expatriates with 100% tuition free offers to encourage them for the completion of higher courses. A huge amount of investment has been recorded during 1980s and 1990s to develop a state of the art education infrastructure and a dense network of schools and colleges throughout Qatar. (Centre, 2016)

Qatar allocated 3.3 % of its GDP for education in 2005, it was increased to 10% in 2010 and the result was seen in the education statistic in shape of more than 99% educated Qatari Population between the age of 15-40 years.

Due to the ease of getting attractive jobs in public sector, Qatari citizens have shown lack of interest in higher education and the tendency to join workforce after the secondary education has been found with increasing percentage with time.

Generally Qataris student discontinue their studies before even completing the secondary education and getting jobs in public sector with it, only 29% choose to go for higher education and 24% stop their educational journey after completion of secondary level of education. (Qatar Statistics – 2016)

To monitor and control this phenomenon, proper strategic planning is required to encourage the high level of educational courses in the forecasted fields of demands in labour market to match their skills with the job demands.

Mismatched education is also a critical issue of Qatari workforce, due to the absence of required and reliable information to guide the students and their parents towards the most suitable and high demanded sector of education.

## **2.5. Role of Labour Market Mismatch in Un-employment**

According to one survey, 3Q/2011, Economic Perspective by Gadi Barlevy, “*Evaluating the role of labour market mismatch in rising unemployment*” states that during a period of one and a half year from mid of 2009 till end of 2010, a strange trend in the US labour market was witnessed, the firms were regularly announcing job offers but the ratio of unemployment was not decreasing, it was later on found that the reason of static unemployment figures were due to the labour skills mismatching with the required skills and qualification the employers needed at that particular time. (Barlevy, 2011)

Following that labour market mismatch has been considered as one of the most important factor in effective management of labour market and jobs management, due to easily available job offers in public sectors without having requirements of specialized qualification and high education degrees, Qatari workforce concentrates on courses required for public sector jobs which has resulted in a serious mismatch of the requires skills and qualification even in public sector due to which government has to outsource and hire from the international workforce, it has resulted the appointment of migrated workforce on key technical and specialized position in public as well as private sectors.

The policy makers in Qatar has taken this issue seriously and formulate the program of Qatarization to divert Qatari workforce towards specialized and high skill sectors specially in energy and industry sectors to enable the national workforce effectively manage the operations and planning related to local

products and hydrocarbon extraction processes. (Barlevy, 2011)

Qatar policy makers have effectively controlled and managed unemployment in the state. According to reports published by Qatar statistics in 2016, there unemployment recorded in Qatar was only 0.4 % and it is forecasted to increase to 0.7% till 2020 based on the increasing trend of mismatch labour market and job markets. It was also recorded that about half of the unemployed workers were refusing jobs opportunity due to private sector and the remaining half was resulted in mismatching with the required skills, experience and qualifications. (Qatar Statistics-2016)

## **2.6. Reforms in Qatar Immigration and Residency Policy**

*According to the article published in Qatar Tribune on November 11, 2017, about 88% of Qatar labour market non-Qatari workforce majority of which belong to private sector of the labour market. In order to get a stable and sustainable labour market, it is important to increase the proportion of Qatari workforce with respect to the non-Qatari work force. As it is difficult to fill the gap between Qatari and non-Qatari work force therefore, the state has decide to give permanent residency to some of the most loyal and needed workers with offers of privileges and benefits like Qatari worker, this action will further increase their loyalty with Qatar and the risk of exiting Qatar Labour market in hard times will be reduced at the same time they will invest their savings with in Qatar instead of sending funds back to their home lands. (Qatar, 2017)*

For the purpose of selection the right expatriates for awarding the permanent residency, MOI Qatar has formulated terms and conditions which needs to be fulfilled by the applicant seeking the permanent residencies. His Highness the Amir Sheikh Tamim bin Hamad al-Thani had issued Law No 10 of 2018 on permanent

residency for non-Qatari individuals in September last year. (Qatar, 2017)

Some of the major requirements to comply with requirements of permanent residency are:

- Non-Qatari who have been working in Qatar for a period of equal or more than 20 years in case they are not born in Qatar, however, the non-Qatari who are born in Qatar need to show their presence for a period of 10 years minimum.
- The applicant shall have enough income and financial status to support his own and his family expenditure while living in Qatar.
- The applicant shall also hold a clean record without conviction in any criminal case proceedings.
- Sufficient Arabic knowledge is also mandatory for the applicants of permanent residency. (Qatar, 2017)

These reforms will bring very positive changes to the stability and sustainability of Qatar labour market, because normally they used to consider that sooner or later they have to go back to their home land even after serving in Qatar for the whole of their lives, these feelings used to think about savings in Qatar and investing in their home towns so that the time they go back they would be financially stable to support their family needs and requirements. After this new law, the expatriates who will get the permanent residency in Qatar will start living here like the Qatari with almost equal rights as Qatari are having, this feelings of ownership will encourage them to invest their savings with in Qatar as no one would force them to leave Qatar or have feelings of having less rights than the Qatari citizen, this reform will attract more investment and capital in Qatar. (Qatar, 2017)

## **2.7. Second Generation Migrant Workforce**

Second Generation Migrants are the workforce who are born in Qatar to the families of international Migrants working in Qatar, they are grown up with Qatari citizens, they studied in same education system in Qatar, therefore, they cannot be considered under the policy formulated for the international migrants nor coming under the Qatari citizen's policies. The life style and needs of second generation migrants is totally different from the international migrant workforce, therefore, it has already been taken serious by the policy makers of Qatar workforce management authorities. (Berni, 2018)

According to Qatar's Ministry of Development and Planning Statistics 2017, economically active workforce was recorded with an increase of 2.8% out of which the percentage of Qatari workforce was only 0.1%, which is only 3.5% of the non-Qatari workforce. These figures remained critical and alarming for the policy makers of Qatar labour market management authorities. (Berni, 2018)

The second generation migrants with low education are preferred for the public security and defense sector and their recruitment are done on priority basis in armed forces and security agencies specially the one with no technical education, however, they are kept on more priorities than international migrants in case they are highly qualified and experienced, it is due to their affiliation with Qatari socio, political and cultural values of Qatar and good understand of communication in Arabic language. (Berni, 2018)

It is also assumed that they are more loyal to Qatar labour market and can be more sustainable workforce of Qatar due to their attachment with the environment and strong ties in the social networks.

Therefore, the proposed labour market information system will also be helpful to track the second generation migrants and guide them towards the forecasted job opportunities in order to avoid the mismatching of their profiles with the upcoming future jobs in the market. (Berni, 2018)

## **2.8. Potential Threats to Qatar Labour Market**

*According to the Qatar Statistic reports and international consultants on labour market management*, one of the major threat to Qatar Labour Market has shown a high demand to immigrant workforce, who are not a permanent part of Qatari Labour Market and can leave the country in case of any critical situation if not immediately handled by the state. One of the recent example of such situation was the unjust blockade imposition, which created a huge panic in the expatriates about the job securities and life threats, however, the government reacted immediately and support its economy from the foreign investment funds, to keep the environment normal. This strategy of the state was proven effective to keep the people calm and satisfied without paying extra for anything due to huge subsidy been paid by the state of Qatar, due to which no negative impact was witnessed on Qatar labour market.

In case the non-Qatari workforce exits the market, it can have serious shortfall of workforce to meet the labour demand for more than 88% requirements. Qatari workers are only 11 to 12% of the total workforce demand. To mitigate these risks the state concerned authorities are working on the following options.

(Centre, 2016)

- Shifting the working processes from manual to fully automatic production lines and robotic work forces, which will not only reduce the dependency over the expatriates but will also reduce the demand of non-Qatari workforce.

- Encouraging Qatari Citizens to get skills and technical education according to the market requirement and not according to their priority and wishes.
- Motivation of Qatari Women and other non-active people to participate in Labour market and play their role in economy growth instead of being burden over the active workforce.
- Scholarships in technologies required by the Qatar Labour Market and proper guidance of students in school and colleges towards the required and most suitable degree programs and qualification fields.
- Establishment of Qatar Labour Market Information System (QLMIS) to monitor and control the statistics of Qatar Labour market and the Qatari students at different levels, to plan effectively before the completion of the education plans the labour market would be ready to hire them and get the maximum benefit by combing the need and direction of the labour market and the supply of required professionals from the educational organizations of Qatar.

## **2.9. Labour Market Information System**

*The Development of migration policies in the process of regional integration in ECOWAS, published a report on Labour Market Information System in May 2014, with some basic definitions and schematic diagram of LMIS for better understanding and implementation due to its effective results throughout the globe.*

### **2.9.1. Labour Market Information (LMI)**

A collection of information about the growth, structure and size of Labour Market or part of it, the critical factors and components of Labour Market and the information about the contribution of its sub-organ in producing,

developing and sustaining the job demand and opportunity equilibrium is called the Labour Market Information (LMI). (M. Langer, Analysis and Design of Information Systems, 2008)

It is clear from above definition that LMI not only include the quantitative information about the Labour Market, however, having a collection of qualitative information about the workforce demands and priorities with respect to their job hunting like the core cultural values, likes, dislikes and behaviours etc. (M. Langer, Analysis and Design of Information Systems, 2008)

Data about labour market actors and their environment, as well as relevant information on labour market institutions, policies and regulations, all collected using credible methodologies and practices that comply with international standards;

Statistical information is defined here as information collected by using statistical methodologies (surveys, inquiries, etc.) that comply with international standards.

### **2.9.2. Labour Market Information System Definitions**

A "labour market information system (LMIS)" is all the institutional provisions, procedures and mechanisms set up to coordinate the collection, processing, storage, recovery and circulation of labour market information"

LMIS has the following functions.

- Users (private companies, statutory authorities, individuals).
- Data collection tools.
- Processes (data processing, data evaluation, conclusions).
- Labour Market Information, LMI.



- Data collection methodologies.
- Resources (man, machines, money and procedures).
- Training, reviews, improvement, method statement and trouble shooting team.
- LMIS utilizes the LMI in the most effective ways to integrate all relevant information about the expatriates.

The following schematic diagram in figure 2-5, of Labour Market Information System shows the integration of information in one data base from different important organs of the system who are responsible for the creating jobs and qualifications or skills. (M. Langer, Analysis and Design of Information Systems, 2008)

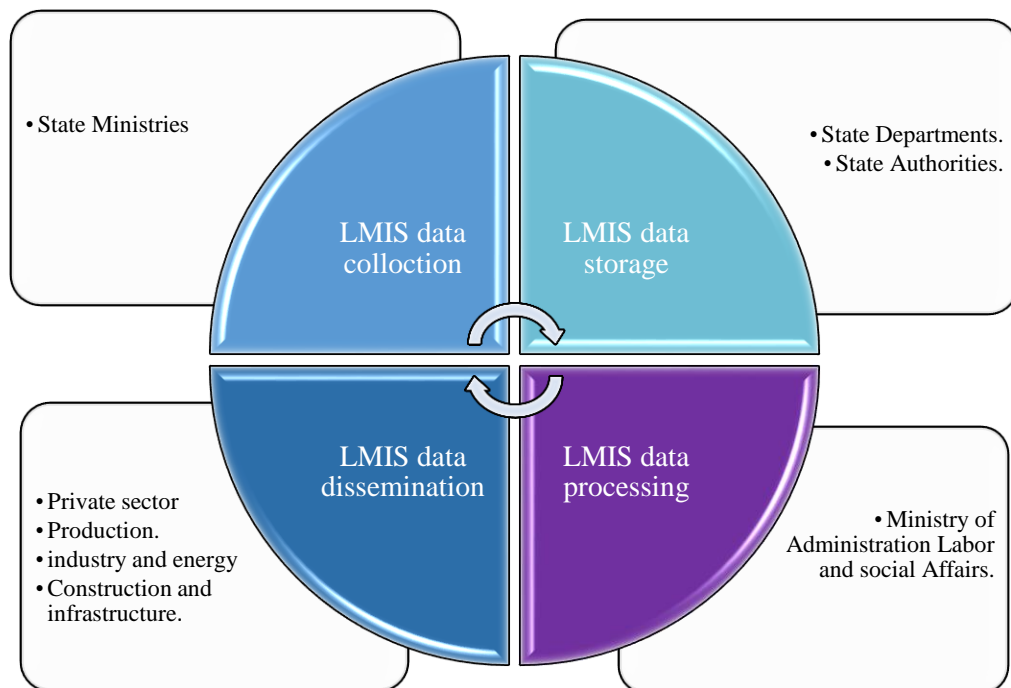


Figure 2-5: Schematic Diagram of LMIS Model

Figure 2-5 is the schematic diagram of the proposed LMIS, showing the four major functions of the LMIS, data collection, data storage, data processing and information dissemination. The primary source of data is shown as directly from public and private sectors.

Right information at right time to right decision makers contributes a lot in an effective decision maker and strategies formulation. The main LMIS organ is the an information bank which provides complete and comprehensive information about the overall Labour Market regarding the total jobs opportunity available at any specific time, the forecasted jobs opportunities in the market during the given future time frame, the new workforce expected to

enter in the Labour Market and the expected jobs opportunity to offer positions to the new active workforce.

An effective LMIS can also provide valuable information regarding the future jobs and skills demands to guide the educational organizations for proper guidance of parents and students to study in the right technology and area of more demand, this will maximize the chances of immediate jobs confirmation on completion of education which will be highly helpful to keep the unemployment at zero or its lowest rate.

## **2.10. Functions of LMIS**

Labour Market Information System consists the following three major functions for effective results and market analysis.

### **2.10.1. Description Function**

This function provide data related to different sector of any labour market, which includes the quantitative data about the number of active and non-active workers in the market, the number of future addition in the active and non-active workforce. The future opportunities and current unemployment rates, the economy trends and job market trends.

### **2.10.2. Monitoring Function**

This function of LMIS is specifically keep an eyes on the market reactions towards new policies and regulations adopted by the government to tackle the instability and unemployment of the Labour Market.

This function notice the fluctuation in market trends and the indication of new market requirements about new skills and qualifications, for example, when the government enforce green building policy over the construction market, this function will indicate a high demand for the environmental, value engineering

and sustainability expert in the market to give an information to the government and private education and training bodies for including the required knowledge area in their courses and to motivate parents and students for admissions in the areas needed by the labour market. (Labor Market Information Systems. , 2017)

### **2.10.3. Assessment Function**

This function of LMIS is designed to evaluate the positive and negative impacts of the implemented corrective actions to check the effectiveness of adopted strategies and policies, in case the results are not impressive the policies and strategies are recommended for review and considerations of required market dimensions. (Foundation, 2017)

## **2.11. Labour Market Sustainability**

Sustainability is the process which keep a balance change and national growth rates without the misuse of future generation's resources, effective utilization of national assets, ensuring a regular human as well as institutional development with effective and efficient use of national resources without harming environment.

### **2.11.1. Sustainability Goals**

The Qatar's National Vision 2030 (QNV-2030) is totally based on achieving a sustainable development status on national level in all major areas of the state, in fact we can declare the QNV-2030 as a sustainability implementation plan on high level which is divided into achievable targets till 2030. Initially it is divided in the following four major sectors.

### **2.11.2. Sustainable Labour Market**

According to Gerd Leohard; (Wired Magazine, 2015):

*” The future is already here but most of us haven’t notice. We are facing exponential technological change and it is only the beginning. Humanity will change more rapidly in next 20 years than in the previous 300 years. 50% of our jobs will automated within in next 10 to 15 years. This could be heaven, or it could be hell, all depends on how we collaborate, going forward. (BONVILLIAN, 2018).*

**Annemarie Muntz, the President, World Employment Confederation said**

*“We are looking for security in work and income. At the same time, we need sustainability in terms of when, where and how we work. This means that the inclusive and competitive labour market workers and business want for our future should be agile and adaptable. By combining a variety of decent employment contracts with modern social security models and accessible employability schemes we can do that. And provide sustainable prosperity for all. (MINICA, 2014)*

### **2.11.3. Challenges of Qatar Labour Market**

Knowing about the trends of professions demands, interest of new active workforce, and the potential in the job market of Qatar can give us an opportunity to design more effective and colorful labour market in Qatar.

#### 2.11.4. Achieving Sustainable Labour Market

In accordance with the QNV-2030 sustainable development goals, Qatar has currently achieved a very high target of 99.8% of jobs provision to Qatari active workforce, only 0.2% are jobless because of lack of experience or search for better jobs, the human resource departments are working to train the jobless for better positions. However, the major problems and challenges in achieving a sustainable target under the Qatarization strategy of Qatar are following.

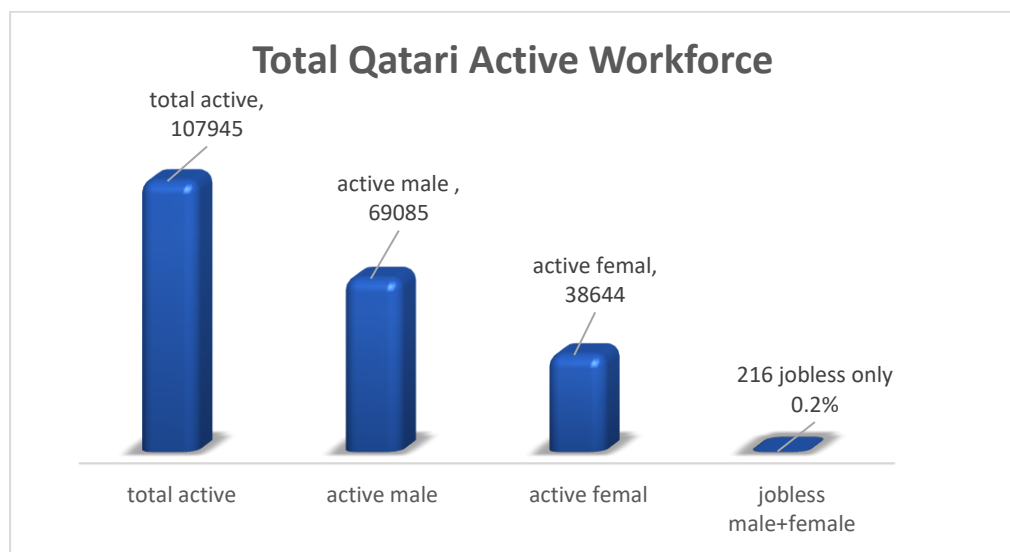


Figure 2-6: Total Qatari Active Workforce

Figure 2-6 shows statistics from Qatar statistics published in quarter 1 of 2019, indicating a total active Qatari workforce of 107,945, out of which 64% are Qatari male and 35.8 % are Qatari female and about 0.2% Qatari workforce are jobless, majority of these joblessness are due to the skills mismatching and lack of experience.

### 2.11.5. Critical Success Factors to achieve a Sustainable Labour Market

According to the following facts and figures are highlighting the major areas of concerns and the driving factors to achieve the required sustainable labour market. Sustainability stresses on fair distribution of resources and opportunities, however, the following figures are showing some imbalance distribution of resources and job distribution.

#### 2.11.5.1. Target Qatari Active Work Force to achieve Sustainability

The total Qatari nationals (economically active) is 107,945, which is only 5.05% of the non-Qatari active workforce (2,150,694) present in Qatar labour market, if we want to achieve an ideal sustainable labour market, we need to give minimum 12% of the total active workforce to only Qatari nationals at the rate of their population proportion, which is 12%. ( (Authority, 2019)).

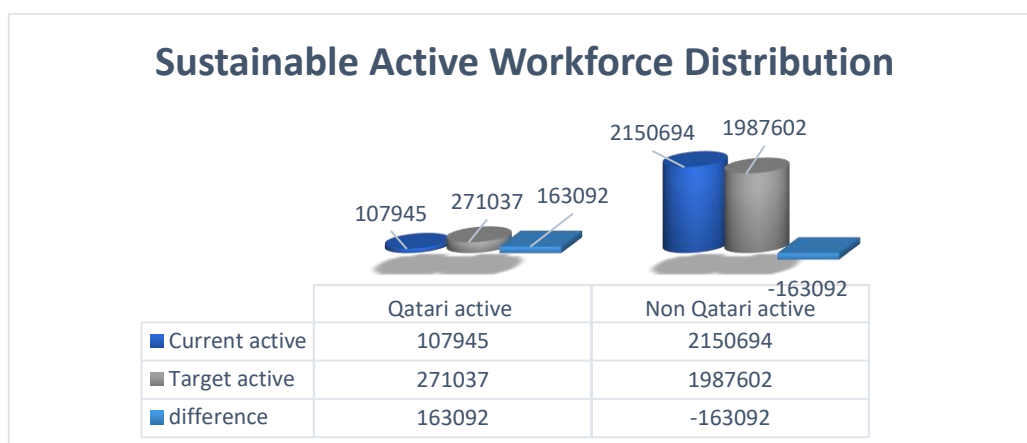


Figure 2-7: Active workforce distribution

Source: Qatar Statistics 2019, Quarter-1

Figure 2-8 is based on the data taken from Qatar statistics, published in first quarter of 2019. The Qatari citizens are 11.5% of the total Qatar population, therefore, the Qatari

workforce shall not be less than 11.5% of the total active workforce for a sustainable market growth, to achieve this status we need to create 163,092 jobs for Qatari workforce, however, the non-Qatari active workforce shall be reduced by an equal number of 163,092.

Therefore, the first target of attaining a sustainable labour market is to have a total of 271,037 economically active and appointed Qatari national, this target can be achieved if 163,092 new Qatari active workforce is added to the labour market, however, to maintain balance between supply and demand an equal number of non-Qatari workforce is needed to be removed from the labour market, to achieve a sustainable and fair distribution of workforce between Qatari and non-Qatari workforces. (QS/1-2019)

The other options are giving permanent residencies to expatriates under the provision of Amiri law no.10 of 2018, which is under process and still not in the stage of implementation, however, this strategy can increase the percentage of Qatari nationals in comparison with other nationals. (Amiri Law-10-2018).

#### ***2.11.5.2. Total Qatari Male versus Female Population (15-65) years age***

The total number of Qatari males at the age of (15-65) is 99,180, while total Qatari female (15-60) are 103,584, showing almost a balance distribution of male and female with respect to Qatari nationals which is 49% male and 51% female.

The overall distribution of male and female is not balance due to huge number labour force living in Qatar without families, this can also be address by reducing the manual works with the introduction of technologies and converting manual works into automations.



#### ***2.11.5.3. Total Economically Active Qatari Male. (QS/1-2019)***

There are 48.33 % of Qatari population living as non-active workforce in Qatar labour market, out of which 32.2% are Qatar female and 16.13% are Qatari male. To achieve a sustainable labour market, the number of non-active workforce needs to be reduced as non-active workforce remain as a burden over the economy of a country and it is also a source of reducing the GDP of Qatar.

The inactive 16.13 % Qatari males are considered as waste in the process of sustainability and efforts are needed to motivate them for work with exception of disable and special person only. (QS/1-2019)

However, there are Qataris who have genuine reason for not being part of active workforce, like some cultural and traditions values are not encouraging female to work, they prefer to act a house wives by their choice whom cannot be added to active workforce. The medically disabled Qatari can be accommodated in fields suitable for their disabilities while some can be tolerated due to their permanent disabilities.

#### ***2.11.5.4. Total Economically Active Qatari Female.***

Female workforce is an integral part of national workforce and according to sustainability requirements the percentage of working male and female shall be equally distributed, both shall equally contribute in the adding the value to GDP.

According to the Qatar statistics in 2016, 37,948 Qatari were active which is only 35.9% of female workforce, however, a large part of 64.1% inactive female and playing the roles of house wives. Special steps shall be taken to motivate the Qatari house wives for working and contributing in national economy.

(Statistics, 2016)

For achieving an ideal sustainable society, the Qatari female shall join the workforce equally as Qatari male, the state can formulate new policies and legislations to motivate and facilitate female joining the active workforce.

#### ***2.11.5.5. Qatari Nationals' Interest in Government Jobs.***

This is one of the major challenges in achieving the targets of Qatarization. More than 75% of the total Qatari active force has been appointed in government departments while they are not interested to apply for jobs in private sector.

The major reason of ignoring private jobs is more weekly days and hours/day with less average salary comparatively the government jobs. This is the reason that instead of achieving a 50% target under Qatarization the Qatari workforce has achieved only 9.1% jobs in the fields of energy and industry.

Effective planning is required to divert the Qatari nationals towards the private sector with many job opportunities available. This is the only way to get a balance contribution between the jobs occupied by Qatari and non-Qatari nationals.

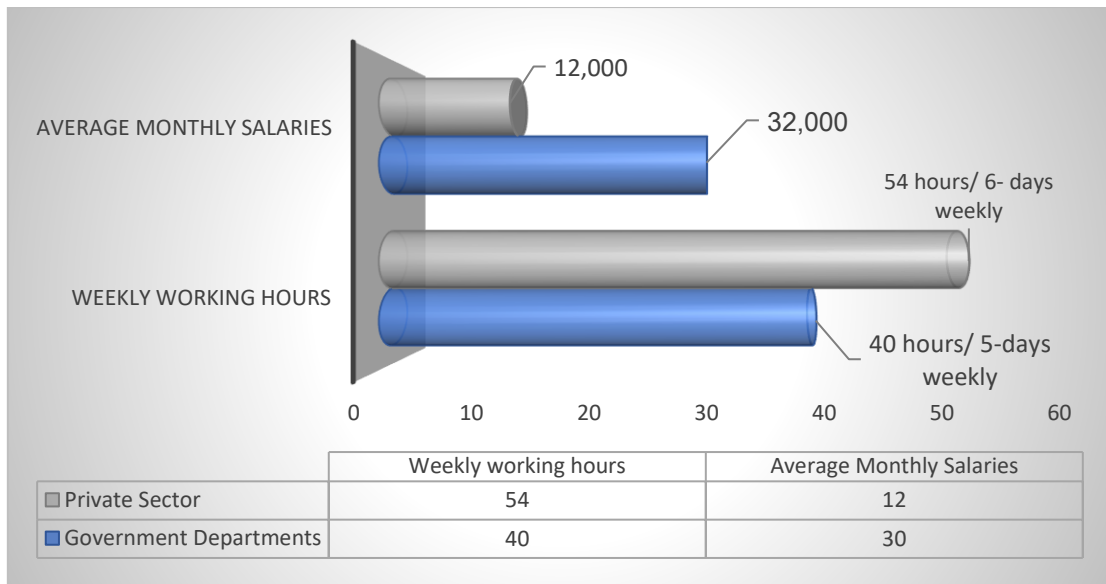


Figure 2-8: Benefits of public sector jobs vs private sector

The data used in Figure 2-9 is taken from the Qatar statistics published in 2016, it is showing the job benefits differences between public and private sectors.

**2.11.5.6. Overloading of Government Departments.**

Due to the attraction towards the government jobs, and avoiding jobs in private sector, the government departments are overloaded by recruiting more employees than required which is against the requirements of a sustainable labour market.

One of the examples of government sector over employment is shown in the following figure, which is clearly showing that 14,888 teachers are appointed for teaching 113,532 students at the average of 8 students per teacher. (QS/2-2016)

One the other hand only 11,902 teachers are effectively teaching to 190,758 students in private schools at the rate of 16 students per teacher and with equal or better annual results comparative to government schools.

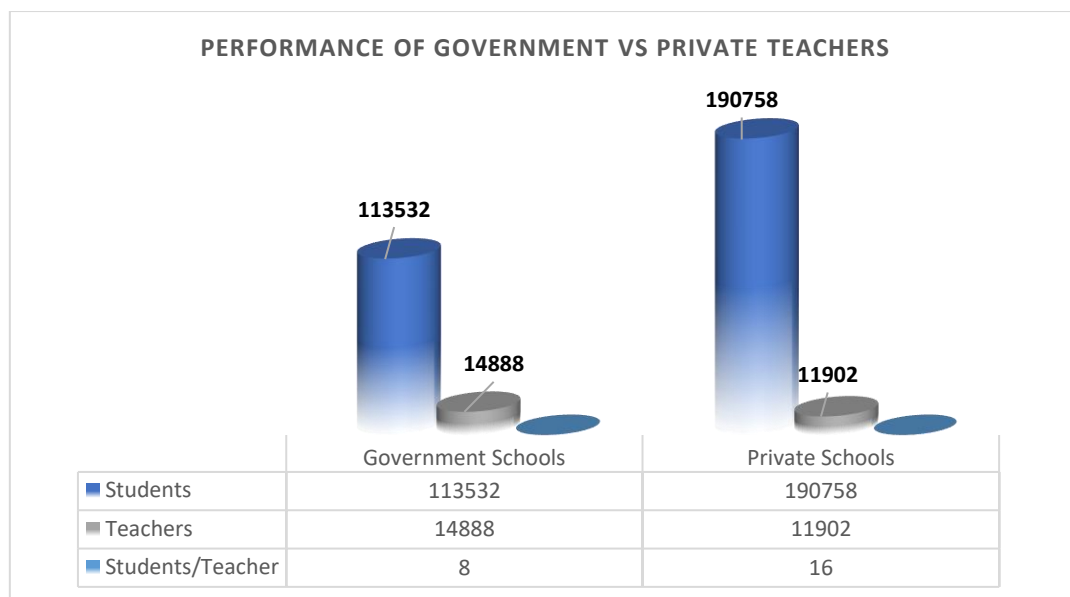


Figure 2-9: Negative impact of attractive public sector jobs

(Source: Qatar Statistics-2016)

Figure 2-10 is based on the data taken from Qatar statistics published in 2016, it is showing that one teacher is appointed for eight (8) students in public schools while in private sector one sector is hired for sixteen (16) students which is double as compared to public sector, however, both sectors schools are performing almost equally, this trend is showing a kind of over employment in public sector.

#### ***2.11.5.7. Total New Workforce expected to enter in Qatar Labour Market.***

According to Qatar statistics published in 2017, the total Qatari student are assumed to be part of the Qatari workforce till 2030, assuming the current trend of Qatari active and inactive workforce. The expected Qatari new workforce to be enter in Qatar labour market till 2030 is 102,370 in addition of the existing workforce of 105,094 who are already working with only 456 Qatari jobless, due to lack of experience and searching for better jobs.

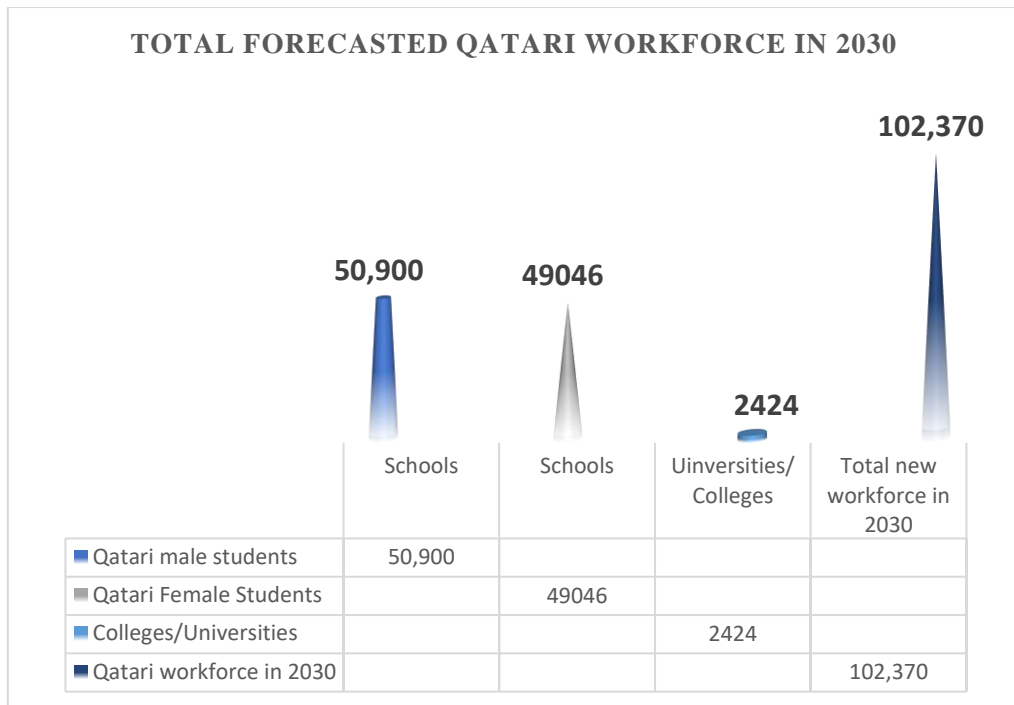


Figure 2-10: Total forecasted Qatari workforce till 2030 (Statistics, 2016)

Above figure 2-11 is based on the data taken from Qatar statistics published in 2016, it is showing all expected jobs demand till 2030 which is the combination of all current students in schools and colleges. The employees who will be retiring and exiting the job market by 2030 are not considered due to unavailability of reliable data.

The following figure 2-12 is showing the total expected jobs opportunities in 2030 as well as the fair distribution of jobs opportunities to achieve not only the Qatarization goals but also the requirements of a sustainable labour market. One assumption has been made while forecasting the future job opportunities, which is in targets of Qatarization currently focusing on Energy and industry only while we suggested 12% jobs in the very important construction industry, it is very important not only for new projects in but for the effective operations and maintenance of the already constructed projects in state of Qatar. (Qatar Statistics, 2016)

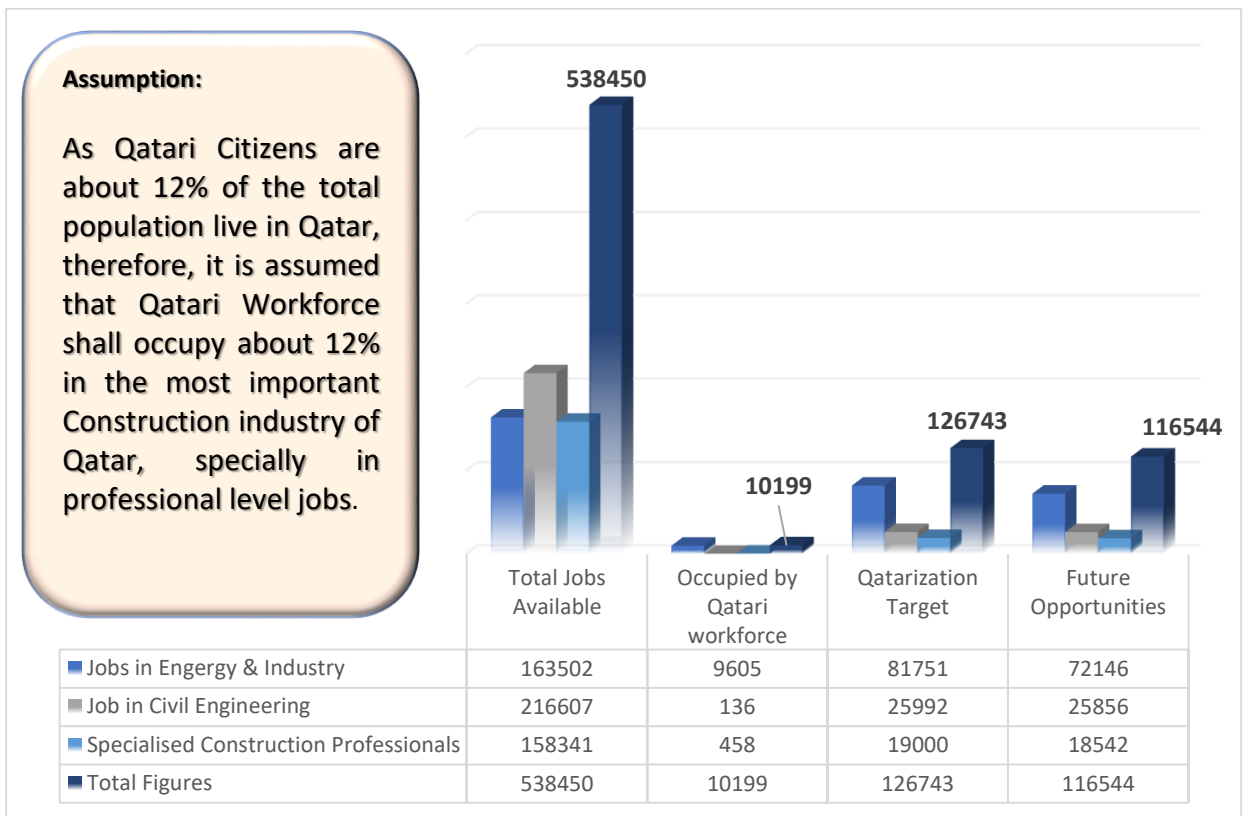


Figure 2-11: total forecasted jobs opportunities till 2030. (Statitics, 2016)

### **CHAPTER 3 : LMIS DESIGN METHODOLOGY**

The labour market has strong correlation with the economic and social trend of a country which shall be considered during the policy making stage for effective management and sustainability of labour market. The major driving factors of maintaining the supply and demand chain of skilled and unskilled workers are demography, production technologies, global economic trends, migration demands, cost of education, inflation and unemployment are always given special attention to study the labour market existing status for the planning of forecasted workforce to minimize the chances of any mismatches due to lack of information about the future jobs opportunities. The policy makers also consider the factor resulting in increasing gaps between the desired areas of interests for the students and the required skills for the available and expected jobs in labour market, the planning shall never be based on short term demand of any specific specialty of labour market, for example in FIFA-2022 infrastructure projects the demand of steel structure engineers increased immensely, however, on completion of football stadiums, this demand will drop and there will be surplus steel structure engineers in the labour market who will be forced to hunt jobs for them outside Qatar labour market because in normal construction activities the demands of steel structure professionals are very nominal.

Therefore, it is important to plan the diversification in skills of labour forces on the basis of long term demand instead of short term to avoid any unemployment in future.

In case the market is facing any skill shortage at a particular time, the long term and short term requirements shall be investigated before injecting the subject skill in the market to maintain the sustainability of the job market. All these policy matters need authentic information on right time of strategies formulation and LMIS can be an outstanding tool to having sufficient information about any skill, its long term and short term forecasted demands and expected fluctuations in it, because without having reliable information on right time, it will not be possible to plan an effective labour market for any country which play an important role in the GDP and national growth of a nation.

### **3.1. Labour Market Information System (LMIS)**

Labour Market Information System is an integrated processed data bank receiving relevant data automatically which is stored in the hardware and process systematically in the predefined dimensions for getting important information about the all relevant fields and areas associated with the labour market. It is collecting data, process it to find the current and future labour market trends and skills requirements along with the indication of current jobs opportunities in a specific labour market.

The information about the jobs and opportunities indicators provided by the LMIS helps all stakeholders in their job hunting and career planning with most reliable market information and forecasts. It also helps the educational institutes to design the most effective and demanding courses for their student to produce multi-skilled workforce in order to prepare more sustainable labour market.



Qatar has limited labour market information the available statistics are based on research based on a sample surveys and not on actual data collection from the market and concerned ministries. Therefore, to make the proposed LMIS an attempt shall be made to collect the actual data during the operations of different ministries and companies, with respect to their hiring and firing numbers and the reasons behind rejections in interviews and terminations from their services.

To make it more effective and sustainable the data collected shall be reliable and actual, which is only possible if the state do proper legislation for it, and bound the concerned departments and firms for uploading actual data on day to day operation basis, for example, the number of students admitted to a school, promoted, failed, transferred to high education or discontinuing their education can be taken from the education ministry of Qatar, this data will be quite reliable because it is based on the actual registrations and processes of education ministry.

The same way labour department shall record and share the data about the actual inflow of migrants and their trade of jobs, as well as the terminations and outflow of migrants from Qatar along with the reasons of workforce increase and decrease in the labour market. It shall be the department policy matter to document the actual data about all important dimensions of Qatar Labour Market and share it with the government body operating the LMIS for an effective and reliable data collection and establishing its important trends for the policy making and strategy formulations.

The proposed LMIS shall be institutionalized supported by the state level legislation to impose its requirements of data collection, processing, storage, retrieval and dissemination on the level of each stakeholder data basis which shall be integrated with the central data basis unit situated in the developing and planning ministry information system department.

The Proposed LMIS shall cover the following sectors.

- i. Collection of reliable data.
- ii. Storage of collected data.
- iii. Data processing software and analyzing capacity.
- iv. Institutional infrastructure and channels.

As the dimensions and variables of labour market keep changing from country to country there the key driving factor of effective LMIS also keep changing and it cannot be generalized, therefore, the study of Qatar labour market key success factors shall be review and considered while formulated the infrastructure and design of LMIS for Qatar labour market. The design and effectiveness of proposed LMIS shall be based on a direct integration of the central data base of LMIS with the data basis of all concerned and relevant sources from public and private sectors. The data collection shall be immediate and direct instead of periodic uploading and recording which can have time and information gaps resulting delays in the data analysis and trend following during the decision making process of planners and policy makers.

### 3.2. Developing of LMIS

The following flow chart in figure 3-1, shows the whole process of the proposed LMIS from start till its implementations and reviews.

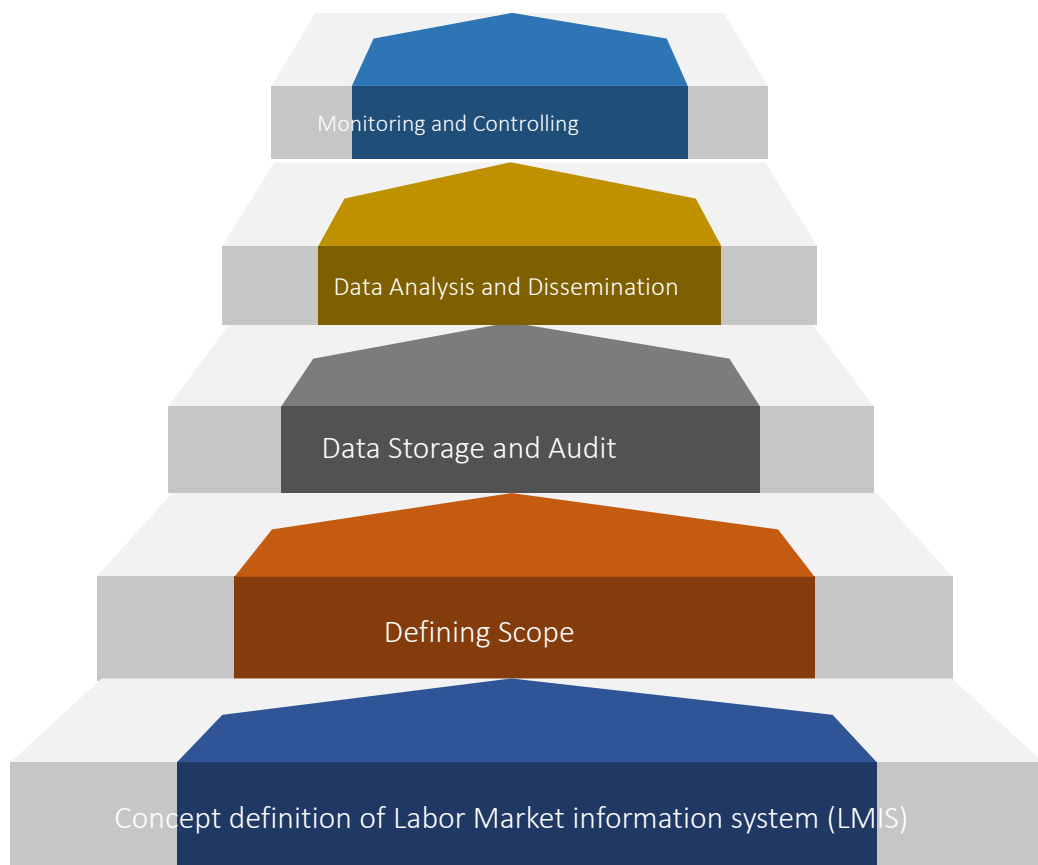


Figure 3-1: Propose LMIS development flow diagram.

### **3.2.1. Defining the Scope of LMIS**

This is one of the most important step for having an effective and productive LMIS, the scope shall be well defined about the following data processing areas.

i. Sectorial data analysis.

Under this factor of scope definition, it shall be agreed on different levels of different sectors, like construction, production, oil and gas, infrastructure, agriculture, forces, education and health etc., about the data collection methodologies, up to what level the collected data will be processed before sharing with the proposed LMIS, either it will be process or only raw data will be provided.

For example, if a construction company is receiving job applications in different sectors, they will just share the applications quantities or they will also provide the information about the number of hired workers, the number of rejected workers, and the reason of rejections, in order to get the information about the key rejection factors so that it can be used in planning the education and career of future workforce.

The company shall also share the information about the successful interviews of appointed professionals and workers, to educate the future workforce and prepare them for concentrating on the core success factors for their career boosting.

ii. Regional data analysis.

By regional analysis it means that in case the labour market requirements keep changing along with the change in the geological locations of the working stations, for example if the labour priorities in Abu Samra is different than the one in Dukhan and Ruwais, in that case the processing of data shall be done according to the establishment of required trends and information about the most critical information. For example, Abu Samra is far from Doha and families normally don't like to stay at Abu Samra due to unviability of schools, markets and communities around, therefore, the employees working at Abs Samra would like to know about the travelling time and cost from Doha to Abu Samra and the benefits associated with travelling allowances in the salary packages.

iii. National data analysis.

The data processing scope on the national level shall fall under the ministry of planning and development, state of Qatar. After collecting a reliable data on regular basis, LMIS shall process the data against all trends decided and agreed to provide enough information about all key areas required for an effective labour market strategy formulation.

Qatar is one of the top country for job hunters around the globe due to the mega projects and an outstanding economic growth due to hydrocarbon reserves of Qatar and attractive development programs like Qatar National Vision QNV-2030 and FIFA infrastructure- 2022.

Therefore, the following minimum trends shall be calculated from the

processing of data collected from all sources linked with LMIS.

- Total workforce of Qatar Labour Market.
- Total Qatari workforce vs Non-Qatar workforce.
- Total male workforce vs female workforce.
- Total economical active workforce vs non-active workforce.
- No. of employees appointed in different sectors of labour market.
- Short term job opportunities forecasts.
- Long term job opportunities forecasts.
- Forecasted workforce in long terms and short terms.
- Forecasted opportunities with forecasted Qatari workforce.
- Forecasted demand of skills and specialties.

The publication above information generated by the proposed LMIS based on a reliable data collected from different sources associated with labour market will give the most important and needful information not only to the policy makers of Qatar labour market but all national and internal job hunters to plan their career according to the opportunities forecasted in Qatar labour market.

iv. International trends analysis.

As world has become a global village and social networks has dramatically reduced the distances between different countries and labour markets. Therefore, it is important to present the concept of open data and share the processed information disseminated by the proposed LMIS to the international markets.

Currently migrants arrive Qatar and then start their job hunting, most of the time they faced a disappointment when their skills and specialties mismatch with the opportunities in Qatar labour market. Therefore, to avoid the wastage of time and money of the international workforce looking for jobs, it is important to provide the international workforce, a reliable information about the available opportunities in Qatar labour market.

v. Data collection and processing intensity.

At the design stage, the time frames for the periodic data collection and processing shall also be agreed and decided at this stage. Normally the Qatar statistics has its own standards of data collection from different source, different organization follow different time frames, therefore, it is important to agree on a uniform methodology for the data collection and same time frames for all data collection from different sources to facilitate the data processing and provide 100% input before running analysis of the received data at any particular time.

It is not necessary that the time frames for the data collection and data processing and publishing shall be the same, the data can be collected

more frequently while the data processing and trend publishing can be done on a quarterly basis for the strategic planning and reviews. It depends on the state policy for the strategies implementation and review periods decided to fix and follow the strategic planning for Qatar labour market.

vi. Data dimensions.

The data dimensions are linked with the trend variables decided to be calculated, therefore, it shall be decided on the variables required and the input required for the calculations of the selected trend calculations. For example, if the LMIS is expected to produce the terminations trends and the reasons of terminations or rejections to guide the future workforce in the concerned market, it shall be provided with the data related to the rejections and terminations along the basic data of demographic dimensions of labour market workforce.

One of the major reason of disqualification during the selection in public sector is Arabic language, therefore, it kept mandatory for security jobs know the basic of Arabic language in order to serve in an effective way in security departments of Qatar, so recording data about the language proficiency is an additional dimension of data.



### **3.2.2. Data Audits**

The effectiveness and preciseness of the labour market information and trends is highly dependent on the regularity and reliability of the data inputs. The on time and correct data analysis processes and the compliance with the expected level of accuracy in the calculated trends and processed data.

Therefore, data audit shall be regularly considered to assure the most suitable data sources for the anticipated labour market dimension and monitoring of the required market trends and fluctuations. Data audit can also point out informational gaps, consistency in the trends, reactions to special incidents, delays in receiving data from specific source, indication of errors in the data receiving channels and systems.

### **3.2.3. Data Analysis and Dissemination**

The steps to be followed to create the proposed LMIS

- i. Set the objectives and goals that help decision-makers
- ii. Decide what data we need the structure and the sides from which can we get the data
- iii. Create a unified database and dimension models
- iv. Load received data from the sides on the unified database
- v. Cleaning and processing the data on the unified database
- vi. Load the proceed data to the dimensional model
- vii. Build analytic reports, dashboards, KPIs, trend, forecasts and other useful outputs from the dimensional model
- viii. Make outputs available to decision-makers

The following devices and technologies are used to build the proposed LIMS

- i. Oracle EXADATA: for data receiving, creating the unified database and build the dimensional model
- ii. Oracle ODI (oracle data integrator): for cleaning, processing, and loading the data
- iii. Oracle EXALYTICS : for building analytic reports, dashboards, KPIs, trends, forecasts, and others

#### **3.2.4. Monitoring and Controlling**

- i. Lead IT specialist as Project Manager.
- ii. Built-in system for data analysis.
- iii. Technical team for performance Monitor and Control.
- iv. Expertise team for review of errors and variations.
- v. Expertise team for trouble shooting.

#### **3.3. Major Data Sources**

The propose LMIS shall receive data from a well-secured, well-designed and distributed infrastructure for reliable data collection from all internal and external sources associated directly or indirectly with the labour market of Qatar.

Only relevant data sources shall be added in the data collection channels because only reliability of data is not important, the relevancy of data is equally important to produce the actual and relevant labour market trends of Qatar labour market.

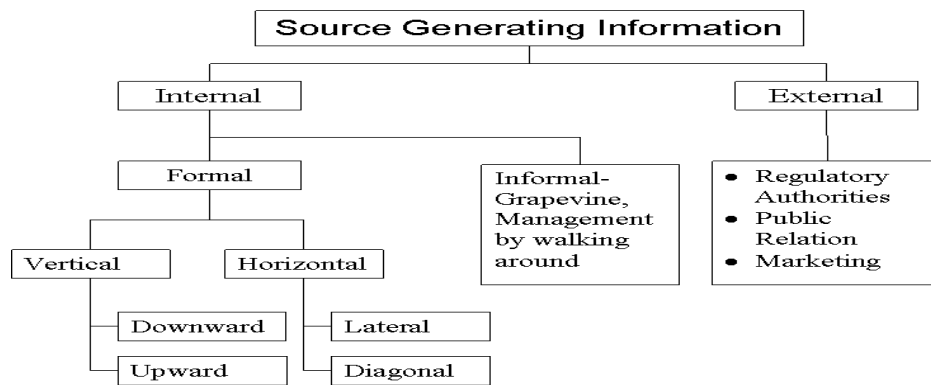


Figure 3-2: Sources generating information

Figure 3-2 is showing the system infrastructure of proposed LMIS, it is showing the flow of data and the network of labour market stakeholder's integration.

In an ideal information network, information should be

- i. Periodical updating
- ii. Efficiently Processed.
- iii. Value driven.
- iv. User friendly
- v. Available/made available to everyone within and outside the organization. (Subject to management's decision)

Following are the some major sources of quantitative data for the proposed LMIS.

- i. Qatar Statistics ( Labour market and Education)
- ii. Public sector human resource information.
- iii. Private sector human resource databases.
- iv. Online jobseekers' databases.

- v. Insurance companies' databases.
- vi. Vocational education sectors databases.
- vii. Jobs seekers data.
- viii. Jobs opportunity data.
- ix. Information about previous thesis and studies.

The proposed LMIS can produce more effective trends and information if it is provided with qualitative data in addition to the quantitative data collection, because quantitative data alone can not provide full information about all required factors of labour market for effective strategic planning.

Therefore, the identification of qualitative data sources is also important for a fully functional LMIS. Relevant information about new trends and fluctuations in supply and demand of Qatar labour market from different sources of information to be updated about the variations in the requirements of labour market and to implement the corrective actions for aligning the LMIS with the required and latest market demands, the most latest and reliable information can be collected from the combination of the following media channels.

- i. Main stream print and electronic media (television, radio, newspaper, magazines etc.)
- ii. Social media networks.

International labour market databases to verify the new trend adoption and acceptance internationally.

It is always important to collect the maximum required dimensions of data for an effective and reliable trend development, however, excessive and irrelevant data can damage the performance of the LMIS due to the wastage of storing capacity and time in analyzing unnecessary raw data. A high level of coordination of information sharing shall be established between different public and private institutions and entities. An effective LMIS shall integrate multiple data sources and databases into one comprehensive and centrally located database in the Ministry of Administrative Development, Labour and Social Affairs.

#### **3.4. Major Organizations of Qatar to be linked with the proposed LMIS**

The infrastructure of propose LMIS shall have the capacity to collect, analyses and disseminate the data in a predefined trends and output and present it in user friend interface with all concerned and legible partners and stakeholders of Qatar labour market. Following are some major stakeholders of the proposed LMIS.

- i. Ministry of administrative development, labour and social affairs.
- ii. Ministry of commerce and industry.
- iii. Ministry of public health
- iv. Qatar Petroleum.
- v. Ministry of Interior.
- vi. Ministry of Education and higher education.
- vii. Planning and statistics authority.
- viii. Qatar foundation.
- ix. Organization under Qatarization law.

### 3.5. Strength and Weaknesses of different Data Sources

*Table 3-1: Strength and Weaknesses of different Additional Data Sources.*

Table 3-1 is showing different types of data sources in addition to previously mentioned in order to feed the proposed LMIS, the strengths and weaknesses of each data source is also explained in this table.

Data source	Strengths	Weaknesses
Labour Force Survey	<ul style="list-style-type: none"> <li>▪ provide structural information on individuals (age, gender, education, occupation)</li> <li>▪ have the potential to cover informal employment</li> </ul>	<ul style="list-style-type: none"> <li>▪ costly</li> <li>▪ usually do not cover population living outside households and in remote areas</li> <li>▪ need large sample sizes to get robust data and enable detailed breakdowns</li> <li>▪ political implications (particularly in countries with high ethnic or racial tensions)</li> </ul>
Human Resource Department for Public Sector	<ul style="list-style-type: none"> <li>▪ use of existing data, no need for additional data collection</li> <li>▪ no sampling issues</li> <li>▪ provide information on occupations, qualifications and skills in demand</li> </ul>	<ul style="list-style-type: none"> <li>▪ only flows, no information on stocks</li> <li>▪ usually cover only a specific segment of the labour market</li> </ul>

Data source	Strengths	Weaknesses
Private sector statistics	<ul style="list-style-type: none"> <li>▪ direct information from companies</li> <li>▪ complementary source to household statistics</li> <li>▪ enable linking employment trends to business trends</li> </ul>	<ul style="list-style-type: none"> <li>▪ require developed infrastructure at statistical institute as well as company level</li> <li>▪ often do not cover SMEs or some sectors</li> <li>▪ do not cover informal economy</li> </ul>
Jobs seekers data	<ul style="list-style-type: none"> <li>▪ opportunity to get direct information at company level</li> <li>▪ relatively easy execution</li> </ul>	<ul style="list-style-type: none"> <li>▪ more informative for current situation than future</li> <li>▪ no information on population out of employment</li> </ul>
Student thesis and projects	<ul style="list-style-type: none"> <li>▪ relatively low cost</li> <li>▪ relatively easy execution</li> </ul>	<ul style="list-style-type: none"> <li>▪ demand for detailed information about sample groups</li> <li>▪ findings may be biased</li> </ul>
Labour market Trends and forecasts.	<ul style="list-style-type: none"> <li>▪ provide future-oriented information</li> <li>▪ Provide structural information on labour supply and demand.</li> </ul>	<ul style="list-style-type: none"> <li>▪ very data hungry, need robust time series</li> <li>▪ may give a false impression of bringing 'precise information as to what the future will be'</li> </ul>

Source: skills anticipation background note, February 2017.

### 3.6. Beneficiaries of Market Information System (LMIS)

Data collection and compilation is important task of LMIS but it is not enough to support the policy makers in their decision making, unless the information is produced relevant to the concerned areas under the consideration of policy makers. Different stakeholders have different requirements and expectations

from LMIS, for example the policy makers and strategic planners may need more detailed information as an input for the decision making processes while a simple job seeker may require only general information about the Qatar labour market in order to plan his career and job opportunity in Qatar.

To satisfy the needs and expectation of different users of LMIS, it is important to enable it understand the needs and requirements of different stakeholders and users, each user shall receive the information he is looking for because one of the most important attribute of the required information is that it shall be relevant to the purpose it is required. It is also the critical success factor to disseminate the information right on time to the right user of the subject information produced by LMIS.

Some of the key users of the proposed LMIS are following.

- i. Policy and strategic planners of Development Planning & Statistics.
- ii. Public and Private Employment providers.
- iii. Consultancy and Advisory organizations.
- iv. Educational and Training organizations.
- v. Existing and forecasted workforce.
- vi. Workers.
- vii. Students.
- viii. Job seekers.
- ix. Researchers.

There are multiple ways and sources to disseminate and share the information created by the proposed LMIS, most common of which are the user interface



supported by the official website of Qatar ministry of planning and development, it can also be share with the periodic reports and trends Qatar statistics, the newspaper, news channels and social media.

Different seminars and conferences shall be conducted in different educational training institutions to explain and elaborate the information and forecasted trends been produced by the proposed LMIS in order to make it easily understandable for the job seekers and career planners. The career planning consultant shall refer to the forecasted labour market demands regarding the required level of skills and qualification. Parents shall plan their children education with their teachers and children based on the reliable forecasted trends of Qatar labour market through the proposed LMIS.

The information about the current supply and demands and the forecasted trends shall also be shared with the corporate sector of Qatar to consider the labour market supply and demand for their future ventures and strategic planning for upcoming projects effective resource management.

It is a universally accepted fact that imbalance the supply and demand of workforce is dangerous for any labour market due to the fact that the labour cost will increase if the supply of workforce is less than its demand, however, a reverse implications shall be observed in case the supply of workforce is more than their demand in the labour market, which will increase the joblessness and which results in dropping the wages and salary packages due to the insecure jobs market.

Therefore, an equilibrium status in the supply and demand of workforce is the key success factor for the sustainability of any labour market in the world, and LMIS is a well-known and proven tool in planning an effective strategies for keeping the workforce supply according to the forecasted demand in the labour market. The skills are developed and workforce preparation are done based on the information and trends created by LMIS to aligned the supply with the actual and forecasted demands of the labour market.

### **3.7. Strategic Planners of LMIS**

Ministry of Development Planning and Statistics is responsible for the strategic planning, coordination and policy making in support of the QNV-2030, the proposed LMIS shall also come under this ministry because it will play its role as a tool of providing reliable and relevant information about the existing as well as the forecasted trends of Qatar labour market to support the decisions and actions of the policy makers for achieving a highly sustainable labour market and jobs opportunities to monitor and control the unemployment in the state.

Creating the required skills in the market and providing enough opportunities means the formation of a society with high living standard who shall be able to afford a happy and standard life in the state, this factor shall support the QNV-2030 in almost all of its four core pillars. A financially stable society is possible only with the availability of stable jobs and earning opportunities, once it is achieved, it shall be supporting in achieving the targets of human development, social development, environmental development which will definitely result economic development of the state because by have a highly stable labour market and controlled unemployment the GDP of a country grows regularly

which results in the economic growth and stability of the nation as a whole.

The proposed LMIS shall also play a major role in the successful implementation of the Qatarization plan of the state, which is not a successfully implemented according to the planned program due to the absence of effective labour market sustainability plan. The theory shows the solutions of the labour market but it has failed to provide the road map for the effective implementation of the plan, due to which it has not achieved its target goals.

### **3.7.1. Employment Policy Formulation**

The information and labour market forecasted trends produced by the proposed LMIS shall be used as an important input during the policy formulation of Qatar employment planning. It shall also be used for the updating of occupational standards, designing of required training courses, required skills development, providing opportunities for the existing jobless workforce of the market by matching their skills and abilities with the required jobs opportunities.

By considering the information disseminated by LMIS, it shall be easier for the policy makers to plan effectively and accommodate the jobless in the future opportunities as well as to keep the equilibrium between the supply and demand of the workforce in the labour market of Qatar.

### **3.7.2. Educational Policy Formulation**

It shall be very easy to decide a career and educational plan if a reliable information about the demand of specific skill and qualification is provided to educational institutes for a proper guidance of students and designing the most suitable courses. Such information is not only valuable to the educational

institutions policy makers but also equally important for the students and their parents to select their education plan according to the forecasted market demand. If the information provided by Qatar LMIS is accurate and the education plan is decided on the basis of provided information, it will minimize the chances of mismatches between the jobs requirements and the available skills in the market, skills mismatching is one of the most critical factor in increasing unemployment in any country, due to this phenomenon, the local workforce remained unemployed and the employers are forced to outsource their required skills from the international labour market.

No policy maker supports to replace the local workforce with the international immigrant due to the negative impact on the economy in shape of money drain in shape of remittance sent by the expatriate workforce to support their families in their home lands. The local workforce on the other hand support the economy of a country in shape of growth in the GDP and revenue collection without draining the money out of the country.

### **3.7.3. Migration Policy Formulation**

Qatar labour market information shall also be used as input in the migration policies and all relevant policies with migrants flow in the state. The transitions are linked with skill demand of labour market, international workforce is allowed to inter in the labour market of Qatar only if local workforce are not available in the required skills and expertise.

In cases of short term fluctuations of the labour market and immediate increase in the demand of any particular skill, the local markets are usually not able to provide the workforce needed due to which the migration policies allow hiring

the required skills from international markets. Such demands attract workforce for a particular period of time, after which the subject skilled workers are deported out of the country.

The following table 3-3 shows the goals and objectives considered in the design criteria of the dissemination plan of proposed LMIS with short description of it.

**Table 3-2: Design criteria of Proposed LMIS**

<b>Category</b>	<b>Description</b>
Goals	<ul style="list-style-type: none"><li>▪ To achieve the targets of Qatarization before 2030.</li><li>▪ To reduce the dependency on international workforce.</li><li>▪ To encourage the Qatari workforce select their career according to the labour market forecasted trends.</li><li>▪ To integrate the educational institute of Qatar with the labour market stakeholders.</li><li>▪ To minimize the chances of mismatching of skills and qualifications with the labour market demands.</li><li>▪ Establishing a stable and sustainable labour market in Qatar.</li></ul>
Objectives	<ul style="list-style-type: none"><li>▪ Legislation of new law in support of LMIS data sharing and integration with labour market stakeholders.</li><li>▪ Encouraging Qatari workforce to join private sector organizations with technical and managerial skills.</li><li>▪ Binding of labour market stakeholders for sharing the actual data on regular basis with LMIS network.</li><li>▪ Awareness campaign to educate the students and parents in selection of courses according to the market opportunities.</li><li>▪ Awareness of the workforce about their rights and requirements, suggestion of trainings and skill developments according to the need of market.</li><li>▪ Awareness of international workforce through effective dissemination of information and future trends about Qatar labour market for their guidance.</li></ul>

**Table 3-3: Key Performance Indicators of Proposed LMIS**

<b>Category</b>	<b>Description</b>
Information accuracy	<p>The information shall be based on reliable and actual data collected during the operations of labour market stakeholders. No illogical trends and forecasted information shall be disseminated to the public.</p> <p>Only approved and authentic media partners shall be allowed to disseminate LMIS information publically. Public shall have the facility to register their comment, complaints or opinion about any information they think is wrong or unauthentic, the complaint shall be effectively responded and followed unless closed.</p>
Information timeliness	<p>The dissemination of the right information and forecasted labour market trends on the right time is also very important. Normally there shall be two major timelines for the issuance of latest and updated information about Qatar labour market, one is annually and second is quarterly. The information to be disseminated before the strategic planning review and updates to reflect the facts and figures of the labour market in the policy revival and corrective actions.</p>
Information relevance	<p>Relevancy of the information is also the most important factor, the information disseminated to policy makers are different than the one for the authorities control.</p> <p>The information disseminated for international workforce guidance are also different in many dimensions than the information published locally.</p> <p>There can be some part of information which can be disseminated equally across the board to all interested in the labour market of Qatar, and that is the information about the current and future job opportunities in Qatar.</p>

The effectiveness of the proposed LMIS can be judged by observing above dimensions after the dissemination of information and trends produced by the LMIS. The system shall be declared as effective even if it is successful to bring improvement in any of the above parameters of the Qatar labour market.

Once the right direction is defined, further improvement in the performance can be achieved through the continual process improvement methodologies in order to improve all or maximum elements of the labour market.

**Table 3-4: General Control of Proposed LMIS.**

<b>Types of General Controls</b>	<b>Description of Controls for LMIS</b>
Software Controls	<p>It performs the monitoring and controlling of the LMIS software and stops any know of unauthorized access to the software programs, software and networking programs.</p> <p>It is one of the most important control as it protects the brain (software) of LMIS, which performs the core functions of input, processing and output on the data received from different stakeholders of labour market.</p>
Hardware Controls.	<p>Protecting the hardware against the equipment malfunction of the proposed LMIS is the responsibility of the hardware controls. It protects the hardware installations from exposure to severe temperatures and humidity. It is also very important to make the hardware part of LMIS stay functional without any stoppage and proper arrangements of backup shall be provided to avoid the raw and processed data from loss.</p>
Computer Operations Controls.	<p>It monitor and controls different compartments and partitions to ensure the coded program function correctly with consistency in receiving, storing, processing and dissemination of information.</p> <p>They include controls over the setup of computer processing jobs and computer operations and backup and recovery procedures for processing that ends abnormally.</p>



Types of General Controls	Description of Controls for LMIS
Data Security Controls.	<p>It protect the data received and stored, by the infrastructure of proposed LMIS, with predefined compiled formats against unauthorized access and editing.</p> <p>It shall also indicate and report any kind of attempt to temper the data received and stored by the LMIS infrastructure.</p> <p>It also report the inadequacy of data received from the stakeholders of labour market which shall be verified through audit before allowing to be processed.</p>
Implementation Controls	<p>It checks the system processes at different stages to confirm that it is functioning according to the design criteria.</p> <p>The effectiveness of the system output is not only reviewed by the management of LMIS but also by its users and stakeholders who provides data to the proposed LMIS.</p> <p>With the help of cost-benefit methodologies the functionality of the system is evaluated on different levels of its development. It overlook the controls and quality assurance steps for system development, conversion and testing the system, user and operations functions of the proposed LMIS.</p>
Implementation Controls	<p>To ensure that the proposed LMIS functions according to the expectation, it is important to control its implementation and apply formal standard, rules, procedures and control disciplines during all major stages from data collection, to its storage, processing and dissemination.</p>

Depending on the infrastructure and functionalities of the proposed LMIS, the most suitable application control shall be selected, it is not always required to implement all kind of application control, and the controls are directly related to the complexity and confidentiality of the proposed LMIS,

The following table 3-6 explains the application controls considered in design criteria with its short description and definitions.

**Table 3-5:** Output Controls of Proposed LMIS.

<b>Application Controls</b>	<b>Description of Controls for LMIS</b>
Control Totals.	<p>Control totals monitor the input and processing stages of the proposed LMIS.</p> <p>These totals can range from a simple document count to totals for quantity fields, such as total active workforce, total non-active, total Qatari and non-Qatari etc. Computer programs count the totals at different levels of input, processing and output.</p>
Edit Checks.	<p>Edit checks performs audits of the received data against the predefined errors and inadequacy and it is reported to the user interface in shape of error popup warnings to attract the attention of LMIS management team, such data is stopped to enter the processing loop unless check and accepted by the management of LMIS.</p>
Computer Matching.	<p>This control review and compare the receiving data for its matching with the required dimension in concerned criteria. If any data is found with unmatched attributes, it is also challenged and not allowed to enter the processing stage of data analysis.</p> <p>Such mismatches are reported by the system to its management team and only after the clearance and acceptance from the technical team, it is either allowed to processing stage or reported back to its origin station or partner stakeholders with the deficiency report claimed by the computer matching control.</p>
Run Control Totals. Report Distribution logs.	<p>Balance the total of transactions processed with total number of transactions input or output.</p> <p>Documentation specifying that authorized recipients have received their reports, checks, or other critical documents.</p>

## **CHAPTER 4 : IMPLEMENTATION AND DISCUSSION**

The right and effective decision making process requires the most reliable, on time and relevant information as a core input of the decision and policy making processes. Qatar labour market is one of the most active and consistently fluctuating market in reaction to different political and financial changes in the gulf region. The policy planners remain active throughout the year to closely monitor the changes in Qatar labour market and to react on time for effective change management in order to avoid any kind of chaos or instability in labour market of Qatar.

The proposed Labour Market Information System (LMIS) can play an important role in collection of most relevant and reliable data from all concerned stakeholders of the Qatar labour market and convert it in meaningful information about all major dimensions of the labour market. This will greatly improve the decision making process of the policy planners to achieve better strategic planning for achieving the targets of Qatarization project of the state and to get a stable and sustainable labour market during the economic and political fluctuations of the gulf region.

The following figure 4-1 is showing the core function of the proposed LMIS, which providing the right information to the decision makers and stakeholders on right times. The proposed LMIS will establish are permanent bridge between all stakeholders of Qatar labour market, this bridge or channel will be used for two way information transactions, like the LMIS database will receive reliable and actual data from all stakeholders while the stakeholders will receive reliable information and forecasted market

trends for their decision making in effective strategic planning.

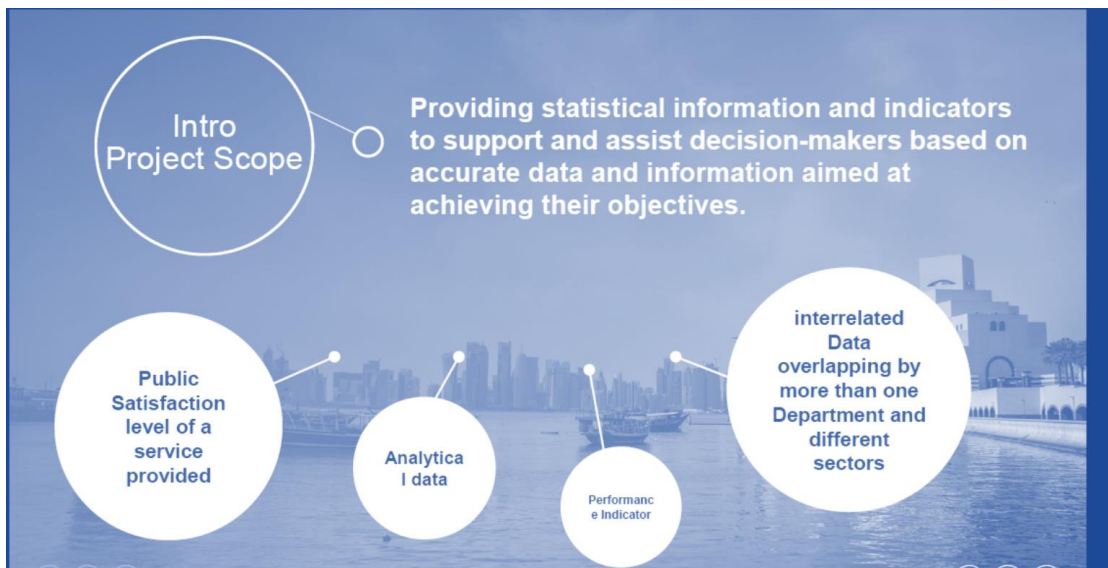


Figure 4-1: Scope of proposed LMIS for Qatar labour market

To maximise the benefits of proposed LMIS, an effective and precise methodology need to be adopted during all phases of LMIS concept brainstorming till its development, implementations, operations management and improvement processes. Following are some major phases the whole process which shall be considered for an effective implementation of the proposed LMIS in Qatar.

#### **4.1. LMIS Approval Decision Phase**

For the approval of LMIS to improve the strategic planning for the stability and sustainability of Qatar market, the adoption decision is the foundation of all processes involved in the design and implementation of the proposed LMIS.

During this phase the decision about the need is taken and it also passes through the following stages to reach to an effective decision about the adoption of proposed LMIS for Qatar.

#### 4.1.1. Gap Analysis of Qatar Labour Market

Need assessment is also called a gap analysis, during this stage the current status of a thorough study shall be done on Qatar labour market challenges and deficiencies, to find out its actual current status and issues.

The following figure 4-2 is showing the schematic diagram of the Gap Analysis, which is based on analyzing the current status of the labour market, consider all key success factors and policy matters assumed in the formulation of the strategic plans and then show the desired or target status of the market.

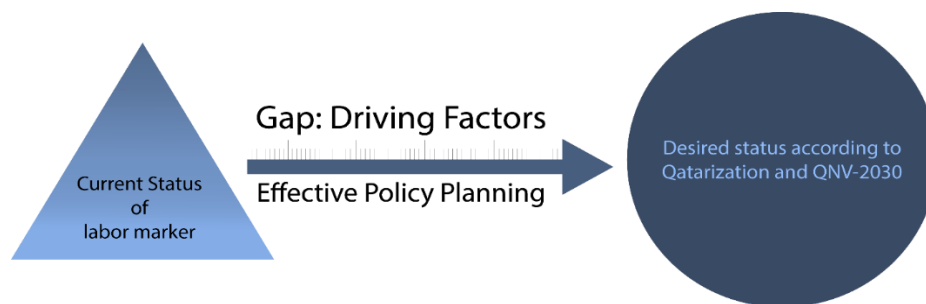


Figure 4-2: Gap analysis schematic diagram

In gap analysis process the actual performance of Qatar labour market will be compared with its potential or desired performance, the reasons behind ineffective use of resources will be found and a corrective or improvement plan will be formulated for the best utilization of the state resources to maximize the benefits of labour market outputs.

Qatar labour market fluctuations and potential risks are reviewed for a period of last 19 years since 2000, during this period a multiple cycles of ups and downs are witnessed by Qatar labour market, some of the major issues faced by the policymakers of Qatar labour market are following.

- i. Non-compliance to Qatarization requirements.
  - i. To divert 50% of Qatari workforce to industry and Energy.
  - ii. To accommodate 50% of Qatari workforce in Public sector.
  - iii. To increase the Qatari / expatriates workforce ratio.
- ii. Increasing dependency on expatriate workforce.
- iii. Increasing money drain outside Qatar.
- iv. Increasing non-active Qatari workforce.
- v. Increasing mismatching of new Qatari workforce with market demand.

#### **4.1.2. Concept Design**

The deficiencies of Qatar labour market found in the gap analysis shall be reviewed by the policy makers and member of Proposed LMIS project for planning an effective solutions of each deficiency in order to achieve the target set under Qatarization for QNV-2030.

Following deficiencies of Qatar labour market can be removed by the proposed concept design considerations during the formulation of design codes for the proposed LMIS.

#### **4.1.3. How to divert Qatari Workforce towards Private Sector**

To achieve this goal of Qatarization, a proper revival of the whole public sector jobs structure is required, it is a known fact that Qatari workforce is not interested to work in private sector due to the following major factors.

##### *Working hours and annual vacations.*

There are six(6) working days of 8 hours each per week in private sector, which equals to 48 hours work per week and only 30 annual leaves per year, while in public sector the number of working days per week are five (5-days) with 7 working hours work per week which equals to 35 hours per

week and 52 days annual leaves. This is much difference which results in attractions of Qatari workforce towards the public sector.

*Proposals to address this difference.*

To make private sector jobs attractive for Qatari workforces, they shall either be compensated for the additional working hours in private sector with comparatively high salary packages than the government sector. The only way to address this issue is to either increase the salary packages of private sector or make the working hour and annual vacations equal for both public and private sectors.

It is not possible creat attraction for the Qatari workforce in private sector jobs with the working hours and annual vacations differences mentioned above.

*i. Job security.*

There is very low job securiy in private sector, because a single mistake can result in termination from the job effective immediately in a single day, however, in government jobs, the employees have enough rights to protect its jobs against wrong decisions of terminations or degradation.

*Proposals to address the issue of job safety.*

It is very important for concerned authorities to strictly implement a well defined job structure equally in public and privates sectors because without properly enforcing it, the private sector will not respect it and the trends of unfair hiring and firing will never end.

- (i) A fair and acceptable job structure is needed for both sectors.
- (ii) A regulatory authority is needed for its implemenation across the board.

The employees right working in private sector shall be equally protected by the effective regulations as practiced in the public sector.

After the implementation of proper job structure and job specifications, the employees of private sector will feel more secure against the unfair and unjustified terminations of higher managers without adopting the due process in the workplace.

By the inclusion of due process in the job structure, this complaint regarding the insecurity of job shall also be reduced upto a great level.

*ii. Authorities and responsibilities.*

It is also a general understanding that there is comparatively less authority provision to lower levels of hierarchy of organization chart but the responsibility keeps increasing with the decreasing the levels in organization hierarchy, while in public sector the authorities and responsibilities are well-defined in the job description by the human resource departments which are highly regarded for smooth working environment.

*Fair distribution of authorities and responsibilities.*

A fair and professional job structure duly supported and enforced by the concerned authorities of the state is one of the best solution to all issues related to the authorities and responsibilities allocations to any employee of the organizational chart.

*iii. Promotions and salary packages.*

Due to the absence of formal job structure in private sector and unchallengeable powers with top management, the decisions regarding promotions and demotions are normally unfair and based on personal



assessments of top management, the salary packages are also fluctuating with the condition of labour market and company financial stability, in case the private company face any turbulence in their cashflow, the first and easy target for them to reduce the overhead is to cut down allowances and securities from the employees, however, government sector employees are protected by their job structure and contract which defines all factors related to their promotions and salaries. The employees working in public sectors are found more satisfied with respect to the management decisions related to their salaries and promotions based on their job structure.

*Proposing fair system for promotion and salaries.*

As mentioned in the proposed solution in all above areas to upgrade the standard of private sector jobs and bring it to the level of public sector in order to make it attractive for Qatari workforce. This is the only solution to achieve the targets set by the Qatarization project of QNV-2030.

Knowing the importance of job structure, for the Qatar labour market, it is important to review the best possible job structure suitable for Qatar labour market to play an important role in bringing the private sector jobs to the level of public sector jobs.

*iv. Controlling hiring for public sector.*

In order to achieve the target goals under Qatarization, it is important to make the public sector jobs equally attractive for Qatari workforce, at the same time the selection criteria in government sector shall be restricted to the modified regulations.

The new policy for hiring in public sector shall be strictly based on the job specification and description, only qualified candidates shall be appointed

whose skills are matching with the job requirements. It shall not be an easy task to get the government jobs unless the applicant complies with all of its selection criteria.

Therefore, this policy of upgrading the private sector jobs and bringing it to the level of public sector jobs as well as making the selection criteria strict for the public sector job hunting will control the unnecessary workforce appointment in public sector and the targets of Qatarization will be easily achieved by diverting the Qatari workforce towards the private sector due to the job modification in private sector.

#### **4.1.4. Increasing dependency on Expatriate Workforce**

The development of experienced Qatari workforce with specialized technical, operational and managerial skills is one of the major goal of Qatarization policy. It is specially targeted to reduce the dependency over the expatriates for the operations, maintenance and management of some major areas of private sector, specially the energy and industry sectors of the Qatar economy. These sectors shall be managed and operated by the Qatari workforce, in case of any shortage of international workforce specially in emergency situations, these sectors shall not suffer from the unavailability of workforce with required skills and qualifications.

Due to the reasons explain above, the private sector of Qatar labour market is run by the expatriates only, which is a critical situation for the policy makers of Qatar labour market. Some important policy changes shall be considered during the proposed LMIS coding in order to achieve a balance and sustainable labour market in Qatar.

#### **4.1.5. Increasing Non-active Qatari Workforce**

Most of the non-active Qatari workforce is from the Qatari female, majority of whom live their lives as house wives, the cultural and traditional values are playing major role in keeping majority of Qatari workforce away being a working women, however, a national level campaign is launched by the state to encourage the female for joining not only public but also private sectors with technical and managerial qualifications under the Qatarization policy.

To control this element of the Qatar labour market, proper policy modification in the qatarization program is required, to motivate and encourage the non-active Qatari workforce, different job offers and incentives in shape of social benefits and financial supports shall be offered to Qatari femal workforce.

#### **4.1.6. Increasing Skills Mismatching of new Qatari Workforce**

Skills mismatching is very dangerous factor for the labour market of any country, because due to this factor the unemployment remains unchanged even with job creation in the market. The reason is that the available workforce fails to satisfy the job requirements of the announced opportunities, this situation creates chances of expatriates in the labour market which is having a double negative implications, it not only drain money out of the country but also increase the unemployment of local workforce which becomes Burdon on the economy of state.

Therefore, the labour market matching is very important for a balance and sustainable market status. Pissarides (1985) and Mortensen & Pissarides (1994) have introduced a market matching function which can be very effective in the policy formulation to manage and control the skills mismatching phenominon of the Qatar labour market.

The market matching function is effective in assessment available job positions in the market and the available skills and qualifications. No decline in unemployment even with provision of job opportunities in the market indicates the existence of skills mismatching shocks in the market.

The matching function approach introduced by Pissarides (1985) and Mortensen & Pissarides (1994) can be explained and discussed as following.

The matching function is based on following assumptions.

The total number of new hires in any given time =  $h$

The total number of unemployed workers during same time =  $u$

The total job opportunities during same time period =  $v$ .

$$\text{Equation no.1: } h=m(u,v)$$

The function  $m$  is representing the matching function, with a limitation of the number of new hires  $h$  considerably less than the number of unemployed  $u$  and the vacant position  $v$ , some unemployed worker  $u$  and some vacant position  $v$  remains unmatched during the same period of time due to mismatching of their skills with the job requirements.

There are normally multiple factors which results in skills mismatching in the market, one of such factors is lack of coordination due to which many workers apply for the same position with attractive packages while the other positions are left unfilled due to either the lack of applicant interest in announced vacancy or lack of qualification to comply with its requirements. Initially the employers and employees have trust deficit at the initial stage of job hiring due to lack of information about each other, the matching function is found very effective in monitor and report the factors responsible for the rising mismatching at certain

time period. The critics of matching function claims that it has limitations and can not encounter all shocks causing the mismatch of labour market.

#### 4.2. LMIS Acquisition Phase

Once a detailed report of Qatar labour market deficiencies and challenges is produced along with the concept of mitigation with best efficient and effective solutions, it will define more dimensions and functions required to be performed by the proposed LMIS.

During the concept design stage or alternative solutions identification stage, it has been repeated concluded the best required tool for addressing the issues of labour market is the proposed LMIS, which will integrate all major stakeholders of the labour market for sharing the data and information for effective policy making of the labour market.

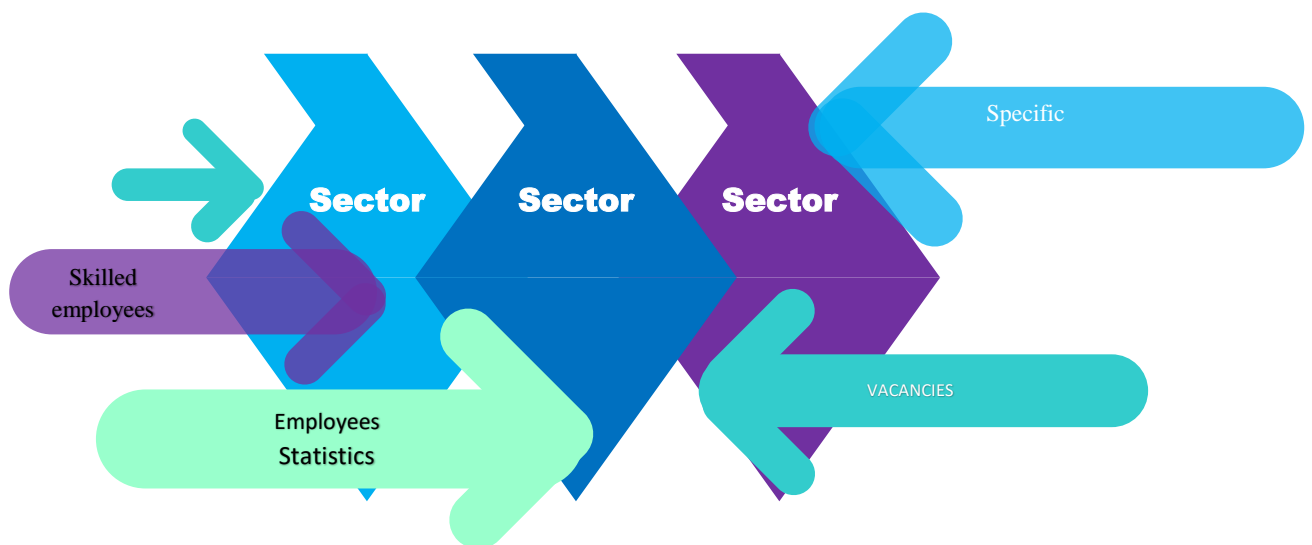


Figure 4-3: Existing data sharing network in public sector

As shown in above figure 4-3, the proposed LMIS network and infrastructure is facilitate the flow of reliable data from the concerned stakeholders to a centralized database linked with the LMIS which will process and disseminate

the meaningful information with market trends for the considerations by the relevant stakeholders in their decision making of policy formulation.

One critical issue is that currently isolated data collection and processing networks are working separately and it is difficult to manage all networks with isolated status, therefore, it is highly recommended to integrate all data basis and information systems with the centrally located databank under the IT department of Ministry of Administrative Development labour and social affairs, therefore, LMIS is proposed which can play a vital role in not only collection of reliable real data but also integrating all stakeholder in one database and information system.

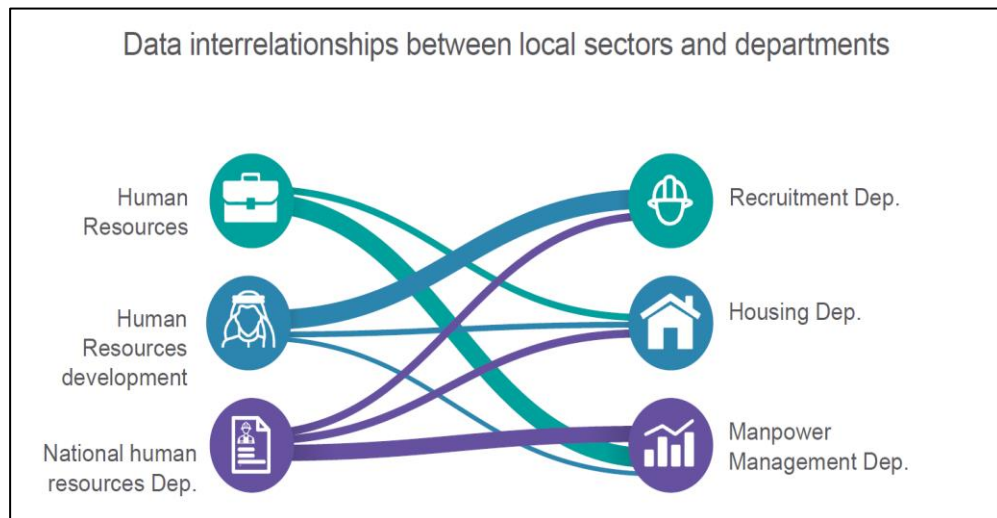


Figure 4-4: Existing inter-departmental channels for data sharing.

As shown in above figure 4-4, this is the current status of information transactions between the Qatar labour market stakeholders, there are multiple channels, and each stakeholders has established many communication channels for collection of their required data and coordination for decision making.

The existing infrastructure of data and information sharing is secure in a sense that each department has full control over the confidentiality management of their policies and information, but there is a serious drawback of it, which is the unavailability of relevant information from other stakeholders on right time and details, each department required a market information for their policy formulation because no one can produce an effective strategy based on their own information and data alone, they need to collect the relevant external information in order to plan for the direct and indirect impacts of each factor.

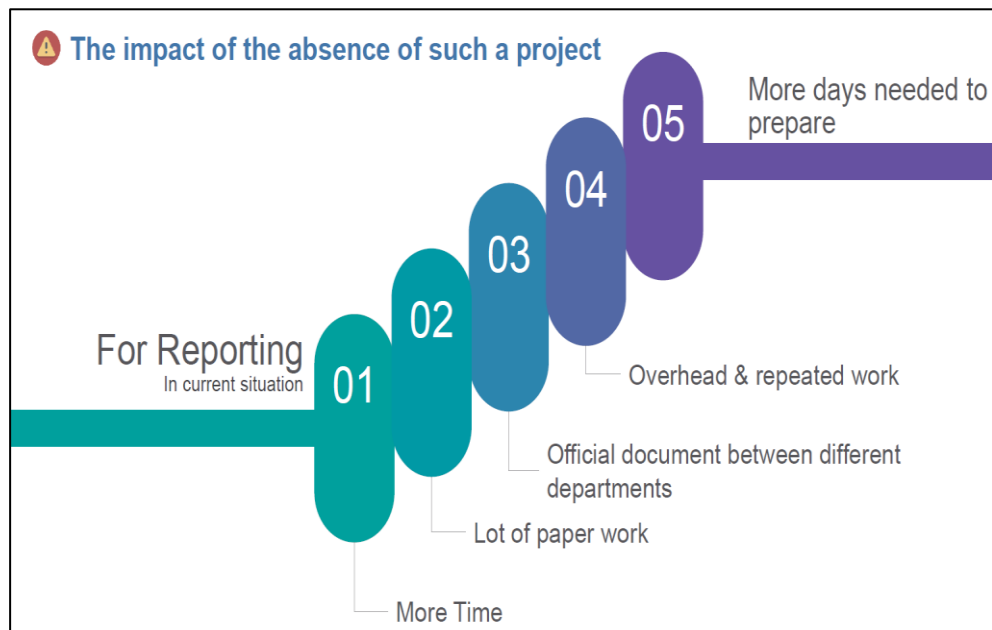


Figure 4-5: Time waste in existing data collection processes

Figure 4.5 shows the procedural delays of requests for the collection of data and information each time it is needed for the policy formulation or decision making related to the issues related to Qatar labour market.

Based on the gap analysis conclusions, one of the best solution for the effective

and efficient collection of reliable data from all key stakeholders of the labour market is creating a centralized data warehouse at the IT department of Ministry of Administrative Development Labour and Social affairs.

This data warehouse will be part of the infrastructure for the proposed LMIS, for collecting the actual and reliable data from all stakeholders from public as well as private sectors, storing and compiling it for the effective data processing to achieve the required information and labour market trends for effective policy and strategic planning for the Qatar labour market.

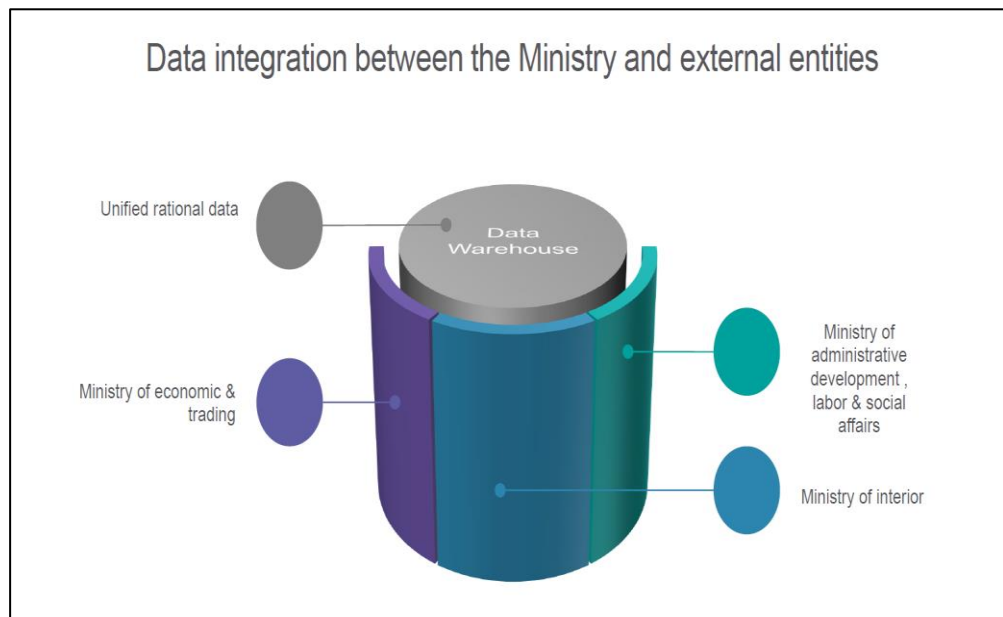


Figure 4-6: Model of proposed LMIS infrastructure

Above figure 4-6 shows the proposed integrated data collection infrastructure for the proposed LMIS, it is based on a central data warehouse which is directly integrated with the information systems of all key stakeholders of Qatar labour market, the data collected during the day to day operations of different



stakeholders is saved in their internal databases, which is then shared after filters with the LMIS data warehouse for storing, processing and dissemination according to the pre coded programmed.

### **4.3. LMIS Implementation Phase**

It is one of the most critical phase of the proposed LMIS, because LMIS can never produce effective information and labour market trends unless it is provided with the most relevant and reliable data from each stakeholder of labour market.

Sharing data is a sensitive issue and most of the stakeholders will hesitate to share their data with any external body, therefore, this is assumed to be the most critical limitation of the proposed LMIS, to handle this issue the state of Qatar shall do proper legislation for it to legally bind all for sharing the actual and required data, this can be debatable issue to decide the filters about what data shall be shared and what to be restricted.

Principally any data which has any kind of direct or indirect impact over the policies and strategies of labour market shall be legally allowed to share with the IT department under the Ministry of Administration and Development for labour and social affairs, because any missing information can play a role of loop hole in the information and trends been produced by the proposed LMIS.

#### **Step 1: (Report Request)**

The process to produce a five years forecasted report of jobs opportunities for the Qatari work force is initiated by the Administrative and Planning Ministry with a formal demand notice from the policy making board.

### **Step 2: (Requesting data from concerned departments)**

The ministry writes requests for the sharing of latest and reliable data and information relevant to all kind of direct and indirect job opportunities in the next five years for the Qatari workforce.

All the major departments dealing with the Qatari workforce are requested to share their statistics about the forecasted job opportunities during the next five years, some of these departments are:

- Recruitment department.
- Human resource department.
- Manpower department.
- Labour department.

### **Step 3: (Data Collection)**

The data is collected from all local departments as well as state departments from other ministries of the Qatar, normally Ministry of Interior, Ministry of Education, Ministry of Health and Ministry of foreign affairs to complete the missing data for effective data processes to get the most realistic trends based on the current and historic trends.

### **Step 4: (Data Compilation and Filtering)**

The Information technology department of Administrative Ministry compile all data received, apply multiple filters on it, store only the relevant data for the target trends forecasting.

In case any irregularities are encountered during the filter and compilation process, the concerned departments are contacted for the correction and verifications.

### **Step 5: (Report Dissemination)**

Once the data received is confirmed to be reliable and relevant , the processes of data analysis are started which results in the production of forecasted job opportunities for Qatar work force during the upcoming five years or till the target year of 2023. The reports are prepared and disseminated in formats easily readable and easily understandable for the concerned policy makers of Qatar labour market.

### **Step 6: (Sharing Reports)**

Finally the forecasted reports are sent to the policy makers to plan strategies for Qatari workforce job opportunities after five years.

As explained in above six (6) steps in data collection for the required information, it is extremely time taking procedure to collect the required data officially from all concerned stakeholders. Each department has its own policies and regulations about the sharing their internal data, and the decision of what to be shared and what not takes considerable time period which results in the delay of the overall decision making by the policy planners.

Therefore, it is very important to make this process of data collection faster and reliable in order to produce the required information immediately and precisely without having doubt about its reliability and integrity.

## Importance of an analytical database?



Figure 4-7: Importance of an analytical database.

Figure 4-7 shows the network infrastructure of the proposed LMIS, connecting the major market stakeholders with the state of the art and secured databank of the proposed LMIS.

The proposed LMIS storing element shall be directly integrated with the internal information systems of all above stakeholders including some other organizations from public and private sectors which are not mentioned in above as it is not possible to mention all stakeholders of the labour market, however, the concept is shown in above picture, which shows that all concerned stakeholders shall be directly connected and integrated with the proposed LMIS, and the data sharing shall be live and automatic during the operations in the concerned departments, the filtered data shall be shared immediately to LMIS at the time it is entered in the internal information systems.

After the implementation of the LMIS, the time any internal or external stakeholder of the Qatar labour market enter any data related to the labour and social elements, it will be shared and enter to the databases of LMIS located in the IT department of Ministry of Administrative Development Ministry which will be accessible any time anywhere to LMIS team.

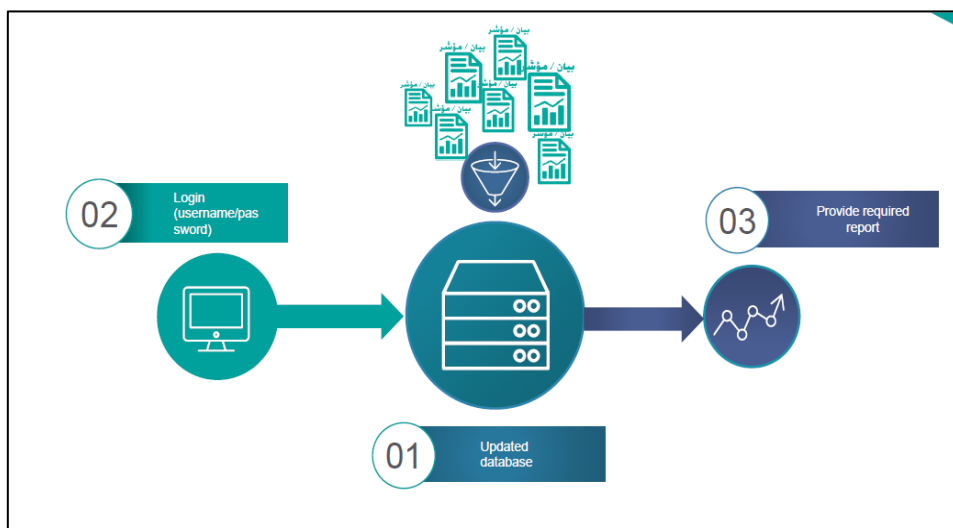


Figure 4-8: System infrastructure of propose LMIS

Above Figure 4-8 shows the final shape of LMIS user's friendly interface, where the user will be entered through the allocated user name and password, and will request for any required data needed for any kind of decision making or policy planner regarding the issues of Qatar labour market.

One the logging in, the users will request for their required information and trends, which will be calculated immediately by the LMIS based on the updated and most recent data of labour market.

The whole process of taking the latest data as an input, completing its analysis

and disseminating the reports will be completed immediately with few clicks, taking an overall time of less than one second

#### 4.4. LMIS Operations and Maintenance Phase

For an effective and productive operations and maintenance of the proposed LMIS is highly recommended to maximum the benefits of the proposed LMIS. A formal organizational chart shall be prepared and approved for it, the host department of LMIS, IT department from Ministry of administrative development labour and social affairs shall be authorized to recruit a team of expertise and suitable professionals for the positions shown in the following organization chart.

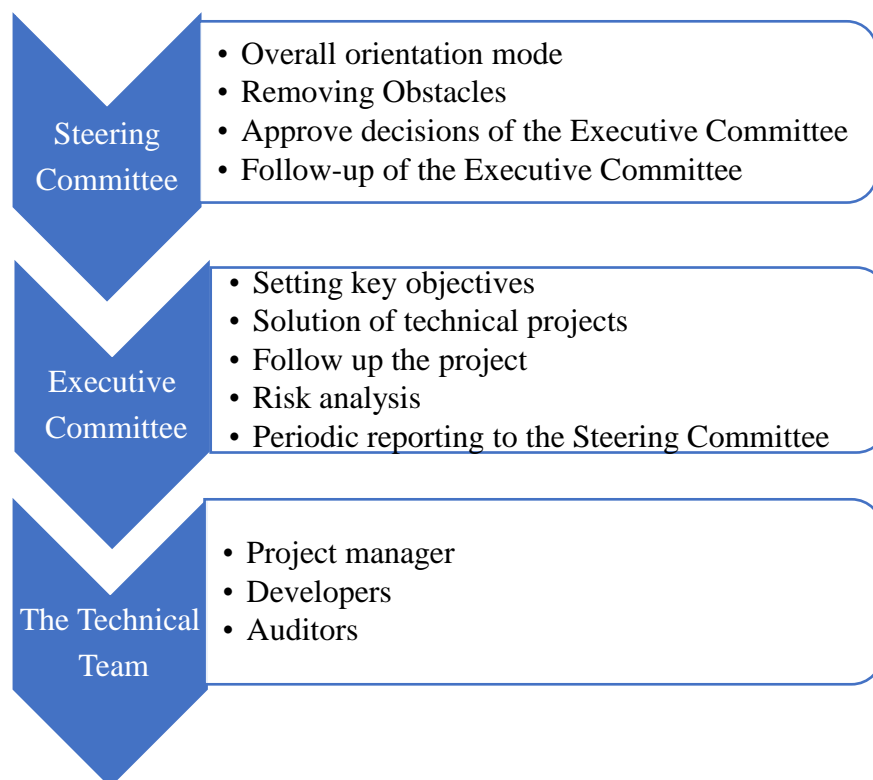


Figure 4-9: Organization chart of proposed LMIS.

Figure 4-9 shows the organizational chart of the proposed LMIS at high level, the committees mentioned are already existing in the Ministry of Administrative development Labour and Social Affairs, the only requirement is the appointment of specialized technical team for the roles explained below.

#### ***4.4.1.1. Steering Committee of Proposed LMIS.***

The steering committee of LMIS shall be taken from the strategic planners of the ministry who are working under the leadership of H.E the Minister, in order to provide the vision and target goals for the proposed LMIS in improvement of stability and sustainability of Qatar Labour Market and the achievements under the Qatar National Vision QNV-2030.

#### ***4.4.1.2. Executive Committee of Proposed LMIS.***

The executive committee will translate the vision and target goals provided by the steering committee in to strategic planning for long term achievements. After framing the vision into long term strategic planning, it will be divided in short term and periodic plans to implement and follow up on quarterly basis.

#### ***4.4.1.3. The Technical Team of Proposed LMIS.***

The technical team will start the operations of proposed LMIS according to the guidelines of strategic planning provided by the executive committee. The technical team divide the strategic planning provided by the executive committee into achievable operational plans on monthly basis.

Technical team will be responsible for the following operations of the LMIS.

- i. Nonstop functionality of LMIS.
- ii. Trouble shooting.
- iii. Data collection management.

- iv. Data storage management.
- v. Data analysis management.
- vi. Data dissemination management.
- vii. Trends coding and review studies.
- viii. LMIS results evaluation.
- ix. LMIS error detections and corrective actions.
- x. LMIS annual review and upgradations.

#### **4.5. LMIS Evolution Phase**

To keep the proposed LMIS highly functional, it is important that its performance shall be under continuous observation for quality and performance enhancement. The system improvement and quality enhancement is not a one go process, rather it is achieved with the continual improvement efforts. A permanent team appointed for the processes improvement is usually deployed who work on one point agenda, and that is how to improve the performance of the existing system and how to increase the level of quality of the output.

Evolution phase normally consists of the following four phases, each phase is explained in below paragraphs.

##### **4.5.1. Planning Phase**

To formulate an effective planning for the improvement of the proposed LMIS, it is important to know about the weaknesses in the system first. During the day to day operations of the LMIS, errors and troubles are reported by the operation team, which are handled by the maintenance team but at the same time the errors encountered are taken for a research to find its root causes.



Once the root cause of any error or default is known, it is easy to work on producing alternative solutions in order to avoid such errors in the future, only correction of the errors is not enough but addressing the causes of errors to avoid its repetition is very important to get an ultimate system with minimum chances of errors.

In planning phase, the specialized team of professional point out the root causes of all previous errors during a specific duration of operations, and proposed a list of alternatives for the effective and efficient solution of each error. The alternatives produced are shared with the top management to choose the most suitable solution of any particular error or default.

#### **4.5.2. Implementation Phase**

After the selection of the most suitable corrective action by the top management, it is implemented to the system during this phase and all processes are kept under observations for the positive or negative impacts due to the implementation of the proposed corrective action.

In case the corrective action is having a negative implications over the performance of the system and it is reported by the LMIS team members, such corrective actions are reversed and the system is brought back to its original format, after the confirmation that the subject downfall in the performance is recorded due to the subject corrective action and not because of some other factors, because in some cases it can be a coincidence that the downfall in performance will be encountered after the corrective action but the downfall will be associated with other factors not with the corrective action. In such cases it is important to properly investigate the actual reason of any negative

implication after the corrective action implementation.

#### **4.5.3. Adaptation Phase**

After the implementation phase if the corrective action implemented resulted in some improvement in the processes of LMIS, this indicates that the corrective action selected is the right one, therefore, it is permanently adapted and it becomes an integral part of overall LMIS infrastructure.

During the adaptation phase only the effective corrective actions are adapted, while the corrective actions which fails to bring any improvement or which result in negative implications are taken back and the system remains to work with old design elements.

#### **4.5.4. Reporting and Communication Phase**

During the reporting and communication phase the information of lesson learned about the error analysis, the alternative list of possible corrective actions, which corrective action was selected and the reasons for selecting a particular corrective action.

The information about the implementation methodology of the selected corrective action and the procedures to evaluate and review the impacts after the implementation.

The rejected corrective actions and the list of reasons for the rejections, the adapted corrective actions and the list of improvements noticed with the implementation of the subject improvement in the systems of LMIS.

All these information are noted in the book of lesson learned which becomes part of the department intellectual asset, these information plays an important roles in the formulation of new corrective action plans for further improvement or repeated trouble shooting for same kind of errors.

## **CHAPTER 5 : CONCLUSIONS AND RECOMMENDATIONS**

Qatar labour market sustainability challenges has always remained in one of the top priorities for the strategic planners of the state in order to maintain a sustainable equilibrium between the supply and demand of its active workforce. It is also an important challenge to keep some acceptable balance between the ratios of Qatari and non-Qatari workforce for achieving the targets of Qatarization program of the government which is an integral part of Qatar National Vision 2030.

For the particular purpose of this thesis different sectors of labour market are reviewed from the literature already existing on it by previous researches and surveys as I said earlier this topic has always attracted researchers and strategic planners to work on it and recommend their suggestion for its sustainable growth.

Additionally from my personal experience while giving my professional services as director of IT department, I have experienced practically many challenges during my day to day decision making processes for the improvement and development comprehensive data of Qatar labour market.

Following are some conclusions of Qatar labour market and the recommendations extracted from this thesis to address all major challenges effectively.

### **5.1. Demand of Workforce in Qatar Labour Market**

Due to a strong and diverse economy of Qatar, a regular growth has always been witnessed in the Qatar's GDP and development funds, due to increasing developmental budgets specifically in construction industry to develop state of the art infrastructure for mega events like Asian Olympics and FIFA 2022 world cup, Qatar labour market always remains active for the workforce demand in different sectors of life.

One of the biggest source of increasing workforce demand is the Qatar National Vision 2030, which has a clear vision for achieving high standards in all sectors of Qatar. Due to the QNV-2030 huge funds have been allocated to achieve the periodic goals according to its strategic planning, which acts like a fuel for the Qatar labour market demand of workforce from Qatari citizens as well as from expatriates, due to which Qatar labour market has remained a top choice for job seekers even in the times of worldwide economic recession Qatar market was active in provide jobs to its workforce.

However, there is comprehensive information system to represent the actual facts and figures of labour market in Qatar. There are many information systems and data collection networks on different sectorial levels but they are not fully integrated with each other, due to which it is difficult for job seekers to know about the actual opportunities available in the market. The unavailability of right information about the job market creates problem in shape of arrival of new workforce to Qatar without having potential job opportunities for them. In the following paragraphs, different sectors are discussed with respect to their challenges they are facing in workforce demand calculations and dissemination.

## **5.2 Qatari Workforce demands in Public Sector**

It has been observed that public sector of Qatar is overloaded in some area, if compared to the private sector for the same kind of job descriptions. It is due to the fact that almost 100% of Qatari workforce like to work in public sector instead of private sector.

### **5.2.1 For Current Situation**

To control the unemployment of Qatari workforce, the state is creating jobs opportunities for the Qatari workforce regardless of actual demand in government departments. The state of Qatar is taking great care of its citizen due to which the job demands are created to provide them jobs for giving them a high standard of living.

However, this phenomenon is damaging the sustainability of the Qatar labour market resources, because overloading the public sector is not only wasting additional resources of the future generations, it also negatively affecting the performance of public sector workforce by having extra as well as mismatching employees in public sector.

One of the negative impact due to attractive packages of public sector's jobs is that Qatari workforce has no interest to apply for any jobs in private sector. The ignorance of Qatari workforce towards private sector jobs has badly affected the Qatarization program in achieving its target goals.

#### **The major reasons behind overloaded are**

- i. Merging the Ministries and increasing their employees.
- ii. Closing of some departments while transferring its employees to other departments.
- iii. Giving extensions to some specialized and experienced employees even on completion of their retirement period.

### 5.2.2 To avoid Future Overloaded

- i. A set of pre-defined jobs structure, job description and specification shall be prepared and approved for all vacancies in public sector, which shall indicate the minimum required job qualification including the education level, the required experience, and age plus expertise levels.
- ii. No hiring shall be done if any candidate is not satisfying the job description in all respect, this will enforce the Qatari students to complete the education level and specialties required for a job in public sector.
- iii. The jobs advertisement and selection for Qatari workforce shall be purely on merit only those candidates shall be selected who comply with all requirement of the job specifications.
- iv. The colleges and universities shall give admissions only to limited students in each category based on the job market requirements, excessive number of professionals without considering the forecasted job opportunities in the labour market.

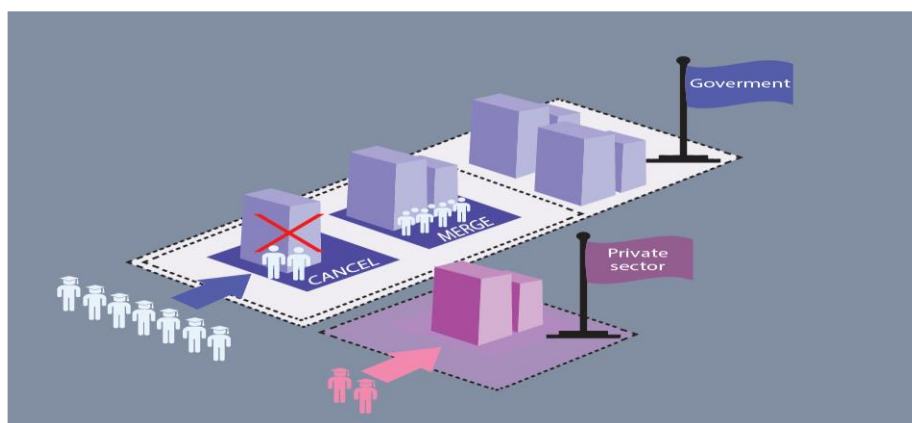


Figure 5-1: Flow diagram to control overloading of public sector

Figure 5-1 shows the recommended strategy for hiring in public sector, the new appointment shall only done against the actual demand and 100% compliance to the job specification proposed by the this thesis. The rest of workforce shall be diverted to private sector according to the requirements of Qatarization.

**Policy formulation to implement the requirements of Qatarization.**

- i. Create policies and procedures for rotating the workforce in that sectors.
- ii. Re-evaluate the employees.
- iii. Update their C.V.
- iv. If matching new sectors, they can transfer to new positions.
- v. If mismatching, they should subject to qualifying courses which can be founded in LMIS. Training shall be provided to the existing Qatari workforce in order to develop the required technical skills in them.
- vi. Re-evaluate their professional profiles.
- vii. Check Fitness to the place.
- viii. If unfit, can be registered in recruitment system as job seeker and give him basic salary until matching and re-employed.

The proposed LMIS will play a vital role in all above recommendation by providing right and authentic information on right time to the right stakeholders of the labour market.

### **5.3 Recommendation of guidance towards Private Sector**

- i. The national human resource of Qatar shall define their hiring, promotions, retiring and firing policy which shall be equally implemented across all departments of the private sector. There shall be strict regulations for the hiring and promotion of Qatari workforce working in private sector.
- ii. All departments shall be bound to demand for new hiring based on the pre-defined need and requirement criteria, new hiring shall be linked with the following requirement criteria.

To effectively monitor and control all above factors of recommendations, the policy makers will need a comprehensive data and authentic information about the concerned areas, the proposed LMIS will play a major role in provision of reliable information on right time.

### **5.4 Qatari Workforce demands from Private Sector**

Qatari workforce does not accept low salary packages as expatriates accept.

Qatari workforce does not like to work six (6) days a week, while expatriates have no objection in having only one day off during the week days.

#### **Recommendations to make Private Jobs attractive for Qatari Workforce.**

- i. The Qatari working in specified private sector shall get more allowances and incentives from the state comparatively the public sector.
- ii. There shall be no appointment in public sector if the skills required for the available vacancy is not matching with the skills of candidate.
- iii. Attractive scholarships shall be announced by state to encourage students towards the required technical education.
- iv. Government shall enforce the private sector in particularly in the specified sectors of energy and industry of Qatar to hire Qatari



workforce, there shall be nominated jobs positions kept for Qatari only with subject to their qualification for the subject job vacancies.

- v. In order to bring the private sector job package equal to the public sector jobs, the state shall pay subsidy to its citizen in addition to the salaries they receive from private sector jobs.

The proposed LMIS will provide the required data and information for an effective decision-making process in all above recommendations.

### **5.5 Supply of Workforce to Qatar Labour Market**

The supply of workforce to the labour market is equally important as its demand, because the supply and demand equilibrium is only possible if effective monitoring and controlling is done in both sectors, and currently the Qatari workforce has provided with full freedom of selecting their careers field and specialties, they have also complete freedom to terminate their education levels any time they need to join the job market.

This attitude is creating two potential risks to the Qatari workforce.

- i. Losing interest in the higher education specially in getting bachelors and master's degrees, as most of them discontinue their education on secondary level, due to the availability of job opportunities for them.
- ii. Increasing phenomenon of skills mismatching with available jobs opportunities regardless their skills and qualification.

## **5.6 Skills Mismatching challenges of Qatar Labour Market**

Skills mismatching is one of most critical challenge to Qatar labour market. If hiring is done without considering the skill matching requirements, it results in over employment and reduction in the performance of employees.

Recommendations to control skill mismatching in Qatari workforce.

- i. The hiring on new vacancies shall be strictly conditional with the compliance to the minimum requirements of job descriptions prepared by the National Human Resource Department.
- ii. Admissions in courses of colleges and universities shall be limited to the number of seats forecasted from the future demands of the labour market, the admissions shall be given on merit to the top students of the year.
- iii. The number of seats in educational institutes shall be according to the forecasted demands of different skills required in next five years, which shall be provided by ADLSA through the proposed LMIS.
- iv. There shall be proper counseling for students and parents during the selection of courses, to avoid the mismatching of their skills with future job opportunities because no hiring shall be done if the skills are mismatched with the announce vacancies.
- v. Training shall be provided to the existing Qatari workforce, to match their skills and qualifications with the available skills demand under Qatarization project.
- vi. A national level awareness campaign shall be launched to convince the Qatari workforce for selecting the educational programs required to match with skills and qualifications required under Qatarization.

- vii. Government shall announce scholarship and additional incentives for the Qatari students joining the degree programs required for energy and industry sectors.

### **5.7 Challenges in Implementation of Qatarization**

Qatar included the project of Qatarization in its national vision 2030 (QNV-2030). Under Qatarization Qatar planned to invest in its human capital to educate them in order to ensure the strong security of different sector.

For Qatarization it was planned to educate Qatar male as well as female in equal proportion and employ them in public and private sector with pre-defined proportions, the sectors which were included from private sector were specifically energy and industry in order to educate Qatari workforce for the skills required in energy and industry sector national wide campaign were launched to motivate new students.

However, the targets set for initial five years were not achieved due to multiple reasons explained below. It is one of the most serious concern of the Qatar labour market and QNV-2030.

### **Recommendation for Women's Empowerment**

- Put Legislation encouraging women to contribute to Qatarization
- Flexible Working hours system.
- Working from home
- Establishing a work nursery
- Part time job packages shall be offered to women who are not able to join full time jobs.

## **General Recommendation for using Consultants and Scientific Research**

- Forming an advisory council that brings together the ministry's experts in the field of work, university professors and researchers to study the ideas that are renewed to serve the labour market, as well as work on solving the problems and obstacles that emerge as challenges in the labour market.
- Signing a Memorandum of Understanding between the Ministry and the University for the use and exchange of experiences between decision makers and university professors, academics and researchers as follows:
  - Providing a leading scientific research and consultancy service in the field of labour market studies and researches, to provide an independent, reliable and objective vision.
  - Provide individual dealings with department managers and decision makers.
  - Both decision makers and directors of departments have a username to view the University's electronic library.
  - Provide preliminary surveys to decision makers.

And by of this steps it provides the right searches and proven theories based on an unbiased, practical and feasible vision as it is a non-profit organization.

## **5.8 Limitations of the Proposed LMIS**

The following limitations shall be considered while designing LMIS.

- i. Technological limitations of the system, errors and defaults in collection of full data and effective processing of data, failure to record short term fluctuations and its implications on the labour market of Qatar.
- ii. Chances of failure to receive accurate information from external sources, education and immigration data from concerned ministries due to lack of willingness to share their core information due to their confidentiality constraints.
- iii. Chances of hacking the data at immature stage before analysing and publishing, giving incomplete information about the labour market, which can result in panics.
- iv. Unavailability of reliable labour market surveys about the GCC labour markets and major trends.
- v. Difficulties in adjusting data analysis according to the changing dimensions of Labour Market evolutions with time, therefore, repeated restructuring shall be required.

There can be many more limitations affecting the effectiveness and efficiency of LMIS which are important to consider and monitored as risk management plan associated with newly design and implemented Qatar Labour Market Information System.

No system can operate effectively with one go trial, it's a continual improvement process, the output shall always be reviewed with the expected results and corrective actions shall be taken to improve the effectiveness of

LMIS to get the most suitable and best functional information system required for the most dynamic and flexible labour market of Qatar.

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