

**DBA Thesis**

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**Oil & Gas Value Chain and Local Content Role in Aiding Job  
Creation and Adding Human Resource Value to the Omani  
Economy**

## **ABSTRACT**

*Abundance of oil in the GCC has provided countries within the region with large amount of wealth. This has enabled countries in the GCC to achieve economic progress, especially in the 21st century. As one of the oil rich countries in the GCC, Oman has been economically dependent on oil and gas as a major source of its revenues for a long time. The Omani government has recognized how dependent the economy has been on the oil sector and is implementing a number of programs to help diversify development. The implementation of the In-Country Value (ICV), together with the country's Local Workforce Development Programme has defined a curriculum that sets the required skills and standards not only within the oil and gas industry but also within other sectors.*

*Thus, within the local content framework, the research finds it necessary to evaluate how the oil & gas value chain and local content play a vital role in job creation for the future.*

*Through the descriptive and exploratory research carried out in gathering primary data and compiling the secondary sources to gain support of the analysis the study has presented the following findings:*

- *Gained a comprehensive understanding of job creation and added value within the context of Oman's economy and determine how human resource development can impact the oil and gas sector.*
- *Brought forth the gaps that are present in the development of human resources and how government initiatives can bridge the gap to the advantage of the aggregate economy. And,*
- *Evaluated the extent to which the local content policies of the government have been achieved. This includes an evaluation of the incorporation of such policies and programs within the value chains within the various spheres of the Omani economy in terms of creating and adding human resource values in different economic domains.*

*Based on the findings the study has furthermore recommended certain necessary factors which aims to bridge the gaps identified in implementing the policies and in practicing the Human Resource Development within organizations. Human resource development should be*

*structured by private and public sector organizations in such a way which will produce well-trained professionals who will have the knowledge to strengthen cost-effectiveness in production. The government as well as the public enterprises should develop means to thrive innovation and creativity within its workforce, besides providing financial and security benefits. The private enterprises need to provide job security to the nationals which will encourage them to prefer the sector just as they are interested in working for the government. In order to utilize the potential of its nationals to the fullest thereby adding value to the economic domain, it is important for the government to formulate policies for diversification of workforces providing women and people with disabilities equal opportunities to project their potential and skills.*

*Keywords: In-Country Value (ICV), Local Content, Omanization, Oil and Gas Industry, Government Initiatives, Oman*

## ATTESTATION

This is to attest that this thesis is presented by Aflah Al Hadhrami in partial fulfilment of the requirements of the DBA program under the supervision of Dr. Hossein Sharifi in the University of Liverpool in the UK and that no section of this research is presented for any other purpose or for any degree, neither it is for the purpose of admission to any other university or any other institute of learning except the one mentioned above.

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## **Chapter: 1 INTRODUCTION**

### **1.1 Background of Research**

#### **1.1.1 Depleting Oil condition and Vision 2020 in Oman**

Abundance of oil in the Middle East has provided countries within the region with large amount of wealth. This has enabled countries in the Middle East to achieve economic progress, especially in the 21st century. Known as the “*centre of gravity*”, the phenomenal economic and political change brought about by oil has made oil an integral commodity that is important to the economics and politics in the region. Oil is also central to how the entire Middle East, and particularly the Gulf Cooperation Council (GCC) countries, consisting of Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman, interact with global markets and other countries. There is not enough arable land to feed the population in the GCC so these countries turn to oil as its most valuable resource (Hertog, 2010). Oil is used for local consumption and is the most valuable natural resource for countries in the GCC because the exportation of oil earns a hefty amount of foreign exchange for the oil-rich country.

In reality however, since the sources of reserves are not eternal, oil is available for a finite period (Hvidt, 2013). Oil resources will eventually be depleted and oil rich countries in the GCC will no longer be able to meet the increasing local and international demand for the commodity in the future. The probability that oil resources will eventually be depleted has gained much attention in oil-rich countries where governments are making serious attempts to diversify their economic activities to offset the potential effects of a diminishing natural resource which is a major source of their national revenues. This has made oil producing countries in the GCC to consider economic diversification in their economic and political agenda (Hvidt, 2013).

As one of the oil rich countries in the GCC, Oman has been economically dependent on oil and gas as a major source of its revenues for a long time. The Ministry of Oil & Gas (MOG) has facilitated these linkages with other countries in order to create long-lasting and productive partnerships which have benefited Oman’s national economy and its local communities (Hvidt, 2013). In the course of history, the vast oil resources of the region have brought political power to its leaders, but it has also provided substantial financial resources to governments who threaten regional security in the GCC. Oil revenues gave leaders like

Saddam Hussein and Bashar al-Assad the capability to build a strong artillery system by squandering billions of dollars and wage war against each other (Salhani, 2014).

By opening its doors to global trade, Oman was able to obtain different avenues of opportunity to diversify its economic activities that has augmented its national revenues. With its fast-expanding economy, the Sultanate of Oman has also devised a more comprehensive understanding of the importance of its own human resources to which the country's development plans are focused. Under the Government of Oman's development plan called Vision 2020, the government intends to implement policies geared towards the development of the country's human capital in order to better prepare the workforce for stiffer competition in other industries, and to help the population acquire better understanding of technologies and innovation. Policies like Vision 2020 will help Oman adapt to the dynamic nature of the global economic and business environments. Development plans like Vision 2020 need to be continuously upgraded in order to ensure their viability, efficiency and conformity with both local and international regulatory standards. However major oil economies are also facing other issues, such as power interventions from other nations, militarization and other socio-political factors. Oil prices can negatively affect countries that are non-producers because the costs of transportation are driven higher by the high costs of oil. Wealth generated from oil has also distorted national economies and interfered with their developmental strategies (Kubursi, 1984). Contextual to development plans of Vision 2020 and localization goals established by the Sultanate of Oman, the present study aims to gain a comprehensive understanding of job creation and added value within the context of Oman's economy and determine how human resource development can impact the oil and gas sector. Besides, the study also focuses on the evaluation of the extent to which the local content policies of the government have been achieved. This includes an evaluation of the incorporation of such policies and programs within the value chains within the various spheres of the Omani economy in terms of creating and adding human resource values in different economic domains.

### **1.1.2 Evolution of Economic Development theories**

Theories about the economics of a country and markets are tied back to eighteenth and nineteenth century analysis of the economy and political systems of European countries – the classical theories like Adam Smith's 'invisible hand' of the market (Smith, 1776), and John

Locke's defence of property as foundational to society, as something that is a natural right and precedes social contracts and government (Locke, 1689).

Development theory first emerged in the 1950s, in the post WWII environment which witnessed tremendous economic growth and change in what was then called the developing world, meaning most of the world outside of North America, Europe and the Soviet Union. One of the most well-known examples of this is W.W. Rostow, who devised five different stages— traditional, pre-conditions for take-off, take-off, drive to maturity and high consumption society (Milne, 2008).

Another variation of a structural model that emerged around this time is the Lewis Theory of Development that sees the economy having two sectors -- traditional and modern. Chenery is another example that looked at patterns of development in countries outside of Europe and North America (Chenery, 1971). Countries have differing success or per capita income levels because of structural differences brought about by economic changes like transition from agriculture to industries and consumption of consumer goods, as well as the accumulation of capital and demographic transitions to urban centres and declining birth rates. Analysts who concentrated on structural changes tended to believe that with the right combination of policies and structural changes, adequate levels of growth could be achieved in any market (Webster and Dunning, 1990).

There were soon critics however who viewed these initial structural models as too ridged and schematic with little explanation of the mechanisms for how developing countries might change. The linear views of modernization theory did not problematize the power imbalances between First and Third World countries, for example, and the traditional views like Rostow's did not consider the barriers to development and achieving economic maturity for developing countries. They did not consider how capitalism also diminishes labour in the case of the Lewis Theory of Development, for example— there are pressures within markets that not all forms of labour are absorbed by the economy in the contemporary era – in many countries there is a surplus of labour in urban centres. Some of the most well-known critics are Immanuel Wallerstein with World Systems Theory (2004) and the Dependency School Theorists who were economists based in Latin American countries (Frank, 1972; Sunkel, 1966) who wanted to highlight the power imbalances between the First and Third Worlds. The Dependency models see the exclusive focus on growth in the Gross National Product as misguided. They instead show that the power balances between countries are important in

explaining differentials around the world. The Dependency theory also emphasized the colonial relationships that many of the now developing countries had with European powers in the fifteenth through to the twentieth century in the case of Latin American and African countries for example.

In the theories that concentrated on the power imbalances around the world, there are domestic constraints and international factors that shape the course of development and can impede growth and a better income distribution in the countries in question. Dependency theory concentrates on the institutional, political, and economic disadvantages that developing countries face in the world system (Shareia, 2015). Developing countries become dependent on the world system, and highly industrialized countries exert dominance over Third World countries. Policy advisors placed too much emphasis on structural factors with views that were often ethnocentric and biased. They maintained the interests of power groups that were already in power and thus the status quo.

Today there is a more complex understanding of economic development and there is more recognition of the power imbalances and the specific challenges that developing economies or emerging economies can face. One critique of dependency theories for example was that they only put forward critiques and did not suggest any possible alternatives to the structural view or any concrete prescriptions that would produce better results. Critics also say that closed economy models that used tactics like import substitution have also not shown any better outcomes in growth or other economic and social indicators.

In the 1980s, a new neoclassical approach began to emerge that focused again on growth. These theories focused on labour and encouraging capital and using technological innovations to increase production and efficiency (Odekon, 2015; Smith, 2000). The view was that economies needed to open their systems to foreign direct investment as closed economies can only grow at a slower rate and the income levels of citizens tend to be lower in countries with closed economies. Citizens are not able to save much capital at such low income rates and this in turn means there is not a lot of investment in the domestic market. These analysts argue that open economies encourage more investment and growth because the per capita income levels tend to be higher. The neoclassical perspectives that emerged in the 1980s called for free markets and the privatization of public services like education, social security and healthcare in order to reduce public spending. It also advocated less government regulation of the market like lowering tariffs on imported goods so foreign firms

would be encouraged to invest and sell their products. Neoclassic perspectives are associated with institutions like the IMF (International Monetary Fund), the WTO (World Trade Organization) and the World Bank. These international financial institutions along with the US Treasury devised economic policies for the developing countries like Oman, which is popularly known as Washington Consensus. These policies significantly emphasizes on the institutional reforms, recognising the social dimensions. The crux of the consensus' Ten Commandments essentially bring forth– the need of fiscal discipline to achieve macroeconomic stability, advise redirecting of public expenditure in a pro-poor and pro-growth way through social service and infrastructure, reforming of taxes, financial liberalization, unified exchange rate to induce competition in non-traditional exports and consequent growth, replacement of trade restrictions by tariffs, inducing of an open market through abolition of barriers of FDI (foreign direct investment), privatization of the state-owned enterprises, abolition of regulations which affect the establishment of new firms and restrict competition and lastly, provision of property rights by the legal authority, without imposing of excessive costs, making them available to both formal and informal sector. The ten commandments, as termed by Williamson (2004), was majorly aimed to lessen the hold of government to the maximum extent, encouraging the growth of private sector through economic liberalization, abolishing of barriers, thereby ensuring health competitive market environment and eventual growth.

Neoclassical economists asserted that slow growth resulted from a poor allocation of resources and from intrusions or distortions created by governments who were intervening and creating nonmarket prices for commodities and goods (Hudson, 2010; Taylor, 2006). The 1980s and early 1990s were years of high growth for countries like Korea, Taiwan, Singapore, Hong Kong, Malaysia, Thailand & Indonesia. All these countries took the free market approach that was promoted in the Washington Consensus. Critics however say that there are dualisms in the inequality manifested in countries outside of Europe and North America – however the extremely rich and poor -- are not addressed very fully by the neoclassical perspective. The benefits from the structural adjustments put forward by such agencies go to benefit just a small ruling class and small upper middle class with the ability to accumulate and consume to Western standards. Critics like Stiglitz for example state that neoclassicism is overly concerned with how markets operate, instead of how they develop or their interrelations with other powers (Stiglitz, 2003). According to Stiglitz, the Washington Consensus helps only the upper classes in many countries, while the poor only see marginal

levels of improvement or no benefits whatsoever. Furthermore, technologies have complicated market theories because they are not public goods; they are controlled by state policies and other barriers that give some countries advantages over others when it comes to the use of technologies. For example, innovators usually have a monopoly on the use of certain technologies, at least for a time. This is an example of a power advantage or a distortion that acts in favor of those who are maintaining the status quo. Another influential idea in the theory of development has been the idea of sustainability. Sustainable development is a development that gauges the costs of growth in terms of resource depletion – natural or manmade resources need to be used without damaging the environment or using or wasting the resource in a way that causes problems for future generations in the future (Lemons and Brown, 2013).

Sustainable production practices have been in existence for a little over half a century. Organic farming pioneer Lady Evelyn Barfour has been credited for her contribution to sustainable farming, through her Soil Association in 1946 (Haines 2001). One of the first theorists to propose the idea of sustainability in the environmental movement was Rachel Carson in 1962. Carson pointed out the environmental costs to the kind of economic growth being promoted by governments and businesses around the world. Another influential essay was written by Kenneth E. Boulding in 1966, which drew out the importance of considering that resources are generally finite and limited. In the 1970s, there emerged one of the first uses of the term sustainable as applied to interpretations of economic development and the world system – for example a group of scientists from the Massachusetts Institute of Technology wrote a report called Limits to Growth for the Club of Rome in 1972 (Carson, 1962).

Sustainable development did not become a universal term, however, until the 1980s and 1990s. In 1980, the International Union for the Conservation of Nature that is one of the first references to sustainable development as a global goal. It was only a few years later when the United Nations published conservation guidelines with the United Nations World Charter for Nature. In 1987 the UN released the report called Our Common Future, which included a definition of sustainable development that is now considered one of the most classic definitions of the term:

*“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”*

—**World Commission on Environment and Development, Our Common Future (1987)**

The idea of sustainable development and natural resources are modes of economic development that are particularly pertinent to Oman with its dependence on non-renewable resources like oil and gas. Vision 2020, an initiative of Sultan Qaboos bin Said, aims at economic and financial stability of Oman by the year 2020, also promotes the idea of sustainable development as they try to use policy to help diversify the economy and create economic development that will help the population adapt when the oil and gas reserves run out (Deloitte, 2013). Today there are more nuanced understandings of the different influences on economic development and wellbeing by development economists like Amartya Sen. The newer debates try to discuss what part of development contributes most to growth or to enhance the quality of life (Deloitte, 2013)

The Overseas Development Institute is a centre for scholars who question the limits of development thinking and how to expand and build on the concept to promote better terms of economic development around the world. Researchers at the ODI stress that economic growth should be used to improve human conditions and meet the Millennium Development Goals as put forward by the United Nations in the year 2000. The Millennium Development Goals have been the standard for development achievements for the last 15 years. These goals help to extend the ideas that development should lead to clear social improvements and job creation for example. Growth without an increase in job creation does little to create social improvements for the majority of citizens in a country like Oman (Deloitte, 2013).

Natural resources have also been the foundation for another set of theories about economic development. In economics, the theory of non-renewable resources states that a good if consumed in great quantities today, will not be able to be consumed at the same levels in the future (Khanna, n.d.). David Ricardo is one famous economists who considered the way that non-renewable resources were priced. He argued that the prices of such resources will rise as they become more scarce. Countries with lower cost of extraction of the resource benefit most from the rents generated. As early as 1931, theorists like Harold Hotelling were devising economic models that were based on the management of non-renewable resources. The non-renewable resource would eventually be depleted but the price of the resource would rise as the resource became scarcer. This theory is also frequently called the Gray-Hotelling (exhaustion) theory (Gray, 1914; Hotelling 1931).

For Vogely (n.d.), there are five different kinds of mineral resource development: (1) The current operating margin (the rate being produced now in relation to what has already been depleted) (2) The intensive development margin (quicker realization of revenue). (3) The extensive development margin (development of deposits that had no economic value before. (4) The exploration margin (the cost and potential revenue is highly uncertain (5) the technology margin (using high level of technology for any of the first margins described above. Others like Simon (1981) find that the preoccupation for dwindling natural resources is somewhat misplaced. For Simon it is best to conceptualize having a perpetual supply of natural resources when thinking about the economic relationship with such industries because industries will find their own replacements or ways to refine and extend supply for particular resources (Simon, 1981).

Hartwick's rule in resource economics helps to determine the levels of capital that should be invested in order to compensate for the declining resources from non-renewable sources. Harwick's rule was meant to assure that the resources are put to the best effective use in assuring a standard of living and industrious use of that resource for the future of the country (Hartwick, 1977). This is often called "*invest resource rents*." Solow (1974) calls this substitutability – when natural resources are turned into capital resources that should seek out equivalence – or a sustainable consumption plan – so that the revenues derived from the non-renewable resource are put to use at a pace that can compensate for the declining or dwindling resource (Solow, 1974).

Frankel (2012) shows however that despite having a lot of resource wealth, countries with oil or mineral or other natural resources have not experienced better economic outcomes than countries with few natural resources. Frankel's article outlines six factors that might counteract the economic benefits to natural resources: (i) world pricing trends over time, (ii) volatility in the pricing of natural resources, (iii) neglect of the manufacturing sector because of natural resource dominance in the national market, (iv) institutions that perpetuate autocratic or oligarchic systems, (v) institutions that are too traditional and not adaptive to new conditions, and (vi) what economists refer to as cyclical Dutch Disease. With the exception of the first channel – the long-term trend in commodity prices does not appear to be downward – each of the other channels is an important part of the phenomenon. Frankel says that policy should be geared so that countries can make the best use of their resource wealth

(Frankel, 2012). Others have shown that there are examples of countries who export commodities doing well in managing booms and cyclical fluctuations.

Esfahani, Mohaddes and Pesaran (2012) show that oil income impact will be less where the natural growth rates of the country (defined as population growth and technological progress) will eventually lose any substantial impact as the population growth increases. However where the oil income is greater than the population growth and technological progress, there will continue to be benefits. Oil enters the long term output on the country when it can outpace the population factors. It is therefore important for oil-rich countries to keep population factors like population growth and employment in check so that the resources generated by the oil sector can keep pace.

Countries that have more recently discovered oil reserves have had problems in line with what the theories above state. Ghana for example has experienced a recent surge in oil revenues, but the investment in the development of infrastructure has been slow. Another unintended consequence is that the cost of living has increased significantly in Ghana. Real estate and land prices have risen in Ghana because of the growth in the oil industry. There is more commercial activity and more construction of hotels, stores and warehouses but there are also consequences for the local population that need to be mitigated, such as the rise in the cost of living (Hicks, 2014). It has only brought short term prosperity for those who initially were able to take advantage of the changes.

A new term emerging in the field is the notion of perpetual resources. The ASTM define this as a resource "*that is virtually inexhaustible on a human time-scale*". Also called renewable resources, examples are solar energy and wind energy for example. Others are certain minerals like salt, magnesium and diamonds. As Eric Neumeyer explains, the world economy has been very resilient to date with resources and they have not become scarce over time, at least to date (Neumeyer, 2000). It has been proposed that in order to be considered sustainable, a country should have resources lasting at least 700 years, with 350 years being the margin for resource depletion, vulnerability or non-sustainability (Resource Guide, 2004). It is likely the energy sector will continue to evolve once the non-renewable sources like oil and gas are depleted. Countries like Oman could also look to diversify by finding perpetual sources to exploit like wind and sun.

Within the global context, competition also continues along with dynamic market mechanisms that require business organizations to be more flexible in dealing with the different transformations taking place in the global business landscape (Fahdi & Swailes, 2009). Human capital, which is essential in gaining competitive advantage for business firms, becomes one of the country's most valuable assets. Thus, as they are one of the major sources of business survival, organizational success depended largely on the skills and competencies of employees to obtain greater capabilities in meeting the challenges within the environment where it operates. Recognizing human capital as a source of their competitive advantage, most organizations optimize their efforts in human resource values that maximize job suitability, satisfaction, and quality of work (Smith, 2005) to achieve profitability and sustainability goals.

### **1.1.3 Overview of Economic Development and Human Capital of Oman: Context of Localization (ICV)**

Since the beginning of oil production back in the 1950's the MOG managed to lift oil production in Oman up to 900,000 plus barrels every day (Al-Iriani n.d.). In this same span of time, the Ministry of Gas (MOG), along with oil and gas producers, have successfully managed to improve the lives of Omanis with the money generated from oil revenues, especially those residing in places that are known as the concession areas, through engaging local community contractors (LCC), offering direct business, scholarships, technical training and employment to local youth and investing in schools and children's programs just to name a few (Coltrain, 2000).

The Omani government has recognized how dependent the economy has been on the oil sector and is implementing a number of programs to help diversify development. In-Country Value (ICV) is an initiative of the Sultanate of Oman to boost the contribution of the oil and gas sector of the country towards their economic growth. It aims to enhance the skills of the local population through promotion of the local sourcing of goods and services. The implementation of the In-Country Value (ICV), together with the country's Local Workforce Development Programme has defined a curriculum that sets the required skills and standards not only within the oil and gas industry but also within other sectors. More detail will be provided on the concept of In-Country Value (ICV) throughout the study, but ICV is a concept that is used by the Omani government as part of their agenda for increasing

employment opportunities for Omani nationals and creating better markets locally for Omani produced goods<sup>1</sup> (Fahdi & Swailes, 2009).

The focus on technology in the knowledge economy has overshadowed human resources as a vital element of any organization. The Omani government has tried to create incentives to train employees in new skills and better prepare the workforce. Records show that trainings have been conducted in a number of different skills areas among 36,020 Omanis: the skill areas include semi-skilled work (17,556), managerial positions and engineers (7,154); technician trainings (4390); unskilled workers (3,622); 3347 Supervisors; Operators (3,237); and Inspectors (1,195) (Sultanate of Oman, 2013).

As Oman diversifies and has already immersed itself into the global economy, they have acquired memberships with other international organizations, and participated in added value creation within the different stages of different supply chains in Oman's economy. Whereas its oil and gas sector has now become a part of its limitations, Oman has opted to diversify in order to establish a robust economy even without dependence on its natural resources, which is actually what Vision 2020 of Oman dictates. The Vision 2020 is intended to help the Omani workforce face changing economic conditions either domestically or internationally, while at the same time seeing that Omani culture and traditions remain intact. Vision 2020 contains a human resource strategy covering the period, 1996-2020 (Deloitte, 2013). These dimensions will be briefly summarized below. They will be discussed in further detail in following chapters.

**First Dimension:** To achieve a balance between population and economic growth by reducing the current population growth rate to less than 3% by 2020, through reasoning and enlightenment.

**Second Dimension:** The second dimension of the Vision 2020 plan is the provision of health services and reduction of the rates of mortality and infectious diseases to reduce the incidence of illness and risk of death that are comparable to advanced economies (Deloitte, 2013).

**Third Dimension:** This dimension is intended to help develop a knowledge society by creating a climate that encourages the spreading and promotion of knowledge and the

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<sup>1</sup> For more information: <http://www.incountryvalueoman.net/INCONV13/>

elimination of illiteracy. It places emphasis on the spreading of basic education, and providing equal opportunities to people in the most efficient and cost-effective manner.

**Fourth Dimension:** Under this dimension the Government's initiative is to ensure that training in specializations is offered through the post-secondary and technical education system, focusing on the specializations that are more in need nationally. This includes the provision of facilities and researches within the social and economic fields of study (Deloitte, 2013).

**Fifth Dimension:** Within this dimension, the government is to provide an established system in the provision of technical education and vocational trainings in preparation for work within the desirable areas required in the labour market as among various specializations and skills towards the achievement of an income that conforms to performance and productivity.

**Sixth Dimension:** Creating employment opportunities for Omanis in public and private sectors, in addition to equipping them through various training programs and provide qualifications that conform to labour market requirements. This includes Substituting expatriate labour with highly qualified Omani labour, in order to shift the economy from a low value added to a high value added economy. Furthermore, it is aimed to attain increased participation of Omanis in the labour market in general, with particular focus on the participation of women.

The Vision 2020 policy, one of the key initiatives identified in this research, requires an evaluation of its significance within the oil and gas value chain and how it could provide positive values on the human resource practices in the country. According to government reports, it is estimated that investments in the oil sector will top \$60-70 billion, within 2013-2022. The gas sector will also generate very high revenues with investments estimated at \$40 billion in exploration ventures and production related activities (Deloitte, 2013).

The aforementioned strategic objectives set by Oman pointed towards the development of its human resources manifests the confidence of the Sultanate that in achieving such objectives, the help of other government bodies is equally essential in the implementation local content polices that will make a significant contribution to achieve the country's economic goals through best practices and raising HR standards (Looney, 1990). At the same time other specific and related organizations will also be benefitted apart from those belonging only to the oil and gas sector where each of these organizations has its own growth and sustainability

plans. For the foregoing reasons, it is best to start with a background on the concept of 'localization', wherein the term localization has further broadened as it is currently not only concentrated in the employment of locals in the Oil and Gas sector or imposing any kind of quotas for hiring a number of local people. ICV, as mentioned earlier, promotes localization or procurement of local content. ICV is about empowering every link of the Oil and Gas value chain; that is, from the local machine shops producing nuts and bolts to training and in taking in the right employees for the upstream and downstream sectors, thus giving back value to the country. In another definition, localization may also be defined as within the industry as "*The total spend retained In-Country that benefits business development, contributes to human capability development and stimulates productivity in Oman's economy*" (Ministry of Oil and Gas, n.d.) .

The local content policy or localization of human resources makes it compelling for contemporary organizations to recognize the importance of human resource management or HRM in bringing organizational stability (Myloni, et al., 2004) and sustainability, as well. It further provides a strong contextual framework and working condition in embracing diversity, notwithstanding the inclusion of diversity as a strategic action towards the gaining of competitive advantage among the business firms operating within the value chain in the oil and gas sector of Oman. This includes the implementation of its expatriates succession plans, and investment that have to be made in training and education programs specifically designed to equip Omanis and raise their levels at par with foreign workers or expatriates. Having these initiatives will enable an increase in the competency levels of the local workforce that would result in higher productivity among all levels from the technical (junior) to the middle and to the highest positions in the organization (Myloni, et al., 2004).

Altogether, the ICV program is projected to cost \$ 64 billion, this will result in additional ICV opportunities on the value chain up to 2020. Oman's workforce was 55,000, with nearly 22,000 of them working in the gas and oil sector. This number is expected to rise to 72,000 as the ICV moves to full implementation, and thereby increase job opportunities along the supply value chain of the oil and gas sector as reliance over local content is developed. With the emphasis on local content, the gas and oil sector will be assured of sufficient labour supply as human resource needs rise along with the expansion of the industry's activities. In which case, the sector absorbs the human resource capacity of Oman thereby decreasing the unemployment rate of the country (Myloni, et al., 2004). Oman, which is a member-country

of the GCC has also its own way of diversifying its economic activities while focusing on other services and the tourism industry, while some other countries focus on aviation, banking, manufacturing, media shipping, to fit its geographical locations and resources as well. In the 1990s the focus of economic activities among GCC countries is on its energy sector both upstream and downstream. Upstream activities involve exploration and recovery of hydrocarbons, while downstream activities consist of refining, selling and distributing hydrocarbons.

Looking into the value chain of the oil and gas sector in Oman, there appears to be a strong demand for a broad range of skills needs to be filled up by professionals such as petrochemical and petroleum engineers, as well as geologists that impose a great challenges in the industry, thereby raising questions on how local content can play a significant role in value creation and human resource values in the economy of Oman. Values and beliefs by themselves play a significant role not only on individual lives, but also to the individual and his job where a deeper understanding towards the relevance of employment may be revealed as the individual gains further knowledge.

Thus, within the local content framework, the research finds it necessary to evaluate how the oil & gas value chain and local content play vital role in job creation for future and evaluate if the country has necessary resources to achieve its ICV objectives on the manpower front. Such an exploration will shed light on the areas where development of human capital is essential in an industry, technological advancements that have greatly contributed to its growth as it facilitates all activities within its supply value chain and, and areas where diffusion has provided companies a great ability to respond to change acquire resiliency amidst various challenges. One of the challenges attached to the introduction and adoption of technological advancements in the industry is a corresponding need for human resource skills; taking into consideration that the update of its systems has revolutionized the manner on how production processes and delivery of its products can be accomplished (International Labor Organization, 2012). Specifically, this research study explores the extent of human resource values established within the economic development framework of Oman to which it can support the ICV initiatives of the Government. Considering that human resources is a prime resource for economic growth and progress in the oil and gas sector which is the country's main industry, this research study has seen the need to examine closely current trends occurring within the sector that can have an impact on the local demand and supply of the

industry. From there, employment gaps and a critical evaluation of the ICV will subsequently form part of the main agenda for this research study. In so doing, the value chain for the oil and gas industry of Oman was scrutinized and an analysis of the contribution of local content in shaping the industry through the creation and addition of human resource value within its value chain, ultimately benefiting the Omani economy, was derived.

## **1.2 Statement of the Problem**

In the last few decades, the Omani government has made sweeping reforms in terms of job creation and creating value brought about by diversified economic activities. Such governmental initiatives have created changes within the social and economic landscape in the country of Oman. The impacts of these changes are also evident in various sectors of the economy. The initiatives are meant to help derive more value from the oil and gas sector in terms of developing other areas of the economy and implementing local content initiatives that would benefit the whole country (Coltrain, 2000).

Working within the perspective that the oil and gas sector is Oman's main industry, various writings on the business environment point out that globalized market conditions have made the growth in markets highly dynamic and more complex. Simultaneously there has also been more consumption and increasing inclusion in consumer culture. These mechanisms and transformations have made the viability and economic existence of organizations increasingly uncertain while taking into consideration the significant role of human capital among a myriad of activities in diversified economies around the world (Florida, et al., 2008).

The localization policy of the Omani government is an effort to lessen the dependency on the oil and gas sector and to use the benefits and resources of the oil and gas sector to build on other industries and services and to generally diversify the Omani economy. This includes the possibilities of creating and stabilizing employment, as well as establishing human resource values within the value chain and all throughout the Omani economy. It is necessary to understand the current gaps in the Omani economy and the problems that the policies are trying to rectify.

Previous studies have uncovered the challenges plaguing the oil and gas sector in Oman in comparison to the other gas and oil industries in the GCC region and worldwide.

Al Shanfari, D.A (2012) in their research have summarized these challenges as: (1) In the nascent Omani industrial sector, which limits opportunities for local industrial participation in the oil and gas sector; (2) limited technical capabilities both at the individual and firm levels capping value added potentials of local firms and workers'; (3) lack of coordination at the national level of activities intended to develop the oil and gas cluster; (4) The insufficiency of having an entrepreneurial culture and that could translate into the development of skills among Omanis on the supply and demand side; (5) Regulatory and Administrative issues; (6) Limited access to capital for small and medium enterprises (SME's) along with uncoordinated SME support efforts; and(7) the lack of education and training among its human resources (Kumar, 2010).

On the other hand, other studies done in the past have accounted for the various factors that limit the growth of ICV opportunities in the oil and gas sector (Dynes, 2011; Adepetun, 2010; Munson & Rosenblatt, 1997). This research specifically seeks to address the human resource aspects that limit the successful implementation of ICV in the oil and gas sector of Oman. Through a close scrutiny of varied studies made in the industry that identify existing demand and supply gaps within the industry and formulate plausible measures that could be taken as ample solutions in addressing the increasing demand for skills along the value chain of the oil and gas sector. These studies also suggest that the creation of goods and services within the oil and gas sector in Oman could also bring social and economic benefits to other industries in Oman (Kumar 2010). Thus, to achieve these major transformations, the need to develop industrial capabilities, education and higher skills, entrepreneurial support, as well as gaining a strong support from the government and its agencies are considered as essentials to achieve the main goal of the ICV initiative (International Labour Office (ILO), 2000).

The present scenario based on the World Bank Doing Business report in 2013 has, however, indicated that only 14% of the population comprises the workforce within the country's private sector. Back in 2013 the target percentage of Omanization in the private sector was already expected to improve– in its financial sector at 82.1%; electricity and distribution sectors at 75.7%, communications, storage and transportations sector at 32%, whereas in the trading sector at 7.5%. Finally, the target for the manufacturing and construction sector was at 11% and 8% respectively (Oman Observer, 2013).

The low representation of Omanis in the private sector is alarming and it is necessary to take measures to address the problem. Part of the problem is a lack of the necessary skills. There

are not enough Omani citizens with the skills that are demanded of private sector employers thereby leading to low opportunities for the locals. Another possible reason is the differences in human resource management inputs between the public and private sectors. Most Omani citizens seek public sector employment over private sector employment.

The focus of the present research is on the Oil and Gas sector, which, according to a study by Accenture (2013), currently employs 55,000 people, of which 22,369 are Omanis, indicating 40.7% 'Omanization' or localisation. The figure aforementioned indicates its composition made up of the direct and indirect work force, creating positive benefits out of the investments made by the government to this sector.

The oil and gas sector in Oman does not however, guarantee continuous employment in the future since the supply or reserve of the natural resource can reach a depleted stage. This realization has long been recognized by the Government, and it is the motivation behind the government's concern to diversify economic activities and opening trade barriers not only within, as well as beyond the national borders of Oman. Although there is currently a strong potential for the oil and gas sector to fuel economic growth, the supply will eventually end and thus the government is looking for ways to take advantage of the value chain for oil and gas. The oil and gas sector becomes interconnected with the political and regulatory framework of the country (Weijermars, 2010). It is also important to study the impact of the oil and gas sector on human resource development in Oman over the last few decades in order to identify the future trends. The sector has been a major source of its economic growth and development (Khan, 2011).

### **1.3 Research Aims and Questions**

The research will attempt to identify specific policies and strategies necessary to fully implement the growth and economic plan of the country through the optimization of the country's own human capital. By closely examining the different components of the oil and gas value chain, the research will be able to determine so far what has been achieved through implementation of the ICV. In a critical manner, it will go on to evaluate the demand and supply of labour in the economy, including the required skills as it is linked to the oil and gas industry, which will become a sound basis for making enhancements on current local content policies, where the policymakers can make wilful deliberations on the necessary

transformations required to polish how it is currently implemented and enforced by the Government.

The study will furthermore help to gain a deeper insight on how the oil and gas value chain can help in the creation and adding of human resource value in the economy of Oman. It will present a general outlook of how the value chain for the oil and gas sector works, and how local content can be integrated within the chain to aid in the creation of human resource value in the economy of Oman. Thus, the objectives of this research study are as follows:

- To gain a comprehensive understanding of job creation and added value within the context of Oman's economy and determine how human resource development can impact the oil and gas sector.
- To review past studies conducted within the area of human resource development and local content to determine the ways the information derived from relevant data can contribute to present efforts. To understand the gaps that are present in the development of human resources and how government initiatives can bridge the gap to the advantage of the aggregate economy.
- To evaluate the extent to which the local content policies of the government have been achieved. This includes an evaluation of the incorporation of such policies and programs within the value chains within the various spheres of the Omani economy in terms of creating and adding human resource values in different economic domains.

The findings from this research, based on the objectives will address the following questions:

- 1) What are the current demand and supply gaps of manpower in oil and gas sector? Is the country equipped to handle the possibility of a burgeoning manpower demand in this sector by 2022?
- 2) How can the value chain of the gas and oil sector of Oman be linked to the government's policy on local content? What are the potential barriers or stumbling blocks that government could face?
- 3) What measures should be considered by the government as part of its initiatives in transforming the quality of workers within the local content to turn them as highly-skilled individuals?

- 4) To what extent can the private sector play a role in aiding the ICV efforts of the Government, considering the increasing manpower requirements of the Oil and Gas sector by 2022?
- 5) To what extent can In Country Value initiatives supplement the policy of the government in developing local human resources related to the gas and oil sector of Oman, and the economy as a whole. Which component and how much of the ICV policy can be translated into quantifiable terms?
- 6) What possible areas need to be developed in the process of localization and implementation of the ICV policy as a /strategy that would enable the country to attain a sustainable economic growth and development?

#### **1.4 Research Structure**

The thesis contains eight chapters. The first chapter includes the introduction and the contextual background of the research. In addition to that, the problem is described, along with the research questions, objectives, research rationale and scope.

**Chapter 2: LITERATURE REVIEW:** of the research covers a Review of related literature in which a review of previous work in the field is presented. It contains descriptions and tables regarding in-country value or local content strategy within different contexts, particularly that of Oman together with national policies and initiatives that can be aligned with the local content policy of the country. World Trade Organization rules are also mention along some examples from other emerging economies that may also manifest the same gaps or symptoms that compels them to adopt a local content policy towards the attainment of sustainable economic growth and development.

**Chapter 3: ICV Development Background:** in this chapter, elements related to ICV are discussed in detail in the form of six-dimension strategy, government initiatives on contract tendering, need for ICV on local content in Oman, major government initiatives and Omanisation.

**Chapter 4: RESEARCH METHODOLOGY:** of the thesis is an elaboration of the methodologies and methods chosen for the research. As it is presented in detail, these methods and methodologies were justified to find their applications to the problem of this

research study from data gathering and collection, to the approaches used, and how generalizations can be made is also thoroughly presented in this chapter.

**Chapter 5: FINDINGS FROM SURVEY: the need and scope of Omanization** presents the results from the findings obtained from the random survey with research participants. These findings are interpreted and argued upon from they are extensively discussed as part of the analysis prior to coming with the generalizations for this research.

**Chapter 6: FINDINGS FROM QUALITATIVE STUDY: exploring the role of ICV and the measures for introducing socio-economic improvements:** This chapter will present the results of qualitative interviews conducted to determine the role of ICV and how it can be improved in Oman. The transcripts collected from interviews conducted among 13 officials are presented in this chapter

**Chapter 7: DISCUSSIONS AND IMPLICATIONS:** In this chapter, the practical applications of the findings interpreted and their possible limitations are laid down for this research. At the same time, serving as a basis for any possible recommendations based on the findings of primary and secondary research.

**Finally, Chapter 8 CONCLUSION:** of the research paper contains contributions, implications and future scope research studies have been presented to base the research for future studies.

## **Chapter: 2 LITERATURE REVIEW**

### **2.1 Introduction to Chapter**

This section presents the underlying relevant theoretical and empirical works to the current study. To achieve a coherent review of literature, the distinct oil and gas industry in Oman will be first tackled, as well as to properly set the discussion. Relevant theories on economic development and human capital development, from the classical to the contemporary will then be presented, followed by comparative data and cases. Overview of Oman's economy and will be presented in the present day scenario followed by summary to the chapter.

### **2.2 The Oil and Gas Industry in the Omani Context**

The oil and gas industry of Oman has continuously grown in various ways over the past few decades. The sector has been facing varied challenges in terms of the adoption of technological advancements mainly because of globalization and the increasingly challenging market mechanisms of global markets. The transformations that occurred within the sector have consequently brought changes in policies and practices within the industry (Chima, 2007) particularly in the pricing and trading of the commodity and its by-products. These changes have even made International Oil Companies (IOCs) shift their market positions despite their influence and size (Darwish & Mohtar, 2013). It is necessary to make significant adjustments within the oil and gas sector in Oman in order to strengthen relationships with the Government and all other companies operating within the global oil and gas value chains.

Oman was neither exempt nor spared to undergo any of these competitive market transformations, which include the growth in the number, as well as the desire of other governments to manage and govern the hydrocarbon resource base of Oman (Alvez, 2012). As it is known, hydrocarbons are also finite and also subject to fluctuations, in which case, to cope with global competition, countries like Oman has to seek measures to replace income from this resource and thus turn into economic diversification (Hvidt, 2013). As a means to try to counter such fluctuations and mitigate some of the negative effects of being an oil dependent economy, the Omani government has tried to promote diversification. The changes that has occurred in terms of technology and corresponding market mechanisms brought about by globalization was not as fast as it was in the markets or any other industries in Oman, with their dependence on the existing and fundamental processes that is known in the sector (Alvez, 2012).

The oil industry has made significant contributions to Oman's economy over the past four decades. The oil industry has generated employment, increased government revenues, increased the gross domestic product (GDP), and provided large amounts of foreign exchange. The oil industry is also important because it is a resource that is needed by many other industries to transport their products or to power their factories. In Oman the oil industry has provided the energy needs of other local sectors and has fuelled the successful implementation of Oman's economic growth and development plans. Oman is a country that is dependent mainly on oil and gas; being its main source of national income, the resource does not however provide any assurance of a sustainable economic growth and prosperity (Limbert, 2015). As mentioned before, oil reserves have been observed to be depleting which might reach a state of depletion, as its oil reserves are not bound to stay eternally. In the work of Papyrakis & Gerlagh (2004), the authors held the view that countries that have great dependence on just one commodity or just a handful of commodities such as oil are likely to experience high levels of corruption and underdevelopment. The development that comes about from high levels of dependence on particular commodities is more of a curse rather than a blessing because changes in the price or depletion of the resource can lead to social and political conflicts. According to the authors, the "resource curse syndrome" (Gelb & Turner, 2007; Kuzu & Nantogmah, 2010) may not occur in all countries that are abundant in one or few resources, and as such, being dependent on a particular resource may still be considered as an opportunity (Kuzu & Nantogmah, 2010). Revenues generated from the oil sector can be used to further widen the scope and the number of sectors in the economy. It is possible to exploit the resource and to also plan for how long such resources will continue to last. The success of the oil industry in Oman has also led to the convergence of various sectors such as finance and telecom sectors, that function consistently and cooperatively to promote economic growth and prosperity as a shared goal.

Cook and Nielson (2011) make the observation that a 'one size fits all' approach to economic diversification is not the model for oil dependent-GCCern countries should follow. Each country in the region is unique and has different strengths when it comes to diversification. Hvidt (2013) has interviewed functionaries and business persons in the GCC countries and finds many diverse efforts at diversification. Oman for example has been investing in the tourism industry and promoting an increase in the number of tourists who visit the country as a means to diversification of the economy and to find avenues of economic development that are not so dependent on oil.

As a normal consequence, inter-sectorial linking becomes part of the strategic objective of the economy (Saikia, 2011), despite its goal to promote employment through the increase of trade that stems from these linkages.

Sectorial-linkaging has a critical role and guides the execution of economic strategies that are geared towards economic development (Salkia, 2011). This concept has evolved from Hirschman's theory of "unbalance growth" and has been known to have made significant economic contributions emphasizing on the relationship a sector builds with the all other sectors and entities in the economy by way making either direct or indirect purchases and sales/ This implies that the higher the participation and linkages of a sector, the more likely it has the capability to stimulate "*rapid economic growth, production, income, and employment*" (Hirschman, 1958). The oil and gas sector of Oman's economy has obviously been a major source of its revenues, inhabiting the capacity to establish linkages with all the other sectors of Oman's economy.

There are a number of studies that point to the success of the various diversification programs in Oman. For example in his thesis on economic diversification, Al-Sarqi (2010) showed that the oil boom has helped Omani diversification in particular and has had a positive impact on diversifying the economy and not just in terms of oil . Government spending from oil revenues also helped the economy grow overall in the case of Oman. The results showed that, overall, the oil sector boom has had a positive impact on the development and output growth of Oman. The oil sector boom did not result in deindustrialization of the manufacturing sector, and government expenditure funded by oil revenue has a significant role in inducing non-oil GDP growth. The factor input analysis in his research showed different patterns over time in the contribution of technological change and economies efficiency to GDP growth, but that in recent years it has been quite strong. Based on the permanent income model (PIM), the thesis examined optimal paths for government expenditure in the light of emerging oil depletion. It is clear that, if the interests of future generations of Omanis are to be protected, the Government needs to embark on such a path immediately. The model developed could be used to guide further definition of the best fiscal path for the country (Al-Saqri, 2010).

Thus, despite the imbalance of growth and development among Oman's economic sectors, the oil and gas sector, through its direct and indirect transactions with the other sectors, is able to stimulate growth in these "weaker" economic divisions. Altogether, the imbalance is less emphasized as they fuse in and make a stronger economic impact as it is supported by the oil

and gas sector. The linkage becomes more formidable and intense as industrialization continues along with the increase in demand for oil and gas products worldwide (Saikia, 2011).

Within the contextual framework established by the World Trade Organization (WTO), not all countries may be capable of opening their markets to other countries. This is due to the differences in laws, regulations, and the physical infrastructure that they own despite operating within the contextual framework of achieving higher living standards, full employment and sustainable economic development. Tariffs for instance, could set out the difference such as in developed countries where average rates are established by developed countries for all manufactured goods, as compared to other countries where specific rates apply to different kinds of products. Consequently, developed countries tend to expand their economies rapidly and grow faster than developing countries, which in turn creates more jobs that leads to an increase productivity and enhanced revenues that can be translated into better services, more revenues, enhanced productivity, and so on (World Trade Organization, 2015).

The positive outcomes of job creation brought by increased trade can enable companies to have more access to new and better technologies that can simultaneously boost innovative methods in production that can improve product quality and increase the firms' competitiveness in world trade (World Trade Organization, 2015). Remaining competitive however, only increases the demand for more skilled workers in order to maintain productivity levels and key to maintaining competitive advantage (Özçelik & Ferman, 2006). In addition, oil and gas companies in Oman have been observed to have a majority of their top employees to many foreign competitors who have the ability to persuade and motivate these top performers to leave their jobs (Al-Harthy, 2008).

As mentioned earlier, similar to other GCC countries, the country of Oman has been dependent on its oil and gas sector as its main source of the country's revenues since the 1970s. The abundance of the resource however has been diminishing, and to counter the possibility of its complete depletion, the country of Oman under the leadership of His Majesty Sultan Qaboos has set targets for the coming years to offset the potential loss of oil revenues in the future. Hence, the Sultanate of Oman has undertaken major transformations to enable the country to integrate itself with world economy (Aycan, et al., 2007) through diversified activities other than oil exploration and production. To achieve these goals, it is not enough that the creation of jobs is emphasized; rather it also includes a consciousness from among

public and private organizations to have significant contributions in expanding economic opportunities through human resource management inputs as a cohesive strategy towards a sustainable economic growth and progress with its very own local talents.

The path towards a sustained economic growth and development does not however, appear too easy for the Sultanate of Oman as real circumstances has to match the objectives set for its plans. Primarily, its small population relative to its land area of the country may not be proportionate and may not suffice for the human resource needs of the country's ambitious growth plans by the year 2020. As it was, Oman's population was forecasted to reach only as much as five million at the culmination of Vision 2020, according to the reports of Oman Human Development Report in 2003 (Fahdi & Swailes, 2009). In order to improve their adaptability and competitiveness and adjust to the changes in the global economic environment, human resources is a key factor. this creates a requirement for individuals that possess skills like flexibility, adaptability, openness to any type of challenge, whether seen or unknown (Håland & Tjora, 2006).

Further, Oman may as well turn to its inherent strengths to sustain in the highly competitive and dynamic environment by turning to its comparative advantage over other nations. One of these advantages is its geographic location. With its strategic geographical location, Oman has optimized the advantage serving as a link to the different regions of the world such as Africa, Asia and Europe. Through the opening of its ports to these countries the country enlarges its trade linkages with other countries in attempt to remove its economic dependence on oil through diversified economic activities. As it is aligned with these objectives, His majesty Sultan Qaboos sees the importance of human resources to achieve the country's goals emphasizing human resource development from a comprehensive perspective that does not hold any bias or ignore one aspect in the pursuit of its overall goals to achieve national development and prosperity. This includes a focus on human resource development that retains a moderately conservative stance while having tolerance over those principles that may depart from its traditional beliefs and norms (Aycan, et al., 2007)

To achieve the aforementioned sub-goals that lead to economic prosperity, the Sultanate has forged partnerships with the education sector to provide education and training among its citizens acknowledging the fact that the quality of their human capital is critical and key towards social and economic advancements (Stalinska, 2014).

Moreover, globalization brings forward more pressure for the country to utilize economic integration which can establish international relations, as well as strengthen existing ones, create more trade opportunities, technological transfer of knowledge and skills that also comes along with human resource migration; notwithstanding the fluidity of capital flows into the country, as well as the industrial cooperation brought about by these relationships.

Over the years, Oman has widened its integration into the global economy as an oil and energy supplier for many business organizations and entities all over the world and memberships with active participation of groups that favour integration and added value creation among different global value chains.

The Vision 2020 of Oman recognizes and places emphasis over the need to integrate its local economy to the global community thereby requiring the building of more infrastructures that would positively lead to development of the different regions, industries and all other sectors through the partnerships it builds among different nations and economies within the global supply chain. The country of Oman stands to gain from these partnerships through direct and indirect foreign investments, export-import diversification activities, production capacity upgrades enhancements in technology, development of financial sector and the private sector, as well the development of human capital that would enable the country to gain comparative advantage and acquiring interdependencies with other countries. These interdependencies also include the utilization of foreign labour to satisfactorily achieve the benefits of globalization to its fullest and achieve coherence and coordination among other countries that are able to provide the necessary skills needed to attain the country's development and sustainability goals.

Despite the positive effects brought by globalization, it is however, succeeded by transformations that results from reshaping some of the country's institutional mechanisms indicating a gap that has to be addressed by governance. For example, employing expatriates to fill in skill gaps can have serious effects on unemployment and the development of local human resources who may not be as equipped as their foreign counterparts. With a growing unemployment rate caused by the hiring of foreign workers, the capability towards earning more income than local workers can greatly impact the host country in as much as these can have serious social and economic repercussions towards a majority of its population.

Thus, the concept of local content came into being and became a development policy for resource-rich countries like those in the GCC where there is an abundance of oil and energy resources (World Trade Organization, 2015), especially those with developed economies. These human resource policies towards the accommodation of foreign workers to fill in skills gap has proven to have worked for many countries especially during their period of industrialization (Ado, 2013). Countries rich in natural resources like those in the GCC or in particular Oman has shown a great dependence on their abundant natural resource (Collier, 2000).

Because this study seeks to address the question, “*What human resource policies and strategies should be undertaken by the Government to full local talents as aligned with the goal of fully implementing the country’s growth and economic plans?*” theories and empirical works on (regional and domestic) economic development and human capital development will now be presented.

## **2.3 Theoretical Foundations**

Since the Sultanate of Oman is a dynamic part of the oil-rich and oil-dependent Gulf Cooperation Council (or GCC), an economic and political association of six GCC nations (along with Bahrain, UAE, Kuwait, Qatar and Saudi Arabia) which acts and functions as a highly unified group, the discussion of regional economic theories, along with domestic models, is not only necessary but also critical to properly describe the Omani context of economic development.

### **2.3.1 Economic Development**

Economic growth is basically the increase of total economic output over time (Richards & Waterbury, 2008). This growth is affected by various factors that boost or hinder its realization (Tabellini, 2005; Gruenwald, 2008). Factors that positively influence a nation’s economic growth include the country’s access to world economy, its stability in the macroeconomic scale, its investitures on public goods for the benefit of its citizenry, and its protective policies for individual property rights (Tabellini, 2005). On the other hand, dysfunctional legal, economic and political systems, political instabilities, corruption and other cultural factors prevent the steady progression of a country in terms of global and local scale economic growth (Gruenwald, 2008).

To enrich the flow of discussion, this section will lay down fundamental concepts on the stages of economic development, the different classifications of economic systems, as well as economic development measures.

### **2.3.1.1 Stages of Economic Development**

Economists have noted that the progression of economies happens in different stages, with every stage being driven by a particular sector or industry (Nivin & Plettner, 2009). Characteristically, the first stage of an economy is agricultural, where agriculture is the largest industry (Nivin & Plettner, 2009). The growth in the agricultural sector pushes for new innovations that result in higher efficiency rates and greater accumulation of wealth, setting the stage for the next level of economic development which is the industrial age (Nivin & Plettner, 2009). The manufacturing sector drives this second stage of economic development, which further develops into the information age in turn driven by technology (Nivin & Plettner, 2009).

Inglehart & Welzel (2009) have noted a move from traditional to more secular and rational societal values, and have linked this change to the advancement from agricultural to industrial stages of economic development. Furthermore, they posit that industrialization is the major catalyst of social changes that give rise to modernization. The economic advancement that modernization ushers has a pervasive effect on society's standards of living in general. It affects the country's education level, urbanization, technical occupational standards, life expectancy, mortality rate, and economic growth. This revolution of way of life eventually leads to a more complex political and social structure that supports democratization. Economic and political development become inevitably linked together in a mutually-supporting cycle (Inglehart & Welzel, 2009)

Many of the developed economies in the twenty-first century have already reached the information era (Nivin & Plettner, 2009). Nivin and Plettner (2009) believe that this information age is not the ultimate end of the economic development process. They maintain that the next level in the hierarchy is the era of creativity, wherein economic development will be ushered by value-added products and services. They also emphasized the important role of creativity in the progression of an economy from one stage to the next. Innovation and technological advancement are results of creative processes. Reaching a cultural state wherein the social and economic infrastructures foster creative processes is critical to the

growth of a locality or region. For the GCC region, it is critical to foster this type of infrastructure to cater to more sustainable and long-term economic growth in the region apart from its traditional petroleum-based economic engagements.

### **2.3.1.2 Economic Systems**

Economies in the world exist in varying forms of systems. These varying structures affect the economic vitality of different countries belonging to the developing world. Pryor (2006) utilized a specialized database to explore the relationship of economic development and type of economic system in 41 different economies. Based on a cluster analysis done on these nations' 31 institutional characteristics, there are four different economic systems among developing countries: 1) traditional, 2) statist, 3) labour-oriented, and 4) business-oriented.

Traditional economic systems are marked by tight government regulations, inimical business environments, mediocre legal systems, inadequately educated workers, low contract security, a marginal financial sector and very minimal influence from its stock market (Pryor, 2006). Generally, these countries have much lower per capita GDP than their neighbours in the developing world. Countries that are classified in this type of economic system include Pakistan, Tanzania, El Salvador, Honduras, Nigeria and Bangladesh. Interestingly, no GCCern country is classified as a traditional developing economy (Pryor, 2006).

Statist economic systems are marked by high government consumption, highly centralized banking systems, prevalence of state-owned enterprises, high limitations to external capital, and high density of unions among workers (Pryor, 2006). Statist economies are also noted to have a more educated work force than other economic systems. Nations such as Costa Rica, Brazil, Jamaica, Egypt, Morocco, Tunisia, India, Mauritius, Lebanon, Egypt, Ghana, Kenya, Jordan, Sri Lanka, Ghana, and Trinidad belong to the statist cluster. Many of the countries in the GCC, such as Oman and Egypt, also belong to this cluster. This reinforces the consistency of economic structures, environments and challenges that are present in the GCC region.

Labour-oriented economic systems are characterized by a poor legal system that provides high protection for its work force but low protection for patents and few rights to creditors. There is greater social security but unequal property ownership. Labour-oriented economies also tend to have more restricted banking activities but far lesser limitations to external capital, like Traditional economies, Labour-oriented ones have a small financial sector governed by a less comprehensive set of accounting standards (Pryor, 2006). Countries that

operate in this economic system include Indonesia, Philippines, Turkey, Venezuela, Colombia, Ecuador, Argentina, Bolivia, Panama, Peru, Uruguay, and Mexico. Compared to other developing countries, these nations tend to have lower GDP, higher inflation rates, and unstable production output (Pryor, 2006).

Business-oriented systems, in turn, exhibit less regulations in labour and market, less restrictions in its business environment, more equitable agricultural land distribution, more equitable wage negotiations and shareholder rights, more stringent standards of accounting, a larger financial sector and a more influential stock market (Pryor, 2006). Due to this more advanced system, its political sector also tends to be more progressive, characterized by greater contract security, and its economy thrives in healthier product market competition. Business-oriented economies understandably have higher per capita GDP and economic growth rates than developing countries under other systems. Thailand, South Korea, Malaysia, Chile and South Africa are examples of nations employing a business-oriented system (Pryor, 2006). GCCern countries generally do not subscribe to the business-oriented model (Pryor, 2006), an indication that Oman's national economic development plans are not patterned after this type of economic system either.

In his conclusion, Pryor (2006) argued that changes in a nation's per capita income influences the evolution of its economic system, which in turn causes alterations in its institutional configuration. In this classification of economic systems, Pryor (2006) also noted several factors that were assumed to affect the state of a nation's economic growth but in reality were not as relevant. These factors include 1) product market competition, 2) government subsidy ratio to GDP, 3) government contract security, 4) central bank independence, and 5) role of workers in decision-making.

### **2.3.1.3 Measuring Economic Development**

Common practice in the economic research community often entails the use of Gross Domestic Products (GDP), Gross National Product (GNP), Gross National Income (GNI), as well as the HDI of the UNDP as indicators for measuring economic development (Dasgupta, 2007; Jing & Graham, 2007; Pryor, 2006, Welzel&Inglehart, 2005).

Jing and Graham used a combination of these indicators to measure economic development in their 2007 publication. GDP per capita was used to indicate the state of economic development; the economic freedom indicator, for economic freedom and property rights

protection; and market structure data, for competition and volatility of the market place (Jing & Graham, 2007).

Barro and McCleary (2003) used four measures that were expected to rise with economic development, namely 1) urbanization rate, 2) life expectancy, 3) the actual GDP per capita, and 4) the average level of educational attainment of its adult cohort. The range of data was carefully defined to determine any indication of inherent preoccupation with urbanization, life expectancy, GDP per capita, and educational attainment.

Similarly, most of Pryor's research (2005) used per capita GDP, workforce's average educational attainment, and the GDP to investment ratio for the period under scrutiny. These three variables comprise the minimal growth model. Using this cluster of variables, economic growth can be examined in relation to economic systems. From this model, valuable knowledge on the relationship between values, levels of economic development, economic systems and the changes of those values over time (Pryor, 2005).

The standard indicator for economic development on national levels is the GDP per capita, since most countries have these data readily accessible for assessment (Fish, 2002). Dasgupta (2007) further points out that aside from GDP per capita, another common index for a nation's overall development is the HDI of the UNDP.

Welzel and Inglehart (2005) are among those who use the HDI of the UNDP for assessing a society's affluence. HDI provides a more comprehensive evaluation of human resources with its three included measures. The life expectancy indicator measures the physical resources of the nation, the GDP indicates its financial resources, and the combination of literacy rates and behaviour ratios are used to assess the intellectual resources available among the country's future and current workforce (Welzel and Inglehart, 2005).

GDP, nevertheless, has received a significant amount of criticism regarding its inadequacy in factoring human resources such as health and education into the calculation (Welzel and Inglehart, 2005). The GDP is primarily focused on the financial aspects of economic development. HDI has also received its share of negative reviews, having been observed by Dasgupta (2007) to focus primarily on present without due regard for the future trends or economic development status. In terms of sustainability in development, GDP and HDI as measurements are also found lacking since these do not interpret depreciation of capital assets and productive bases as integrative parts of a nation's overall economic status.

Considering these loopholes, there is a widespread agreement for the need to come up with more integrated indicators for development than the much used GDP measure. The new indicator being aspired for is one that is more in keeping with what the people define as a better life (Giovannini, 2007). While higher output is viewed as a sign of progress within the GDP context, it is in actuality also linked to environmental damages, ill-health conditions and non-alleviation of society from poverty. Hence, there is a move to depart from GDP, which is the traditional growth measurement (Giovannini, 2007).

A paradigm shift in economic development has transpired, according to Louanski (2006). The aspects of culture and heritage, which were once ignored in the traditional model, are now being considered as mechanisms for socio-economic development. Development strategies that once centred on commodities are now being substituted by more people-centred approaches. Louanski (2006) maintains that people are the object as well as the catalysts for change. With this new approach to economic development, the integration of culture into existing and newly conceptualized strategies is increasingly gaining support (Louanski, 2006).

### **2.3.2 General Economic Theories: Regional and Local Development**

Economic development has many faces, varying from one theory to another. A state's development and its stages and processes are interpreted in various ways and instilled with different notions of progress, ranging from Adam Smith's invisible hand, to Lenin's imperialism as highest form of capitalism. As a general rule, progressive theories in economics move towards modernization under a free market, laissez-faire capitalist market (Rourke, 2002).

A conventional approach favoured by free-market and democratic schools of thought is the modernization theory, which states that the development of a state is an integrated and continuing process of advancements in the spheres of politics, economics and social affairs all leading towards a form of democracy (Dobrinsky, 2011). On the other hand, another theory upholds the necessity of existing stiff hierarchies of economics in the international scale. This theory, known as the structural economic theory, further contends that a nation's standing and given role in that international hierarchy is the determining factor for its development and affluence. This theory also highlights the historical background of such an international system, including how some national economies climb to the top of the

hierarchies and why some others were downgraded to the lowest rungs. According to Rourke (2002), world-systems, Marxism and dependency are theoretic frameworks that are under the umbrella of economic structuralism theories.

Among economic development theories, economic base is among the concepts with solid followings. Economic base theory determines causal relationships in a region's development process, dividing economic activities into two main types: 1) exogenous or regional, and 2) endogenous or local (Isard, 1965). Regional export activities, or exogenous activities, are necessary stimulants for a region's economic progress, considering the demand for goods and services in the area forms the basis for the social and geographical division of labour among member economies (Maik, 1977).

Exogenous activities stimulate the growth of endogenous sectors that are internal to the region's economy. In the GCC region, the oil and gas sector form a large part of the area's exogenous activities. Member states collectively account for 49% of Organization of Petroleum Exporting Countries' (OPECS) crude oil production and 52% of its total oil reserves. Roughly 70% of the GCC export earnings is tied to the oil and gas sectors (Malizia & Feser, 1999). On average, these two critical sectors account for 41% of member countries' GDP and 63% of total government earnings (Malizia & Feser, 1999). Oil and gas sectors that are involved in exogenous activities operate on a multiplicative mechanism among related industries and organizations that are active in the domestic market, spurring growth in that level of the economy.

Malizia and Feser (1999) highlight the significance of sustaining exportation in the regional level. A number of researchers seek to disprove this view, positing that branch representatives of the region should be given emphasis instead, and that the specialization among members in the region should be increased further. While viable and rational, the option is not highly applicable to regions heavily dominated by a large and degenerating sector, such as GCC with its petroleum-based regional economy. Some experts counter the above propositions with an assumption that there is a need to differentiate exogenous bases and stimulate development of new sectors in order to veer the domestic economy away from industries that require heavy long-term investments and expenditures (Malecki, 1997). Malecki (2007) further states that for national governments to operate in this economic set-up, there needs to be an initiative to attract international investors for service sectors to support advanced technological ventures.

The Theory of Trade also upholds the significant role of exogenous activities in the economic development of a region. The theory also lays down the workings of an economic global platform in the existence of business interaction between countries with different levels of economic development (Malecki, 1997). The framework seeks to address questions on production specializations that are crucial to regional clusters in terms of consuming time, monetary and other forms of resources. As a result, regions that are high on capital resources produce high capital-consumption goods for export, whereas labour-rich countries produce labour-intensive goods for external trade (Malecki, 1997).

For some specialists, the benefits of such trades are more favourable for high capital regions than labour-intensive ones (Malizia&Feser, 1999). As a consequence, national economies in developing regions engaging in export and international trade need to stabilize their internal infrastructures and institutional investments in order support its activities in the regional and international scale. Aside from the development of its financial institutions and economic infrastructures, such countries also need to standardize the level of technical training and specialized education that is available for its current and future workforce (Szajnowska-Wysocka, 2009).

The Basic Product Theory refers back to the theory of economic base. According to this theory, steady and progressive specialization of the region's internationally competitive products is the key to attaining regional development (Landes, 2000). In order to maximize the profitability of these specialized products, the regional players need to build an organized production strategy that lowers the cost of economic transactions related to the specialized goods (Landes, 2000). This theoretical framework requires ruling classes or authorities in the national scale to strengthen the specialization trend, promote and accommodate the growth of financial institutions, boost investments in infrastructures such as roads and telecommunications, and increase the quality and availability of services pertaining to education and business (Grosse, 2002).

Geographic development in different scales, ranging from local to international, however, have strong implications on the social, political, and economic actions that regional authorities tend to make (Landes, 2000). Hence, decisions on the regional level may be diverted to highly specialise economic activities, favourable to some geographic portions or aspects of the region, such as the GCC's heavy investment and reliance on petroleum products and its related goods.

The Growth Poles by F. Perroux is a popular economic theory that posits economic growth as the outgrowth of the economy's most developed sectors and industries (Grzeszczak, 1989). The strongest players who belong to these sectors as well as other specific entities stand as the stimuli for growth of the economy, bearing the weight of the economic development and making weaker industries and entities depend on them for continued growth and development. Growth pole organizations in an economy can be identified through their high rate of economic development and strategic partnerships or connections. They also tend to occupy the strongest positions in the international market (Grzeszczak, 1989).

The dynamics of growth poles and their environments are further considered in Perroux's exploration of polarized systems (Grzeszczak, 1989). This unique type of behaviour system stems from the growth pole's relationship to its environment. Further studies into the concept of polarity extracted the nature of regional polarization, wherein the more developed regions play the role of growth poles that serve as points of reference for the environment. Industrial centres and competitive branches congregate in these regions. This leads to the creation or reinforcement of metropolitan areas, whose growth further strengthens their dominance over the weaker economies (Grzeszczak, 1989). In this way, growth poles make other areas in the region more dependent on their policies.

In Perroux's estimation, the national authorities have a responsibility to forge new growth poles within polarized systems, as well as strengthen connections between metropolis areas to other parts of the region in order to intensify the motivation and distribution in order to intensify stimulation of steady growth (Malizia&Feser, 1999).

Regional innovation networks are applied and documented in several literatures. The Italian experience in Silicon Valley in California is among the most popular ones. Research further probing the Italian experience done by Groupe de Recherche Européen Sur les Milieux Innovateurs (GREMI) provides a model of an innovative environment that requires local environments as the sources of regional innovation (Szajnowska-Wysocka, 2009). Advancement of fixed capital is not an adequate stimulus for development. This is what is happening in the GCC, with many states shifting from petroleum-based economies to new industries. The acquisition of new production skills and the employment of innovation in the process are also essential. Regions and organizations need to embrace drastic shifts and be prepared for "creatively forgetting" uncompetitive offerings in order to take part in a collective "learning" process (Szajnowska-Wysocka, 2009).

Based on the Theory of Production Cycles, there is a seamless connection between economic development and the process involving product creation, improvement, and standardization (Szajnowska-Wysocka, 2009). From this viewpoint, technological innovations and creative product development stimulate regional development. Naturally, polarization happens in ties between developed and developing communities in the region as better quality offerings are created in more affluent countries and exported to much poorer ones.

Many economics experts agree on the significant role that technological innovations play in a region's economic development. It encourages economic efficiency, well-designed advancements, and effective dominance in the international scene. Therefore, technological and technical development as well as knowledge that spurs this development are basic influences on regional development (Szajnowska-Wysocka, 2009).

Regional innovation networks are tied closely to the concept of product cycles. The GREMI research group point out the innovative nature of institutional structure, as well as the information and cooperative structures, as influential to the level of innovation of economic activities in the area (Geenhuizen 2009). GREMI put the local environment's role into consideration in presenting the concept of local innovative environment, which the research team considered a knowledge machine and innovation hatcher. Local innovative environment is defined as a complex network of casual social relationship within the bounds of a certain territory that are shaped by the local culture, tradition and identity. These units enhances the effectiveness of the group learning process due to abundant means of creating social links, such as its integrative process of information production and dissemination. Under this nuance, learning regions were established as a collective learning model in the late 1990s. This model was used to perform an analysis of notable economic growth areas the space industry in Toulouse, Cambridge, and Silicon Valley. The concept is also highly applicable for analysing institutional learning in the region.

At about the same time in the 1990s, researchers such as Porter (1990) and Krugman (1991) also introduced industry clusters, a theory which resonates with the emphasis on innovative environment of its contemporary concepts. Industrial clusters are identified as geographical concentrations of closely connected business organizations accompanied with suppliers, specialists, service providers and institutional linkages with universities, standards authorities, brand associations and the likes. In other words, these clusters are complex systems of interrelated entities. The effect of belonging to such industrial cluster is

synergistic, in that it takes added value on top of the sum total of the values of each part or member organization. The presence of industrial clusters in a region enhances the area much more effectively than if there was no established network and the entities were left to their own devices.

Porter (1990), who developed the model, considered industrial clusters as investigative tools for gaining insights into the competitive advantages of current international economies. He noticed that the main factor for economic traffic is finding the appropriate location. With the increasing pressures of local production and international sales, business entities or organizations relegate themselves to industrial clusters that allow them to create a network of cooperative competition. Porter's model (1990) considers the following factors: production, demand, co-existing sectors, and economic policies and strategies.

After having considered regional development and discussed the different schools of thought on the topic, another theory, Endogenous Development, also needs to be part of the discourse. The concept is an important element in the Omani government's objectives for maximizing the country's domestic economic assets. In the late 1900s, the orthodox theories on modernization, along with their varied assumptions, have undergone application and examination in different economies of different continents (Aghion et al. 1998; GREIF & LAITIN 2004). Much of the myths, both of modernists and dependists about universal modernity have been debunked rather than validated (Vazquez-Barquero 2003). In this juncture in history, new theories on alternative developments were also taking shape and replacing the old ones.

To address the deficiencies of classic economic theories, these new models highlight the significance of social development to the overall economic outlook, just as much as the enhancement of human capital and the empowerment of local communities hold a relevant role in regional development (Ploeg 1994; Geenhuizen 2009). All these fresh concepts concede to the findings of multiple researches that economic growth cannot be encompassed by technological advancement alone.

A failing of the previous models that the concept of endogenous development attempts to rectify is the assumption of the former that long term growth effects in the endogenous economy are based largely on human and technical capital investments (Domański & Marciniak, 2003). As the theory postulates, endogenous development involves other non-

classical elements for economic growth aside from the increase of capital wealth and human capital investments, such as the effective exchange of relevant information between stakeholders or entities (Domański & Marciniak, 2003). As such, information and knowledge exchange among different parties and across different levels need to be part of the state policies in order to promote a holistic approach to economic development.

Regions or areas with high levels of production have environmental conditions that are conducive for innovations and knowledge sharing between companies due to large-scale accumulation of insight in the same particular field of specialization of industry. In the long run, this type of diffused technical knowledge among insiders forms a special type of protective layer against external competitors for the local industry (Domański & Marciniak, 2003).

While there certainly are similarities in scope, local development and endogenous development are two different concepts and should not be interchanged. Local development forms a level in the spatial system, whereas endogenous development does not relate to any spatial scale. The distinctive feature of endogenous development is the use of internal resources for production and other business activity at whatever spatial level, whether local, regional, national, or international.

One important factor for endogenous development is economic policy. Now that regional economies are becoming significantly more endogenous, the importance of establishing operational economic policies is more crucial and essential (Marlowski, 1999). Economic policies tend to lead to useful principles on progress and development by questioning and probing workable permutations of multilevel policies. This is the case since the evolution of economies in the 21st century is driven primarily by endogenous processes involving adaptation and organisation in macro and micro levels.

Domanski and Marciniak (2003) acknowledge the difficulties arising from the need for complex economic policies and the rising trend towards endogenous development in different levels of the spatial scale. They point out that competition in the modern context has escalated beyond local or national economies to the global economy. As a consequence, markets at all stages are more dynamic and place emphasis on strategy and flexibility, demanding effective adaptation methods. This evolved structure in the economy is also becoming more and more influenced by information technology in terms of technical

infrastructure, services and other goods wherein software infrastructures become more crucial and widespread in different sectors such as education, sciences, and management. These technological advances are driven partly by technically proficient members of the workforce, government, business entities and scientific communities.

Globalization is also making its share of impact in the way economic systems operate. With the dissolution of stiff state borders in terms of economic and technological activities, maintaining the political, economic and social dynamics of locality also becomes an imperative. This focus on locality or the “little homeland” is a more acceptable move and garners less resistance compared to globalization, which encounters oppositions in many levels (O’Riordan 2001; Korff 2003). Nevertheless, these two are not mutually exclusive alternatives but natural complements. As a complement to globalization, local development needs to be kept in step with the global pace.

Like a range of other concepts, locality proves a difficult term to define. According to Nurek (1986), nearly a hundred definitions on local community have been recorded, as early as the 1950s. Despite the dilemma in finding the correct terms for encapsulating the idea, experts concede that localities involve a particular location that is self-created after the lengthy process of mutual adaptation between man and his environment (Nurek, 1986). The concept of locality is important for the modern spheres of economics, geography, political science and other social sciences. As a by-product of the multifaceted crisis from the industrial revolution, the revival of the locality’s pivotal role in economic development is viewed by Jaloweicki (1988) as the appropriate means of resolving the accumulated issues of the modern civilization.

The characterization of locality as a particular space brings up the concept of social space, which Lisowski (2003) defines as a concept created by a society or community that incorporates the ecological and cultural aspects into one unit, wherein man plays the role of a dynamic initiator of his environment. Lisowski (2003) further states that human activity is the cause rather than the result of the state of the physical space and the organization of its components in the social space.

The physical space is only one element of social space. The latter is represented in two forms: one which is abstract, which involves the space of networks; the other is the concrete element or the place, which involves physical space. The fusion of these two elements is sometimes

opposed by geographers who tend to be sensitive about spatial diversification. As a result, social spaces are defined in local scales, as the socio-economic units in the micro-level. The irony of social spaces and globalization is that the latter has not unified the former but rather petrified it into local and regional spaces with its own political, economic and cultural identity and freedom. In this way, globalization has restructured concrete space in an unprecedented way.

The concept of self-organizing space is likewise derived from the natural sciences but is also a valuable resource in understanding local development. Self-organizing space explains the dynamic of complex system transformations from one structure or order to another (Prigogine & Stengers, 1990). The same dynamics that explain self-organizing space are useful in explaining the transformation of local spatial structures as influenced by social space factors. The self-organization processes, however, can only be applied to rather rational and static organizations in the social space, making the requirement a considerable limitation in most cases of organizations or elements.

In consideration of the theoretical anomalies that are encountered in development processes, the use of path dependence concept can be a useful approach. This concept is anchored on evolutionary construal of a particular region's development characteristics. It identifies a type of region, particularly those whose beginnings were shaped in the industrialization era, that could remain attached to the economic culture of automated, large-scale production lines. Lack of economic modifications in such traditional regions hinders these areas from adopting more progressive worldviews and theories in terms of regional development. The level of endogenous development available to such a space is dependent on the path that has been marked for it and the one it is willing and initiating to carve for itself is crucial in the actual implementation for local and regional policies (Domanski, 2004).

The study of alternative endogenous development also entails significant discussion on the neo-regional wave paradigm, which gained ground in the 1980s and treats discourse on regional development as a new generation of social science (Bourdieu, 2001). This type of discourse opened the creation of the framework for new methodologies in organizing and reinvigorating endogenous resources in the region.

Caught in between the dual correlation of localities and the global economy, the region's intermediary position points it towards new tasks and roles in the development of economy,

and also requires it to adapt to more progressive regional policies in order to respond to the growing dynamism of modern space, where transactions flow globally through limited virtual borders and pre-established spatial borders are continuously being fragmented into more transparent and flexible states (Castells, 2000). Therefore, the region is no longer primarily a political subdivision or historical and cultural effigy. In the continued advancement and complexity of the modern economy, the region is set to perform as an alternative structure that has multiple quasi-state capabilities and semi-autonomous functions in relation to world economics. This identity of economic significance provides a new image for the region (Gasior-Niemiec, 2004).

A clear path surfaces as an alternative and more progressive means for developing a region and its economy when the continuum of changes undertaken in the discourse for economic development is followed from its early stages to its current state. After consideration of the elements of regional development discussed above, the potential key indicators for development can be broken down into the following: 1) territorial identity, 2) political engagements, 3) living conditions, and 4) social ties (Szajnowska-Wysocka, 2009).

General Economic Theories: Regional and Local Development		
Classic Economic Theories		
Dobransky, (2011)	Modernization theory	Development of a state is an integrated and continuing process of advancements in the spheres of politics, economics and social affairs all leading towards a form of democracy
Rourke (2002)	Structural economic theory	A nation's standing and given role in that international hierarchy is the determining factor for its development and affluence
Isard, (1965) Maik, (1977)	Economic base theory	Determines causal relationships in a region's development process. Division of economic activities– 1) exogenous or regional, and 2) endogenous or local
Malecki, (1997)	The Theory of Trade	Upholds the significant role of exogenous activities in the economic development of a region. Regions that are high on capital resources produce high capital-consumption goods for export, whereas labour-rich countries produce labour-intensive goods for external trade
Landes, (2000)	The Basic Product Theory	Steady and progressive specialization of the region's internationally competitive products is the key to attaining regional development.

Grosse, (2002)	The Basic Product Theory	Requires ruling classes or authorities in the national scale to strengthen the specialization trend, promote and accommodate the growth of financial institutions, boost investments in infrastructures such as roads and telecommunications, and increase the quality and availability of services pertaining to education and business
Grzeszczak, (1989)	The Growth Poles	Posits economic growth as the outgrowth of the economy's most developed sectors and industries. Growth pole organizations in an economy can be identified through their high rate of economic development and strategic partnerships or connections.
Malizia&Feser, (1999)	The Growth Poles	National authorities have a responsibility to forge new growth poles within polarized systems, as well as strengthen connections between metropolis areas to other parts or the region in order to intensify the motivation and distribution in order to intensify stimulation of steady growth.
Szajnowska-Wysocka, (2009)	Theory of Production Cycles	There is a seamless connection between economic development and the process involving product creation, improvement, and standardization.
Porter (1990)	Industry clusters Theory	Considered industrial clusters as investigative tools for gaining insights into the competitive advantages of current international economies. Considers the following factors: production, demand, co-existing sectors, and economic policies and strategies
<u>Modern Economic Theories</u>		
Ploeg 1994 Geenhuizen (2009)	Local empowerment in regional development	Highlight the significance of social development to the overall economic outlook
Domański & Marciniak, (2003)	Endogenous economy based on human and technical capital investment	Endogenous development involves other non-classical elements for economic growth aside from the increase of capital wealth and human capital investments, such as the effective exchange of relevant information between stakeholders or entities

Marlowski, (1999)	Economic policy for endogenous development	Economic policies tend to lead to useful principles on progress and development by questioning and probing workable permutations of multilevel policies
O’Riordan (2001) Korff (2003)	Globalization as economic policy	With the dissolution of stiff state borders in terms of economic and technological activities, maintaining the political, economic and social dynamics of locality also becomes an imperative. This focus on locality or the “little homeland” is a more acceptable move and garners less resistance compared to globalization, which encounters oppositions in many levels
Jaloweicki (1988) Lisowski (2003)	Concept of locality	Locality’s pivotal role in economic development, post multi-faceted crisis of industrial revolution, is the appropriate means of resolving the accumulated issues of the modern civilization.  Human activity is the cause rather than the result of the state of the physical space and the organization of its components in the social space
Prigogine & Stengers, (1990)	Concept of self- organizing space	Self-organizing space explains the dynamic of complex system transformations from one structure or order to another.  Self-organizing space are useful in explaining the transformation of local spatial structures as influenced by social space factors.

### 2.3.3 Economic Models: Developing Countries

The Dependency Theory is one of the most subscribed approaches to the analysis and evaluation of developing countries such as Oman. The theory was popularized in the 1960s after the expectations and positions of economic theories and conventions such as capitalism failed to take fruition in the free world. The proponent of the theory contends that the global economic system is primarily composed of highly industrialized countries such as the United States, whereas developing countries such as Oman are in the outskirts of the system (Todaro & Smith, 2009). Furthermore, core countries are able to maintain their high standards of living by exploiting the resources and markets of less developed countries, creating a continuing system of domination and mistreatment.

Dependency theory depicts the international system as a parasitic relationship where core countries are greatly benefited whereas peripheral countries are bound in a perpetual state of dependence for the production of high-value goods and services (Todaro & Smith, 2009). The structure of the current international economic system, according to the theory, has also been constructed primarily by core countries to maximize their wealth and power, which they have no intention of giving up by replacing the old system with a newer, more equitable one. Furthermore, the theory also contends that members of the political elite from these dependent countries are also influenced by core country manipulations and tend to keep much of the national wealth to themselves (Todaro & Smith, 2009).

The Production Possibilities Curve (PPC) takes another approach at measuring economic development. The production possibilities graph features a curve that characteristically concaves to the origin, which denotes the locus of the combination of all the economy's final goods if the total amount of resources were completely used. In the graphical calculation and presentation of the PPC model, the curves that lie inside the curve represent production volumes and combinations that do not maximize the economy's full resources (Todaro & Smith, 2009). On the other hand, points that lie outside of the curve are production levels and product mixtures that are impossible to achieve to constraints in the economy's resources.

The PPC model operates on the following assumptions, that (1) there are only two goods for production at a time, (2) the availability and amount of resources are not fixed, and (3) the factors for production are capital, land, capital, and capacity (Todaro & Smith, 2009). This model is also highly applicable in the Omani setting, although the measurement provided by this indicator tends to be limited by the first assumption. On the other hand, the basic assumption of dual goods and the ambiguity to the availability of resources allows for less complexity in analysing economic growth using the model. For instance, in many emerging countries, the influence of labour in economic growth is uncertain anyway, and only complicates the equation when it has to be factored-on point on point (Todaro & Smith, 2009).

### **2.3.3.1 Petro-centric Economic Theories**

Already more than 70 years ago, Hotelling (1931) analysed the problem of how a non-renewable resource should be optimally exploited. This is indeed an important issue from an economic point of view because non-renewable resources, such as oil, gas or ore, are

important factors of production and exhaustible. Even if recycling can be used and enables the reuse of a certain part of the resources, this does not change the fact that the major part of non-renewable resources is lost in the production process. With a limited amount of resources available, this implies that most of the resources used today are not available in the future.

The question on the optimal use of non-renewable resources such as gas, oil or ore has been around since the early 1900s (Hotelling, 1931). More than 70 years ago, economists and had already been concerned about the exhaustibility of these important resources for production, well aware that the natural wealth being consumed then and currently will no longer be available in the future. Recycling contributes an insufficient dent in the resolution of the problem, since major portions of non-renewable resources are actually lost during production. Hotelling's analysis of the problem during his era proved to be a helpful resource when the people became seriously aware and concerned about the implications of this scarcity.

Hotelling's model on exhaustible resources operates on a basic assumption that there is a perfectly competitive market for these exhaustible resources. A study was conducted to solve for the optimal rate of extraction given the price trajectory for the resource. The social optimum revealed that the growth rate of the resource's price is equivalent to the interest rate used to discount profits. This rule, called Hotelling's rule, is the standard measure used in the extraction of non-renewable resources. The price and extraction rate are indirectly related, with the extraction rate declining significantly as the price of the resource increases.

It was not until the 1970s when Hotelling's 1931 model garnered the attention and support that it was due. Around this period, the limited supply of oil and other natural reserves were established and circulated as public knowledge. This realization led to two major oil crises within that decade, kindling radical oil price hikes in the process. The Club of Rome had issued a statement on the impossibility of economic development to carry on given the limited supply of resources (cf Meadows, 1972). The gravity of the issue led economists to commit time and effort in studying the optimal rate for the exploitation of natural resources (Dasgupta & Heal, 1979; Conrad & Clark, 1987).

Kamvara (2007) proposed a theory called rentierism, which applies to the extraction and importation of oil from the GCC. Kamvara defined the concept as the high profitability of an economic activity which requires proportionately lower levels of productivity. In the GCC, the production of oil requires relatively lower manpower concentration yet remains the major

source of revenue in the region. In general, import restrictions, tariffs, licensing procedures, and foreign exchange rationing are examples of rentierism (Kamvara, 2007).

Oil producing countries in the Arab region are largely characterized by rentier economies that have weak performances apart from the generation of oil revenues. Aside from providing temporary covering for otherwise unstable economies, rentierism also allows the states the liberty to extract resources and not be held liable for the actions (Kamvara, 2007; UNDP, 2005). Eventually, state elites form a cooperative group that reinforces their mutual dependence on the state. Meaningful liberalization in the political settings are not achieved, since the smaller procedures for liberalization are not aimed at (Kamvara, 2007; UNDP, 2004). In the region's most affluent nations, the rentier politics of "no taxation, no representation" is in place (Springborg, 2007).

The dependence on oil exportation resulted in weak economic structures that have left many GCCern economies weak and barely sustainable in long-term perspectives (UNDP, 2009). Many of these economies are positioned low in the competitive international market, suffering from low value-added services and low local knowledge development. Other non-oil sectors in these countries, such as agriculture and manufacturing suffer from poor performances and profitability, left behind by the oil-led economic growth. According to the UNDP (2009), majority of oil producing GCCern nations, especially the GCC countries were less industrialized in the past decade than they were in the 1970s.

Fish (2002) supports the hypothesis that the accumulation of oil wealth is more suitable for totalitarianism, stating further that there is a negative relationship between a country's democracy and its OPEC membership. States that are involved in oil production and trade tend to favour patriarchies in cultural and political structures. While the resources from oil revenues could be used to fund development projects, the culture and system revolving around oil wealth reinforces autocratic regimes and hinder good governance and economic development (Henry, 2003). As a consequence, economic growth tends to be slow, civil wars are more likely to erupt and authoritarian rule becomes a more plausible form of government. These conditions drastically shape the core of the country's social structures (Ross, 2008).

Additionally, natural resource wealth tends not only to enrich governments but also form repressive governments (Zakaria, 2004). This results in little economic or political progress. Judging from the instability and lack of substantial progress in non-oil sectors of these

countries, Auerswald (2007) observed how these oil-producers were more in desperate need of the oil revenues than the consumers were in need of the oil.

To validate Fish's (2002) assertion that oil favors patriarchal societies, Ross (2008) further studied the effects of oil in women's status in different countries whose affluence stem mainly from oil. His findings agreed with Fish's position, and his conclusion was that petroleum indeed perpetuated patriarchy. In the GCC, women were largely underrepresented in the workforce. He explained that the role of women were significantly diminished by oil rents, which allowed the persistence of patriarchal norms and institutions instead of the more diversified laws and policies that would have been set in place if export-oriented sectors such as manufacturing and agriculture were allowed to flourish (Ross, 2008).

The abundance of natural resource such as oil in the GCC largely shaped the economy of these countries in various ways, leading to 1) a low probability of competitive manufacturing, 2) decreased the significance of the private sector in the region, and 3) significantly improved the investment of resources for import-substitution beneficiaries. In stark contrast, East Asia's scarcity of natural resources naturally led to a labor-intensive manufacturing industry and entrepreneurial outlook (Solingen, 2007).

In summary, rentierism from oil wealth has shaped the political and economic structure and growth rate in the GCC, which involves high value for patriarchies, authoritarianism, low levels of development in non-oil sectors, and the subjection of women to lower status in society (Kamvara, 2007; UNDP, 2004, 2006; Fish, 2002; Ross, 2008). The tendency of wealthy and repressive government and the disregard for industrial development have made oil-producing countries more dependent on oil than their consuming economies (Solingen, 2007; Zakaria, 2004; Auerswald, 2007).

The discussion above focused on the important aspects of economic development and the non-renewable resource that is pivotal in the progress of Oman's national development. In the next section, the discourse will focus on another valuable resource that is elemental to the success of Oman's developmental objectives, that is, the country's human resource.

### **2.3.3.2 Human Development Theories and Policies**

The concept of human development is extensive, encompassing different elements. According to the United Nations Human Development Report in 1990, development has

three fundamental components: 1) knowledge, 2) longevity, and 3) standards of living. The combined measures of a country's per capita income along with its literacy, school enrolment and life expectancy rates make up the country's human development index, which is used to evaluate the nation's status in relation to the aforementioned components.

Experts and authorities on human development are now adopting the perspective of human development as a process that involves manifold dimensions (Alkire, 2002). World Bank's focus has moved from heavy emphasis on economic growth to a more extensive list of indicators in different domains such as education, health, and social exclusion (UNDP, 2000). It is not only the World Bank that sought to broaden the scope of human development. The Millennium Development Goals from the Millennium Summit in September 2000 focused primarily in education, health, gender sensitivity, environment, mortality and poverty.

Besides consumption and capital, eight spheres of well-being were distinguished by the Commission on the Measurement of Economic Performance and Social Progress (CMECSP, 2009): health, education, personal insecurity, personal activity, social connectedness, political voice and governance, economic insecurity, and environmental conditions. The commission seeks to locate and address inequalities in these measures rather than provide a concrete measure for each dimension. Anand & Sen (2000) as well as other researchers, such as Hicks (1997), are supportive of this construct, they agree on the possibility of successfully building and employing an index for these measures for a more holistic analysis of human development.

If there existed a well-defined social welfare function, and the outlook on development was completely utilitarian, there is a single measure that could substitute for the different dimensions of development. Nevertheless, the construction of such single measure is problematic since it entails various interpersonal assessments of utility (Harsanyi, 1955). The idea may not even be responsive to the real meaning of human development according to Harsanyi (1955). According to Sen (1999), development is the enlargement of the human set of capabilities as well as the set of choices people are allowed to have, with no more need for carefully considering the functions of the choices that they make.

Like certain aspects of economic development, experts have difficulty agreeing on a singular theoretical framework and definition of for human development. Nevertheless, the components that different authorities are putting forward are generally parallel and consistent

in the direction towards which they are pointing. Cahill's (2005) findings present a positive correlation between standard of living, knowledge, and longevity, so these measures can be used compositely as the human development index using a weighted average for the cluster. Alkire and Santos (2010) devised a similar multidimensional measure for poverty using 10 different indicators related to education, health and standard of living. While many researches such as the ones mentioned above are seeking to find a more elegant, singular measure as the human development index, other researchers deny that this is sufficient or effective. McGillivray (2005), along with Adelman and Morris (1967) employs the Principal Component Analysis (PCA) or factor analysis, which uses linear data reduction techniques for an objective evaluation of human development. This method, however, assumes that there is no non-linear relationships existent among the different indicators. This leads to an overestimated number of developmental dimensions.

### **2.3.3.3 Think Tank Models (Institution-led Development)**

Not over two decades ago institutional role was only a minute detail in the discourse on development economics. In the 1980s, the rise of the new institutional economics moved the subject into a broader field of study. In the 1990s, Think Tank Models have gained core importance as a critical factor in international economic development. Authorities such as International Monetary Fund (IMF) and World Bank point to institutions as the main influence behind many international differences in economic development (Stein, 2008). Think Tanks are policy or research institutes, that is, organizations that perform research and advocacy in relation to subjects such as economics, military, social policies, political approaches, technology and culture (Stein, 2008).

In the late 1990s, the subject of institutional impact over economic development became an earnest subject of debate in economic circles. Many have subscribed to the view that the low quality institutions were the ultimate cause of continued economic problems in many developing countries. As control measures for the stark inefficiencies in the said regions, the World Bank and IMF imposed excessive governance-related conditions on borrowing countries, encouraging the adoption of more effective institutions that have higher level capacities in good governance (Kapur & Webber, 2000). Around the same time period, many affluent countries extending bilateral aids to developing behaviours also started attaching similar conditionality to their assistances. These new conditions often referred to Global Standard Institutions (GSIs) as the better institutions, although there has not been any agreed

upon definition as to what constitutes a GSI. Most of these institutions are based on Anglo-American nations, who experience optimal market freedom and exercise strong private property rights protection (Chang, 2001).

The need to comply with the bilateral, regional and multilateral trade agreements obligated many developing countries to adopt the concept of GSIs, many of which started to sprout only in the 1990s. For instance, the North American Free Trade Agreement (NAFTA) made drastic changes in its 11th chapter with regards to the institutions through which the governments of member-countries could control corporations. This change in policy allowed foreign investors to file charges against host countries not only for expropriation through sequestrations but also through profit-reducing regulations (Chang, 2008). The World Trade Organization also employed the Trade-Related Intellectual Property Rights (TRIPS) agreement to mandate developing countries to embrace American-style intellectual property rights (IPRs) laws.

The pressure to form associations with GSIs and adapt to these new aid conditions, international rules and standards came to developing countries even through informal channels. Think Tanks and policy forums that are led by developed countries, such as the G7, the Organization for Economic Cooperation and Development (OECD), and the World Economic Forum, endorsed the adoption of GSI by recipient-countries. Those that remained with non-American institutions were implicitly categorized as countries with low-rate institutional quality. Developing countries which seek development loans and aids took this perspective seriously, especially with the increased influence of foreign investors in the health of their capital markets.

Aside from strong external pressures, the push for accepting GSIs also came from internal forces rooted in these developing countries. Some free-market ideologies also provided strong dogmatic support for GSIs, especially since these institutions are laid out to be intrinsically partial to the rich over the underprivileged, financial capital over industrial capital, and capital in general over labour (Chang, 2008). Not surprisingly, the elites and financial capitalists of these developing countries were strongly in favour of these international institutions.

Academic research grew exponentially pertaining to the study of institutional role in economic development. This explosion in research stemmed from and was encouraged by the

increased demand for institutional reform in emerging countries. Reports such as the *Doing Business* annually published by the World Bank, and the *Governance Matters* series published by Daniel Kaufmann's research group (1999-2002), were conducted by the same organizations who created the demand. Majority of the studies were conducted by academic economists who published papers in to directly address certain actual global demands, but were also influenced up to varying degrees by academic trends and favourable publishing potential of fresh research subjects.

Among these research works, the predominant theme is the promotion of institutions, particularly, GSIs, as the decisive factor in economic development and performance (North, 2005; Acemoglu et al., 2005). The aspect often neglected in the studies of this causality relationship is the effect of economic development to these celebrated institutions.

Chang's 2001 research is one of the few papers addressing the aforementioned gap in institutional development. His study found that several channels paved the way for economic development to influence institutions. First, economic development spurred the growth and creation of more institutions. Economic development helped cultivate agents of change, who needed more institutions to partner with in their developmental endeavours. Second, the increased affluence that comes from development tends to create a greater demand for institutions with greater transparency and accountability, higher quality output, and better governance. The demand for increased efficiency and quality has made institutions more expensive than they already were. However, Chang's third finding was that development helped to lower the costs of establishing and running these organizations, balancing the increases in costs that higher quality performance entailed.

In many occasions, reforms in relation to economic development are initiated by powerful sectors in the economy. For instance, the development of banking in the 18th century was made successful by the support of industrial capitalists despite strong opposition against it by landlords. Later, at the turn of the century to the 1900s, the working class used its rising power to push for labour protection laws and state welfare, despite the opposition of industrial capitalists who a century before had used the same show of force against the landlords.

According to Chang (2001) historical evidence points strongly towards the idea that economic development cultivate institutions rather than the concept that better institutions

cause positive economic development. Chang (2002) also noted that the institutions which the current development view contends as necessary for the development of emerging countries were in fact acquired by already affluent countries *after* they have gained considerable economic development and not prior to. These institutions include securities regulations, IPRs, limited liability, banking, bankruptcy laws, central bank, and modern bureaucracy among others. More importantly, the Anglo-American countries where the current GSIs find their home did not have much of these institutions during their own developmental states, having established these only after they have reached a certain level of affluence (Chang, 2005).

If Chang's (2001) contentions on the direction of causality between institutions and development are exact, developing countries at present and in the long run will be better off investing financial capital and other resources for development-stimulating policies instead of spending these in the costly acquisitions and maintenance of GSIs. Alternatively, developing countries can expend on educational upgrades, infrastructure investments, industrial subsidies and other areas that directly or indirectly promote economic development.

A complication in the equation of causality is what Chang (2002) noted as the late-comer effect. Late-comers in an industry have the advantage of adopting better technologies without having to pay the full development costs for the same. In the same way, late comers in the field of institutional development, especially ones who are developing countries, can benefit greatly from importing superior institutions without having to invest in their development. Given this condition at the time when developing countries were under strong encouragement and pressure to adopt GSIs, their institutions have become more highly developed than what their standards would have required. Consequently, the precise relationship between institutions and development in these countries has become more difficult to identify.

In addition to the question of institutional development, an even specific question on the nature of institution arises. Is a liberalized institution, that is, one stemming from an Anglo-American system and background, more suitable and effective for driving economic development? Laying aside the assumption that the direction of causality in actuality is opposed to the direction being proposed by the currently accepted development view, current discourses on liberalized institutions remain to be crude and insufficient in addressing fundamental questions.

Theories promoting liberal institutions posit that these entities provide stronger protection for private property rights, offer optimal economic freedom, and more effectively promote investments and economic growth (La Porta et al., 2008; Acemogul et al., 2001). To illustrate the point, the Anglo-American legal system, or common law, is viewed as more conducive for business and enterprise than the Continental system of civil law, because the former offers minimal government regulations and higher investor and creditor protection.

Proponents of liberalized institutions also argue that shareholder-oriented corporate governance systems are more effective in ensuring growth and investment by the promise that they cannot be ripped off by other stakeholders of the company. The downside to this orientation however, is the loss of incentive for profit maximization among the middle managers, workers, and suppliers of the firm, all of whom have fixed amounts of remuneration regardless of the company's profit performance.

The connection between economic development and liberalization is a far more complicated interrelationship. A further examination of the arguments of the liberalization theory has to be in order. For one, does stronger private property rights protection really promote higher economic growth? While this assumption is held indisputable by many institutions in the current trend of development discourse, the researcher finds multiple areas that leave the proposition in questionable light.

First off, discourses on the subject do not give ample consideration for other forms of property rights besides private, open-access and state. Advocates for liberalization assert the supremacy of private ownership, given that open-access nearly inevitably leads to the "tragedy of commons" and state ownership is too often rendered ineffective due to competition restrictions and principal-agent issues. In the real-world setting, however, a wide range of property rights do not fall neatly into any of the three mentioned categories.

For instance, Ostrom's (1990, 2007) research on different property rights revealed that property rights on items such as village forests may at the onset look like simple cases of open access rights, but often involve intricate rules on who is authorized to do what and when. Another recent dialogue on shareware pinpointed a communal property rights system in operation for the software and the manner and timing of use. Hybrid forms of property rights are also in existence, such as an agricultural cooperative's combination of property types for its assets, with some such as land and livestock being private properties but other

assets such as tractors and other equipment as communal. The Township and Village Enterprises (TVEs) in China also present a complex type of ownership, which are technically owned by the local states but often operate as though they are private properties of local political figures and enterprise managers. Current discussions about liberalized institutions do not provide space for these complex types of ownership.

Second, communal ownership theories have recently arisen, pointing out the superiority of communal ownership over private ownership under particular circumstances, citing evidences on the former's higher effectiveness in attaining economic growth and social efficiency under certain conditions. Numerous theories on capital market failure have also been put forward to contend the suitability and efficiency of state ownership over personal ownership under other circumstances (Chang, 2008). State ownership has not only been efficient in the allocation of resources for countries such as Singapore, Finland, France, Taiwan, and Norway but has also spurred these nations' rapid economic growth through successful and dynamic strategies in relation to technology and export (Chang, 2008).

The third point is the notion which Hodgson (2009) also emphasized. Property as an institutionalized possession is based on an existent third-party which can legitimate, adjudicate and enforce the relevant rights of the owners of the property. This third party is often in the person of the state, which means that property owners and the state cultivate a relationship which is not antagonistic, as opposed to the assumption that is predominant in current literature.

The Singaporean state, for instance, is esteemed as one which provides strong protective rights to private property in its jurisdiction. Nonetheless, Singapore's strength from which it draws its ability to offer that type of protection springs from its extremely high level of state ownership. The country has an excellent fiscal position which is attributed to its highly efficient state-owned enterprises, collectively responsible for over 20% of the gross domestic product of the country (Bercuson & Carling 1995). In addition, Singapore's ability to provide high-quality affordable housing which has provided its state with high credibility was possible because the state owned majority of the country's land and operated a gigantic public housing corporation that has 85% share in the country's housing market.

Finally, and most importantly, stronger private property rights protection has no traceable links to higher investments and consequently higher economic growth (Stiglitz, 2007). That

linkage depends on the kind of property rights that is under question and is in need of protection. For instance, in some countries, strong protective laws on landlord property have been proven to be detrimental to economic growth in that region. Likewise, too much protection on company shares and liquid assets could contribute to reduction in real investment and growth in that too much pressure is passed on to company managers who must deal demands from other transferrable asset owners.

Aside from being too simplistic about the mechanisms and effects of institutions on economic development, dominant discourse on the topic also tend to disregard the nonlinear relationship between the two, the nature of which differs across different societal structures and has the tendency to be volatile over time even in the same community.

Even if an institution does exert an influence on promoting economic growth, a higher level of influence from these entities could actually also hamper development. In the same way, experts concede that there needs to be some level of property rights protection in order to attract investments to an economy, but too much protection especially those that favour the powerful few can also be a great hindrance to progress. The recent IPRs debate emphasized this argument and revealed that too much protection of IPRs no longer contributes to firm motivations and knowledge-generation investments but becomes a negative force for the society (Chang, 2001).

Second, an institution that has been found effective in one country is not necessarily good for another. For instance, stretching the illustration of the IPR, high protection levels of IPRs is likely to generate net benefits to a country with high financial reserves but may be harmful to a country that is yet to develop its wealth. Developing countries rarely have enough economic agents that have the technological capacity to respond to the incentives stemming from those protective policies. At the same time, the country will have to pay proportionally higher costs for the higher protection as compared to richer countries (Chang, 2001). In other words, effective levels of IPR protection vary from country to country.

Lastly, the effectiveness of an institution to instigate growth in one country may also vary through time. For instance, agricultural development in Pre-World War I Japan was stimulated by concentrated land ownership. In that era, development was rapid because land personally cultivated their lands and made investments to improve technology and irrigation. After the war, however, development stunted and the prior land ownership arrangement

became a block to development since land owners became absentee landlords and were no longer motivated to invest for high agricultural yields (FAO, 1966). Japan's move to overrule the pre-war landlord property rights became instrumental in Japan's development after the war. The same course of action would have had serious economic repercussions had it been done in the previous era. The Marxist view, in relation to the forces of production, has some merits in relation to this last point. An institution that had once exerted positive influence towards development can turn into an obstacle of that same development over time.

#### **2.3.3.4 Human Capital Theory**

The Human Capital Theory (HCT) is ultimately concerned with the development and wellbeing of an economy's human capital. In the context of HCT, human capital is defined as the productive wealth of an entity that encompasses labour, skills, and knowledge (OECD, 2001). It also denotes any stock knowledge or characteristic – either innate or acquired – that a person is able to contribute to his economic productivity (Garibaldi, 2006). Fundamentally, the theory views education as an investment because it increases the productivity and earning capacity of an individual. From a macro-level point of view, educational investment is a crucial element of a country's economic growth. In support of this notion, Marshall (1920) maintains that the most valuable type of capital is the one that is invested in a country's own people.

The concept of human capital was first introduced by Schultz and Becker, both economists from Chicago School of Economics who developed the substantial portion of its theoretical framework. In the 1950s when it began to be used in academic discussions in development, the term was sternly censured by certain authorities due to negative connotations that linked it to human trafficking and slavery. Even before the publication of the theory, liberal philosophers across ages have strongly refused to associate the human person to implications of wealth or resources, emphasizing that man is the purpose for the existence of wealth and not the other way around (Mill, 1909).

Liberals had argued that a theory that promoted the treatment of humans as a commodity or mechanism for acquiring wealth was in danger of justifying the issue of slavery. At that time, the issue on slavery was a highly sensitive topic and propositions like the Human Capital Theory were bound to receive intense reactions. Becker (1993) himself acknowledged the

hesitation in publishing the research at that time. Schultz, who was a human capital advocate (1959), referred to these particular liberals as sentimentalists.

Despite the heavy criticisms, the concept became a highly accepted theory in economics, one which became fundamental in the modern understanding of development, and later became the reason for the proponents to win the Nobel Prize in 1992. In many countries, the theory has been instrumental in shaping educational policies as well as the formulation of trainings, and became extensively used in other sectors such as migration and health. In this study, the scope of HCT is limited to its application in the field of education.

HCT falls under the neoclassical economics paradigm. In order to promote a holistic understanding of the theory, there needs to be a cursory discussion of the neoclassical economic models and its fundamental assumption on human behaviour. The neoclassical perspective is based on the assumption that individuals by nature seek the optimization of their own economic interests. HCT assumes that individuals hold the hope of accumulating higher earnings in the future by investing in education and skills enhancement. Blaug (1992) asserts that individuals invest in these activities for the sake of future pecuniary and non-pecuniary benefits.

A closely related approach to education and human development is Methodological Individualism, which is a conceptual framework that argues all social phenomena can be reduced to its roots in the people's individual behaviours. The theory's prime assumptions resonate with the Human Capital Theory assertions that members of the society undergo and seek after human capital formation due to their desire for maximizing their economic interests (Blaug, 1992). While emphasising on economic interests, the theory does not disregard the nonmonetary benefits that education offers the individual and the society in terms of culture, intellectualism and aesthetics. Human capitalists, however, refer to these as education's positive externalities.

Marginson (1993) lays down the HCT proposition in a linear format: an individual acquires skills and knowledge through human capital in the form of education and training. These human capital investments will increase his productivity as a worker. Increased productivity at work will earn him higher wages, following the labour market ideal that compensation is based on one's productivity. The conclusion follows that people view education as a

worthwhile investment as long as the personal benefits from education are equal or greater than the personal costs.

The logic behind the Human Capital Theory is clarified in the close examination of its assumptions. According to this model, increasing investment in human capital leads to higher productivity rate and ultimately to higher compensation for the individual, and more progressive economy for the country.

Economic Models		
Authors	Models	Observations
Todaro& Smith, 2009	The Dependency Theory	The global economic system is primarily composed of highly industrialized countries such as the United States, whereas developing countries such as Oman are in the outskirts of the system  Core countries are able to maintain their high standards of living by exploiting the resources and markets of less developed countries, creating a continuing system of domination and mistreatment
Todaro& Smith, 2009	The Production Possibilities Curve (PPC)	A curve that characteristically concaves to the origin, which denotes the locus of the combination of all the economy's final goods if the total amount of resources were completely used.  The curve represents production volumes and combinations that do not maximize the economy's full resources
Hottelling (1931)	Petro-centric Economic Theories (Hottelling's rule)	Optimal Exploitation of non-renewable resource. Operates on a basic assumption that there is a perfectly competitive market for these exhaustible resources. The social optimum revealed that the growth rate of the resource's price is equivalent to the interest rate used to discount profits
Kamvara (2007)	Petro-centric Economic Theories (Rentierism)	High profitability of an economic activity which requires proportionately lower levels of productivity  In general, import restrictions, tariffs, licensing procedures, and foreign exchange rationing are examples of rentierism.

Fish (2002)	Petro-centric Economic Theories	States that are involved in oil production and trade tend to favour patriarchies in cultural and political structures  The culture and system revolving around oil wealth reinforces autocratic regimes and hinder good governance and economic development
Zakaria, 2004	Petro-centric Economic Theories	Natural resource wealth tends not only to enrich governments but also form repressive governments  This results in little economic or political progress
Ross (2008)	Petro-centric Economic Theories	The role of women was significantly diminished by oil rents, which allowed the persistence of patriarchal norms and institutions instead of the more diversified laws and policies that would have been set in place if export-oriented sectors such as manufacturing and agriculture were allowed to flourish.
United Nations Human Development Report 1990	Human Development theories	Human development is extensive, encompassing different elements. Consists of three components: 1) knowledge, 2) longevity, and 3) standards of living.
UNDP, 2000	Human Development theories	World Bank's focus has moved from heavy emphasis on economic growth to a more extensive list of indicators in different domains such as education, health, and social exclusion
Anand & Sen (2000) Hicks (1997)	Human Development Index	Possibility of successfully building and employing an index for these measures for a more holistic analysis of human development. Development is the enlargement of the human set of capabilities as well as the set of choices people are allowed to have, with no more need for carefully considering the functions of the choices that they make.
Cahill's (2005)	Human Development theories	Presents a positive correlation between standard of living, knowledge, and longevity, so these measures can be used compositely as the human development index using a weighted average for the cluster.
McGillivray (2005) Morris (1967)	Principal Component Analysis (PCA) of Human Development	Assumes that there is no non-linear relationships existent among the different indicators.  Leads to an overestimated number of developmental dimensions

(Stein, 2008)	Think Tank Models	<p>Importance of Think-Tank Models lies in its being a critical factor in international economic development.</p> <p>Consists of policies or institutes that perform research and advocacy in relation to subjects such as economics, military, social policies, political approaches, technology and culture.</p>
(Chang, 2001)	Think Tank Institutes/Policies	<p>Most of these institutions are based on Anglo-American nations, who experience optimal market freedom and exercise strong private property rights protection.</p> <p>For instance, Changes made in the North American Free Trade Agreement (NAFTA) in its 11th chapter allowed foreign investors to file charges against host countries not only for expropriation through sequestrations but also through profit-reducing regulations.</p>
Chang (2002)	Causality between Think-Tank and institutes policies	<p>Institutions emphasizing the current development were in fact acquired by already affluent countries after they have gained considerable economic development and not prior to.</p> <p>Based on Think-Tank policies and their causal relationship with institutions, , developing countries at present and in the long run will be better off investing financial capital and other resources for development-stimulating policies instead of spending these in the costly acquisitions and maintenance of GSIs.</p>
La Porta et al., 2008 Acemogul et al., 2001	Think Tank Institutes/Policies	Theories promoting liberal institutions posit that these entities provide stronger protection for private property rights, offer optimal economic freedom, and more effectively promote investments and economic growth
(Chang, 2008)	Loopholes in Think-Tank Policies/Models (Communal Ownership Theories)	Superior to private ownership under particular circumstances, citing evidences on the former's higher effectiveness in attaining economic growth and social efficiency under certain conditions
Hodgson (2009)	Loopholes in Think-Tank Policies/Models (State-Ownership Theories)	Property as an institutionalized possession is based on an existent third-party which can legitimate, adjudicate and enforce the relevant rights of the owners of the property.

(Stiglitz, 2007)	Loopholes in Think-Tank Policies/Models	Stronger private property rights protection has no traceable links to higher investments and consequently higher economic growth
(Garibaldi, 2006)	Human Capital Theory	Concerned with the development and wellbeing of an economy's human capital Denotes any stock knowledge or characteristic – either innate or acquired – that a person is able to contribute to his economic productivity
Becker (1993) Schultz (1959)	Human Capital Theory	Opposes the treatment of humans as a commodity or mechanism for acquiring wealth Instrumental in shaping educational policies as well as the formulation of trainings, and became extensively used in other sectors such as migration and health
Blaug (1992)	Human Capital Theory (Methodological Individualism)	A conceptual framework that argues all social phenomena can be reduced to its roots in the people's individual behaviours Members of the society undergo and seek after human capital formation due to their desire for maximizing their economic interests
Marginson (1993)	Human Capital Theory (Linear format)	An individual acquires skills and knowledge through human capital in the form of education and training. These human capital investments will increase his productivity as a worker, which at work will earn him higher wages, following the labour market ideal that compensation is based on one's productivity

#### 2.4 Value Generation and its Management in oil led economies

Countries that have integrated a local content policy within its economic development framework are also bound to encounter many challenges. These challenges pertain to the regulatory frameworks that will optimize value creation within the value chain of extractive industries like the oil sector. Such sectors consist of different activities from the point of extraction to its processing, and up to the point where it is made available for sale and utilization of its consumers. Such processes occur among companies operating in the host country and the home country, and with their consumers. Local content policies can have an impact on the distribution of value along the production chain, as well as the global value chain itself. Being such, its stakeholders may consider local content policy as a determining factor in making their investment decisions that could also prove to be critical in the

formulation of public policies as strategically aligned with development goals of the country, to which it requires a deeper understanding of the processes that takes place from the point of extraction, processing and distribution of oil and gas.

As earlier mentioned, activities in the oil and gas sector can be classified into three groups; that is, the upstream, midstream and downstream (Weijermars, 2010). The upstream level includes the activities of exploration and discovery of oil and gas development, as well as production, including the assessment of its quantity for further exploitation. Under the midstream category, the activities comprise those that take place during the transport and storage of oil. Downstream activities consist of activities that involve further processing of the product in its raw form to its refining, gas, as well as petrochemical processing. It further includes distribution activities of the products to its various consumer markets, most of them owned by utility providers (Weijermars, 2010).

The identification of secondary basins for oil and gas can be achieved by means of aerial or satellite photography and magnetic surveys or any other advanced or more detailed information obtained from 3D surveys, as well as exploratory drillings. After the discovery of oil, comes the delineation and appraisal process of the deposit, which usually lasts for several years to complete. It could take from three to ten years. This includes activities and other forms of investments necessary to set-up the site for commercial production, including the creation of an evaluation system. Duration of these activities also depends on the requirements of each project, the region's requirements and usage for exploration. Investments along these areas usually range from 40-50% of the total cost of a project and also vary among regions based on the depth and quality of the reservoir, its products, as well as the geographical environments where development operations will take place.

The production stage follows next to which it is composed of extraction of gas and oil from the deposits. This is followed by the extraction of hydrocarbons that is known as a 'build-up'. Then a plateau that can temporarily be maintained for a few months or even years in the case of large oil deposits, and the 'decline' until the end of the life of the field follows.

As recovery of hydrocarbons can vary depending on the type of reservoir and pressure applied, production costs also differs depending on the size and geographical circumstances of the region. Within a span of 15-25 years, hydrocarbon recovery will eventually reach its

limits leading to a rehabilitation of the area requiring production facilities and structures are removed (Sigam & Garcia, 2012).

The commissioning of production installations includes such activities as the removal of equipment being used, site restoration according to environmental sound practices and conditions, and also implementing measures to stimulate site re-vegetation, and the continues monitoring of the closed site. This phase, usually included in the planning process at the start of the development phase, is executed at the culmination of the commercial activity; results, which takes place within three months (Sigam& Garcia, 2012).

Midstream activities consist of the establishment of assets and services that links the supply and demand of gas with its value chain to include transportation and storage. Storage facilities normally have large-diameter tanks that are clustered in large tanks connected to different hubs pipelines, or ports that would facilitate distribution to consumer centres. The value chain also includes inventories held up as hedge for future speculation of the commodity.

To transport these oil and gas products, equipment like tankers, pipelines (which is the most favoured although expensive) and railroads are used hence making it inevitable for additional investments. Pipelines do not offer any flexibility as they are usually fixed and when installed across borders, the construction of pipelines is usually integrated (Folga, 2007), and may involve negotiations and other agreements, to include substantial investments that require upfront payments and contractual stipulations.

Another means of transporting gas is through shipping (Ekpo, 2012). Technological breakthroughs also enable the conversion of gas into liquefied natural gas (LNGs) Marine tankers also serve as a viable mode of transporting oil and oil products, the most common among them is intercontinental transportation, and offers more flexibility than pipelines.

Downstream activities cover the activities from the refining/processing of hydrocarbons to selling it to final consumers. Crude oil is processed and converted to be made ready as finished products, where refining is the most critical part of the value chain processes.

Marketing involves the usual activities like selling and delivery of refined products in different distribution channels. These activities are normally handled “by international or local integrated oil companies, specialized distribution companies, and increasingly by petrol

stations chains, supermarkets as well as retail firms.” (Sigam & Garcia, 2012) Piped gas is usually distributed by utility companies and other firms that participate in long-distance transmission as well as by direct deliveries.

As described earlier, the different activities within the oil and gas sector value chain can offer many employment opportunities where local content can play a significant role. This is however, with the reservation that local content possess the desired skills that are necessary to handle such the sector’s activities that includes planning and decision-making they can incur heavy investments from the onset.

Local content, as it is generally perceived to be has the capability of creating employment opportunities, stimulating economic activities through entrepreneurship that can also trigger diversification, technology and knowledge transfer (Boschma, 2008). These activities require a comprehensive understanding of the value chain pertaining to the industry itself and its value chain and the economic mechanisms that poses as challenges in determining how it can provide human resource values (Abdullah, 2009; Hvidt, 2013) in the Omani economy. These different opportunities and challenges are thus discussed in the following sub-sections of this chapter.

## **2.5 Employment Opportunities**

Countries that are blessed with rich natural resources such as minerals, fossils, and their culture have the capability to increase their wealth if such resources are carefully and efficiently managed (Strauss, 2000). Its positive outcomes include more revenues for the country resources, fluidity of foreign exchange, employment opportunities, as well as the production of more goods and services needed for consumption that would further the creation of employment (Armstrong & Ebell, 2014; Strauss, 2000).

Although, studies among developing countries with lesser natural resources do not always have positive effects (Acquah-Sam, 2014) the creation of employment opportunities is one of the major contributions of oil producing countries. This can also be attributed to the economic and social integration with other institutions along with the sector’s convergence with other countries, especially those who are abundant of the same natural resources (Sachs & Warner, 1997). This is highly evident among state-owned oil companies in which their training programs are geared towards upstream activities, as well as in supervisory roles and leadership programs (Todaro, 2004).

Michael Strauss (2000) in his work presented a proposition as regards positive economic outcomes that can be derived from an abundance of natural resource. In his work Strauss referred to natural resource wealth as more of a curse than a blessing citing “pauper rolls” (Straus, 2000) or abject states of countries like Japan, Singapore, Israel, Taiwan, South Korea, and Hong Kong reaching high levels of economic prosperity. On the same note, the author cited the countries of Nigeria, Mexico, Argentina, Iran, Libya, India, Haiti, Costa Rica, Azerbaijan, Burma, Armenia, Georgia and Jamaica, wherein natural resources, instead of providing wealth, only led these nations into different levels of poverty, political instability and chaos. These adverse effects on the abundance of natural resources were also linked to macroeconomic causes such as the terms of trade, foreign exchange rates, debt burdens and fiscal issues (Sachs & Warner, 1997)

The same contention may be supported by the “Dutch Disease” where nations abundant in natural resource suffered rather than prospered with its natural resource endowment. Strauss (2000) made a clear explanation on how the “Dutch Disease” occurs in which a country rich in one or few natural resource is trapped into a “spiral of macroeconomic imbalance” (Strauss, 2000) relating to the Dutch experience where the country fell into an economic stagflation from the 60s to the 70s despite its overabundance of natural gas.

In as much as the exploitation of natural wealth can lead to increase in profits and foreign currency and thereby encouraging linkages within the global sector that further expands demand for the natural resource. In effect, this can diminish supply faster and resulting to inflationary prices even within the domestic market. As government revenues become reliant on the resource what the government earns will be spread to the production of other domestic products resulting to higher prices unless pre-emptive measures are undertaken much as Strauss (2000) describes it as “curable” as he cites the case of Indonesia wherein the country has devalued its currency and increased its revenues in its offshore accounts.

For Oman, the path does not appear to lead towards the expansion of its labour pool as the oil and gas industry is very capital intensive. In this case, growth in the sector can be determined by the amount of capital investments not on the expansion of employment. Currently, the Enhanced Oil Recovery (EOR) to which Oman is a pioneer in the implementation of these activities; and such is now undertaken by Oil & gas Operators, are used for extraction and this situation is only seen to exacerbate over time (Stosur., 2003).

In other words, as it was earlier premised, the abundance of oil as a natural resource is not always a sufficient condition for a sustainable economic growth and development (Warner, 1997) such as in the countries of Angola, Argentina, Gambia, Nigeria and all other developing countries that are abundant that have abundant natural resources relative to their needs.

In the case of the United States of America and Great Britain, these countries were able to optimize their natural resources through their efficient financial resources (World Bank, 1989).

### **Chapter: 3 ICV DEVELOPMENT BACKGROUND**

In-Country Value is a vital subject to the Omani Government as it forms part of the His Majesty's National Objective Programme of improving the sustainable employment of Omani nationals along with increasing the incorporation of Omani goods and services within the procurement processes of local companies. Despite other similar initiatives of the government such as the Vision 2020, the ICV programme has been considered a vital component of this study due to its strategy of domestication through sustainable industry practices. In a way, it can be said that majority of the goals of the Vision 2020 plan are a part of ICV programme too. This chapter is devoted to understanding the components and features of ICV in detail.

The oil and gas sector is one of the key pillars to ICV development. The share of petroleum activities in the GDP reached 50.9% in 2011, and it is expected that the size of the oil and gas sector investment will reach between USD100 to 110 billion for the upcoming 10 years (2013-2022), out of which USD40 billion will be invested in Gas development (Oxford Business Group, n.d.).

The Ministry of Oil and Gas and oil and gas companies acknowledge their significant role in stimulating and positively impacting the economy in Oman. Hence, the MOG formed an ICV Committee, chaired by His Excellency Nasser bin Khamis al Jashmi, Under-Secretary of the Ministry of Oil and Gas, with OPAL CEO Mohamed al Harthy as board secretary. The ICV Committee groups government representatives and executives from the oil and gas sector. Its main role is to provide guidance and governance to ICV development and raise opportunities while coordinating the efforts of the industry with respect to ICV development. Two sub-committees have been created, the Contract and Procurement managers sub-committee and the Human Resources managers' sub-committee.

Government has created a dedicated ICV development division, responsible for defining and implementing initiatives directly related to the development of local suppliers and local workforce, mainly through:

- ICV tendering clauses,
- Financial support mechanisms,

- Local workforce skilled training and employment programs.

### 3.1 In-Country Value (ICV) Six-Dimension Strategy

Oman’s ICV mission revolves around a six-dimension strategy upon which all rationalizations and activities which include the 50 cross-industry development initiatives, over 50 supply chain development opportunities, a local workforce development initiative, the execution model and the key performance indicators are all integrated for implementation in the proposed comprehensive national development program for the Sultanate’s oil and gas industry (ICV Blueprint, 2013).

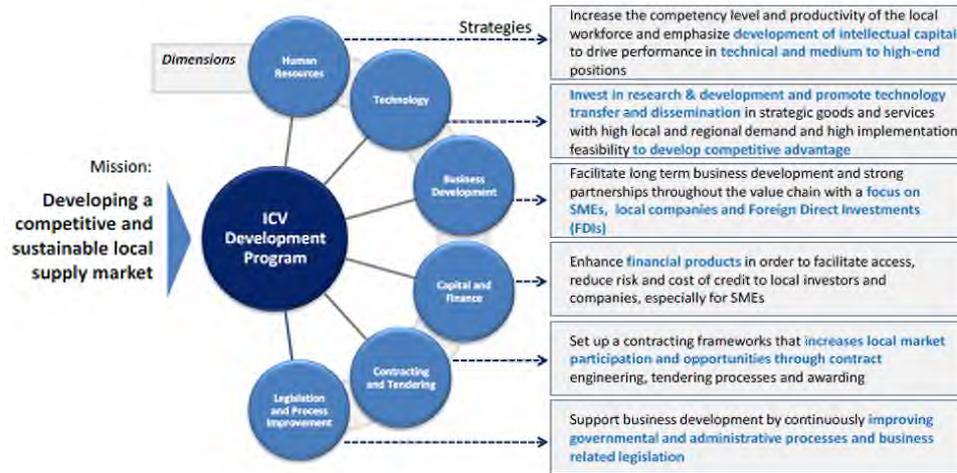


Figure 3.1 Six-Dimension Strategy

Source: In Country Value Oman, n.d.

At the ICV development operational level, two types of development opportunities have been defined:

#### **Supply chain development opportunities**

53 supply chain development opportunities have been identified out of the purchasing categories initially selected to be included in the scope of work. The supply chain development opportunities consist of expanding and launching new industries, activities or products in response to the oil and gas industry demand.

For each opportunity, and based on the implementation feasibility and the local supply market maturity, an implementation strategy and roadmap have been defined. The implementation strategy gives preference first to the development of SMEs, or the development of Omani well-established companies, then to the creation of joint-ventures and lastly to the establishment of local branches of international companies in Oman.

The supply chain development opportunities cover all types of activities. They are balanced between the development of raw material, manufacturing, assembly, blending, fabrication and services (ICV Blueprint, 2013).

### **Local workforce development program**

A local workforce education and training program based on the analysis of 228 skills has been defined. Currently the number of Omanis working for the oil and gas industry topped approximately 22 thousand out of a total of 55 thousand. By 2020, the number of positions available to be occupied by Omanis would reach 50 thousand. This includes the new position openings due to the increase of oil and gas industry demand as well as the succession of all expatriates currently in position. However, acknowledging the importance of expatriates in business, especially with regard to technology transfer and business viability, the program suggests to educate and train 36 thousand Omanis (71% of the workforce size, representing the semi-skilled and medium to high end positions) to fulfil the oil and gas industry demand (ICV Blueprint, 2013).

## **3.2 Government Initiatives on Contract Tendering**

This section will discuss the local content initiative in the oil and gas sector of Oman. It will go over the fundamentals of local content and the current initiatives enforced by the government on the tendering process to support ICV programs.

As per the MOG guidelines a standardized approach to incorporating ICV (In-Country Value) into tenders for major and minor contracts across the Oman Oil & Gas industry has been developed. The bidder with highest ICV content for the tender will be given commercial benefit up to 10%. The exclusive exhibit for ICV in the tender package request's the bidders to provide current and forecast data on the following seven elements;

- Investments in Fixed Assets in Oman

- Omanization in the Workforce
- Omani Recruitment, Training and Progression
- Local Sourcing of Goods
- Local Sourcing of Sub-Contracted Services
- Development of National Suppliers
- Development of National Training, Education and R&D Institutions

The above data is evaluated to identify the highest ICV content by the bidders, since different contract types generate different types of ICV, therefore five weighting sets have been developed, as follows:

- DRILLING RIGS
- PROCUREMENT (products, equipment, materials)
- SERVICES, with \$ materials and equipment > 40% of core bid value<sup>2</sup> (e.g. drilling services, field production, materials-intensive fabrication/construction)
- SERVICES, with \$ materials and equipment < 40% of core bid value (e.g. engineering, labour-intensive fabrication/construction, consultancy, finance, insurance)
- MULTI-DISCIPLINED (EP/EPCm, EPC, EPIC, EPCIC)

By reviewing these facets of the elements in the tendering, the research will be able to uncover how the Omani government would be able to create and enhance the implementation of a local content policy that envisions a skilled workforce and an investment-friendly economic that is conducive for the achievement of a sustainable economic growth and development. While local content has been a major concern in the oil and gas projects undertaken by emerging economies, the researcher feels that there is inadequate information

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<sup>2</sup> Core Bid Value, means the anticipated value to be charged to client for labour plus equipment, less associated overheads and mark-up. Deciding which weighting-set to use for a particular Service contract will be a professional judgement

regarding how local content can work not only for the oil and gas sector but also for the whole economy especially when the goal of the economy is to remove its dependence on oil revenues.

### **3.3 Need for In Country Value (ICV) or Local Content in Oman**

The Ministry of Oil & Gas clearly defines In-Country Value or as “the total spend retained in country that benefits business development, contributes to human capability development and stimulates productivity in Oman’s economy” (Ministry of Oil & Gas, 2013). The Ministry further enumerated the elements of ICV consisting of fixed assets investments in Oman, Omanization of its work force, training for Omanis, local sourcing of goods, as well as sub-contracted service, development of local suppliers, and development of national training, education and research and development institutions.

The local content policy is also utilized by other countries as a strategy to increase domestic inputs in order to add value to the economy (Lahiri & Ono, 2003). Countries that utilize such policy are those which are dependent on their natural resources, such as oil and gas. Indicators from World Bank data (Collier, 2000) however have shown that countries that depend largely on either one or a few commodities like oil is more likely to fall into several problems detrimental to the economy, such as, corruption, underdevelopment, poverty, domestic conflicts (Papyrakis & Gerlagh, 2004), viewed as ‘curse’ than a blessing and known as “resource curse syndrome”,

Local content started in the 70s from the North Sea (TIME, 1979) in the form of import restrictions coupled with the creation of national oil companies. Technology transfer, local employment opportunities, backward and forward integration, increase ownership and control of firms were the main objective of the local content policy (Lec, 2011). Its major objectives were transfer of technology, provision of local jobs.

Australia had utilized local content strategy in its automobiles and tobacco industries. Canada also used it in its automobile industry, so as with other European countries that produces automobiles and electronics (Velo, 2006). The policy was also useful for countries with wind power industries (Ado, 2013). In the case of China, its local content policy demanded 70% domestic content and a basis for awarding wind farm projects as implemented in 2004. The wind energy sector in Brazil also adopted the same policy despite its inadequate capacity. The Spanish provinces of Castile, Galicia, Leon Navarra, and Valencia, have

adopted and applied local content policies autonomously. Quebec's local content policy had started in 2003, with a stipulation that 60% of the expenditure spent on turbines need to be localized (Hao et al., 2010). Other oil producing countries like Nigeria have also adopted local content to protect its oil production industry. As Oman sees more opportunities in its oil and gas sector, its ICV program becomes an effective trade-off in achieving "short-term efficiencies that supports long-term development" (Lec, 2011).

In the case of Oman, there is only a need for continuation of the efforts exerted to upgrade and enhance the efficiency of the State's administrative apparatus and control of its performance. Special attention to population and sustainable human development issues, social care and enhancing women's participation in conformity with economic growth and with continued sensitivity to Omani culture. Development of small and medium-sized enterprises is achieved by means of providing them with financial, technical and administrative support like upgrading the financial institutions so as to enable them to achieve optimum allocation of savings, financial investments and improvements.

The Sultanate's economic reform programme is primarily geared to meet the growing demand for jobs created by the sustained growth in the youth population. Economic reform continues to focus on diversifying the economy into labour-intensive areas, expanding and enhancing the role of the private sector, and developing human resources by increasing the capacities of young Omanis with the necessary skills through improvements in technical education, vocational training and higher education. At this point, it can be asserted that the achievements made by the government through various initiatives that has uplifted the standard of living of Omanis, and how it has made improvements in the field of education and training with its collaborations with the private sector and private educational institutions.

The degree of satisfaction towards government initiatives on levels of living standards according to geographical areas in the Sultanate, wherein those in urban areas are likely to be more satisfied than those in the rural areas as more developments are taking place in the cities of Oman.

The need for an ICV policy for Oman's economy is necessitated by the two-fold challenge it faces to sustain future growth and sustainability. Primarily, its dwindling oil resources have lowered the capability of the public sector to employ Omani Nationals. This also has

repercussions on the economic structure of the country. Another is the skills that are demanded by the labour market, which are not met by the young population entering the labour force albeit, the large demand for employment in the public sector. The public sector, which is a most favoured place of employment for Omanis, has become saturated causing an imbalance with the rate of growth of the population. These issues have raised additional concerns on current educational system posing as hindrances in the full implementation of the ICV strategy. The Omani government is neither remiss in paying attention to these concerns and have implemented policies that would further improve its economic standing turning to diversification and promoting the growth of the private sector. In a similar manner, measures have been undertaken to develop the human capital of Oman to make them employable in the major industries of the economy.

Back in 1995, a conference was held to determine the future direction for the Sultanate's economic and social development thereby giving way to the launching of Vision 2020, a plan which recognizes the essentiality of the "the acquisition of global knowledge, information and technology, and the development of advanced human skills becoming essential prerequisites for progress" (Ministry of Education, 2004).

Among the goals of Vision 2020 was to achieve an efficient and competitive private sector; a diversified economy; well-developed human resources; and sustainable development within a stable macroeconomic framework. Through the vision, a number of plans were instituted by the government to reach its goals. Thus, the leadership has implemented and continuously strengthens its diversification plans, not only to improve Oman's economy but the well-being of its population. Focus of the plans was on providing macroeconomic balance, sustainable growth, diversification, the development of its private sector specifically by providing support to SMEs, and the development of its human resources (Oman Ministry of National Economy, 2005a).

The Omani government has long foreseen the challenges it has to face in the 21st century; that is, dwindling oil reserves and growing youth population to which must address seriously. Hence, to overcome these challenges, its leadership pursued five interrelated approaches to develop the human capital of the economy and went on to change the educational curriculum and structure of the country by promoting the creation of private universities and colleges. The government also went about creating more vocational training opportunities and aligned vocational training to the specific needs of the private sector. It also went about diversifying

its economic activities and immersed itself to privatizing its labour market. In other words, the approaches it undertook relates to the main challenges pertaining to the educational system where several transformations are needed in its curriculum and promotion of education and training to provide needed skills of the private sector. On the same note, the government also moves towards addressing the issues in its labour market by broadening its economy through diversified activities. However, oil and gas still remains as its primary industry hence, this study primarily looks into the promotion of ICV in the oil and gas sector, the largest sector in the economy so far so as to relate the findings that could be made with all the other sectors of the Omani economy.

The Ministry of National Economy of Oman explicitly declares that the development of the country's human resources and the upgrading of skills of the Omanis have to be implemented to keep abreast of the technological changes, meet the demands of a knowledge-based economy and globalization.

To fully support ICV, Oman has increased the percentage of admission in higher education institutions of graduates with general certificates while upgrading and spreading basic education. The government's goal is to enable the Omani youth to meet the demands and fill-in new employment opportunities and substitute expatriates, aimed to increase the productivity of Oman's youths. As they are being prepared to participate in establishing knowledge economy and better enhance their quality of life (Oman Ministry of National Economy, 2005).

Oman has made a steady progress in the above mentioned aspects and has instituted changes to the structure and curriculum of its educational system. Providing government-funded education has been one of its accomplishments, and its current priorities are now concentrated into enhancing the quality of education to meet the demands of technological changes in the environment. The teaching of English was moved to the Grade 1 rather than Grade 4 as the government finds it necessary to equip the youth at early age to prepare them for higher education programs in the future, where English is being used in teaching the subjects. Special curricular materials put emphasis on the acquisition of transferable skills rather than on theoretical concepts alone. Learning passively is no longer the focus in teaching but instead experiential learning and other contexts for application.

The MoM has stipulated a fixed Omanization ratio in six areas of the private sector: transport, storage and communications are to have 60% of national workers; finance, insurance and real estate 45%; industry 35%; hotels and restaurants 30%; wholesale or retail trading 20%; and contracting 15%. The Oman Future Vision 2020 embraces the strategic changes in the Oman development process to shape up the national economy, boost it and diversify sources of national income in a bid to reduce dependence on oil and expatriates. The objective is to rely more on the private sector and the national labour force to achieve better living standards. Within this context of rapid growth and economic reform, the social protection sector and mechanisms will play a key role in addressing the growth of the informal sector (sub-contracting, home-based work and self-employment) and ensuring that working conditions and occupational safety and health issues are properly applied. There is no United Nations Development Assistance Framework (UNDAF) for the country as the presence of United Nations agencies is limited.

### **3.4 Major Government Initiatives**

Two major initiatives have been implemented by the government in making transformations in its labour market and the private sector. These initiatives were implemented through economic diversification and privatization, in addition to the improvements made in the quality of education the Omani government provides to its citizens. This initiative was intended to prepare Omanis for future employment opportunities by equipping them with the skills demanded by the private sector. With a diversified economy, the government is able to promote the employment possibilities of Omanis through its Omanization policy, which it strongly emphasized. To ensure that its Omanization goals are met, the government made their Omanization policies pertinent to all types of organizations, both private and public. To further reduce its reliance on oil as a source of its revenues and expatriate labour, the government has leveraged its spending on industrial and tourism projects to create jobs and foster different sources of income via the private sector other than oil and to develop areas in its interior region. In addition, it has offered soft loans to entrepreneurs to foster the growth of small- and medium-sized enterprises and built new industrial estates outside of Muscat.

The discovery of oil was essential to the development of infrastructure and government services like health care and education after 1970 in Oman. Al-Shanfari (2012) makes the point that oil is still the foundational part of Oman's economy and it continues to drive development and prosperity in Oman – oil proceeds make up about eighty percent of the

Oman government's revenue. It has been estimated that there are now less than 20 years of reserves left for Oman's oil, so there is an increasing need to encourage diversification in the economy. The population has also grown at a fast rate, and the economy cannot supply enough jobs for the growing population, and taxing the educational system as well because there are a lot of youth who are not able to find quality work after graduation. These dilemmas have led many analysts to look at entrepreneurship and self-employment as possibilities for further diversifying the economy and creating more sustainability in the local economy (Al Moharby & Khan, 2007). Al-Shanfari says however, this will be a challenge because the indigenous private sector is small in Oman and there are only a very low number of entrepreneurial ventures. As Porter states, 'Oman's economy is suffering from an underlying entrepreneurial malaise, which without action, will hinder economic growth' (Porter, 2003, p. 51).

Al-Shafari goes on to explain that Oman is less than ideal for entrepreneurs because administrative procedures are cumbersome and licensing processes are restrictive. The government itself and the bureaucratic inefficiencies were considered one of the greatest barriers to doing business in a survey of Omani respondents (Blanke et al., 2009). Al-Shafari goes on to note that Oman ranks poorly in terms of small business climate: Oman was in 65th place out of 183 in ease of doing business in 2010 (World Bank, 2010). Despite these limitations there is increasing recognition that entrepreneurship and small business is an important motor for local economies. Khan and Almoharby (2007) state that there are now a few organizations that have begun to promote the idea of entrepreneurship. There are emergent entrepreneur training ship programs and education that is geared towards promoting small businesses. The authors argue that entrepreneurship and small businesses deserve a more central place in the promotion of local economies and the diversification programs advanced by the Omani government (Khan and Almoharby, 2007).

There is also a significant literature emerging about women and entrepreneurship in Oman. Small business practice and entrepreneurship may be a way to create spaces for women to gain their own financial independence and to control their own resources (McElwee & Al-Riyami, 2003). The authors point out that the Omani government have underutilized the role that women can play in diversifying the economy and taking on the role of promoting entrepreneurship and small business practices in order to create a resilient and solidly diversified economy.

In other articles about women's entrepreneurship in Oman, the authors make the point that there has been a departure from traditional decision-making and male dominated power structures. There is now an evolving phase of women's empowerment considering how restrictive traditional roles were restrictive of women (Al-Lamky, 2007). The organization Omani Women Workshop (2009) has noted that government support for some opportunities like education and financial support have created opportunities for women to become entrepreneurs (Al-Sadi, Belwal & Al-Badi, 2011; McElwee & Al-Riyami, 2003). These authors point out that women's entry into entrepreneurship fields is new in Oman and it has its challenges. There are difficulties in terms of accessing financing and technologies and family responsibilities that put pressure on women to conform to traditional ideals about the family (Al-Sadi, Belwal & Al-Badi, 2011).

Liberation policies were also implemented to encourage more trade in its economy. Determined to achieve growth rates, stable prices, an upgrade of citizens' standard of living, maintain its low inflation rate, reduce unemployment by improving the quality of education and providing more higher education opportunities. ▯

A number of initiatives to achieve its goals have already taken effect. Economic diversification, the promotion of private sector, and Omanization are so far the three biggest initiatives that the government has made to forward its economic growth and remove reliance from oil revenues and expatriate labour.

Back in 2000, Oman opened a liquefied natural gas plant that that has proven to be somewhat productive with natural gas production estimated at 16.5 billion cubic meters, and natural gas reserves are at 829.1 billion cubic meters in 2004. The plant's provision has provided added inputs to the country's oil and gas capacity. Added to that is the government's strong support in developing the manufacturing sector through infrastructure projects of developing sea ports and airports that were also included among its major projects to sustain economic growth and development.

Export development projects are were also pursued by the government in the last decade with the opening of industrial zones in Rusayl, Sohar, Raysut, Sur, Nizwa, Buraimi, and the Al Mazunah Free Trade Zone. These industrial zones were further developed Efforts to developed under the Public Establishment Industrial Estates (PEIE) that was long-established in 1993 (PEIE), which was designed to take responsibility over the development of industrial

land within its capacity to act as a liaison for manufacturing businesses and the Oman government. The PEIE also works hand in hand with companies in the assembly of sites, development of buildings, and the assessment of infrastructure project needs. Incentives available for different projects are also assessed, as well as providing assistance to firms in the marketing and promotion of its products. The body also works hand in hand with the Oman Ministry of Commerce and Industry, the Oman Chamber of Commerce; the Oman Centre for Investment, Promotion, and Export Development; and also being works with permit issuing and regulatory bodies, and utility providers. From these initiatives, it is apparent that Oman is determined to reduce its reliance from its dwindling oil resources and instead strengthen its human capital through various infrastructure projects and giving support to businesses to generate jobs for its citizens while strengthening the industrial, trade and commercial sectors of the country. Along with these initiatives, Oman has sought for various ways to promote the private sector especially SMEs to widen job opportunities.

Aside from privatization, tax free zones and technological parks like Knowledge Oasis Muscat (KOM); were also created to make the country more attractive to foreign investment, while providing support to technology-oriented businesses. KOM tenants include entrepreneurs' researchers, small and medium-sized businesses, as well as large multinational corporations. KOM incentivizes businesses in various ways like foreign ownership, no personal income tax, no foreign exchange controls, tax and tariff exemptions and duty-free access to products moving from Oman and other GCC countries. Technical vocational colleges are also found in KOM.

The opening of free trade zones in the country has also been very helpful to the government in attracting more investments into the country. As the country has a very strategic location, Oman is able to capitalize on this. For example, its Al Mazunah Free Trade Zone, which is located in the southern region, specifically in Dhofar, lies close to the border with Yemen, lying outside of tax boundaries, and business personnel can enter Al Mazunah without the need for the issuance a visa. Free trade agreements with countries like the United States, as well as with other European and Asian countries have further enhanced the country's comparative advantage over other countries in the GCC.

The Foreign Capital Investment Law in 1994 intended to attract non-Omani investors was amended in 2003 to allow non-Omanis to conduct business in Oman by securing a license from the Oman Ministry of Commerce and Industry. Although foreigners are not allowed to

own more than 49 percent of a company, exceptions of up to 65 percent and even 100 percent ownership can be made for “*projects which contribute to the development of the national economy*” upon the approval of the Council of Ministers (Oman Ministry of National Economy, 2005).

The government has also provided several forms of tax incentives to the different sectors of its economy, such as industry, tourism, and farming, via tax exemptions of up to ten years.

Further, the government added more local markets in the country in order to create more jobs rather have businesses concentrated only in Muscat. Entrepreneurs and would-be entrepreneurs also received support from the government as it extends soft loans and grants to young people who wanted to start their own businesses. Generally, the government is able to provide fiscal incentives to its people where it encourages them to start their own businesses. Loan subsidies of up to Omani Rial (OR) 5000 are extended to its youth population who have left school and are unemployed and provide them a source of income through self-employment. These initiatives have made positive contributions to trade Omanization and fostered the growth of small businesses.

The government have targeted such sectors like grocery shops sale of foodstuffs, vegetable and fruit shops, ready-made garments, car washes, Internet cafés, meat and butchery shops, and carpentry wood works shops. Moreover, Omanis were also provided entrepreneurship trainings to better prepare them in starting their own businesses. Part of the government’s initiatives are labour laws that were developed to provide the labour force more rights, and a standard minimum in replacement of the skilled and unskilled wages (Fasano and Iqbal, 2003).

### **3.5 Omanization**

The composition of its workforce includes expatriates, overseas personnel, who have helped assisted in shaping the physical and administrative infrastructure of Oman for quite a number of years, which caused rendered a disparity between the oil-producing and non-producing companies/enterprises. Private businesses are likely to hire foreign workers as they are able to fulfil the skills requirements of most jobs in the different sectors of the Omani economy. Most major oil and gas companies have almost half of its workforce consisting of foreign workers. Banks, insurance, hotels have the least number of Omani employees back then in

the 90s and thus, have compelled the government to implement the Omanization policy, which includes the following.

- Raising the Omanization ratios in private-sector establishments organizations have and increasing contributed in growth of productivity in government bodies as well as increasing the Omani labour work force from 17 percent to 50 percent of the total working workforce population.
- Increasing the Omanization percentage in the government public sector to 95%. (The Omanization percentage in the government sector was 35 percent in 1990 and improved to 75 percent in 2010.)
- Increasing the Omanization percentage in the private sector to 75 percent. (This share increased from 25 percent in 1990 to 38 percent in 2010)

Oman has taken introduced steps to promote the employability of Oman nationals. More than 17 joint sectorial committees with members from the private sector, public sector, and Oman Chamber of Commerce and Industry have been formed designed to enhance and expand government and private sector and government roles in the field of training and employment. The responsibility of these committees lies in addressing the structure of labour and formulation of training and plans associated to Omanization plans. Identifying such requirements necessitates as time schedules, employment relations, and wage policies (Oman Ministry of National Economy, 2005a). Based on the recommendations of these committees, the Ministry of National Economy has fixed Omanization targets for Sultanate of Oman in six areas of the private sector enterprises and offers suggests certain benefits to businesses that meet Omanization targets. These rewards include a certificate for catering to Omanization targets, having the company name published in the local press, and preferential treatment in dealings with the Ministry (Oman Ministry of Information, 2008a). The field of education has made Omanization a success.

Historically, teachers in Oman have been predominantly non-national expatriates. This dependency on foreign staff often brought about high turnover rates and a lack of continuity among the locals. In academic year 1980–1981, only 618 of a total of 5,663 teachers, or 11 percent of the teaching staff, were nationals. By 1985–1986, the proportion had increased to 18 percent. The majority of Ministry of Education employees (55 percent in 1990) were also non-nationals: more than 70 percent Egyptians, and 30 percent Jordanians, Pakistanis,

Sudanese, Indians, Filipinos, and others (Metz, 1994). The government has responded by emphasizing teacher training for nationals in order to create an indigenous teaching force. Furthermore, the government has made Omanization in the educational colleges a high priority. As of 2003, the total number of staff working in the educational colleges was 1,051; of these people, 633 were faculty, 94 of them nationals (approximately 15 percent of the total). Academic support staff numbered 213, of whom 205 were nationals (97 percent of the total) and 8 (4 percent) were non-nationals. Administrative staffs were 100 percent nationals. Oman Ministry of Higher Education staff on scholarships for higher degrees (master's degrees and doctorates) numbered approximately 37, with a further 12 expected to go abroad for the same purpose in 2004 and 2005 (Oman Ministry of Information, 2008a).

Omanization efforts have also met success in the banking industry. According to discussions with officials from the Oman Ministry of National Economy, the largest area of Omanization has been the banking industry, with current estimates indicating that 91 percent of banking employees are nationals, which means the sector has reached its Omanization goals. Other successes include the hotel and hospitality sector, whose key to success has been funding for training and cooperation with private-sector employees. Transportation is also seen as a success for Omanization, because non-nationals are not permitted 192 Facing Human Capital Challenges of the 21st Century to drive cabs. Figure 5.6 gives the Omanization percentages by private sector area for 2005.

Many authors outline however that there are significant barriers to Omanization that remain. Al-Lamki conducted a study with university students via questionnaires about the perceptions of university students of the private sector and Omanization. Al-Lamki found that over 65 per cent of respondents preferred working for the public sector. The author states that the public sector is preferred because it is perceived to be better benefits (1998). Swales, Al Said and Al Fahdi (2012) found that the perceptions of ministerial officials and managers at private companies of local residents are still negative based on stereotypes. There were stereotypes of foreign workers as more efficient and smarter, whereas local labourers were stereotyped negatively. Efforts at Omanization show how the government has taken concrete actions to diversify the economy and support the employment of Omani citizens.

## **Chapter: 4 RESEARCH METHODOLOGY**

### **4.1 Introduction to Chapter**

Research Methodology includes the entire process followed by the researcher to solve the problem. According to Rajasekhar & Philominathan (2006) research methodology is the procedure followed by researchers to go about their work of *describing, explaining and predicting phenomena*. This chapter will explain the research methodology adopted in this research. All the information related to the data collection method, data source, questionnaire framework, tools used for the analysis is explained.

### **4.2 The Scope of Research**

This research is aimed to examine the role of local content and various In Country Value (ICV) measures in the oil and gas value chain in Oman. This research also aims to evaluate the opportunity lost and how much is the loss to the Oman's economy.

Oman is a rich country in the GCC and the economy of Oman is mainly dependent on the natural resource of oil and gas. With the opening of the economy to the global trade, Oman is able to obtain different avenues opportunity to diversify its economic activities which has contributed to increase the national revenue. However with the diversification of the economy, Oman has acquired membership in various international organizations and participated in added value creation at different stage of supply chain (Stalinska 2014). Now the Oman economy is largely dependent on the oil and gas resource so the government want to reduce the dependency on this sector and intended to help the local people with new skills and training. This is what Vision 2020 is intended to do. So with in line with this government project this research will focus on the ICV program of the government in the oil and gas industry's value chain (Hvidt 2013).

#### **4.2.1 Corollaries for the study, extracted from the review of literatures**

Håland & Tjora, (2006) opined that the strong tendency of having the country's adaptability and competitiveness having a strong tendency is to be affected by rapid changes in the global economic environment where its human resources is a key factor, thereby seeking, as a requirement of those kind of individuals that possess multi-skills that can flexibly adapt to any type of challenge, whether seen or unknown. According to Aycan, et al., (2007) focus on

human resource development retains a moderately conservative stance while having tolerance over those principles that may depart from its traditional beliefs and norms. Based on these propositions, His majesty Sultan Qaboos saw the importance of human resources to achieve the country's goals emphasizing human resource development from a comprehensive perspective that does not hold any bias or ignore one aspect in the pursuit of its overall goals to achieve national development and prosperity. To achieve the aforementioned sub-goals that lead to economic prosperity, the Sultanate has forged partnerships with the education sector to provide education and training among its citizens acknowledging the fact that the quality of their human capital is critical and key towards social and economic advancements (Stalinska, 2014). Therefore, from the above literature, the study's first corollary is drawn–

1. Human Resource Development exerts evident influence on oil and gas sector associated with job creation and added value to Omani's economy.

The Vision 2020 of Oman recognizes and places emphasis over the need to integrate its local economy to the global community thereby requiring the building of more infrastructures that would positively lead to development of the different regions, industries and all other sectors through the partnerships it builds among different nations and economies within the global supply chain.

The issue of localization has started in the 1970s and has been infused across several economies such as, Australia, China, Spain, and such others. The need behind localization (ICV policies developed by Oman), lies in the depiction of indicators of World Bank. According to its indicators countries that depend largely on one or a few commodities like oil is more likely to fall into several problems detrimental to the economy, such as, corruption, underdevelopment, poverty, domestic conflicts (Papyrakis & Gerlagh, 2004). Lec, (2011) noted that Oman has ample of opportunities in its ICV implementation in Oil & Gas sector, as it becomes an effective trade-off in achieving short-term efficiencies that supports long-term development. Based on such factors, the second corollary developed analyses the impact of ICV program in bridging the gap of human resources–

2. Government initiative through ICV bridges the gap existing in the development of human resources, and

Geographic development in different scales, ranging from local to international have strong implications on the social, political, and economic actions that regional authorities tend to make (Landes, 2000). Hence, decisions on the regional level may be diverted to highly

specialise economic activities, favourable to some geographic portions or aspects of the region, such as the GCC's heavy investment and reliance on petroleum products and its related goods. One of the negative implications of actions taken by authorities have been stated by Solingen, (2007); Zakaria, (2004); Auerswald, (2007). According to them, the tendency of wealthy and repressive government and the disregard for industrial development has made oil-producing countries more dependent on oil than their consuming economies. On the aspects of human resource creation in the economic domain by government policies, Harsanyi, (1955) maintained that in case there was only a well-defined social welfare function, and the outlook on development was completely utilitarian, there is a single measure that could substitute for the different dimensions of development. Nevertheless, the construction of such single measure is problematic since it entails various interpersonal assessments of utility. Several factors related to economic domains which eventually lead to creation of human resource values have been pointed out by Cahill (2005) and Alkire and Santos (2010), thereby suggesting the significant role of Government. In such a context, a corollary has been developed, to measure the role of Omani Government, as well–

3. Government policies and proposals within value chains created human resource values in economic domains

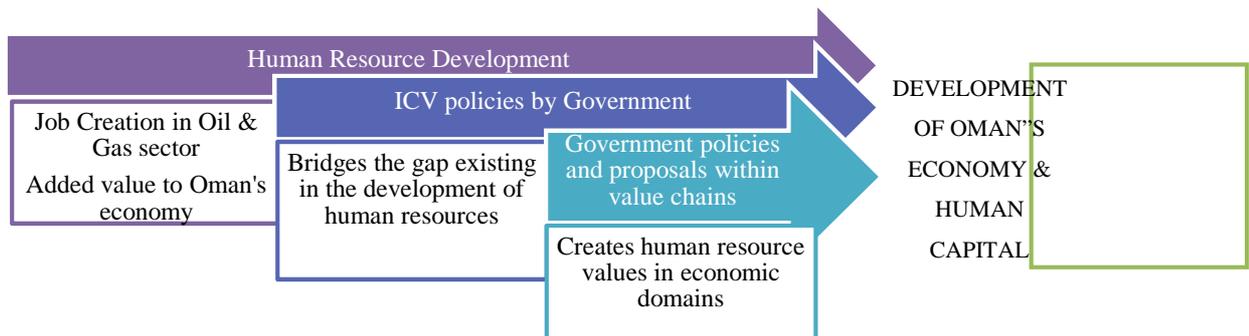


Figure 4.1: Conceptual framework of the study highlighting the corollaries established

Such a corollary will be analysed further by means of primary research, examining the causal relationship shared by government's initiative of Omanization through development of human capital through various efficient measures and the growth of economy through creation of values. Also, while analysing the primary data collected, secondary literatures will be explored to provide authenticity to the findings received.

### **4.3 Research Philosophy**

Research philosophy is the belief of the researcher about the entire process through which the data will be collected, analysed and used in the research to fulfil the proposed objectives. According to Saunders et al. (2009), research philosophy is mainly related to research background development, research about the knowledge and also about its nature. Similarly research philosophy can also be defined using the research paradigm. However Cohen, Manion & Marriason (2000) have a different view on the research philosophy. According to the authors' research paradigm can be defined as the broad framework which includes perception, beliefs and understanding of the various theories and practices which will be used in the research.

Similarly (Gliner & Morgan 2000) has defined paradigm as "*the way to think and make research. It is not a strict methodology yet more of a philosophy that can serve as the guide on how the research can be made.*" There are various factors which can be included in the research philosophy and paradigm such as the mentality of the researcher, varying perceptions, different ways of looking things and different beliefs on different things.

Various philosophies of research approach can be categorized in two terms; *epistemology* (what is known to be true) and *doxology* (what is believed to be true). So the main purpose of science is to transform the things which are believed into the things known i.e. from data to episteme. According to (Galliers 1991) there are mainly two research philosophies which have identified:

#### **a) Positivism**

According to Levin (1998) positivists believe that reality is stable and this can be described and observe from an objective viewpoint. Positivist philosophy of research emphasizes that the phenomena should be isolated and at the same time the repeatable observation should be there. However there is no unique view from the researchers on the suitability of the

positivism philosophy in social science (Hirschman 1995). Some researchers feel that the more pluralistic approach is required in the social science (Khun 1970, Remenyi and Willams, 1996).

#### **b) Interpretivism**

Interpretivism is another alternative philosophy of research which focuses mainly on the subjective interpretation of an intervention in real world. The crucial element of the interpretivism philosopher is the study of the phenomenon in the natural way. According to this philosophical approach reality can be interpreted in multiple ways but to maintain the given interpretation is more important. This research is aimed to find the application on different research principles and also the strategy which is aligned with the diversification. Similarly the role played by small and medium enterprises and the education in the economic development of the Oman's economy will also be studied in this research.

For this research the positivism research philosophy will be followed because this research philosophy focuses mainly on the subjective intervention of the real world. The research philosophy for the current study tries to create a link between different fields of study in the area of good governance through the implementation of the ICV strategy so that the sustainable economic development can be achieved in Oman. Since this study is also based on the study about the role of IVC and government initiative in local content in Oman Interpretivism philosophy is more appropriate.

#### **4.4 Research Design Strategy**

In any research identifications of the suitable research design is an important part. Research design contains all the information about the key elements in the research and also the method and various tools which will be used in the research (Kumar, 2005).

There are many research design strategy which can be followed for conduction any research. in some the research, the research design strategy consist the entire process which start from conceptual framework, literature review, research methodology, research question and end with finding and conclusions. For this paper the research design strategy is defined in terms of research methods, research strategy and research approach.

#### **4.4.1 Research methods**

The quality of any research largely depends on the research method adopted by the researcher. If the suitable methods are not used then this will negatively affect the overall quality and findings of the research.

Among the various research methods, quantitative and qualitative research methods are the most popular method used in the social sciences. Quantitative research method is useful when the research requires to quantify the collected data and the results obtained from certain sample can be generalized to the entire sample (Saunders 2003). In the quantitative research method the data used is in the form of number and this method is used to test the proposed hypothesis which is formed on the basis of the objectives of the study (Williams 2007).

The second method is the qualitative research method. This method is popular among the researched who are more concerned about the quality of the information concerned. Qualitative research method is useful in getting the insights for setting the problem and generating the hypothesis. Data used in this method are generally in the form of word or pictures and the sample size is also small as compared to the quantitative method (Macdonald & Headlam n.d.)

Another alternative method which can be used is the mixed method which uses the combination of both quantitative and qualitative research approaches (Johnson & Onwuegbuzie 2004). The mixed method used in this research will help the researcher to provide a means to conduct the research in more exhaustive manner and also help in exploring, describing, predicting and investigating the phenomenon more comprehensively. Similarly the mixed method is suitable for the qualitative analysis where the questions are related to the contribution of the oil and gas sector in the local economy and also related to the effect of oil revenue on the social programs and various initiatives taken by the government. Also the mixed method is helpful in assessing the influence of the perception of the local people on the local economy (Rocco et al. 2003)

For this research mixed method will be used, where both the quantitative and qualitative analysis will be conducted. The data for the quantitative research will be collected from the primary survey conducted among 380 junior and middle management level employees who are working in Oil and gas sector in Oman. For the qualitative analysis the data will be collected through the interviews conducted among 13 senior level officials in the oil and gas

sector in Oman and other organization (both public and private). The main reason behind using the qualitative data for this research is to get the in depth understanding of the functioning of the oil and gas sector and to examine the role of the local content in creating and adding human resource to the economy of Oman.

#### **4.4.2 Research approach**

According to Saunders et al. (2009) there are two approaches which can be followed in any research, inductive approach and the deductive approach. The inductive approach which is also called building a theory, involves the searching of some patterns from the collected information and then developing the explanation. In this approach the first step is to collect the data and based on the data, theories are developed. According to Goddard (2004) in this approach in the initial stage of research no theory is applied and there is freedom to the change the direction of study. The second approach is the deductive approach, where the main focus of the researcher is to develop the hypothesis based on some already existing theories. Finding conclusion from already existing theories is main priority in this type of approach. This approach is similar to the scientific investigation where the movement is from theory to data, unlike in the inductive approach where the movement is from data to theory (Saunders et al. 2007b).

The focus of this research will be on looking at the local measures which has been taken in the oil and gas industry so the research approach will be more inductive than deductive, wherein recommendations will be presented to address the issue of ICV, through corollaries deduced from the literatures explored. Similarly this research is expected to look for the information on how much employees in the oil and gas industry understand the ICV programs, through examining of data by theory.

#### **4.4.3 Research Strategy**

There are various research strategies such as survey, experiment, observation and interview, which can be used by the researcher. In case of survey first the questionnaire is prepared according to the requirement of the research and the responses is collected from the targeted sample population. Another alternative research strategy is conducting the interview. This strategy is mostly used to collect the qualitative data using the open ended questionnaire (Vargas-Hernández et al. 2011).

Difference between strategy and method has been well explained by Saunders (2009). Strategies involve the elements mentioned in the paragraph, while methods include–descriptive, exploratory and explanatory. For this paper the triangulation research strategy has been followed where the data will be collected using both survey and interviews. Data collected from survey will be used for quantitative analysis whereas the qualitative analysis will be based on information collected from interviews.

## 4.5 Data Collection Tools and Procedures

### 4.5.1 Data Type

**Primary Data:** As the name suggests primary data is the data which is collected by the researcher himself according to the requirement of the study. These data are neither published earlier nor are they collected, so this is also known as the original source of data. The main advantage of collecting the primary data is that the data can be collected exactly on the information required for the study. Both the quantitative and qualitative data can be collected from primary source. The sample survey with close ended question can be used to collect quantitative data while the personal interview with open ended questions can be used to collect qualitative data.

In case of the present study the primary data was collected for both quantitative and qualitative analysis. For the quantitative analysis the primary survey was conducted among 380 respondents who were working in middle management position to determine how ICV enables job creation and value addition with the Oman's Economy using the close ended questionnaire. For the qualitative data personal interviews were conducted with senior officials from four segments related to Oil and Gas sector<sup>3</sup> using close-ended questionnaire. Such a data was collected aiming to understand the perspective of the responsible authorities regarding the nook and corner of Omanization adopted in the country and its present state in various Oil & Gas based organizations, both public and private. The sample of 13, which is though limited, is adequate for the analysis since the goal of this research is exploratory, as it will provide the researcher background of descriptive analysis, by providing the various

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<sup>3</sup> Government Body - 1, Government Body - 2, Government Body - 3 and, Government Body - 4. Oil & Gas Operators comprised of Operator - 1, Operator - 2 and, Operator - 3. Oil & Gas Service Providers comprised of Service Provider - 1, Service Provider - 2 and, Service Provider - 3. Apart from the government bodies, Oil & gas service providers and operators, a university was also approached to obtain a scholarly viewpoint of the phenomenon– Sultan Qaboos University (SQU).

perspectives of responsible organizations of Oil & Gas sector of Oman. Further, the study also included workforce analysis wherein to analyze the workforce trend, the data was collected from 40 contractors for 61 different active contracts.

**Secondary Data:** Secondary data are those data which are not collected by the researcher himself but has been collected earlier by some other individual or organization. The main advantage of using the secondary data is that these types of data are generally easily and freely available. For this study the secondary data has been collected mainly from the international governing organization like the Heritage Foundation, World Bank and United Nations, Deloitte and Ernst & Young, to name a few. The secondary data was useful in formulating the hypothesis mainly related to the ICV program and its success in the political and economic development. Furthermore, the reports formulated by above mentioned organizations and other associated organizations of Oman will act as a pillar-, guiding the researcher to understand the internal context, thereby shaping the findings; and also supporting the primary analysis presented by the study.

#### **4.5.2 Sampling Plan**

Sampling plan presents the overview of the sample collected by the researcher to present his study. It denotes the exact path which was followed to collect the required data. Two types of sampling have been utilized:

**Probability sampling technique:** When each and every element in the population has equal and independent chance of being selected in the sample then it is called the probability sampling technique. This sampling technique is also known as the random sampling. This technique is suitable for the quantitative data collection because due to the random sampling there is no bias in the collection and the collected sample can be used as the good representative of the entire population (Teddlie & Yu 2007).

**Non probability sampling:** Unlike the random sampling when the each and every element in the population does not have equal and independent probability of being selected in the sample, then it is called non probability sampling. There broadly two types of non-probability sampling; accidental and purposive. In the purposive non probability sampling the researcher intentionally select some specific sample; whereas in the accidental the researcher does not have any intension to select some specific sample but somehow the sample collected become non-random.

In this research both the probability and non-probability sampling plan have been used to collect the data. To collect the data for the quantitative analysis among the middle level employees working in different institutes within Oil and Gas industry, random sampling was used to get the information. However, no technique as such was utilized to calculate the size because earlier 500 respondents was decided and approached to get a wide perspective and therefore to present a detailed analysis. But only 380 respondents reverted back, being ignored by the rest, owing to varied constraints. Only Junior and Middle level employees were selected and approached through electronic mail to collect the quantitative data, because most of the workforce proportion in the organizations is accumulated in these two tiers. Prior approaching the respondents for survey, a detailed information on the respondents profile from selected organizations and departments were gathered from the Human resource department, so that each of the respondents can be mailed personally, thereby collecting their informed consent for the survey. This collection of personal information from the HR department further assisted the researcher to carry out a non-response bias test, through re-surveying the non-respondents i.e. 120 individuals out of 500 sampled population, by personal approach. This personal approach in the second survey confirmed non-repetition of further non-response by the reluctant individuals. Larger population of workforce will provide a varied perspective to the researcher enabling him to present an enriched analysis and information. Besides, as nearly all the departments of the organizations were approached, so no specific type was selected, rather varied perspective will help the researcher to analyse the proportion of Omanization followed and existing within the functioning of the organizations and steps taken to improve the same. However for the qualitative analysis data was collected through the open ended questionnaire from the higher level authorities from various organization and ministry. So in this case random sampling was not feasible so the non-probability convenience sampling was used to collect the information.

#### **4.5.3 Questionnaire**

Primary data for this research has been collected using both the close ended and open ended questionnaire. For the quantitative analysis the data was collected using the close ended questionnaire (See Appendix I) among the 380 middle level management employees, and for the qualitative analysis the data was collected using the open ended questionnaire (See Appendix II) from the various senior level managers from different organization and ministries who are involved in the oil and gas sector in Oman.

## **1) Quantitative questionnaire**

The main aim of this research is to find the impact of the oil and gas value chain and local content role in aiding job creation and human resources in the Omani economy. To collect the data for the quantitative analysis purpose the questionnaire was prepared.

In the first part of the questionnaire, question related to the personal information of the respondents were asked such as the age and gender, sector, department, educational level, state citizenship, experience and current position in the company. This information will help to find the overall demographic profile of the employees engaged in the oil and gas industry in Oman.

The second section of the questionnaire was aimed to collect the data about the general background of the employees in this sector. In this section the employees were asked about the importance of the local content in your organization and also about the areas in which the local suppliers need training and assessment to the local suppliers. Similarly the respondents were asked about the expectation regarding the local content requirement in oil and gas projects, important phase in which the local content is most important, barriers related to handling of the local content. To know about the strategy followed with respect to the local content question related to the importance of the local content strategy, elements of local content strategy and the responsible authority for the strategy. Suggestion and the efficiency about the local content strategy were also asked in this section from the respondents.

The last section of the quantitative questionnaire is aimed to collect the information about the role of HRD and the various government initiatives for the promotion of local content in Oman economy. In this section the entire questionnaire in liker scale form and the respondent respond with one the five options available. The option given to the respondent were, strongly agree with the statement, agree, neutral (neither agree not disagree), disagree and strongly disagree. In this section the statements were divided in three sub sections. The first one is the Human resource development and the statement given were mainly related to the role of HRD in motivating employees, impact on employees attitude and other various aspect of employees and on which HRD has its impact. The second sub section is the government initiatives. In this section the statements were mainly related to the government initiative to empower the local content in oil and gas industry in the Omani industry such as the government policy to reduce the share of outside workers in the industry, various training

provided to the local employees, supervision system, innovation and creativity promotion and evaluation of the implemented program. The last sub section included in the questionnaire is to collect the responses related to the impact of the government initiatives in the economic domain in Oman. In this section the respondents were asked to provide their view on various issues such as the impact of the government initiatives on the different sectors, within the Omanis organization, on expats within organization and influence on replacing the expats in the Omanis organizations.

## **2) Qualitative Questionnaire:**

To get the in depth information about the research the qualitative data was collected among the senior official in the four segments which includes Ministry, Operations, University and Service Providers. Total 13 senior officials were interviewed using the open ended questionnaire.

In the first section of the questionnaire related to general background such as name , age, educational qualification and experience, role in the organization and also the department in which the respondents is involved. This section will help to get the overview of the demographic profile of the respondents.

The second section was devoted to get the specific information from the senior official in various segments. In total ten questions were framed for this section according to the requirement of the research. Seniors official were asked to give their view on the current demand and supply gaps existed in the oil and gas sector so that the current situation in the Oman can be explained. Similarly question included in the questionnaire are related to the issues of the man power in Oman and what is the expected situation in 2022, burgeoning man power demand in various oil and gas industry in Oman, value chain in oil and gas sector, barriers faced by government and the measures taken by the government to provide training to the local employees. In later section the role of the private sector was asked in oil and gas industry in Oman and also their role in the various government initiatives were asked. Similarly the role played by In Country Value (ICV) in developing local human resource in oil and gas industry was asked to the senior officials.

#### 4.6 Data Analysis and Procedure

Data analysis is the crucial part in any research. For this research, data was collected for both the quantitative analysis and qualitative analysis. The data collected for the quantitative analysis was first processed in the excel sheet and coding was done. Further the data was exported to the SPSS (Statistical Package for Social Science) software, for the quantitative analysis, where both descriptive and inferential tools were used. Frequency analysis has been conducted as descriptive tool, which shows the number of occurrence for every response chosen by the respondents in the sample. In terms of inferential analysis, correlation and regression techniques were applied to determine the outcomes of corollaries formulated and the research questions posed.

Similarly the multiple regressions was run to find the role of HRD and various government initiatives for the promotion of local content in Oman economy.

$$Y_i = \beta + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \dots + \beta_n x_n + e_i \quad \dots \dots \dots (1)$$

Where  $Y_i$  is the independent variable,  $\beta$  is the constant  $\beta_1, \beta_2, \dots, \beta_n$  are the regression coefficient for the independent variables  $X_1, X_2, \dots, X_n$ . In the above regression  $\beta_1$  can be interpreted as, how much the dependent variable will change with one unit change in the independent variable. Similarly  $e_i$  is the error terms, which includes the other factors which affect the dependent variable but are not included in the regression line. The regression analysis undertaken will shed light on the correlation between

- The HR policies in the concerned sector and creation of jobs and added values to Oman's economy
- Government initiatives and development of human resources, and
- Government policies and programs within value chains and creation of human resource values within economic domain.

For the qualitative analysis the method of content analysis was used. Content analysis is used to summarize all type of content by describing the themes identified in the transcripts different aspect of the collected information. The content analysis approach can be of three types; conventional, directed and summative (Saunders et al. 2009). These approaches differ from each other in terms of coding scheme, threats to trustworthiness and origins of codes (Rubin & Babbie 2010). In case of conventional analysis, the coding categories are directly derived from the text data whereas in direct method the analysis begins with a relevant theory

to guide for the initial codes. Finally in the summative content analysis is done using the keyword of the content and also include counting and comparisons (Gray 2014). In this research the summative content analysis will be used to interpret the information collected from interview.

Furthermore, the second survey conducted on the 120 non-respondents of the actual survey was analysed using Cross-tabulation and Chi-square tools, so that the difference in the responses regarding HRD and government's role promotion of ICV thereby creating scope of jobs for the population can be determined. This determination will validate the estimation made against each of the three hypotheses proposed.

#### **4.7 Ethical consideration**

While conducting the survey the ethical issues were considered in line with university requirements. Prior permission was taken from the organization before conducting the quantitative analysis among the employees. All the participation in the survey was voluntary and there was no pressure given to the employees for the participation. Privacy concerns of the participation were also taken care of and the identification was not disclosed.

Similarly for the qualitative data collection prior information was given to the senior officials about the questionnaire and their identity and information were also not disclosed. The data was collected with full sincerity and no the data was not misused.

#### **4.8 Summary to the chapter**

The entire process of the research methodology was explained in this chapter along with the data collection process and analysis process. Both the quantitative and qualitative analysis will be conducted for this research. For the quantitative analysis primary data was collected among the 380 middle level employees in the oil and gas organization in Oman using the close end questionnaire. Further, to analyse the current workforce trend for execution of contract data for various contract categories was collected from 40 contractors for 61 different active contracts.

For the qualitative analysis data was collected among 13 senior level officials from Ministry, Operations, University and Service Providers in oil and gas sector using the open ended questionnaire. In terms of sampling plan probability sampling was used for the quantitative

data collection while in the qualitative data collection non random sampling plan was adopted. Since the research involves the in depth qualitative analysis the inductive research approach will be followed and exploratory research will be conducted. The quantitative analysis will be conducted using SPSS 21.0.

**5.1 Introduction to chapter**

Workforces of an organization or a country as a whole, play an important role in understanding the actual scenario related to the formulation and implementation of policies aimed for their betterment of the economy. With similar intention, the present chapter portrays the analysis of the responses collected from 380 randomly selected employees engaged to both public and private enterprises of Oman, to shed light on the practice and process of Omanization in their respective organizations and fruits gained, if any. Such an analysis aims to bring forth the ground reality of the policy of ICV implemented and followed in Oman’s Oil and Gas sector, one of the crucial contributors of its economy. The following sections include descriptive analysis reflecting the personal information and general background of the respondents thereby bringing forth the actual strength of Omanis as well as expats working in both public and private enterprises of the concerned sector. The next section includes inferential analysis of the specific responses related to Omanization policy formulated by the government through In-Country Value (ICV).

**5.2 Demographic Profile**

**5.2.1 Age & Gender**

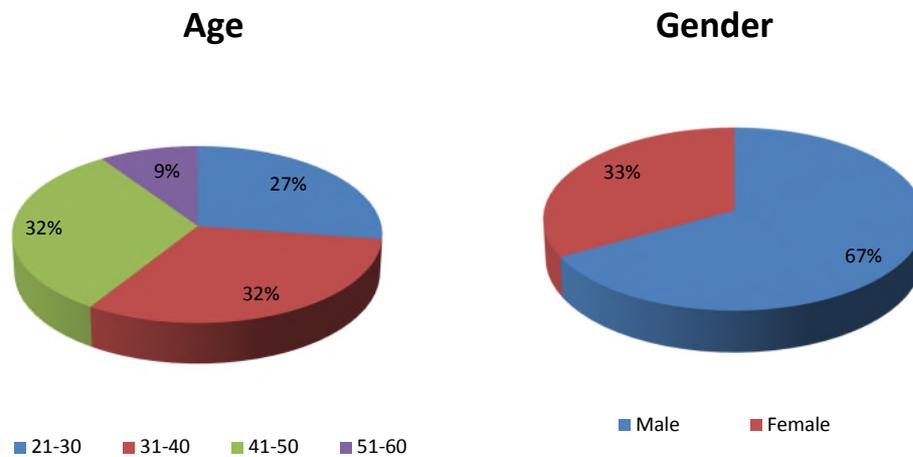
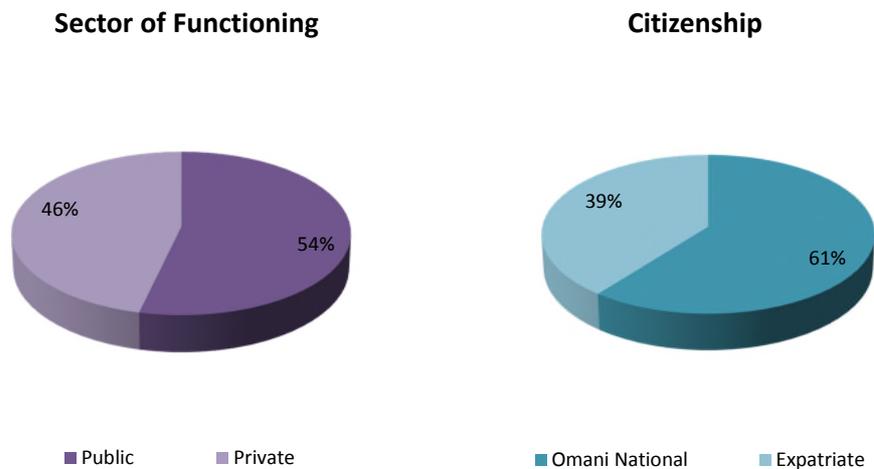


Figure 5.1: Graphical Representation of Age and Gender of Respondents

A considerable proportion of the respondents approached belonged middle age groups mostly ranging within 31-50 years (64%). 27% of the respondents fall within 21-30 years and the remaining were within 51-60 years of age, projecting a significant years of total experience as professionals, engaged in the middle management of the enterprises. Unfortunately, there existed gender disparity in the entire workforce approached with only 33% of female and rest 67% of male employees, reflecting preferences of other secured job such as banking and so on over risky sectors of Oil and Gas. Such significant workforce concentration have been resulted from the random sampling applied, based on probability, shedding light on the age structure and gender disparity existing within these organizations.

The ICV recognizes the strong potential of women joining workforce in promoting its own localization policy. This is an aspect that has to be covered by the country's educational sector and the Ministry of Manpower, to fully exhaust all possible areas of human resource development in promoting localization and to eliminate the country's reliance on its oil resources. Equipping women with the right skills and providing them more employment opportunities will be most feasible despite the country's cultural beliefs and idiosyncrasies over allowing women to seek employment in the various economic sectors of the Sultanate

### 5.2.2 Sector of Engagement and Concerned Department



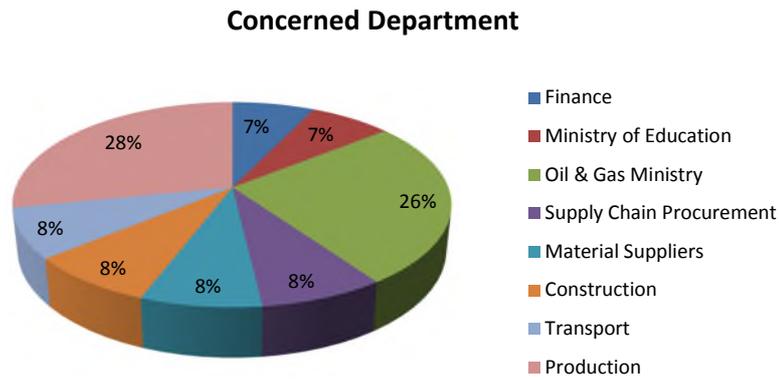
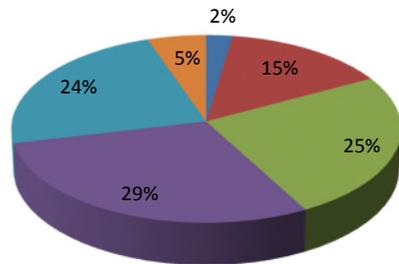


Figure 5.2: Graphical Representation of Concerned Sector, Citizenship and Department of Functioning of the Respondents

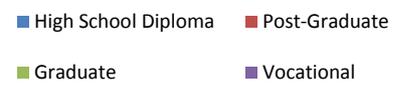
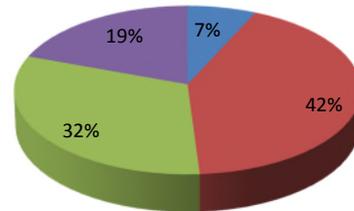
Public sector assumes a significant position over private sector, where, Omani national feel inclined to work owing top various facilities offered by the former than the latter. The probable cause of greater proportion of Omanis joining public sector owes to various facilities approved by the concerned sector. There exists a minimum wage policy formulated by the government of OMR 325 (\$844.50), which the private sector tends to avoid by hiring expats as their lies no minimum age bound. Moreover, other facilities such as, living allowances (revising the amount regularly), pensions and social security are also provided to the government employees, which encourage Omanis to prefer the public sector over private. Hence, majority of the Omani respondents were engaged with the public sector and Expatriates dominated the private one. Out of the total respondents approached only 39% were expatriates, leaving the majority as nationals which enabled the researcher to get in-depth information about the scenario of Omanization through inclusion of local content in the entire workforce of the country. Departments of engagement reflected that majority of the respondents were associated with the Oil & Gas Ministry and Production sector (26% & 28%, respectively), leaving rest of the departments with equal portion of respondents (within 7%-8%).

### 5.2.3 Years of experience, Education and Current Position

**Years of Engagement with the Concerned Enterprise**



**Educational Degree**



**Current position in the Firm**

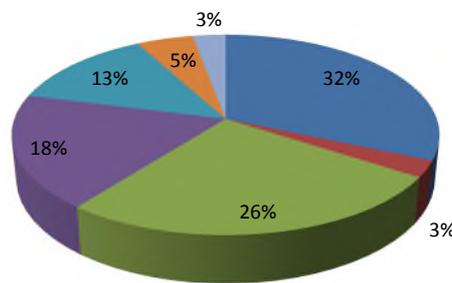


Figure 5.3: Graphical representation of Cumulative Years of Engagement, Educational Qualifications and Current Position of the Respondents

Respondents' educational qualification results suggest a great development in the composition of survey participants wherein majority of them have a bachelor's degree (32%), as well as post-graduate degrees (42%). This indicates that there is a great improvement in the education that would enable the formation of a knowledge-based society for Oman that would provide more room for social and economic growth, as well as greater flexibility in meeting the challenges of globalization where what matters most is the acquisition of knowledge among the country's local talents. A significant proportion of them also possess vocational qualifications as well, reflecting the influence of training programs initiated by the government, through vocational schools and training centres, under colleges and universities.

Years of service/experience of the participants' showed that most participants have been working in the organizations for more than 5 years. Merely 2% of the sample has been in service in their respective companies or organizations for less than a year and only 5% are employed for more than 20 years in the organization, owing to the limit of the survey conducted only on middle management employees. While on the other hand, those who have been working for 6-20 years in their organizations constituted a majority of 78% of the total sample.

In compliance with the cumulative years of experience, a limited few of 3% work as senior managers in their concerned enterprises and in other minimal posts of welders and like. 5% are in the position of Research Associate and 15% work as Supervisor, which point towards the dispersed population in the particular sectors, with concentration being in the positions of Manager, Team Lead and, Engineers (32%, 18%, 26%, respectively). Such a huge concentration of the respondents in the three positions, reflect the propensity of these business graduates towards customer driven sectors over intelligence units.

### 5.3 General Background

#### 5.3.1 Importance of Competency Assessments & Expectations from Local Content Requirements

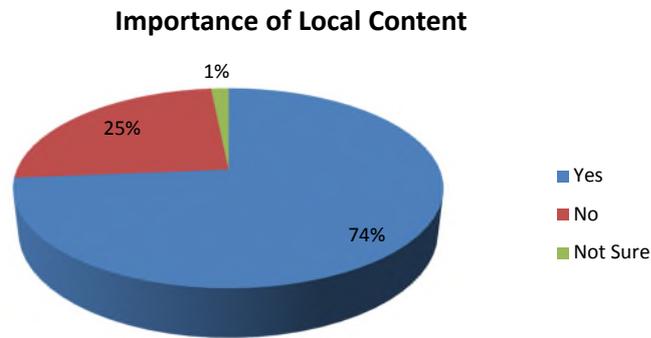


Figure 5.4: Graphical representation of Importance of Local Content in Organizations

Most of the respondents approached agreed to the importance of local content within the functioning of the organizations, both public and private sectors. These local content or Omani nationals are required in every sector associated with organizations such as internal stakeholders comprising of the workforces, suppliers and other external stakeholders. 74% of the respondents agreed that local content in the functioning are significant, while 25% had a negative response, mainly from non-oil & gas sector. Out of the ones responding in affirmative 72% were Omani nationals, rest 2% comprising of expats. However, negative responses came from expats, significantly, who did not feel the need for Omanization in organizational functioning. Mere 1% was not sure of the importance associated with the Omanization of various sectors of their organization.

The next question asked the respondents to select the skills that they think local suppliers would require more competence assessments and training as it is the workforce development strategy of the ICV to increase the competency level and productivity building intellectual capital to drive performance in technical and medium to high-end professions by setting-up programs for short-term development and improving education for long-term development internationally accredited standards. Thus, the ICV has been classified in three themes, that is,

(1) To define industry standards/competency for selected jobs.

(2) Align educational curriculum with industry requirements, and

(3) To define training programs to close competency gaps.

Thus, as this research study tries to probe on the oil and gas value chain and local content role in providing human resource value to the whole Omani economy as well, it is just appropriate to seek answers on the competencies that are necessary to create and add human resource values to the economy. From there it is possible to set a definite timeframe for the initiatives set in order to meet ICV goals.

The survey showed the following results;

### Area in need of Competency Assessments

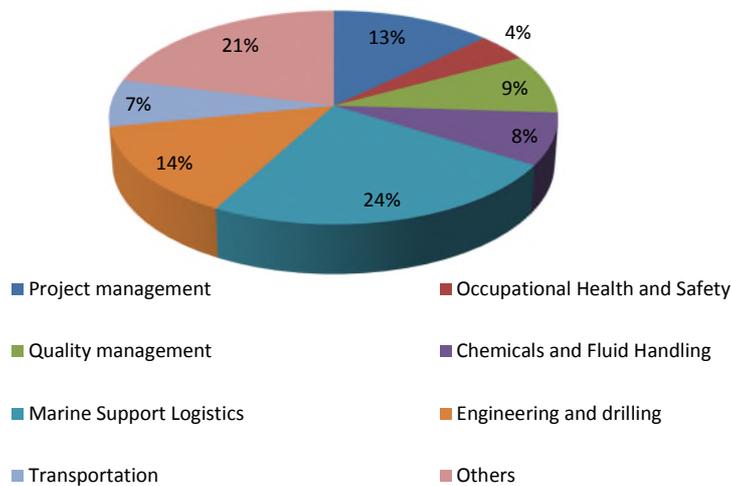


Figure 5.5: Graphical representation of Area which requires Competency Assessments

The results of the survey further indicates that in almost all fields there is still a need to train local talents to get them ready to perform either semi-skilled or skilled functions especially within the gas and oil sector, while energy is the largest sector in Oman. Building human resource competencies and skills through education and training initiatives that will be applicable not only to large sectors, but also SMEs to empower them and develop world-class workers that would provide such firms more flexibility in meeting the challenges and

demands of globalization. At the same time, such endeavours will promote ICV through the participation of different sectors in the economy.

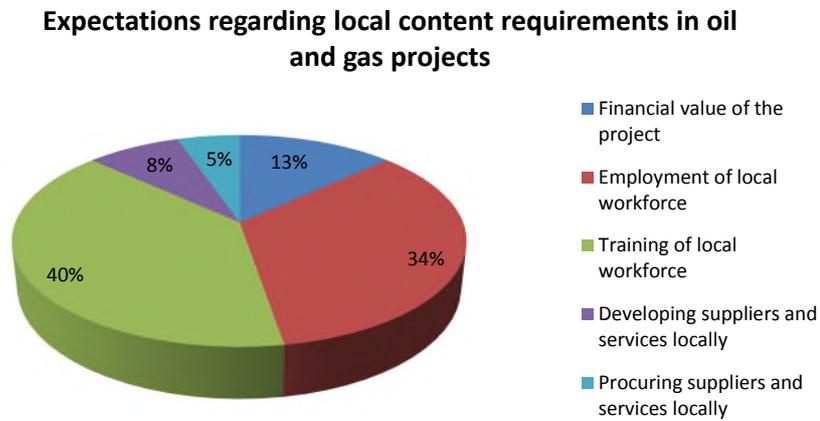


Figure 5.6: Graphical representation of expectations regarding local content requirements in oil and gas projects

When asked about the expectations of the respondents regarding the requirement of local content in oil and gas projects, all of them pointed every option available, with the majority of pointing towards the training of the local workforce, owing to their lack of competency and specific skills required in the concerned sector. In the wake of globalization reaching its peak and increasing trade within countries, involving local assumes a significant factor. Global sourcing differs from international purchasing in scope and complexity. In fact, it is often viewed as a corporate strategy aimed at the global utilization of materials and resources. Depending on the level of global activities the private sector needs to develop its sourcing strategy based on the integration, as well as coordination with suppliers that must first start from the local and would eventually cut across different sectors globally purchasing, engineering, and operating locations with regard to materials, processes, designs, and technologies. Globalization has brought about an ongoing process of greater economic interdependence among countries that is reflected in the increasing amount of cross-border trade in goods and services. Manufacturers have been vital to establish an efficient supply chain and make use of international resources to reduce their costs, improve quality, and spur

innovation; thus differentiating itself for the most successful demand-driven global value chain organizations. Developing local sourcing competencies within the Omani economy will enable organizations to gain more flexibility along with an innovative mind-set, to face globalization challenges. This further suggests that through the ICV valuable human resource values can be fused in towards the overall success of organizations. Providing education and training programs on sourcing will enable the gaining of competencies where Omani nationals can develop their knowledge that would prepare them for higher technical positions and make them competitive enough to meet international sourcing standards.

### 5.3.2 Involvement among various backgrounds, Particular phase of Requirement of Local Content and, Barriers in the Inclusion of Local content

**Involvement with people from various backgrounds**

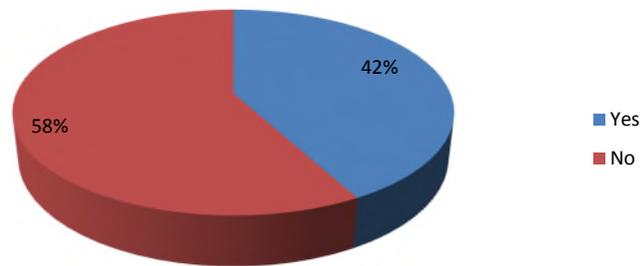


Figure 5.7: Graphical representation of involvement among people of various backgrounds

Most of the respondents surveyed agreed that mingling with people of different background, specifically between the Omanis and the expatriates are very limited. Only 42% of the total respondents agreed to get involved with people coming from other countries, outside work, while the rest denied. However, in a team, involvement with team-mates irrespective of nationality is a common sight.

### Phase of the project local content is most required

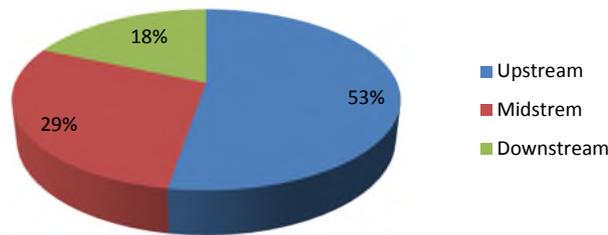


Figure 5.8: Graphical representation of requirement of local content

The next survey question asked the participants to identify the phases in oil and gas operation which they perceive to be most viable, where most agreed with upstream (53%) over midstream (29%) and downstream (18%). While all the production stages in the oil and gas sector make a contribution to the firm's operational viability, respondents are more agreeable that upstream and downstream activities can be more viable for local content activities than midstream activities. The reason why this question was asked is to draw the relationship between productive activity and the development of human resources to which the government's current localization program must have a focus.

To further emphasize the relevance of the stages of production and distribution in the oil and gas sector it is necessary to look into these stages and link it with the elements of local content that makes it up and forms the essence of having the strategy implemented. Local content, which is the added value brought to a host country and all its other areas; i.e., both regional and local; throughout the activities of the oil and gas industry. Local content can be measured per project, by its affiliation and/or by the country's aggregate. At the core of local content are the development of its workforce who are provided employment and training opportunities and the development of supplier and services that can be achieved locally. The government, as well as oil and gas companies makes considerable investments to tap local supplies and services to enable the procurement them within local boundaries. It has become an issue among oil-producing countries as they can affect petroleum oil companies (both private and national) in both its domestic and international operations.

Upstream activities involve exploration and drilling or generally the discovery of oil. And despite the big investments in upstream activities, returns are greater that can go down to other succeeding activities. Once discovered, oil resources could generate revenues for years and investment made can be ploughed back to other discoveries and to production and marketing of the product. Thus, the need for local content and potential employment opportunities for Omani nationals are wider as compared to midstream and downstream activities. The lack of local skills and regulatory mechanisms in offshore upstream activities often is viewed as a limitation towards more profitable operations. Hence, ICV can be a strategic move towards reducing these challenges.

However in Downstream activities like Distribution, Sales and Marketing of Petroleum pre-cuts like fuel, lubes, gas and other products, localization of products/ services and Human resources could be termed as the low hanging fruits (BCG Matrix, 2014). Over 65% of manpower involved in the sales and marketing activities have already been localized in Oman (manpower.gov.om, 2015). The downstream activities include sales of products to government entities, other businesses and export to other nations. Depending on the finished product, the end users vary. However, this process has direct contact with customers. Furthermore, various supply chain activities too could have their services localized and could prove further impetus to the ICV initiatives.

**Barriers in including local content when handling variety of projects**

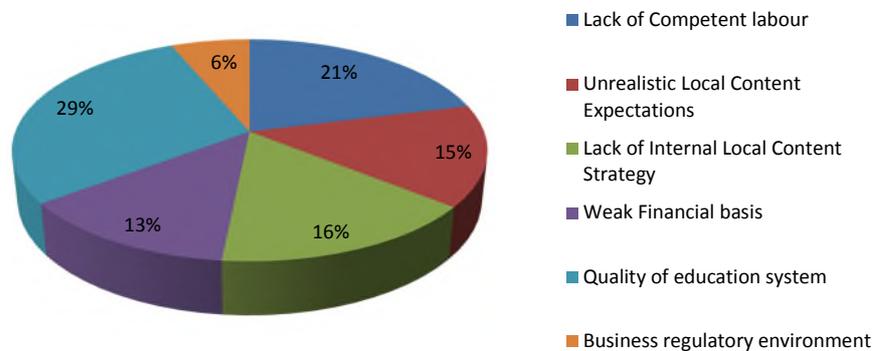


Figure 5.9: Graphical representation of barriers in implementing the same while handling of projects

Nearly all of the respondents approached agreed to the various factors acting as barriers in including local content when handling of projects, especially the global ones. 29% of all the respondents agreed that lack of quality of education and skills among the Omani nationals pose as a significant barrier followed by lack of competent labour (21%). Unrealistic expectations of and from the local content too, act as barrier which is on equal footing with lack of internal local content strategy within organizations and weak financial basis. Most of the private sector organization lack efficient plans for employing and utilizing the local content and also deny from providing facilities approved by the government, which act as hindrance in including local content and thereby effective implementation of ICV rules in the functioning of the organization (CC Energy Development S.A.L 2015). Public sector respondents too, agreed with the same, pointing out that though such a scenario is rare within their concerned departments, yet they still linger in some enterprises.

### 5.3.3 Handling of local content expectations, Importance of including local Content Strategy & Important elements assisting in the promotion of the strategy

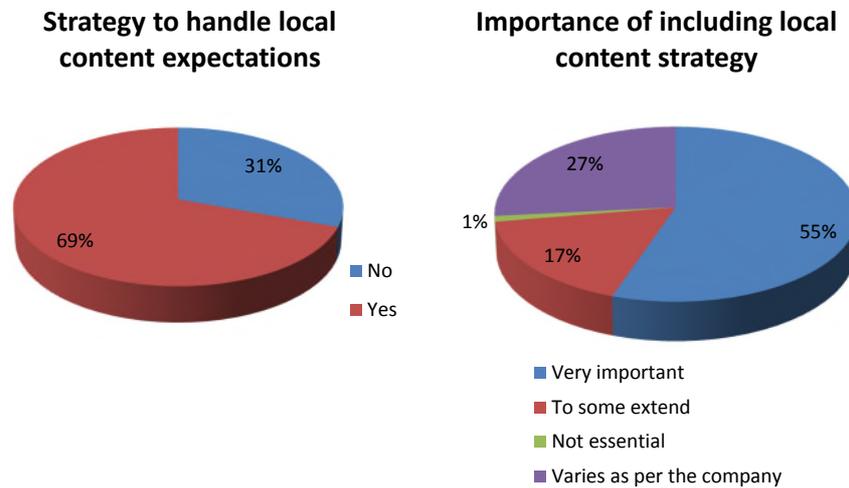


Figure 5.10: Graphical representation of Strategy to handle local content and importance of handling the same

Respondents were also asked if their company or organization is utilizing any strategy, as organizational policy, to manage local content target and expectations. The results showed that 69% of those surveyed have been or is currently using a local content strategy to meet

localization targets and expectations. The remaining 31% answered “No.” There were no respondents that answered with the “Don’t Know/ No Comment” option for this question.

They were then asked about the usefulness of the strategies, their companies were adapting, to which 55% respondent as very important. However 27% believed it entirely depended on the company’s broader aims and objectives. Such a response uphold the fact stated by Lawati (2014), that most of the private sector organizations are keen on employing and retaining expats over Omanis, owing to higher skilled expats willing to work in lesser remuneration, compared to Omanis, for whom Government has guaranteed a minimum wage limit. Therefore, these organizations are less willing to apply these strategies, efficiently. Over 60% of the respondents feel that the strategies used by their organizations are proving to be effective in tackling ICV measures, which is a positive sign. However not all were enthusiastic about the effectiveness of the current strategy and wanted more results. The expats that were surveyed were of the opinion that ICV ventures are carried out by their respective companies in an orderly manner and that slow progress is being witnessed. They felt that any sudden shifts on manpower distribution would upset the balance of the sector.

### Important elements to promote successful local content strategy

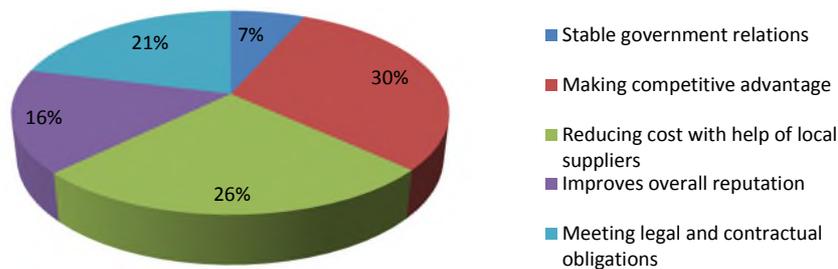


Figure 5.11: Graphical representation of the important elements to promote successful local content strategy

Agreeing to the importance of implementation of the local content strategy within organizations, respondents agreed to the various elements held significant in promoting successful local content strategy as well. Though widely distributed, 30% agreed that making of competitive advantage will promote successful local content strategy because

competitively advantageous companies will be able to promote successful local content strategy, by deriving all their energies and plans to achieve the same. Whereas, struggling companies will be overwhelmed with sustenance in the market, rather making the strategies a success. 26% believed in reducing cost with the help of local suppliers and 21% agreed that company's meeting of legal and contractual obligations also act as significant element. Significant though, only 7% believed in stable government relations as significant element and 16% agreed to improvement of overall company reputation. From the perspective of the researcher all choices given in the selection made are opportunities for organizations, but from the vantage point of most organizations the reduction of costs is always essential that could lead to all other positive outcomes listed. From the answers given, the significance of local content is even more emphasized leading to other possibilities or gains that can be derived from it.

### 5.3.4 Various Factors Associated with the Implementation and Functioning of Local Content Strategy

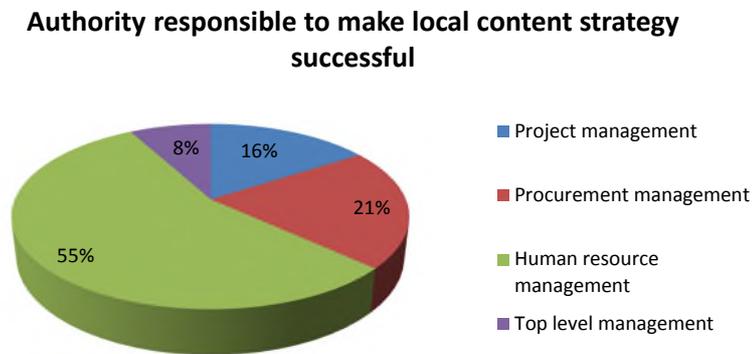


Figure 5.12: Graphical representation of authority responsible for making success of local content strategy

When asked about the competent authority or body responsible in making local content strategy successful within an organization, majority of the respondents, i.e. 55% agreed Human Resource management as a significant one. Others though in smaller proportion nearly equally agreed Procurement management, Project management as next crucial authority after Human resource and only 8%b believed the Top level management as a vital

element responsible to make local content strategy successful. Ease in dealing with suppliers can be beneficial to business in consideration of transport costs, local labour contract requirements, and low-cost sources that can be availed locally. The supply value chain plays a significant role in the operations of organizations especially for those in the manufacturing or production business. Organizations all over the world, primarily through its Human Resource Management along with other departments, continuously try to develop their own strategies for manufacturing and supply chain sourcing outside their home country. Developing the necessary competencies within the local level through local content can enable a company or any organization for that matter, to reduce prices while optimizing product quality, job order fulfilment, lessen production lead time. Optimizing quality, fulfilment, production cycle times, responsiveness and financial conditions are the primary criteria. The undertaken literature survey reveals the significance of an international purchasing strategy as a key competitive factor for companies seeking globalization (Stalinska 2014). Such a strategy is a purchasing management approach focusing on supplies from vendors in the world market, rather than limiting options exclusively to domestic sources. Gaining competence within this area will enable Oman to develop more independence and the ability to compete favourably with international suppliers.

#### Local content strategy in an organizational context

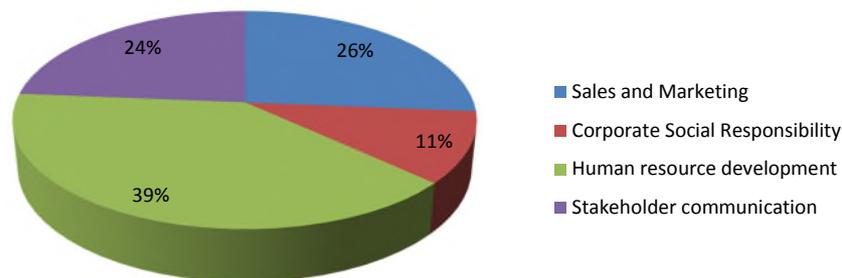


Figure 5.13: Graphical representation of local content strategy in an organizational context

In compliance with the question asked above regarding the competent authority responsible for the success of the local content strategy, when the respondents were further asked that in what the local content strategy is viewed in organizational context, majority responded to

Human Resource Development. **Human Resources Development** is the area to which ICV is most utilized (39%) and lowest percentage was on Corporate Social Responsibility at 11%. This is understandable as the current ICV program of the government is linked with human resource development but not much information or knowledge has been campaigned for by the government in terms of social responsibility.

The ICV program has established targets and/or requirements for both public and private sectors of the Omani economy. Primarily, these targets are issued with the intention of creating more employment opportunities for Omani citizens along with the promotion of small- and medium-sized enterprises while accelerating the development of knowledge and skills and integrating them with existing technologies that would also give way to innovations. Thus, while local content can have its own benefits and challenges, oil companies, such as International Oil Companies (IOCs) utilize them either at a per project basis or for the long-term. To cite examples we can refer to such companies like ExxonMobil, Statoil, and Total; among others who have utilized fully local content strategy focusing on main components like workforce development, supplier development, strategic community, investment, local recruitment, local procurement, education and training, local entrepreneurs support, as well as SMEs, capacity building, local expertise, and all others that have the same contextual connotations but having different labels. All these components indicate what the sector lacks in terms of local content.

Majority of the participants were able to gain appreciation of having their own strategy which presumably can vary along different projects and in different locations. Rather than merely rely on sectorial localization targets as a compulsory requirement, having its own strategy will enable companies to reach such targets established by the government.

**Efficiency of current local content strategy**

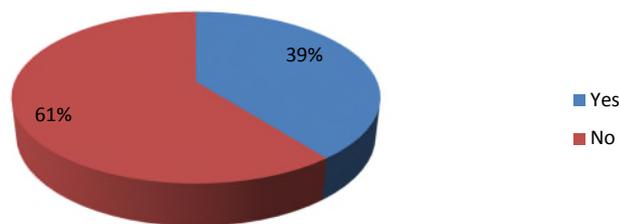


Figure 5.14: Graphical representation of efficiency of current local strategy

61% responded affirmatively that the current local content strategy devised by the Ministry of Manpower (MOM) and implemented in both private and public enterprises are efficient enough to derive the desired results. In fact, the deliberate effort made by both the sectors following the guidelines set up by MOM have helped in rising the standard and proportion of Omani national in all sectors of Oil and Gas industry, thereby contributing in Omanization, effectively. This issue has been further elucidated in the next section of the study, i.e. qualitative research.

### Reviewing of local content from time to time

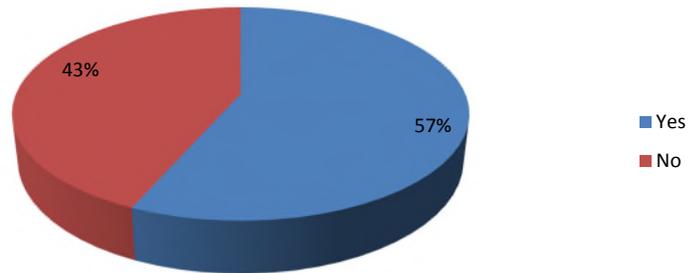


Figure 5.15: Graphical representation of reviewing of local content from time to time

An overwhelming majority of respondents felt that a periodic review of ICV initiatives by their respective organizations must be conducted between the stakeholders and the core committee. However a small percentage of respondents feel that by regular government interventions, private players will be forced to coerce with ICV initiatives, yet 57% of them agreed to the carrying of the procedure, 43% denying the same. Reviewing of ICV initiatives undertaken by organizations, periodically, will check the functioning of the organizations, in which they will find it difficult to deviate from the guidelines implemented by MOM. Also, periodic review will help the organization and the government to achieve its goal related to Omanization by updating the redundant strategies and implementing evolved ways as per global standards, thereby making the nationals highly skilled professionals.

### Ways to review the existing local content strategy in your organization

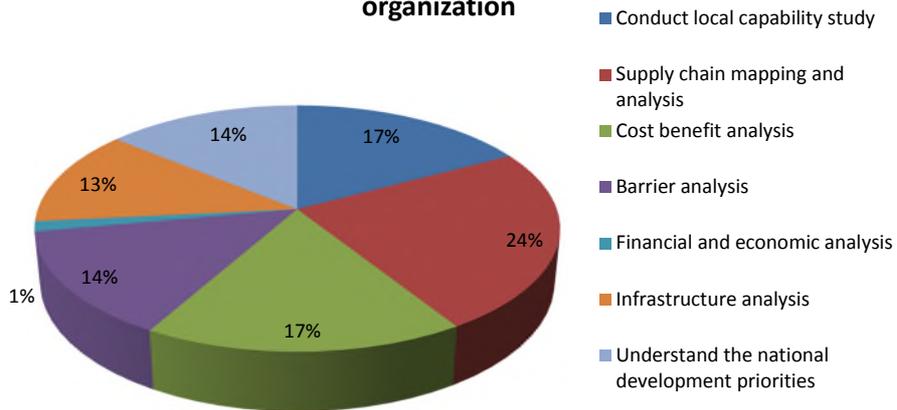


Figure 5.16: Graphical Representation of ways to review the existing local content strategy in concerned organization

Corollary to the preceding question, the need to review ICV or local content, a follow-up question for those who answered “Yes”, asked respondents to define the basis of such review. From the above image (Figure 4.15) it is noted that respondents find that there is a need to review local content along the different areas it cover, emphasizing on supply chain, local content analysis and Cost benefit Analysis, which are the main components of the local content strategy.

Continuous review is necessary since it is the main strategy being tackled by the government to achieve its development goals, and even if it is the main thrust of most emerging economies of today, the information regarding certain project may not be adequate enough so as to require constant review and update among organizations. Local content can further expand the supply chain and hence most respondents place more weight on this aspect, although it does not necessarily mean that all other components are not important or do not need any review.

### Best strategies to ensure local content in global project in an emerging economy

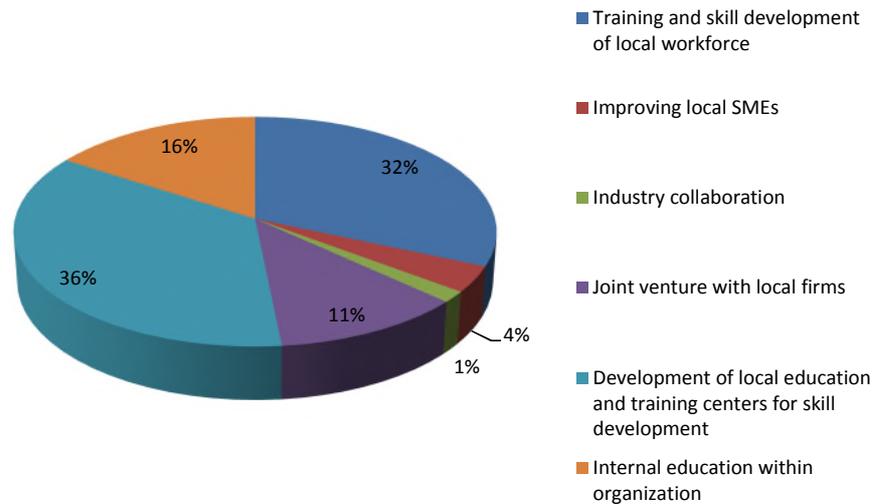


Figure 5.17: Graphical representation of the best strategies to ensure local content in global project in an emerging economy

The next question in the quantitative survey asked respondents on how they perceive or gauge the strategies that Oman has employed, to manage and provide local content. Choices provided to respondents are: Training and skills development of the labour force; SMEs support; the development of educational and training institutions; Local procurement; Collaborations and inter-sectorial link-aging; joint ventures and so on.

While all the choices are important to any local content strategy, respondents feel that the vital link is on the *development of local education and training centres for skill development* and think that the government has made great moves in the development and training of Omanis. The results of the survey showed that 36% of the sample is of the opinion that this is one of the strategies that Oman has utilized to further its local content strategy. Lowest ranked from the choices is industry collaboration, which was only at 1%. This indicates that there has to be more attention towards this aspect knowing how industry collaboration could expedite the transfer of information and build and/or destroy image of any country, person or government, for that matter.

## 5.4 Data Preparation

**Reliability and Validity** of the collected data is important in every research and the verified data will help the research to make decision more precisely and can also be used for further references (Perry et al, 2005). Data validity can be checked using various tests such as face validity, criterion validity and construct validity.

To check the validity of the data collected for this research the pilot survey was conducted before the actual survey. The pilot survey was conducted among 15 middle level employees in oil and gas industry for quantitative data and 2 senior level managers in the Ministry for qualitative data. The results from the pilot survey showed that all the variables included in the questionnaire are significant. So the same questionnaire was used for the final survey. Reliability test helps to know the consistency of the data and also the method of the data collection (Saunders et al. 2007a). According to (Hair, 2003) data is considered to be reliable if the questionnaire gives the similar results even if it is repeated many times. To check the reliability of the data for this research the *Cronbach's alpha coefficient* has been calculated and the test shows the values of 0.972, 0.981 and 0.951 for HRD section, Government section and Government initiatives impacting economic domain respectively which are reliable.

Owing to the fact that, the questionnaire for the following inferential analysis was based on Likert scale– a collective of items (this study contained five), comprising of approximately equal quantity of favourable and unfavourable statements associated with attitude object (Omanisation policies based on Vision 2020), given to a group of subjects (employees of varied nationalities working in the Oil & Gas Industry of Oman), it is essential to measure the reporting errors, so as to assert the reliability of these questionnaires in gaining efficient data required (Gliem & Gliem 2003; McIver & Carmines 1981; Spector 1992). Essentiality of reliability in both theoretical and applied research lies in its ensuring construct validity (Allen & Yen 1979; Aiken 2002; Anastasi & Urbina 1996; Cronbach & Gleser 1957). In fact, establishment of reliability is deemed importance by scholars at such a level, that it is ensured not only in newly constructed scales but also while using established scales from eminent research studies. In this measurement and establishment of reliability, Cronbach's coefficient Alpha is the most widely used index (Peterson 1994; Hogan et al. 2000).

Cronbach's Alpha as defined by Cortina (1993), Peterson (1994) and and Kopalle and Lehmann (1997) drops the ill-fitting items taken within the study (as this study has taken HRD section, Government section and Government initiatives impacting economic domain),

followed by recomputing of data. The items which get dropped are the ones having less correlation with the remainder, thereby enhancing the alpha. The alpha within the inferential statistics therefore can be utilized for any literature, scenario, item correlation, sample size, scale length and such others. However, according to Iacobucci & Duhachek, (2003), alpha does not take count of the sample size, yet the latter is significant in the calculation of confidence interval limits and through this the reader gets the idea that item correlations are estimated more stably with the increase in sample size.

The Cronbach's Alpha values for policies and practices formulated and implemented by the Human Resource Department, towards the achievement of the Vision 2020, is .972, taking all the items into count. Besides, the results show higher intercorrelation among all these items, with values varying within .649 and .922, exhibiting consistency within scores thereby establishing their usefulness in incurring appropriate results. Besides, the individual score variance of these items (highest is .922) being lesser than the total score (.972), further establishes the internal consistency between the item scores i.e. all the items are measuring a uniform concept– impact of HRD policies on Omanization.

Similarly, the alpha coefficient of Government policies and various initiatives taken by the Government reflect values of .981 and .951 respectively. The individual item score for government policies reflect values within .829 and .965, i.e. smaller than the total score. Items within government initiatives too have individual values within .797 and .901, reflecting lesser values than the total score, hence justifying their internal consistencies measuring a uniform concept (Ritter 2010).

Scholars are of the opinion that researchers must take into consideration all the parameters incurred within a reliability test, as has been done above, as through these coefficients, the data interpretation of results greatly impacted. Therefore, clarity in understanding of the reliability index resolves common misconceptions, enabling researchers to present and explain the reliability estimates cautiously. As is evident in the study, the statements taken to represent the policies and practices implemented by the Human Resource Department of Private and Public sector and the Government aptly enables the researcher to interpret and develop an understanding of the scenario related to the Omanization within the country, thereby, determining the degree of achievement with respect to the Vision 2020 adopted by the Sultanate of Oman.

Next in the data preparation is the process of tackling of **non-response bias**. The term refers to the biasness a researcher has the probability to make while estimating population characteristics, from the data collected through survey, where to due absence of response in certain parameters, the particular characteristic is misrepresented (Sivo et al. 2006). The types of bias made varies from sampling error, where inferences are made from the sampled population rather than surveying the target population; non-representative bias, where some amount of the sampled are less likely to represent the target population; misreporting by the participants. In the present study, although there was no item or unit non-response, however, issue of neutral position– individual going for ‘can’t say’ were evidently present in some cases. Nevertheless, the researcher while designing the survey took care of the non-response bias and hence conducted the survey in such a way that, issues of attrition, non-representation and inadequate sample size were tackled, thereby ensuring substantial interpretation and observation. Keeping the population of expatriates and local content within the public as well as private enterprises of Oil & Gas industry, the total sample size was determined at 380, taking into consideration the adequate representation of both the nationalities. Furthermore, keeping in purview some of the consequences of non-response bias– biasness in sample, low power and inaccurate effect size, the researcher has employed questionnaire considering estimated strategies developed to lessen down non-response. The questionnaire employment was conducted keeping in purview the priori and post hoc survey strategies– implementing a random sampling of the employees from the target population, i.e. the entire strength of locals and expatriates engaged with the Oil & Gas industry of Oman. These randomly sampled populations was adequately having sufficient power and accuracy in determining the effect size, which was followed by Dillman’s empirically supported Tailored Design Method, thereby tackling the issue of non-response bias.

Random sampling plan was chosen in employing questionnaires because the concerned plan simplifies the external validity inferences by eliminating the causal relationship between variables from the sampled population studies and not studied (Sivo et al. 2006). For instance, while interpreting the causal relationship between Human Resource Development and its impact on job creation and added value to Omani economy, inferences of those only studied (ones who had definite view point– agree/completely agree and disagree/completely disagree) has been taken into consideration, eliminating those who have not been studied (who had neutral viewpoint of Can’t say and rest of the target population). This strategy

therefore, not only determines the external validity but also has sufficient power and ascertainable magnitude of the effect size of interest.

The post hoc strategy of using Tailored Design Method proposed by Dillman, (1999), was considered to tackle the uncontrollable factors like, belief system of the participants, their attitudes, the nature of questionnaire (since it was personally devised by the researcher) and the sponsoring organizations. Therefore, following Dillman's proposal multiple data collection modes were employed– participant friendly questionnaire, personalized correspondence, five-contact strategy and token prepaid financial incentives. Only a return envelope with first class stamps were not applied owing to personalized approach of data collection along with electronic mailing of the questionnaires. TDM here essentially refers to the multiple ways of contacting the participants like approaching the questions in different tonal voice, which have proved to be efficient in lessening participant non-response. Although application of priori and post hoc strategies have enabled the researcher to gain 98% of effective responses from the sampled population, still, the two-wave analysis has been further conducted to tackle non-response bias.

In the wave analysis, as observed by Lahaut et al. (2003) and Armstrong & Overton (1977), the term wave refers to the response collected through stimulus, such as mail or post-card survey. The responses gathered from the non-respondents or the late respondents are assumed to be those led by increased stimulus and are generally held to be similar to the early respondents. Hence in the two wave analysis categorisation of the timing of responses given by the survey respondents into waves has been carried out– the responses collected in the first instances has been categorised under Wave 1 and those collected later has been categorised under Wave 2. As is mentioned in the research methodology of the present study, despite approaching to nearly 500 respondents from the public as well private organizations in Oman, through personal mail, only 380 respondents replied to the questionnaire promptly, leaving the rest 120 as non-respondents. Although the Tailored Design Method proposed by Dillman, enabled the researcher to gain effective responses thereby tackling the low response rate, however, estimates made from the primary observation still might held certain biases. Therefore, a second time survey was taken within the 120 respondents through personal approach, so that further cases of non-responses can be avoided. Upon collecting data from the second survey with the non-respondents a comparison in the perspectives of the early and late respondents were made, to check validity of the estimation made against each of the hypotheses. And if any biasness in the estimation is to be observed, then a re-survey has to be

taken to avoid cases of over-estimation or under-estimation of the perspective of the sampled population. In a nutshell, this two wave analysis enabled the researcher to validate the representation made and perspective shared by the sampled population on behalf of the target population of the study.

In the present study, survey included areas of demographic profile of the respondents, general background of the respondents involving their awareness on local content and localisation policies implemented by their respective organization, their perspectives on role of the government and organizations' HRD in the promotion of local content. Re-survey of the demographic profile involving questions of age, gender and such other variables along with their awareness about local content has been kept away, owing to financial and time constraints. Exploration and collection of data archives regarding the age, years of experience and localisation policies implemented by selected public and private sector organisations leading to re-analysis of the survey results would have consumed huge amount of time. Besides, the estimation on demographic profile and general background of the respondents would not affect the purpose of the study– to understand the role of Oil & Gas value chain and local content in aiding job creation and adding human resource value to the Omani economy. For this, only the data collected to understand the causal relationship between Local Content policies formulated and implemented by the Government and the respective Human Resource departments and, creation of jobs for the local content has been re-surveyed thereby conducting the two-wave analysis and validating the estimation made.

Under the arena of role of Government and HRD in promotion of local content, three distinct questions were asked– impact of human resource development on oil and gas sector associated with job creation and added value to Oman's economy; government's initiative through ICV cannot bridge the gap existing in the development of human resources; and, government's policies and proposals within value chains have not created human resource values in economic domains. Under these three distinct questionnaires there were sub-questions as well as presented in the table below–

Impact of human resource development on oil and gas sector associated with job creation and added value to Oman's economy	Motivate employees to put in their best in accomplishing their tasks
	Enhance employees' job satisfaction
	Create a positive employees' attitude
	Provide employees' with greater intrinsic rewards
	Increase employees' commitment
	Increase employees' individual output
	Increase organizational productivity
	Bring about greater flexibility and increased workflow
	Bring about production efficiency
	Bring about cost effectiveness in production
	In terms of frequency of on-the-job training enhance employees' performance
	Through sponsored formal education outside the workplace enhances employee commitment
Government initiative through ICV cannot bridge the gap existing in the development of human resources	Reduced the share of expatriate workers
	Provided clear path to the employees, bringing to the fore organizational needs and individual training needs.
	Improved the supervision system, HR planning and training needs assessment
	The Institute of Public Administration develops and provides training courses focusing on planning and strategic management applications.
	Established a minimum number of training courses that the normal employee should attend annually.
	Ensure the importance of loyalty, innovation and creativity in HRD policies in public and private units
	Establish a strong and effective system for evaluating and assessing the strategies of HRD and their implementation.
Government policies and proposals within value chains have not created human resource values in economic domains	Influenced the various sectors of economy
	Increased the employment rate of Omanis within organizations
	Influenced organizations in replacing the expats with Omanis
	The capacity of Oman's economy in generating new jobs has catered the Omanization initiative, affecting the expats.
	Impacted the lessening of expats within organizations
	Boosted the organizations' functioning earning greater revenue.

To understand the responses of both the early respondents (Wave 1) and late respondents (Wave 2), cross tabulation and chi-square tests have been performed, using SPSS (v 21.0) software. While difference in response regarding role of Government and the HRD between wave 1 and wave 2 has been understood through cross-tabulation, chi-square established the statistical significance, which was considered at  $\leq .05$ .

**Response rate:** Mean response rate in understanding the impact of human resource development among the Wave 1 respondents were 4.23 and that among Wave 2 was 4.03, reflecting, exhibiting a relatively closer value. The chi-square value for both the waves showed values of 242.23 and 59.46, respectively, with significance values being .000. Similar results were observed in inability of government initiative through ICV in bridging the gap existing in development of human resources and government policies not creating human resource values in economic domains. Both the statements reflect a mean value to be 4.16-4.03 and 4.18-4.03, respectively, with significance being at 0.000. Therefore, the results evidently determine the validity of the estimation made from the early respondents (wave 1), thereby rejecting the probability of Non-response bias.

Test Statistics						
	Non-impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy	Impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy	Government initiative through ICV cannot bridge the gap existing in the development of human resources	Government initiative through ICV cannot bridge the gap existing in the development of human resources	Government policies and proposals within value chains have not created human resource values in economic domains	Government policies and proposals within value chains have not created human resource values in economic domains
Chi-Square	242.232 <sup>a</sup>	59.467 <sup>b</sup>	213.747 <sup>a</sup>	59.467 <sup>b</sup>	232.632 <sup>a</sup>	59.467 <sup>b</sup>
df	3	3	3	3	3	3
Asymp. Sig.	.000	.000	.000	.000	.000	.000
Mean	4.23	4.03	4.16	4.03	4.18	4.03

Furthermore, the responses rate from the frequency and percentage shows a nearly closer pattern, both the waves agreeing and strongly agreeing with the statements at greater

percentage, ranging with 32-54% , exhibiting a similarity in the responses collected from the early as well as late respondents.

<b>Impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy</b>				
	WAVE 1		WAVE 2	
	N	%	N	%
Strongly Disagree	20	5	8	6.66
Disagree	30	8	18	15
Agree	124	33	30	25
Strongly Agree	206	54	64	53.33
Total	380	100	120	100
<b>Government initiative through ICV cannot bridge the gap existing in the development of human resources</b>				
Strongly Disagree	20	5	8	6.66
Disagree	39	9	18	15
Agree	122	32	30	25
Strongly Agree	199	52	64	53.33
Total	380	100	120	100
<b>Government policies and proposals within value chains have not created human resource values in economic domains</b>				
Strongly Disagree	30	8	8	6.66
Disagree	20	5	18	15
Agree	130	34.21	30	25
Strongly Agree	200	52.63	64	53.33
Total	380	100	120	100

From the above statistical analysis, therefore the issue of non-response bias has been evidently dealt with, thereby avoiding the follies of over-estimation or under-estimation of the findings observed and presented from the survey of the sampled population.

Lastly, while preparing the data for inferential analysis, the **normality distribution** of the statements was also taken into consideration, thereby establishing the data validity. As per the studies conducted by Ghasemi & Zahediasl (2012) & Schoder et al. (2006), statistical errors are common in studied using parametric tests like correlation, regression, t tests, analysis of

variance (ANOVA) and such others, as they are based on the assumption that data collected from the sampled population has a normal distribution. This assumption of normality is critical to be taken into consideration owing to construction of accurate and reliable conclusion about the actual scenario. Following the scholars' assertions, the researcher here have undertaken the test of normality through SPSS software, examining all the statements under each of the three corollaries to determine the normal distribution of the data collected on HRD practices, Government initiatives taken to tackle the gap existing in HRD and policies and programs formulated and implemented by the government to add local value to the economic domain of Oman.

The normality assessment of statements consists of multiple tests, namely, Kolmogorov-Smirnov (K-S) test, Lilliefors corrected K-S test, Shapiro-Wilk test, Anderson-Darling test, Cramer-von Mises test, D'Agostino-Pearson Omnibus test and the Jarque-Bera test (Oztuna et al. 2006; Elliott & Woodward 2007; Peat & Barton 2005; Thode 2002). Among these plethora of tests, Kolmogorov-Smirnov (K-S) test and Shapiro-Wilk tests have been applied by the researcher, as these are the only two tests derived through SPSS (Thode 2002; Ghasemi & Zahediasl 2012). However, out of the two tests applied, interpretation of normality distribution of data has been carried out using the Shapiro-Wilk tests which essentially takes into account the correlation between the data and corresponding normal scores, thereby providing enhanced power than the K-S test (irrespective of the Lilliefors correction of the latter) (Steinskog 2007).

	Shapiro-Wilk		
	Statistic	df	Sig.
Impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy	.676	380	.340
Government initiative through ICV cannot bridge the gap existing in the development of human resources	.699	380	.180
Government policies and proposals within value chains have not created human resource values in economic domains	.668	380	.250

Table 5.1: Normality Distribution of the Corollaries taken in the inferential analysis

Presented above is the normality distribution values (Shapiro-Wilk) of the three corollaries, namely, Human Resources development, Government's initiative in bridging the gaps of human resource development and policies and programs of government creating human resource values in economic domains, collected from the 380 employees employed in the public and private sector of Oman. Each of these corollaries has a set of sub-variables, whose normality has also been tested and presented in the Appendix. The significance values of the three corollaries as well as the sub-variables (presented in the appendix) are greater than .005, thereby asserting their normality for parametric tests of correlation and regression.

## 5.5 Inferential Analysis

Inferential Analysis has been carried out by formulating corollaries, thereby examining the cross impact of factors and the causal relationship existing between various measures of Omanization and human development and, growth of economy within the country and testing them through Correlation and Regression analytical tool using SPSS 21.0. The analysis has been carried out to find correlation of various elements acting as independent variables against a dependent variable of Impact of Human Resource Development, Government initiatives through ICV bridging the gap in the development of Human Resources and Government policies and programs creating human resource values within economic domain.

**Corollary1:** Human Resource Development exerts evident impact on Oil & Gas sector associated with job creation and added value to Oman's economy.

With the aim of examining the corollary associated with role played by the Human Resource Development on Oil and Gas sector of Oman, the impact of HRD (or lack of it) were taken as dependent variable against various outcomes associated with the same as independent one. Observation of the analysis depict that, all the independent variables have high significance value (2-tailed) of .000, implying the high level of influence exerted by them. Pearson Correlation values of certain variables such as, creation of positive attitude among the employees ( $\alpha.921$ ), bringing about greater flexibility ( $\alpha.921$ ), production efficiency ( $\alpha.886$ ), increase in organizational productivity ( $\alpha.897$ ), motivating employees in accomplishment of tasks ( $\alpha.883$ ), provision of greater intrinsic rewards ( $\alpha.879$ ) and so on (as reflected in the table below) depict a higher affirmative correlational values, denoting the significance of Human Resource Development in bringing key changes in organizational functioning through motivating and developing (through training and ensuring job satisfaction) its workforces. Furthermore, such a significant higher correlational value asserts the vulnerability of

organizations in general and Oman in particular, in context of non-applicability of the HRD policies affecting the country's economy, profoundly. Only the element of cost effectiveness denotes a relatively lesser value of  $\alpha.617$ , depicting lesser influence exerted by the HRD, over organizations.

Impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy		
Impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy	Pearson Correlation	1
	Sig. (2-tailed)	
	N	380
Human resource development (HRD) practices motivate employees to put in their best in accomplishing their tasks.	Pearson Correlation	.883**
	Sig. (2-tailed)	.000
	N	380
HRD practices enhance employees' job satisfaction in the company.	Pearson Correlation	.882**
	Sig. (2-tailed)	.000
	N	380
HRD practices create a positive employees' attitude in the company.	Pearson Correlation	.921**
	Sig. (2-tailed)	.000
	N	380
HRD practices provide employees' with greater intrinsic rewards than other traditional HRD tools	Pearson Correlation	.879**
	Sig. (2-tailed)	.000
	N	380
HRD practices increase employees' commitment to the company.	Pearson Correlation	.839**
	Sig. (2-tailed)	.000
	N	380
HRD practices increase employees' individual output in the company.	Pearson Correlation	.788**
	Sig. (2-tailed)	.000
	N	380

HRD practices increase organizational productivity.	Pearson Correlation	.897**
	Sig. (2-tailed)	.000
	N	380
HRD practices bring about greater flexibility and increased workflow.	Pearson Correlation	.921**
	Sig. (2-tailed)	.000
	N	380
HRD practices bring about production efficiency.	Pearson Correlation	.886**
	Sig. (2-tailed)	.000
	N	380
HRD practices bring about cost effectiveness in production.	Pearson Correlation	.617**
	Sig. (2-tailed)	.000
	N	380
HRD practices in terms of frequency of on-the-job training enhance employees' performance.	Pearson Correlation	.955**
	Sig. (2-tailed)	.000
	N	380
Employee commitment in the organization is enhanced by HRD through sponsored formal education outside the workplace.	Pearson Correlation	.867**
	Sig. (2-tailed)	.000
	N	380
**. Correlation is significant at the 0.01 level (2-tailed).		

Table 5.2: Correlation values of various impacts exerted by Human Resource Development in Oil & Gas Organizations of Oman

Results of the regression analysis predicted 97.6% variance in the role played by Human Resource Development over various job attributes such as job satisfaction, motivation, intrinsic rewards, enhancement of performance through on-job training and such others. Such a prediction has been established by the value of adjusted  $R^2$  which is .976 which is close to absolute 1. Furthermore the value of F (1313.708) projected through ANOVA with

significance at .000 suggests the significant explanation carried out by the various job attributes towards 97.6% variance in HRD.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.989 <sup>a</sup>	.977	.976	.174

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	475.460	12	39.622	1312.708	.000 <sup>b</sup>
	Residual	11.077	367	.030		
	Total	486.537	379			

Table 5.3: Tabular Representation of Model Summary and ANOVA

Coefficients table through Regression analysis reveal that all the factors related to organizational functioning such as motivation (t 7.130; p= .000), job satisfaction (t 5.812; p .000), positive attitude (t 5.643; p .000), greater intrinsic rewards (t 3.664; p .000), employee commitment (t 4.291; p .000), individual output (t 5.594; p .000), organizational productivity (t 1.342; p .000), flexibility and increased workflow (t 6.111; p .000) and production efficiency (t 4.734; p .000) are significantly influenced by the Human resource development practices in the organizations based on Oil & Gas sector of Oman. Employees' performance through On-Job-Training ensured by the HRD show a relative significance over other attributes with the value of t being 14.206 and p- .000. But influence of HRD practices on cost effectiveness project a negative value (t -2.394; p= .017) depicting that the influence in this attribute is minimal.

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	-.327	.042		-7.821	.000
1	Human resource development (HRD) practices motivate employees to put in their best in accomplishing their tasks.	.120	.017	.113	7.130	.000
	HRD practices enhance employees' job satisfaction in the company.	.098	.017	.096	5.812	.000
	HRD practices create a positive employees' attitude in the company.	.121	.021	.112	5.643	.000
	HRD practices provide employees' with greater intrinsic rewards than other traditional HRD tools	.056	.015	.062	3.664	.000
	HRD practices increase employees' commitment to the company.	.056	.013	.061	4.291	.000
	HRD practices increase employees' individual output in the company.	.072	.013	.072	5.594	.000
	HRD practices increase organizational productivity.	.025	.019	.026	1.342	.000
	HRD practices bring about greater flexibility and increased workflow.	.121	.020	.126	6.111	.000
	HRD practices bring about production efficiency.	.080	.017	.085	4.734	.000
	HRD practices bring about cost effectiveness in production.	-.022	.009	-.026	-2.394	.017
	HRD practices in terms of frequency of on-the-job training enhance employees' performance.	.316	.022	.311	14.206	.000
	Employee commitment in the organization is enhanced by HRD through sponsored formal education outside the workplace.	.033	.015	.035	2.137	.033

Table 5.4: Coefficients Value of Various Job Attributes

Therefore, from the above analysis through statistical tool of Correlation and regression, it can be aptly asserted that Human Resource Development has a considerably significant impact on job creation in Oman's Oil & Gas sector. The various positive attributes related to organizational and individual functioning owing to HRD practices influences Omani nationals to take up job in both public as well as private sector thereby boosting Government's policy of Omanization and adding value to the country's economy.

**Corollary 2<sub>1</sub>** Government initiatives (through ICV) can bridge the gap existing in the development of human resources. Variables are presented in the correlation table given below.

Correlation outcome carried out between the Government Initiatives in implementing and boosting Human Resource Development practices within organizations as dependent variable and various factors related to it as independent variable project positive and significant values. Though all the attributes project high correlational values yet ensuring of loyalty, innovation and creativity in private sectors and establishing of strong and effective system for evaluating HRD practices project greater significant values ( $\alpha$  .978 & .973;  $p$  .000, respectively). Other influences exerted by the Government initiatives include, reducing the share of expats ( $\alpha$  .829;  $p$  .000), bringing to fore organizational and training needs ( $\alpha$  .962;  $p$  .000), improving supervision, HR planning and training needs assessments ( $\alpha$  .964;  $p$  .000), development of training courses for employees and young individuals ( $\alpha$  .945;  $p$  .000), establishment of mandatory training courses for individuals ( $\alpha$  .910;  $p$  .000) and ensuring innovation, loyalty and creativity within governmental organizations, ( $\alpha$  .897;  $p$  .000) too.

<b>Correlations</b>		
Government initiative through ICV cannot bridge the gap existing in the development of human resources		
Government initiative through ICV cannot bridge the gap existing in the development of human resources	Pearson Correlation	1
	Sig. (2-tailed)	
	N	380
Omanization policies of the Government have reduced the share of expatriate workers in your organization.	Pearson Correlation	.829**
	Sig. (2-tailed)	.000
	N	380
Government initiatives have provided clear path to the employees, bringing to the fore organizational needs and individual training needs.	Pearson Correlation	.962**
	Sig. (2-tailed)	.000
	N	380
Government initiatives have improved the supervision system, HR planning and training needs assessment.	Pearson Correlation	.964**
	Sig. (2-tailed)	.000

	N	380
The Institute of Public Administration develops and provides training courses focusing on planning and strategic management applications.	Pearson Correlation	.945**
	Sig. (2-tailed)	.000
	N	380
Government initiatives have established a minimum number of training courses that the normal employee should attend annually.	Pearson Correlation	.910**
	Sig. (2-tailed)	.000
	N	380
Ensure the importance of loyalty, innovation and creativity in HRD policies within the governmental units.	Pearson Correlation	.897**
	Sig. (2-tailed)	.000
	N	380
Ensure the importance of loyalty, innovation and creativity in HRD policies within the private sector units.	Pearson Correlation	.978**
	Sig. (2-tailed)	.000
	N	380
Establish a strong and effective system for evaluating and assessing the strategies of HRD and their implementation.	Pearson Correlation	.973**
	Sig. (2-tailed)	.000
	N	380
**. Correlation is significant at the 0.01 level (2-tailed).		

Table 5.5: Tabular representation of Correlational Values of Government Initiatives and various factors associated with it

Statistical outcomes related to the Government initiatives undertaken in Oman with respect to Omanization policy through Regression analytical tool predicted 98.7% variance exerted by various Government initiatives boosting ICV policies in the country. Such a prediction has been established through the value of adjusted  $R^2$  which is .987 (See Table 2.5) – close to absolute 1, thereby establishing the implication of regression equation in making predictions. The value of F at 3474.987 projected by the ANOVA with significance value as .000 further establishes the 98.7% variance exerted by various Governments' initiatives.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.993 <sup>a</sup>	.987	.987	.137

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	518.291	8	64.786	3474.987	.000 <sup>b</sup>
	Residual	6.917	371	.019		
	Total	525.208	379			

Table 5.6: Tabular Representation of Model Summary and ANOVA

The significance values (.000) reflect the importance of various elements associated with the initiatives undertaken by the government with respect to Omanization policy. Correlation results reflect that Government's initiatives have reduced the share of expats in Oil & Gas sector (t 1.026), provided clear path to the employees through bringing out organizational needs and individual training needs (t 6.613), improved the supervision system, HR planning and training needs assessments (7.831), development and provision of training course by the Institute of Public Administration functioning under the Sultanate (t 4.924), have established minimum training courses mandatory to every employee (t 5.000), ensured the importance of loyalty, creativity and innovation in both public (t 3.025) and private (t 11.601) enterprises and established a strong and effective system of evaluation of HRD practices (t 9.530).

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.140	.028		-4.966	.000
	Omanization policies of the Government have reduced the share of expatriate workers in your organization.	.010	.010	.011	1.026	.306
	Government initiatives have provided clear path to the employees, bringing to	.139	.021	.138	6.613	.000

the fore organizational needs and individual training needs.					
Government initiatives have improved the supervision system, HR planning and training needs assessment.	.171	.022	.165	7.831	.000
The Institute of Public Administration develops and provides training courses focusing on planning and strategic management applications.	.093	.019	.091	4.924	.000
Government initiatives have established a minimum number of training courses that the normal employee should attend annually.	.066	.013	.070	5.000	.000
Ensure the importance of loyalty, innovation and creativity in HRD policies within the governmental units.	.044	.015	.042	3.025	.003
Ensure the importance of loyalty, innovation and creativity in HRD policies within the private sector units.	.286	.025	.287	11.601	.000
Establish a strong and effective system for evaluating and assessing the strategies of HRD and their implementation.	.220	.023	.223	9.530	.000
a. Dependent Variable: Government initiative through ICV cannot bridge the gap existing in the development of human resources					

Table 5.7: Tabular Representation of Correlation values of various elements associated with Government initiatives in implementing HRD practices

Therefore, it is observed from the statistical analysis carried above that right application of Government initiatives (through ICV) can bridge the gap existing in the development of human resources, thereby improving the strength of Omani national in both public and private sector of Oil & Gas sector and in developing their concerned skills as professional beings as per the global standards.

**Corollary 3:** Government policies and programs within value chains create human resource values in economic domain.

Correlation values carried out through Regression analytical tool reveal that the six elements selected as possible outcomes of Governmental policies and programs within value chains are considerably correlated with the latter. The values of all the six elements such as, influencing various sectors of economy ( $\alpha.928$ ; p .000), increasing of employment of Omani nationals within organizations ( $\alpha.897$ ; p .000), lessening of expats within organizations belonging to both the sectors ( $\alpha.900$ ; p .000), influencing the organizations to replace the expats with

Omanis, thereby keeping the head count same ( $\alpha.875$ ;  $p .000$ ), affecting the expats by creating increased job opportunities for Omanis ( $\alpha.811$ ;  $p .000$ ) and boosting of organizational functioning thereby earning greater revenues ( $\alpha.831$ ;  $p .000$ ). Therefore, the results project a positive relationship between various elements associated with human resource value in economic domain and Government's policies and programs, which is significant for the analysis.

<b>Correlations</b>		
Government policies and proposals within value chains have not created human resource values in economic domains		
Government policies and proposals within value chains have not created human resource values in economic domains	Pearson Correlation	1
	Sig. (2-tailed)	
	N	380
Government initiatives of Omanization have influenced the various sectors of economy.	Pearson Correlation	.928**
	Sig. (2-tailed)	.000
	N	380
Omanization has increased the employment rate of Omanis within your organization.	Pearson Correlation	.897**
	Sig. (2-tailed)	.000
	N	380
Omanization has impacted the lessening of expats within your organization.	Pearson Correlation	.900**
	Sig. (2-tailed)	.000
	N	380
Government initiative of Omanization has influenced your organization in replacing the expats with Omanis.	Pearson Correlation	.875**
	Sig. (2-tailed)	.000
	N	380
The capacity of Oman's economy in generating new jobs has catered the Omanization initiative, affecting the expats.	Pearson Correlation	.811**
	Sig. (2-tailed)	.000
	N	380

Government initiative of localisation (thereby lessening of expat workforce) has boosted the organizations' functioning earning greater revenue.	Pearson Correlation	.831**
	Sig. (2-tailed)	.000
	N	380
**. Correlation is significant at the 0.01 level (2-tailed).		

Table 5.8: Tabular Representation of Correlational Values

Regression analysis reveal the values of adjusted  $R^2$  to be .948, implying 94.8% variance in government's policies and programs creating human resource values within economic domain. Moreover, the value of F through ANOVA being 1160.794, with significance value of .000 suggests the prediction made by the regression equation of 94.8% variance. Furthermore, the value of  $R^2$  .949 being proximate to absolute 1, establishes the worth of the regression equation in making calculations.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.974 <sup>a</sup>	.949	.948	.271

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	509.803	6	84.967	1160.794	.000 <sup>b</sup>
	Residual	27.303	373	.073		
	Total	537.105	379			

Table 5.9: Model Summary and ANOVA of the hypothesis

Coefficients value projecting a significance of .000 indicates that the various dimensions of value chains listed below are important for government's policies and programs intended to thrive Omanization in the country, thereby developing the professional skills of its nationals and thereby decreasing its dependency on expats for responsible posts. Regression analysis depicts that Government's policies and programs have influenced various sectors of the economy (t 7.316), increased the employment rate of the Omanis (t 7.959), lessened the rate

of expats in both public and private sector organizations (t 7.512), have replaced the expats by Omanis (t 5.092), have affected the job opportunities of expats through providing considerable jobs to Omanis (t 4.331) and have boosted the organizations' functioning based on Oil and Gas sector, thereby earning greater financial revenues (t 8.081).

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.493	.062		-7.998	.000
	Government initiatives of Omanization have influenced the various sectors of economy.	.259	.035	.251	7.316	.000
	Omanization has increased the employment rate of Omanis within your organization.	.216	.027	.206	7.959	.000
	Omanization has impacted the lessening of expats within your organization.	.233	.031	.224	7.512	.000
	Government initiative of Omanization has influenced your organization in replacing the expats with Omanis.	.149	.029	.139	5.092	.000
	The capacity of Oman's economy in generating new jobs has catered the Omanization initiative, affecting the expats.	.107	.025	.095	4.331	.000
	Government initiative of localisation (thereby lessening of expat workforce) has boosted the organizations' functioning earning greater revenue.	.140	.017	.157	8.081	.000
a. Dependent Variable: Government policies and proposals within value chains have not created human resource values in economic domains						

Table 5.10: Coefficients value of various elements related to Government Initiatives undertaken to boost Oman's Economic Domain

Therefore, it can aptly be asserted that Government of Oman's policies and programs within value chains have created human resource values in economic domain and are continuing to do so, thereby shifting the workforce concentration from largely expatriates to its nationals.

## 5.6 Summary

Descriptive analysis of the data collected from the 380 employees engaged with the private and public sector of Oman purported to understand the demographic distribution of the target population, represented through the sampled population. Further the descriptive analysis also brought forth the general background of the participants, through gauging their awareness of the ICV strategies and process of Omanization. Demographic distribution reflected the prevalence of workforces aged 21-50 years within the case organizations of the Oil & Gas sector of Oman, outnumbering ones aged beyond 50 years. Besides, incongruent distribution in terms of gender is also prevalent in the case sector, although the ICV supports utilization of women potential joining the workforce thereby promoting the localization initiative. Such a demographic distribution pertains scope of development opportunities for women to come forward joining the regular workforce. Later in the demographic distribution it is observed that private sector workforces outnumbered public sector ones, though by a small margin and evident presence of Omani nationals over expatriates, suggesting the positive consequences of the ICV strategies of the country. Regarding departments of engagement within the case industry, production assumes pioneering position followed by the Oil and Gas ministry, other departments having an approximately equal distribution of the sampled population. In terms of experience and education, majority had 11-15 years, with a cumulative distribution showing most of them having 6 to 20 years of experience and a large portion of the sampled holding graduate and post-graduate degrees. However, significant few had vocational degrees as well, with managers and engineers dominating other organizational positions of the sampled workforce.

In terms of the general awareness of the sampled population regarding the importance of ICV strategies and areas which are in demand in terms of competency assessments, majority of the participants were supportive of the strategies, especially those from the Oil and Gas sector, highlighting the need for Marine support Logistics as the area of competency. Further interpretation of the requirement of local contents from the participants revealed training and employment suggesting their low skill development thereby lacking competency and requisite skills, hence explaining the demand for expatriates. Strikingly, the descriptive interpretation shows a very limited involvement of the Oman local with the expatriates as a team in the workplace. And the phase within Oil & Gas industry requiring significant local content, thereby increasing the value is the upstream involving exploration and drilling of oil,

through which a linkage between productive activity and development of human resources can be established and strengthened by the government. However, due to lack in requisite educational expertise and skills serves as a barrier for the locals in handling global projects, leading to lack in competent labour. As a result, both public and private sector organizations implement strategies, based on the lines of Vision 2020, to manage local content target and expectations, which as the participants revealed are of utmost importance. This implementation of localization strategies by the organizations are however dependent on certain important elements, as the analysis revealed, such as, making competitive advantage from the strategies and reducing cost of hiring expatriates with the help of local suppliers, meeting local and contractual obligations and such other factors. And to make these strategies successful, the Human Resource Management plays a crucial role within an organization, as the participants viewed, followed by Procurement management, Project Management and Top Level Management. Further, the survey revealed that the area of Human Resource Development significantly utilizes the local content as against the Corporate Social Responsibility sector. Regarding the efficiency of the local content strategy implemented by the government's Ministry of Manpower, participants had an affirmative perspective, which has been effectively carried out by the private and public organizations. However, the efficiency of the policies formulated by MOM and their future plans in strengthening the Vision 2020 effectively, considering the exiting lacunae, is something which required in-depth study and hence has been dealt qualitatively through personal interviews with the representatives of MON and experts of the local content strategy.

Coming back to the descriptive analysis, it has been observed that the local content strategy implemented by the public and private sector organizations are reviewed periodically, thereby strengthening the strategy and the skills of the local content. And the procedures of reviewing these strategies include supply chain mapping and analysis, cost benefit analysis, local capability studies, barrier analysis, understanding the priorities of national development and put up actions accordingly, infrastructure analysis and so forth. From these analyses of review process, development of local education and training centers for skill development, followed by training and skill development of local workforce assumes the position of best strategies ensuring local content in global projects of an emerging economy like Oman.

Upon understanding the perspectives of the respondents regarding the issue of local content strategies and the role of the private and public sector organizations in making the Vision 2020 a truly achieved 'vision', the chapter further lays down the casual relationship (if any)

between various measures of Omanization and human development and, growth of economy within the country. To achieve this purpose various corollaries has been proposed, taking the measures undertaken by the Human Resource Development, Government initiatives through ICV bridging the gap existing in the development of human resource and Government policies creating human resource values in economic domain. These corollaries, analysed inferentially, enabled the researcher to identify the role of the Human Resource Development and the Government in making significant development of the local content, thereby boosting the growth of economy, making the nation self-sufficient. The first corollary indicated the significant role played by the Human Resource Development in bringing key changes in organizational functioning through motivating and developing (through training and ensuring job satisfaction) its workforces and the vulnerability of the organizations under non-applicability of the HRD policies thereby affecting the nation's vision on local content development and its economy, consequently. The analysis further revealed the role of HRD in ensuring motivation, job satisfaction, provision of intrinsic rewards, enhancement of performance of the local content through on-job-training and such others, thereby encouraging the local Omani nationals in taking up private and public sector jobs boosting the vision of Omanization and adding value to the economy.

The second corollary regarding the role of Government initiatives in bridging the gaps existing in Human Resource Development projected a strong causal relationship. The analysis showed the contribution of Government's role in ensuring loyalty, innovation and creativity in private sectors and establishing of strong and effective system for evaluating HRD practices. Further, the government highlighted significant initiatives in reducing the share of expats, bringing to fore organizational and training needs, improving supervision, HR planning and training needs assessments, development of training courses for employees and young individuals and establishment of mandatory training courses for individuals, thereby helping the nation achieve its ICV strategy within the estimated time– 2020. The analysis therefore signified the appropriate intervention of government machinery in bridging the gap existing in the developing of human resources.

The third corollary dealt with the government policies and programs existing within the value chains being significant in creating human resource values in economic domain. In it, observations revealed the role of these policies and programs of the government in influencing various sectors of economy, increasing of employment of Omani nationals within organizations, lessening of expats within organizations belonging to both the sectors,

influencing the organizations to replace the expats with Omanis, without disturbing the amount of workforce engaged, affecting the expats by creating increased job opportunities for Omanis and boosting of organizational functioning thereby earning greater revenues. This initiatives carried out by the government have enabled Oman to gradually shed its dependency on the foreign nationals and thus making place for itself in the global market, utilizing its denizens' skills and potential.

Although the quantitative analysis including both descriptive and inferential substantially established the positive attitude of the survey participants towards ICV strategies and the dependency of achieving effective results of Omanization and gaining of economic value on Human Resource Development and policies and initiative taken by the government, yet it lacked key insights of the representatives of the Government bodies, Oil & gas industry and subject experts from educational institutions. The quantitative is essentially the view point of the general citizens– the employed, which failed to decipher the issues regarding, handling of manpower by 2022, demand and supply gaps of manpower in Oil & Gas industry, specialized techniques of enterprises in handling this burgeoning demand, linkage between value chain in Oil and Gas sector and Governmental policies, hindrances faced while implementing ICV strategies, transformation of the local content into efficient skilled labour and role of private sector in this transformation and implementing policies and lastly, further areas which needs to be developed to implement the ICV policy and gain effective results.

Since personal interviews ensure in-depth conversation with the participants, garnering scope of expressing oneself at length, thereby making a better observation of the participant behaviour, the qualitative method utilizing the concerned strategy was necessary in the study, so as to gather and interpret the perspective of the other side i.e. the policy makers, regarding the Omanization policies, its implications within the polity and economy of the nation, progress made and scope of development. Therefore, in the following chapter, interpretation of the qualitative data has been presented, gathered from the representative of the four sectors associated with government and its plan of implementing Omanization strategies within the nation.

**Chapter: 6 FINDINGS FROM QUALITATIVE STUDY: EXPLORING THE ROLE OF  
ICV AND THE MEASURES FOR INTRODUCING SOCIO-ECONOMIC  
IMPROVEMENTS**

**6.1 Introduction to Chapter**

The oil and gas sector of Oman, the largest contributor in the kingdom's GDP, has witnessed rising propensity towards incorporating of its citizens over expatriates, in the recent period. As per the declaration of the Sultanate's webpage, blueprint strategies are being formulated for the provision of as much as \$64 billion supplementary opportunities for the In-country value programme within 2013-2020. Such formulation of strategies for providing opportunities through considerable financial expenditure to Omanis will help the country to gain significant benefits through business development, development of human capital and stimulation of productivity in the Kingdom's economy. It is in regard to such a scenario that the present study conducts interview with thirteen personnel engaged in higher echelons of departments belonging to four segments– the Government, Oil & Gas Operations, Oil & Gas service providers and University. The data collected through interview method will then be qualitatively analysed to understand the various factors associated with the Oil & Gas sector such as, demands, supply, manpower, barriers, governmental policies, and so on.

**6.2 General Background**

All the thirteen executives approached for conducting the interview belonged to higher echelons of the concerned departments and therefore were middle aged with nearly 18 to 25 years of total experience. Nearly all of the respondents had university degrees with some of them holding doctorate degrees as well and were engaged for not less than 10-15 years with the case organizations (Table 6.1). The candidates interviewed from the four segments of organization are as follows:

<b>Respondents</b>	<b>Organizations</b>	<b>Age</b>	<b>Highest Educational Qualifications</b>	<b>Experience</b>
Mr. A	Government body - 1	42	MBA	18+
Mr. B	Government body - 2	45	MBA	20+
Mr. C	Government body - 3	56	PhD	19+
Mr. L		51	M.A.	21+
Mr. D	Government body - 4	49	PhD	23+
Mr. E	Operator - 1	54	MBA	25+
Mr. F	Operator - 2	43	MBA	19+
Mr. M		57	MBA	26+
Mr. G	Operator - 3	50	MBA	24+
Mr. H	Service Provider - 1	44	MBA	18+
Mr. I	Service Provider - 2	46	PhD	18+
Mr. J	Service Provider - 3	52	MBA	25+
Mr. K	Sultan Qaboos University (SQU)	48	PhD	18+

Table 6.1: Brief Description of Respondents

### **Government Bodies**

1. Government body - 1: *Mr. A*
2. Government body - 2: *Mr. B*
3. Government body - 3: *Mr. C, Mr. L*
4. Government body - 4: *Mr. D*

### **Oil & Gas Operators**

5. Operator - 1: *Mr. E*
6. Operator - 2: *Mr. F, Mr. M*
7. Operator - 3: *Mr. G*

### **Oil & Gas Service Providers**

8. Service Provider -1: *Mr. H*
9. Service Provider -2: *Mr. I*
10. Service Provider -3: *Mr. J*

### **University**

11. Sultan Qaboos University (SQU): *Mr. K*

## **6.3 Supply Gaps and ICV in Oman**

### **6.3.1 Demand and supply gaps of manpower in sector of oil and gas**

The oil and gas sector of Oman, in the recent period is facing certain gaps in the demand as well as supply of manpower. **Mr. A** opined that there is a total requirement of *US\$ 64 billion IN-Country value (ICV) down the value chain– US\$ 51.5 billion has to be addressed through local sourcing and rest US\$ 12.5 billion to be addressed through employment of Omanis*. **Mr. F** pointed out that there is a sharp shortage of manpower in Oman’s labour market, which affects the oil and gas sector too. As a result, “*companies and government agencies*” based on the concerned sector, “*seeks local agents to sourcing of labour*”. **Mr. C** expressed that growing shortage in skilled manpower have been a growing concern among responsible bodies of the O&G sector and this gap in demand and supply has occasioned into “*lose in efficiency and increased costs*”. Nearly two-thirds of the respondents agreed that this

shortage of skilled manpower has led to ‘poaching’ by the competitor companies and have also resulted in “*upward pressure on remunerations and a considerable increase in the costs of procuring and retaining workforces*”.

### **6.3.2 Handling of burgeoning demand of manpower by 2022**

Increasing demand for skilled manpower among private and public enterprises, affecting the oil economy of Oman as well as the economies of labour-source markets such as Pakistan, Bangladesh, India and so on, have influenced the government agencies such as the Ministry of Oil & Gas (MOG), Supreme Counsel of Planning, Ministry of Manpower and Ministry of Higher Education, to initiate strategies to meet the urgency. Such strategies have been “*formulated or discussed by including the private players as well*”, as **Mr. E** opined. The burgeoning demand for skilled manpower in the O&G sector, pose as a challenge for the companies in the wake of “*rising world market prices in oil and gasoline products– leading to expansion and growth of the sector*”, **Mr. I** expressed. But **Mr. K** observed that such a rise in prices and resultant expansion in O&G sector also act an opportunity for the government and the companies, as the “*shortage in sufficient skilled labour will provide prospect to the Omanis to get trained in the required skills*”. **Mr. K** further asserted that the burgeoning demand of skilled labour therefore can be met through effective training programs initiated by the government and followed by the respective companies, where Omanis will be provided “*required skills, thereby addressing the skill gap*”.

### **6.3.3 Specialization of the enterprises to handle burgeoning manpower demand**

In the rising practice of ‘poaching’ of skilled manpower among O&G companies, thereby threatening the functioning of the respective firms, **Mr. G** pointed out the efforts made these enterprises towards “*provision of training to its workforces*”, especially the Omanis “*through talent management and development*”. Moreover, as **Mr. H** opined, that his enterprise have diligently maintained a “*higher than required Omanization rate [through] substantial venture in both time and resources,*” to cultivate them. **Mr. B** presented a different scenario though. He emphasized that private sector are more elusive in implementing stringent measures to address the shortage of skilled labour, which has led to huge gap between employment rate of Omanis in public and private sector. Moreover, there are lesser skilled Omanis in responsible position, in both the sectors, who are generally employed in clerical or subordinate jobs. In the recent period, owing to *Vision 2020*, certain private enterprises, such

as that of **Mr. F**'s have raised their salary structure so as to encourage Omanis to join the concerned company. Development of technological advancements have also been initiated by certain private companies as pointed by respondents to lure Omanis to join the private sector over public and also adequate training programs are also provided to them to evolve them as skilled workforces. Expats have also been given adequate training and monetary benefits so as to attract them and restrict poaching by competitors.

#### **6.3.4 Linkage between value chain of O&G sector and Governmental policies**

Oil & Gas (O&G) companies in Oman follow the rules framed by the Ministry of Manpower (MOM) in addressing the skills gap existing in the value chain. A coordinated effort has been initiated by the Government departments and agencies with the public as well as private sector companies to address the challenging issue of skilled manpower shortage, explained the Ministry's representative **Mr. C**. Within that coordinated effort the concerned companies work with MOM, following its six-point plan "*to define long-term industry skill needs so that universities and the Ministry's vocational schools can develop graduates with right skill sets*" expressed **Mr. D** and **Mr. J**. Furthermore, **Mr. A** noted that owing to shortage of manpower in private sectors, the Government have ensured certain steps to encourage Omanis to opt for the concerned sector through "*increment of minimum wage policy from OMR 140 to OMR 200 (\$364 to \$520) in 2011 and further to OMR 325 (\$844.50) in 2013*". Besides, **Mr. B** asserted that the government has also ensured certain incentive structure for companies exercising in the private sector such as, "*compensation of training programs carried out by them; labour levy rebate scheme subsidizing the training and salaries of the newly employed Omanis*", and so on. In a nutshell, the respondents viewed the linkage between governmental policies and O&G companies as crucial owing to larger dependency of the economy on hydrocarbons, therefore following initiatives has been taken:

- Devising of a common program by converging oil and gas industry
- Coordination of efforts and initiatives maximizing the return on value creation, and
- Building of efforts towards efficient ICV development through leveraging of capacity and expertise of ICV committee.

### 6.3.5 Barriers in implementing ICV associated policies

Omanization policy formulated by the Government through its Seventh Five Year Plans and Vision 2020 has not yet witnessed the desired results owing to considerable barriers faced by the policy. Despite Governmental efforts in bringing Omanis into the fore fold of its Oil and Gas sector, especially in the private enterprises, there are certain existing facilities provided by the government itself, which are acting as barriers to the effort, pointed **Mr. G. Mr. I** further explained the point by denoting the minimum wage policy as a constraining factor leading the enterprises to hire expatriates over Omanis as there lies so such factor with the former. Furthermore, based on the MOM's policy of stringent hiring of nationals in lower positioned jobs of various sectors, most of the Omanis are employed as manual labours, drivers, and clerical jobs and so on, which contribute minimally to the economy and act as barrier in establishing Omanization in the responsible positions of the sector. **Mr. K** opined that, the "*establishment of monthly unemployment benefit of OMR 150 (\$390)*" has also contributed as barriers faced by the government in implementing full-fledged Omanization plan.

### 6.3.6 Transformation of the local content into highly skilled professionals

In a situation where there exists lack of skilled labour or professionals in the Sultanate and owing to greater dependency on expatriates for holding responsible positions in various organizations based on Oil & Gas sector, the government of Oman needs to structure its initiatives thereby transforming the local content into highly skilled professionals. Despite measures taken, the respondents feel that more needs to be developed so as ensure considerable success. **Mr. M** pointed out that chronic skill shortage within the country in both medium and long term can be met through a combination of strategies such as, "*global training strategy for enterprises and industries, drawing talent from diverse section of the population like women and people with disabilities, rising of collaboration among industry workforces, worker unions, and other associated stakeholders*" thereby improving retention schemes and development of technologies for future. **Mr. L** expressed that in order to follow global standards, it is essential for the Government as well as organizations to "*follow International Labor Organization's (ILO) standards and policies*". Such an alignment with ILO's G20 Training Strategy, will eventually lead in a "*skilled labour force which will build up a strong, sustainable and balanced growth*" thereby filling the gap between education & training (theory) and, work (practice).

### **6.3.7 Private sector's role in transforming the workers into highly-skilled professionals**

With the Government of Oman taking a considerable step towards Omanization of its workforce by 2020, private sectors are also trying their best in matching their steps with the former. As has been pointed out by the respondents, that private sectors feel burdened in hiring Omanis, owing to guaranteeing of various facilities as formulated by the Government such as, minimum wage rates, pension facilities, unemployment benefits and the like thereby encouraging them to prefer expatriates over nationals. Another barrier faced by private sectors, as explained by **Mr. J** is loss of workforces. Citing one instance he said, his organization had projected considerable commitment in Omani workforce development through maintaining higher Omanization rate, yet it *“lost nearly 35% of its workforce to its competitors despite investing significantly in time and resources to train them”*. This has led to his enterprise face difficulty in replacing the experienced and well-trained personnel from the local market, where there is a *“lack of efficient professional fit for service”*.

Yet **Mr. E**, as responsible personnel of a private sector organization noted that despite huge loss in workforces incurred by the concerned sector to its competitors, *“private firms are taking up considerable initiatives to transform Omanis into skilled personnel so as to lessen their reliance on expatriates”*. Instead of competing with each other, private industries are placing greater emphasis on *“talent management and development”*. Furthermore, they are committed in developing young nationals to suitable positions matching their skills and also equipping them with necessary resources, thereby developing them as *“global competitive workers”*.

### **6.3.8 Role played by private sectors in aiding ICV efforts of Government**

In-Country Value development has emerged as a major aim for both government and private organizations functioning in the Oil & Gas Sector. Therefore, both sectors have come forward *“collaborating with the government agencies to make ICV development a success within the stipulated time frame”*, noted **Mr. K**. ICV managers and team have been carved out from these industries along with committees to look after the same. Also training and development programs are going on full-fledged basis, *“hiring nationals through local sources by tendering and suppliers development program”* explained **Mr. A** and **Mr. L**. Table below provide a brief idea about the local employers share (\$value) in one of second

largest producer of oil in Oman, with whom the organizations establish a contract of oil & gas services, boosting Government's ICV efforts.

Such initiatives have led to desirable percentage of Omanization in the oil & gas industry, pointed **Mr. H. Mr. D** furthermore stated that, such a tight collaboration of the Oil & Gas industry have *“converged the ICV agenda towards a common program, have coordinated efforts thereby maximizing the return on value creation and have leveraged expertise and capacity of the ICV committee to development of ICV, efficiently”*.

### **6.3.9 Translation of ICV policy into quantifiable terms**

The ICV policy undertaken by the government and the effort carried out by both the private as well as public enterprises in meeting Omanization policies within their organizational functioning, have yielded considerable fruit. **Mr. C** noted that ICV have resulted in deepening outcomes such as, *“quantifying of oil and gas industry demand in the country thereby assessing feasibility of new sustainable opportunities of ICV development”*. Furthermore he stated that the efforts have led to quantify the *“capability of the local supply market and its capacity in provision of required goods and services”*. **Mr. G** asserted that ICV has led to address *“activities and businesses”* throughout the overall value chain.

### **6.3.10 Possible areas need to be developed in the process of localization and implementation of the ICV policy**

**Mr. I** in reference to the development achieved in the economy through ICV and localization policy opined that although export of natural hydrocarbons contributes a major sliver to the economy of Oman, *“the rate of native unemployment still remains around 15%”*. Moreover, until now the country has primarily emphasized upon short term policies rather than sustainable long term ones. Addressing these two areas can help in sustainable economic growth and development of Oman. **Mr. B** noted that, the area that needs most attention is *“development of domestic manpower resource so that they can be made skilled enough to satisfy the specific manpower demands of the sector”*. Echoing similar concern about the sector which needs improvement in future, **Mr. E** emphasized that, *“the most vital sector that needs attention is unemployed domestic manpower. Enhancing its quality and making it skilled is already acknowledged as a part of the entire objective of the ICV policy”*. Therefore it is concluded that, improvement of domestic manpower assumes considerable position when implementing the policy of localization among organizations of the concerned sector or to

any sector of the country, which will eventually lead to increased economic gains. As Swailes et al. (2012) stated through their study, “changing the attitudes of young Omanis, however, requires sound evidence about working life in the private sector”, which therefore requires a detailed and evidence based understanding of the workforce market, which will include both employers and employees’ perspective of the present and future scenarios involving wage levels and job security.

## **Chapter: 7 DISCUSSION & IMPLICATIONS**

### **7.1 Introduction to Chapter**

After analysing the primary data collected through qualitative and quantitative means from the 13 representatives of four segments of the Oil and Gas industry including one university scholar and 380 workforces of various backgrounds engaged in the middle management of organizations of the same sector, this chapter undergoes analysing them with secondary data as explained earlier, with the purpose of meeting the research objectives established. The conclusion will be followed by recommendation by the researcher, to strengthen the ICV development and localization policy devised by the government and implemented by the public and private organizations, covering the gaps exposed through the study.

### **7.2 Analysis of the Objectives with Findings**

#### **7.2.1 To understand the concept of ICV and role of HRD especially within the Oil and Gas Sector**

The qualitative data gathered from responsible members of bodies associated with the functioning of the Oil and Gas sector of Oman reflected that the policy of Omanization and ICV development have incurred giant job opportunities for its nationals. All the respondents agreed to the fact unanimously that through increasing of job prospects among the Omanis will help the sector to gain success in Omanization. The Oil and Gas sector presently is facing a major manpower gaps against its requirement, hence compelling organizations to rely on foreign nationals or expats. Therefore, local sourcing of labour through skill development will enable the nation and its organization will enable strengthening of the effectiveness of its nationals, thereby saving themselves from upward pressure of remunerations and costs of procuring and retaining human resources– especially the expatriates. The ICV Blueprint Strategy published by the Sultanate of Oman too speaks of similar concern. According to the report, an amount of US\$ 64 billion can be addressed through employment of Omanis selected directly or through local sourcing (Lawati 2014). But such process of job creation evidently needs human resource development of the nationals, owing to lack of required professional skills among them, which reflects proposition made by Lahiri & Ono, (2003), according to whom the local content policy is also utilized by other countries as a strategy to increase domestic inputs in order to add value to the economy. As the primary data suggests, job creation and eventual replacement of the expatriates by the Omanis require immense

training program through human resource development (HRD) among the organizations supported by the responsible Governmental body so as to evolve them into highly skilled professionals as per global standards. HRD plays a significant role in not only transforming the local content into effective manpower resource but also motivate them to develop and retain their organizational commitment and productivity, thereby contributing value to the economy. Primary data through survey portray that HRD practiced in organizations result in gaining several elements such as, creation of positive attitude among employees, increasing of individual output, ensuring greater flexibility and workflow, enhancing workforces' performance through on-job training and sponsoring formal education outside workplace to employees thereby guaranteeing their organizational commitment. Furthermore, the personal interviews also highlighted the burgeoning requirement of skill development through training programs, within which the Human Resource Department plays a significant role. Given the issue of lowering of Oil & Gas prices in the global market, development of skills of the local workforce will enable the sector to deploy innovative ideas of making the sector lucrative again, thereby raising its value in the global market. For this skill development, human resource department plays an important role. Therefore, it can be asserted here that HRD evidently plays an important role not only in creation of job and retention of workforces, ensuring their effective productivity, but also in adding value to Oman's economy (Papyrakis & Gerlagh, 2004).

#### **7.2.2 To understand the gaps in the functioning of HRD and government initiative with respect to ICV and how these gaps can be bridged**

Primary data gathered through interview pointed out the gaps present in the demand and supply of manpower within organizations based on Oil and Gas Industry. Such gaps are majorly the result of gaps present in the development of human resources. This mostly can be observed in the private sector than the public ones, where all the facilities and policies devised and implemented by the Government are followed. Private sectors until a year back, as pointed out the interviewees, were reluctant in investing time and resources over training and development of its workforces. They mostly preferred expats who are more educated and well-trained over its nationals. This led to lesser stringent rules for human resource development through effective training and activities. As a result the local content is mostly unaware of the technological assistance and lack expertise in the same. Moreover, certain experiences such as Omanis applying for the post of accountants for example, without having

any knowledge or experiences of the matter, thereby misleading the authorities have further diminished their interest in hiring them. From the interviews it was evident that the local content are lesser indulged in developing their skills so as to compete with the expatriates, owing to their higher payment scale, which was in actuality implemented to attract the localites. The lack in initiatives in human resource development especially by the private sector, along with laxity on part of the local content in taking personal initiatives of skill development lingers as a gap in achieving ICV policies of Vision 2020. Secondary resources too, support the view extracted through primary data, by depicting that private sectors were apprehensive of implementing human resource development in fully fledged manner owing to reasons like *poaching* of their potential personnel by competitors thereby incurring huge loss to the organization (Ennis & Al-Jamali 2014). Besides, hiring Omanis and investing in their development is followed by provision of considerable wage, retirement security and the like, devised by the government, which is not the case with expatriates (Ennis & Al-Jamali 2014). Such practices led to gap in Human Resource Development.

In order to encourage the private sector to implement development procedures, thereby bridging the gap in HRD, government formulated certain steps. These steps ranged from compensating private organizations in their training program, subsidizing the salaries of newly-hired Omanis to bringing into fore organizational individual training needs to guide the private enterprises and setting up of evaluation and assessment of HRD strategies and its implementation (Cahill 2005) & (Alkire and Santos 2010). Similar findings have been observed from the personal interviews undertaken which exhibited the government's cooperation initiative with the Universities and Public as well as Private Companies. As denoted by the participants, the companies have been asked to present a detailed skill requirement list which is important for achieve the Vision 2020, following which the universities and the government run vocational schools can develop curriculum. Further, to make the private sector more lucrative for the local content, Government has also increased their salary structure in the concerned sector, along with compensating the sector for carrying out effective training programs. Such practices in the recent core have guaranteed loyalty, innovation and creativity in both public and private organizations, have improved the supervision system, HR planning and training assessments, developed courses and have made some of them mandatory for employees to undergo and most importantly have increased the share of Omanis over expatriates, thereby bridging the gap (Szajnowska-Wysocka, 2009). To conclude, the government of Oman, as observed from the qualitative analysis, have evidently

taken both the sectors of Oil & Gas– private as well as public into its fold, building of efforts towards efficient ICV development through leveraging of capacity and expertise of ICV committee.

**7.2.3 To evaluate the extent to which the local content policies of the government have been achieved in terms of ICV and different economic domains.**

The government of Oman since Sultan Qaboos' rule had been devising its development plan through which the Omanis will be strengthened thereby lessening the proportion of the expatriates. The first Five Year Development Plan (1976-80) devised during the oil boom period emphasized on development of infrastructure and expansion of economy and also in lessening of expat count by 5000 each year. The Fourth Five Year Development Plan (1991-95) identified and thereby emphasized in improving human resource development and expanding the indigenous base within its industries, hence leading to the foundation of Omanization policy. Later, followed by the World Bank's report and identifying the economic situation of the country, the Government introduced the *Vision for Oman's Economy 2020*, which was incorporated in subsequent development plans. Such Omanization plan led the government to articulate plans and develops strategies which were to be implemented in the upcoming decades. Policies include, sustainable economic growth, development of human resources, economic diversification and private sector development (Ennis & Al-Jamali 2014; Lawati 2014). Based on the workforce analysis trends, w.r.t. to construction sector, expatriates occupy 72% of the workforce, pointing at the room for training and better government policies so that more skilled people can be hired. Further, in terms of Drilling and Well Construction, the percentage of Omani nationals was significantly higher (79%), when compared with expatriates (21%), which point at the progress being made due to the government initiatives. In terms of Supply of materials, more expatriates (68%) when compared to Omanis (32%) supply raw material to the Oil and Gas industry. However it was point out in the analysis that these suppliers often hire locals within their organization thus contributing to Omanization. Primary survey and interview analysis too point out that several policies of the government encouraged Oman nationals to take up job in the concerned sector in both private and public enterprises such as, setting up vocational schools under the aegis of educational institutions, emphasizing private as well as public enterprises to set up training programs and centres for rendering required professional skill

development, providing minimum wage limit to save these nationals from being exploited and providing other facilities as well.

In terms of reaching the desired goal secondary sources mostly provide a negative picture. Most of the published research work and articles denote that Omanization policies of the government which aimed for increasing the levels of Omanis in both private and public sector from 15 and 68 percent in 1995 to 75 and 95 percent in 2020 have achieved limited success, especially in private enterprises (CC Energy Development S.A.L 2015). This is evident from the qualitative analysis as well, where the in-depth conversations with the participants belonging to varied fields of responsibilities revealed certain barriers in implementing ICV associated policies. For instance, the minimum wage policy by the government influences private sectors to hire expats over local contents, due to unavailability of the latter in the stipulated wage range. Furthermore, the stringent policies laid down by the Ministry of Manpower for hiring the local content in lower positioned jobs like clerical and such others led to a larger population being employed in the lower strata and their consequent lower contribution in the economy. However, survey data reveal that private sectors in the contemporary period are equally enthusiastic in raising the Omanis' level as are the public ones, which have contributed in gaining considerable success. Through the joint initiative of private-public enterprises along with government agencies, have boosted the share of nationals in all the sector of the Oil & Gas industry. New jobs have been created, with attractive salary benefits and others which draw the nationals, besides boosting the organizational functioning through well trained nationals thereby earning greater revenue than before (Al-Sadi, Belwal & Al-Badi, 2011; McElwee & Al-Riyami, 2003) & (Al-Sadi, Belwal & Al-Badi, 2011). However, there still lie certain lacunae like unemployment rate of the locals still lingering at 15% and absence of substantial long term policies, thereby affecting the achievement of Vision 2020, through efficiently developed manpower. Therefore, there lies scope for sizable policy formulation and implementation by the Government-Public-Private sector, thereby developing an understanding and perspective of the present and future scenarios involving wage levels and job security among the local workforce.

### **7.3 Recommendations**

Based on the analysis carried out qualitatively and quantitatively and concluding the research objectives, exploring both primary as well as secondary data, it is evident to the researcher

that there exists certain weak spots which needs improvement, thereby making the ICV development and Omanization policy a success. In compliance with the improvement required, the researcher therefore provides certain recommendations, which can be given a thought by the responsible bodies and individuals before making further advancements for future.

1. Human resource development should be structured in such a way which will produce well-trained professionals who will have the knowledge to implement strategies through innovation and creativity. In face of increasing competition and globalisation, it has become imperative for organisations to include cost-effective methods while production, which comes only through talented and skilled individuals. The data collected through primary methods reveal that innovation and advancement in cost-effectiveness has not been focused on by the human resources department while conducting their operations. In such a scenario, it is significant for organizations to train its employees for future gain in cost-effectiveness of production procedure.
2. Primary data analysis also projected the element of innovation and creativity developing less in public sectors in comparison to private ones. Such an existence will threaten the functioning and productivity of the organizations in the future, thereby affecting the economy. As Oil and Gas industry is one of the major contributors of economic gains for the country and, as greater proportion of Omanization have taken place in the particular sector, therefore it is important for the government as well as the public enterprises to develop means to thrive innovation and creativity within its workforce, besides providing financial and security benefits. This can be enabled by inculcating a number of robust training and development programs, regular performance reviews in order to boost their confidence and including a number of extra- curricular activities like industry visits to increase their awareness.
3. Though in the recent years, population of Omanis have increased in the private sector, yet the sector still lags behind public holdings, despite increasing its monetary benefits. This reflects that the private enterprises need to provide job security to the nationals which will encourage them to prefer the sector just as they are interested in working for the government. The private sectors' propensity towards hiring expatriates for lesser compensation over nationals and in-sufficient provision of health and retirement benefits makes the national apprehensive in joining the same, thereby

preferring the public holdings. Until the government and organisations adopt methods to reverse this phenomenon, not much development will be seen in any sector as far as Omanization is concerned. Such a scenario needs modification for making Omanization a success.

4. Another major loophole present in the working sector of the country is lack of workforce diversity. As observed from the primary data collection and published studies, there exists gender disparity and negligible presence of people with disabilities. There was considerably lesser population of women and people with disabilities out of the respondents approached by the researcher. In order to utilize the potential of its nationals to the fullest thereby adding value to the economic domain, it is important for the government to formulate policies for diversification of workforces providing women and people with disabilities equal opportunities to project their potential and skills, which the public and private sectors need to implement in their organizational planning so as increase their productivity. Government should also plan to encourage these individuals to join the workforce sector, thereby utilizing their capabilities.

## **Chapter: 8 CONCLUSIONS**

### **8.1 Contribution of the study**

**Conceptual Contribution:** The study aimed to bring forth the ICV program of the Government of Oman, thereby exploring the avenues of actual scenario persisting in context of the Omanization policy in both public and private organization of the O&G industry is one of a kind. Though there exist reports bringing out the developments taking place in the particular area, there is a lack of research studies based on developments occurring for a certain period of time. In such a context the present study contributes to its readers and future researchers, valuable information regarding the goings-on in the industry referring the Omanization policy reflecting views of the ones who are directly benefitted or affected by the program and reflecting into past occurrences as well.

**Practical Contribution:** There are many long term benefits that the ICV program can bring the Omani government as it helps to reduce the dependence of the country on foreign labour and it reduces the high dependence of the Omani economy on the oil and gas sector. This study shows that there are many possible avenues of transformation that are open to the government at the present time via the ICV programs it has devised. This kind of policy should improve the human rights standing for the Omani government vis-à-vis the international community because it shows a commitment to the liberalization of trade policies and the adoption of reforms that promote a free-market economy. It should also help to incorporate women and young people into the active economy and lead to a more productive society and hopefully increase the welfare of more citizens. The education programs and training initiative that fall under the ICV programs will also contribute to a society where more people are highly skilled and have the potential to earn well and contribute to society in meaningful ways with their knowledge and talents.

The findings of the primary studies in this research too revealed that company representatives agree that Omanization has opened a whole new arena for development of Omani nationals in the economy. The interviews reflected the pitiful state of Omani nationals as far as skills and talents demanded by the oil and gas industry in concerned, which forces companies to hire foreign executives for key jobs. However, different efforts taken by the Omani government seems to be paying off as there are more Omani nationals in the workforce today than ever before. Findings from the initial chapters too support this notion. However, talent

management remains a crucial area which needs development from the side of the government and the organisation, if the full effects of Omanisation are to be realised.

## **8.2 Research Limitations**

Though it is the purpose of this research to discuss all the ways in which job creation and value adding have been impacted by the oil and gas value chain, the scope of research that it is in the power of this paper to review will limit the true extent of what will be reviewed. Given that the nature of the research topic is exploratory and intended to suggest areas where further research is needed, the amount of research capable of being reviewed will, however, supply an adequate array of knowledge as to what level of influence oil and gas value chains contribute to the country of Oman.

Obtaining a level of information conducive to creating an adequate review of oil and gas value chains will be an undertaking of reasonable difficulty. The information required to create an adequate study is available via a search of several online journals as well as reports created by students and scholars within the field which are discussed throughout this paper. It is also possible to use the statistical data available from international organizations like the IMF and World Bank. The Omani government also produces its own data. There are also significant data sources available from the oil and gas companies themselves.

The study is also limited in terms of the interview and survey data it will collect because the sample size is relatively small for a discussion of the Omani economy overall. It will not give a systematic portrait of all the variation that exists in the local economy or in terms of perceptions of the oil and gas industry. In order to produce a comprehensive picture of the Omani economy the survey administration and interview administration would have to use a much larger sample and a probability sampling technique that could allow the researcher to make statistical inferences about the soundness of the generalizations being made. In order to accomplish this level of survey administration, the researcher would likely require research assistance as well as research funding in order to carry out a wider scope of research that would give a more systematic view of the Omani economy and the perceptions of Omani citizens on the local economy. There would also need to be a base of verifiable data available, like an official census of the country that can be used to help draw inferences from the data collected about the employment policies and how they are having an impact on Omani work opportunities. For example, like the total number of women employed outside the home in

Oman over a span of years and then compare this to the number of female respondents in various sectors after the implementation of the ICV program.

The research was also limited by some significant gaps that are present in the existing literature. While there is a lot of statistical information available on the effects of the oil and gas industry in Oman, in other GCC countries and around the world, the data on the local economy in Oman and on the other sectors of the economy are less comprehensive and less rigorously quantified. There are thus some significant imbalances in the amount of information that is available and in the quality of that information. The present study has to use this multi-faceted information that comes from different sources and different kinds of research questions. For example, there is little in the way of pre-existing research using interview data about the perceptions of Omani citizens on the different sectors of work. This information has to be gleaned from original interview data. In order to talk about GDP and the effects of the oil companies, it is possible to use already existing research. There are therefore different qualities to the kind of analysis that can be provided in trying to synthesize this data into an analytical report like this one. This is also why it was necessary to try a more empirical research technique in order to get information on the perceptions of workers and on the perception of local development and the local economy in Oman.

As the researcher solely in charge with the gathering of the information for this research and review of the data for analysis, I am qualified to conduct this research as it relates to my intended program of study. My work to date has shown that I am capable of conducting the research necessary to properly understand the effects of Oman's ICV policies on developing the local economy. I also have the ability to communicate the information obtained, which will be herein discussed and reviewed.

### **8.3 Implications for future research**

Upon completion of the review of related research previously conducted on the topic; this research paper has explored where questions remain on the subject of the local economy and the effects of gas and oil dominance in Oman. However, there is scope of future research wherein research studies that evaluate the effectiveness of the government efforts to increase the job market and/or add value to different economic sectors within the Omani market. There is a lack of empirical studies that explore specific examples and causal factors for either the failure or success of Omanization programs. The research will, in the future, review the

implications and the requirements for change within the context of gas and oil in the country of Oman.

It would also be helpful to have studies of the effects of job creation on Omani citizens themselves. What kind of jobs are recent graduates able to procure in the markets in Oman, and how are young people making their career choices? There is a lot of attention on the part of the Omani government to the companies who hire foreign workers and the government has established incentives for companies to hire Omani workers. This however is a very top down approach to the problem of local economic diversification and opportunity creation. There are also many push factors within Omani society that have not been studied closely. One such factor is a better understanding of how Omani citizens themselves select their work and career paths and how they seek out job opportunities. It would be helpful for policy makers to have information about job selection and training from the vantage point of Omani citizens. This would help future that seek to make appeals to Omani citizens and help them also make training and education choices that lead to better opportunities for them. There is still however an imbalance when it comes to the demand and supply of labour in Oman. It was mentioned earlier that more research is needed on perceptions of the public and private sectors in Oman because Omani citizens seem to express preference for public sector jobs and public service because they believe these jobs are more stable and provide better working conditions and benefits and thus more job security and stability in the medium and long term. There is thus a much higher demand for public sector jobs than private sector jobs, and there is also less enthusiasm in the entrepreneurial route of small business and local business investment. There has to be work on how to shift these cultural and social perceptions on the part of the general public in Oman. There also needs to be more confidence in the national skills and training that are achieved by Omani citizens.

Another fruitful area of research in order to further understanding of economic diversification and local economies would be to foster more comparative studies between different economies that have tried to lead themselves away from dependence on a single commodity or resource and adopted programs for economic diversification. A wide-ranging comparison between different programs in different cultural and economic contexts would help economists and development researchers to build stronger models of economic development that might be able to help pinpoint some of the causal factors that lead to more economic growth. This kind of research can also shed light on where there may be potential problems or

what practices should be avoided when trying to generate more support for the local economy. There is thus a lot of information that can come from a comparative look at successful local economy generation programs, as well as comprehensive analyses of programs that maybe only had limited success or no success at all.

A final area of potential research could be how to best apply the revenues that are generated from the oil and gas industry in terms of supporting a more robust local economy with a diverse set of opportunities for Omani workers. More diagnostic studies are needed of the Omani population in terms of their relationship to the companies who invest in the country and the foreign workers who do come to assume more specialized and technical roles in the workforce. What specific initiatives would improve economic indicators and motivate more local economic development? What are the cultural and social barriers to small business development and entrepreneurship for example among the Omani people? What kind of local businesses could the government help to incentivize and so lead to more economic diversification and even job creation among small businesses and entrepreneurs as employers? The present Omanization programs that are in place have been good at opening opportunities within existing companies and industries but another beneficial area to invest and provide incentives is in the creation of self-employment opportunities and a more bottom-up and self-help initiative in local communities and local business owners themselves. They can become small merchants and service providers and thus give more resilience to the local economy.

One of such possible changes is expected to occur in the value chain with which oil and gas is produced as well as every step of the chain following production it will be possible to refine said chain in order to create and sustain booming economy within Oman that is not only self-sustaining but self-thriving as well. This will allow the country to create its own jobs and add its own value without the necessity of investments from outside sources. It will further allow the country to create an atmosphere which is known around the world for the skills and abilities it produces. Future research will be able to determine how this can be achieved.

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## Appendix I: Quantitative Questionnaire

The following questions are address to define the role of ICV in the oil and gas sector of Oman. The goal of the study is to determine ICV role in job creation and adding human resource values in the Oman economy.

In line with “Participant Information Sheet Guidelines” and with regards to the study following are the survey questions.

Your participation is deemed to be voluntary and your identity, as well as your answers to the questions will remain confidential.

Thank you.

Name :

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### Section A: Personal Information & General Background

**1. What is your age?**

- |                |                          |               |                          |
|----------------|--------------------------|---------------|--------------------------|
| <i>21 – 30</i> | <input type="checkbox"/> | <i>31- 40</i> | <input type="checkbox"/> |
| <i>41 - 50</i> | <input type="checkbox"/> | <i>51- 60</i> | <input type="checkbox"/> |

**2. What is your gender?**

- |             |                          |               |                          |
|-------------|--------------------------|---------------|--------------------------|
| <i>Male</i> | <input type="checkbox"/> | <i>Female</i> | <input type="checkbox"/> |
|-------------|--------------------------|---------------|--------------------------|

**3. Which sector does your organization belong?**

- |               |                          |                |                          |
|---------------|--------------------------|----------------|--------------------------|
| <i>Public</i> | <input type="checkbox"/> | <i>Private</i> | <input type="checkbox"/> |
|---------------|--------------------------|----------------|--------------------------|

**4. What function or department do you currently work in?**

- |   |                          |                                     |                          |
|---|--------------------------|-------------------------------------|--------------------------|
| <i>Finance Department</i>                 | <input type="checkbox"/> | <i>Ministry of Education</i>        | <input type="checkbox"/> |
| <i>Oil &amp; Gas Ministry (Govt Body)</i> | <input type="checkbox"/> | <i>Supply Chain and Procurement</i> | <input type="checkbox"/> |
| <i>Material Suppliers</i>                 | <input type="checkbox"/> | <i>Construction</i>                 | <input type="checkbox"/> |
| <i>Transport</i>                          | <input type="checkbox"/> | <i>Production (Oil &amp; Gas)</i>   | <input type="checkbox"/> |

**5. How many years have you been working for the company or institution you are currently connected with?**

- |                         |                          |                    |                          |
|-------------------------|--------------------------|--------------------|--------------------------|
| <i>less than a year</i> | <input type="checkbox"/> | <i>1-5 years</i>   | <input type="checkbox"/> |
| <i>6-10 years</i>       | <input type="checkbox"/> | <i>11-15 years</i> | <input type="checkbox"/> |

- 16-20 years  more than 20 years
6. **What is your highest level of educational attainment?**
- High School Diploma  Post-Graduate
- Bachelor's Degree  Vocational
7. **State your citizenship?**
- Omani National  Expatriate
8. **What is your current position in the company?**
- Manager  Senior Manager
- Engineer  Team Lead
- Supervisor  Research Associate
- Others

**Section B: General Background**

9. **Do you think there is importance of local content in your organization?**
- Yes  No
- Not Sure
10. **Which among the following skills do you think local suppliers need more competency assessments and training?**
- Project Management  Marine support and logistics
- Occupational Health and safety  Engineering and drilling
- Quality management  Transportation
- Chemicals and Fluid handling  Others \_\_\_\_\_
11. **What according to you are the expectations regarding local content requirements in oil and gas projects?**
- Financial value of the project  Developing suppliers and services locally
- Employment of local workforce  Procuring suppliers and services locally
- Training of local workforce  Others \_\_\_\_\_

**12. Do you find to involve yourself with people from different backgrounds?**

- Yes*  *No*   
*Never been an issue*

**13. In which phase of the project is the local content most required?**

- Upstream*  *Downstream (R&D)*   
*Midstream*

**14. Which among the following skills do you think local suppliers need more competency assessments and training?**

- Lack of competent labour*  *Lack of internal (company) local content strategy*   
*Lack of basic infrastructure*  *Weak financial basis*   
*Communication problems*  *Quality of education system*   
*Unstable economy*  *Business regulatory environment*   
*Unstable political structure*  *Others \_\_\_\_\_*

**15. Does your company has any strategy to handle local content expectations?**

- Yes*  *No*   
*Not Sure*

**16. Do you think it is important to include local content strategy?**

- Very important*  *Not essential*   
*To some extend*  *Varies as per the company*   
*Others \_\_\_\_\_*

**17. What according to you are important elements to promote successful local content strategy?**

- Stable government relations*  *Increased workforce at low cost*   
*Making competitive advantage*  *Improves overall reputation*   
*Reducing cost with help of local suppliers*  *Meeting legal and contractual obligations*   
*Others \_\_\_\_\_*

**18. Who according to you should be responsible to make local content strategy successful?**

- |                               |                          |                                  |                          |
|-------------------------------|--------------------------|----------------------------------|--------------------------|
| <i>Project management</i>     | <input type="checkbox"/> | <i>Human resource management</i> | <input type="checkbox"/> |
| <i>Procurement management</i> | <input type="checkbox"/> | <i>Top level management</i>      | <input type="checkbox"/> |
| <i>Others _____</i>           |                          |                                  |                          |

**19. Do you think the current local content strategy is efficient?**

- |                 |                          |           |                          |
|-----------------|--------------------------|-----------|--------------------------|
| <i>Yes</i>      | <input type="checkbox"/> | <i>No</i> | <input type="checkbox"/> |
| <i>Not Sure</i> | <input type="checkbox"/> |           | <input type="checkbox"/> |

**20. Do you think local content must be reviewed from time to time?**

- |                 |                          |           |                          |
|-----------------|--------------------------|-----------|--------------------------|
| <i>Yes</i>      | <input type="checkbox"/> | <i>No</i> | <input type="checkbox"/> |
| <i>Not Sure</i> | <input type="checkbox"/> |           | <input type="checkbox"/> |

**If the answer for 20 is “Yes”, then what according to you should be done in order to**

**21. review the existing local content strategy in your organization?**

- |  |                          |   |                          |
|--|--------------------------|---|--------------------------|
| <i>Conduct local capability study</i>    | <input type="checkbox"/> | <i>Financial and economic analysis</i>                | <input type="checkbox"/> |
| <i>Supply chain mapping and analysis</i> | <input type="checkbox"/> | <i>Infrastructure analysis</i>                        | <input type="checkbox"/> |
| <i>Cost benefit analysis</i>             | <input type="checkbox"/> | <i>Understand the national development priorities</i> | <input type="checkbox"/> |
| <i>Barrier analysis</i>                  | <input type="checkbox"/> | <i>Others _____</i>                                   |                          |

**22. What according to you are the best strategies to ensure local in global project in and emerging economy?**

- |  |                          |  |                          |
|--|--------------------------|--|--------------------------|
| <i>Training and skill development of local workforce</i> | <input type="checkbox"/> | <i>Financial and banking initiative</i>  | <input type="checkbox"/> |
| <i>Local procurements</i>                                | <input type="checkbox"/> | <i>Joint venture with local firms</i>  | <input type="checkbox"/> |
| <i>Improving local SMEs</i>                              | <input type="checkbox"/> | <i>Development of local education and training centres for skill development</i> | <input type="checkbox"/> |
| <i>Industry collaboration</i>                            | <input type="checkbox"/> | <i>Internal education within organization</i>                                    | <input type="checkbox"/> |
| <i>Others _____</i>                                      |                          |  |                          |

**23. How do you see local content strategy in an organizational context?**

- |  |                          |                                  |                          |
|--|--------------------------|----------------------------------|--------------------------|
| <i>Corporate Social Responsibility</i> | <input type="checkbox"/> | <i>Customer communication</i>    | <input type="checkbox"/> |
| <i>Sales and marketing</i>             | <input type="checkbox"/> | <i>Stakeholder communication</i> | <input type="checkbox"/> |
| <i>Human resource development</i>      | <input type="checkbox"/> |                                  |                          |

**Section C: Role of HRD, and Government initiatives for the promotion of Local content**

24. The following questions are based on 5 point Likert scale, where 5 denotes strongly agree and 1 denotes strongly disagree, with 3 being neutral. The entire questions are divided into 3 sub-sections delving into various sectors bringing out the several factors related to ICV policies incorporated in the oil and gas sector of Oman.

Description	5	4	3	2	1
<b>Human Resource Development</b>					
Human resource development (HRD) practices motivate employees to put in their best in accomplishing their tasks.	<input type="checkbox"/>				
HRD practices enhance employees' job satisfaction in the company.	<input type="checkbox"/>				
HRD practices create a positive employees' attitude in the company.	<input type="checkbox"/>				
HRD practices provide employees' with greater intrinsic rewards than other traditional HRD tools	<input type="checkbox"/>				
HRD practices increase employees' commitment to the company.	<input type="checkbox"/>				
HRD practices increase employees' individual output in the company.	<input type="checkbox"/>				
HRD practices increase organizational productivity.	<input type="checkbox"/>				
HRD practices bring about greater flexibility and increased workflow.	<input type="checkbox"/>				
HRD practices bring about production efficiency.	<input type="checkbox"/>				
HRD practices bring about cost effectiveness in production.	<input type="checkbox"/>				
HRD practices in terms of frequency of on-the-job training enhance employees' performance.	<input type="checkbox"/>				
Employee commitment in the organization is enhanced by HRD through sponsored formal education outside the workplace.	<input type="checkbox"/>				
<b>Government initiatives</b>					
Omanization policies of the Government have reduced the share of expatriate workers in your organization.	<input type="checkbox"/>				
Government initiatives have provided clear path to the employees, bringing to the fore organizational needs and individual training needs.	<input type="checkbox"/>				
Government initiatives have improved the supervision system, HR planning and training needs assessment.	<input type="checkbox"/>				
The Institute of Public Administration develops and provides training courses focusing on planning and strategic management applications.	<input type="checkbox"/>				
Government initiatives have established a minimum number of training courses that the normal employee	<input type="checkbox"/>				

Description	5	4	3	2	1
should attend annually.					
Ensure the importance of loyalty, innovation and creativity in HRD policies within the governmental units.	<input type="checkbox"/>				
Ensure the importance of loyalty, innovation and creativity in HRD policies within the private sector units.	<input type="checkbox"/>				
Establish a strong and effective system for evaluating and assessing the strategies of HRD and their implementation.	<input type="checkbox"/>				
<b>Government initiatives impacting economic domain</b>					
Government initiatives of Omanization have influenced the various sectors of economy.	<input type="checkbox"/>				
Omanization has increased the employment rate of Omanis within your organization.	<input type="checkbox"/>				
Omanization has impacted the lessening of expats within your organization.	<input type="checkbox"/>				
Government initiative of Omanization has influenced your organization in replacing the expats with Omanis.	<input type="checkbox"/>				
The capacity of Oman's economy in generating new jobs has catered the Omanization initiative, affecting the expats.	<input type="checkbox"/>				
Government initiative of localisation (thereby lessening of expat workforce) has boosted the organizations' functioning earning greater revenue.	<input type="checkbox"/>				

Any other comments

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*Thank you for your time*

## Appendix II: Qualitative Questionnaire

### Instructions:

The following questions are address to define the role of ICV in the oil and gas sector of Oman. The goal of the study is to determine ICV role in job creation and adding human resource values in the Oman economy.

In line with “Participant Information Sheet Guidelines” and the kick-off meeting with regards to the study following are the questions for the on-to-one interview.

Your participation is deemed to be voluntary and your identity, as well as your answers to the questions will remain confidential.

Thank you.

**Date** : \_\_\_\_\_ **Duration** : 90 Minutes  
**Name** : \_\_\_\_\_  
\_\_\_\_\_

### **QUESTIONS**

1. What are the current demand and supply gaps of manpower in oil and gas sector?
2. Is the country equipped to handle the possibility of a burgeoning manpower demand in this sector by 2022?
3. How is your enterprise specialized to handle the burgeoning manpower demand in the contemporary period?
4. How can the value chain of the gas and oil sector of Oman be linked to the government’s policy on local content?
5. What are the potential barriers or stumbling blocks that government could face?
6. What measures should be considered by the government as part of its initiatives in transforming the quality of workers within the local content to turn them as highly-skilled individuals?
7. In what way is the private sector conducive with the government’s initiative in facing the barriers or in transforming the quality workers into highly-skilled individuals?

8. To what extent can the private sector play a role in aiding the ICV efforts of the Government, considering the increasing manpower requirements of the Oil and Gas sector by 2022? Bring out studies and initiatives done by private sectors operators.
9. To what extent can In Country Value initiatives supplement the policy of the government in developing local human resources related to the gas and oil sector of Oman, and the economy as a whole. Which component and how much of the ICV policy can be translated into quantifiable terms?
10. What possible areas need to be developed in the process of localization and implementation of the ICV policy as a /strategy that would enable the country to attain a sustainable economic growth and development?
11. Any other comments

*Thank you for your time and consideration.*

### Appendix III: Normality Results

#### Corollary 1

Impact of Human Resource Development on oil and gas sector associated with job creation and added value to Omani's economy						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Human resource development (HRD) practices motivate employees to put in their best in accomplishing their tasks.	.330	380	.200	.637	380	.150
HRD practices enhance employees' job satisfaction in the company.	.301	380	.200	.666	380	.180
HRD practices create a positive employees' attitude in the company.	.306	380	.210	.689	380	.310
HRD practices increase employees' commitment to the company.	.306	380	.210	.713	380	.300
HRD practices increase employees' individual output in the company.	.299	380	.180	.675	380	.200
HRD practices increase organizational productivity.	.295	380	.240	.684	380	.310
HRD practices bring about greater flexibility and increased workflow.	.280	380	.210	.720	380	.200
HRD practices bring about production efficiency.	.294	380	.170	.716	380	.120
HRD practices bring about cost effectiveness in production.	.279	380	.200	.779	380	.210

HRD practices in terms of frequency of on-the-job training enhance employees' performance.	.320	380	.180	.658	380	.250
Employee commitment in the organization is enhanced by HRD through sponsored formal education outside the workplace.	.306	380	.300	.691	380	.310
a. Lilliefors Significance Correction						

Table 0.1: Normality Distribution of Sub-variables of Corollary 1- Human Resource Development

## Corollary 2

Government initiative through ICV cannot bridge the gap existing in the development of human resources						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Government initiatives have provided clear path to the employees, bringing to the fore organizational needs and individual training needs.	.315	380	.200	.673	380	.140
Government initiatives have provided clear path to the employees, bringing to the fore organizational needs and individual training needs.	.315	380	.200	.673	380	.210
Government initiatives have improved the supervision system, HR planning and training needs assessment.	.306	380	.240	.709	380	.300
The Institute of Public Administration develops and provides training courses focusing on planning and strategic management applications.	.320	380	.200	.669	380	.300
Government initiatives have established a minimum number of training courses that the normal employee should attend annually.	.273	380	.200	.741	380	.180

Ensure the importance of loyalty, innovation and creativity in HRD policies within the governmental units.	.310	380	.240	.671	380	.160
Ensure the importance of loyalty, innovation and creativity in HRD policies within the private sector units.	.308	380	.230	.694	380	.200
Establish a strong and effective system for evaluating and assessing the strategies of HRD and their implementation.	.308	380	.200	.695	380	.240
a. Lilliefors Significance Correction						

Table 0.2: Normality Distribution of Sub-variables of Corollary 2- Government Initiatives in Bridging HRD Gaps

### Corollary 3

Government policies and programs within value chains create human resource values in economic domain						
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Government policies and proposals within value chains have not created human resource values in economic domains	.307	380	.250	.668	380	.250
Government initiatives of Omanization have influenced the various sectors of economy.	.309	380	.100	.642	380	.200
Omanization has increased the employment rate of Omanis within your organization.	.315	380	.200	.637	380	.140
Omanization has impacted the lessening of expats within your organization.	.295	380	.200	.674	380	.130

Government initiative of Omanization has influenced your organization in replacing the expats with Omanis.	.315	380	.140	.639	380	.120
The capacity of Oman's economy in generating new jobs has catered the Omanization initiative, affecting the expats.	.316	380	.230	.627	380	.200
Government initiative of localisation (thereby lessening of expat workforce) has boosted the organizations' functioning earning greater revenue.	.301	380	.240	.705	380	.200
a. Lilliefors Significance Correction						

Table 0.3: Normality Distribution of Sub-variables of Corollary 2- Government Policies and Programs