

The Economic Implication of Solar Energy for Entrepreneurial Business in Bahrain

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Abstract - The main objective of the study is to analyze the effect of use of solar energy to increase the entrepreneurial business in Bahrain. The purposive sampling method was used for data collection and 100 household were selected from the ministry of electricity database which list number of households who are using renewable energy as source to generate energy and random households are using traditional resource to generate energy. The study used regression analysis for hypotheses analysis. The analysis was done in two steps, at the first step the validity and reliability were analyzed and at the second stage, the regression was analysis was conducted. The analysis has been recognized that the household has perception that if the household will used more solar energy, it will boost the local businesses in related industry. Therefore, solar energy has strong effect on entrepreneurial business growth within country. Thus, this study recommending that renewable technologies have become more efficient, which means entrepreneurial businesses can get more energy by investing in it, using renewable energy indirectly help companies improve their performance and earn higher revenue.

Keywords: Economic implication, Solar energy, entrepreneuriaul business

INTRODUCTION

Large industrial companies argue with reason that the correction of tariff will create less competition, only when trying to develop industrial based economy. However, there is revers reason in which by correcting the tariff of electricity can make industrial companies more compatible in condition with correction of structure should done correctly. Advertisement has deep roots in region, it has a share in government success to use country high revenue to enhance society lifestyle. With this, it causes to waste all displays in demand and supplies energy. In continuous with this cost of politics until the year 2030 it will add extra cost of 150 billion of dollars. Because the demand grows from government support to industrialized GCC economy and bring chains to import industrial transformation to region. In the same time population growth, lifestyle enhancement, aside of hot climate in the region have resulted in increasing electricity consumption to cool residences. This matter has made decision difficult toward the economic situation on how to reduce electricity consumptions and require having root solution. As we can see the changes in demand of using non-renewable energy has effect on developed countries economic and lead to think of new strategies to enable GCC and the entire world to contemporary with new alter.

All institutions from universities, schools and business leaders and even homes can have the access to reach to some of systems with low cost (whence cost of per watt) availability. With increment of systems size, the cost of per watt fall. That mean they can enjoy the benefit of energy with reasonable price without the need of estimations of grid. The thought of caring to environment will attract students and teachers with eco mentality to install solar panel to keep environment clean. In this case, the government ministries, will encourage building universities dan schools for students and supporting business with green mind to continue with their practice in spreading awareness of how it is important to

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have healthy environment, renewable energy and utilities eco-friendly; this will give reputation in innovation and creativity. The job of solar panels not only in producing energy it is as well stand as symbol of unique culture and social. Renewable energy has certainly presented itself, in many developed countries as the research displayed. From entrepreneurs' view, it provides many opportunities to create new value. Based from recent literatures, we have built our idea on new flow of researches that support business leaders as mediator solution of environment problems instead of being the cause. In this new model, it is obvious that it should merge environments consequences in vision of project owner (Cohen and Winn, 2007; Dean and Mc Mullen, 2007).

In this research, we hope to contribute in entrepreneur with four methods. First point, we believe that sustainability of entrepreneurship will be the most important research flow in future in-developed countries. That is coming back to the fact of relationship between entrepreneurship and sustainability still in continues display more commitment from descriptive and optimism. Accordingly, many open questions regard what if and to what extent entrepreneurial has ability to create sustainable economic value (Hall, 2010). Second point, it is possible that renewable energy to be in established economics is the sector is that is possible to countries to develop new business models, because of its specifications, economic capability through creating value, creating job opportunities, innovation, knowledge and technology transaction (Gabriel, 2016).

Third point, business leader's opportunities depends on market flaws, governance, political industrial view, easy percentage in practice trading business, the capacity consider as important final factor at point of enhancing entrepreneurship in renewable energy field. Project owner comprehend its abilities or region in gaining external knowledge, learn and use. Finally, our research is concerned with renewable energy strategy from leadership view. Based on previous experimented researches, the research bind with strategy to achieve 42% from installment abilities from renewable energy in year 2020, with double of total capacity.

Main restriction of the research is extracted data from experimented previous researches that been restricted from analyzing renewable energy from entrepreneurship view. The current research facilitates to conclude that is possible to direct future researches toward to business models in renewable energy sector and measure capacity ability on level of climate and national. So, the main objective of the study is to analyze the effect of use of solar energy to increase the entrepreneurial business in Bahrain.

LITERATURE REVIEW

Renewable energy drew the attention of too many researchers to analyze the benefit that could come from it. As research paper made by Ranjan (2010), in present day having solar energy and to use it efficiently in market energy, it is require having complete multi-stage level to many factors, including suitable resources for solar energy and considering as well capacity need of energy according to the areas specifications requirement. Though it is in continues development in, reducing manufacturing cost, increasing society performance and increment in solar cells efficiency, the capital cost ratio is high for photoelectric systems and sun heat it will always demand encouragement to boost the use of it in wide range. Also, there is necessity to merge market with society power and participations of business leaders as well the need update energy politic to grow and facilitate active role for each main player such as financial institutions, business institutions, non- government organizations, small creditable organizations and so on (Rehman et al., 2015).

The use of central solar energy as focus to produce electricity by using solar energy towers parabolic, central solar energy technology in dish drive has attractive features, which rise from verity, and security sector extend electrical and that, seduce investors from all around the world. Another study paper has discussed the limitation of current situation effect majorly on companies' success in renewable energy (Abrar ul Haq, Nawaz, Akram, & Natarajan, 2020). The study has review on how the impact of economic, society, and individual politics considerations on established companies. Though notable difference between those three factors, except there is wide result can implement in different markets, the correspond of entrepreneurs to those motivations very important definite during endeavor building their business. The result of analysis was there is challenge limitation in the market to specify priorities and proposed solutions that can be implemented (Abrams, Kevin, Mathew, Connor, Allison, & Willis, 2019).

Salah (2017), has displayed the appearance of renewable energy in many developed countries. Taking side of organizing projects, it creates many opportunities to create new values. Thoughts were build based on groups of new researches that support entrepreneur as media to solve environmental problems instead to be the cause of it (Cohen, Winn, Dean & Mc. 2007). The research displayed four (4) ways in supporting entrepreneur vision. First one, the beliefs of entrepreneur sustainability will be the most important wave for future research in developed countries. Because of the fact of the relationship between entrepreneur and sustainability still in the appearance, it is more imposed than adjective and sanguine. Therefore, there are many open inquiries regarding what if the entrepreneur could create sustainable economic value and to what extent (Shah et al., 2015). Second, the possibility for a renewable energy in established economic is the sector that enable countries to improve new business models, because of its privacy and economic ability hence value

creation, employment opportunity, innovation, knowledge transfer and technology. Third, while project coordination opportunity depends on flaws of market, government, industrial policy and ratio facilitate in trading business practice, treated as factor such ability to absorption is final factor in encouraging entrepreneur in field of renewable energy. It is comprehending businessmen or region on acquisition external knowledge and learn from it as well use it.

Fourth, Moroccan article interest on renewable energy from business leaders side vision. Based on previous experiment, the research bond with Moroccan strategies to achieve target 42% from installation ability/ 6000 MW from renewable energy such as water, wind and renewable energy by year 2020 and total amount of doubled energy. The finding of research was, there is huge possibility regarding creating value and entrepreneur in education in Morocco. However, some barriers related to legal factors and politic factors can kink these possibilities inside the country and other developed countries. In Morocco law, do not enhance participations of small project owners in execution national strategies to achieve its goal. Still small business in renewable energy runs by entrepreneur from first generations that they lack required abilities to achieve economic scale (Ali et al., 2015). In addition to that, the main limitation for the research is data output from tried experimental, that did not allow to analysis renewable energy from business leaders visions (Malik et al., 2019). The conclusion of the research that future research can move toward to business models in renewable sector and measure absorption capability on two levels national and regional (Qamri et al., 2015).

Another article been made on Bulgaria regarding energy consumption and economy of the country. Since the country depend on oil and natural gas, it can be said the contribution of renewable energy provide considerable resource substitution. If the cost to build renewable energy and possibility to reach and competitive cost with fossil fuel, it is expected to have economic improvement positively. According to obtained result, it can be said that the country need investment increment renewable energy sources to enhance long- term relationship between changes. The impact of renewable energy consumption on economic growth will increase if the country strategy and motivations has continued, the return can be positive to the country economic. Can and Korkmaz (2019), stated that the investment on renewable energy can provide good support for economic growth and development through the positive guarantee of external appearance as well rise of local productivity, creating employment opportunity and reduce imported payments. In addition, the forecast point by increment of employment opportunities it will reduce average of population aging and immigration with economic growth using renewable sustainable energy. Regard this all the motivations is very important, there is possibility on reaching ability to long-term loan with low cost and enhance industries in line with solution. Credibility and motivation are very attractive and very important for investors that desire to guide current resources and capital to renewable energy investment (Murtaza et al., 2015).

The motivation in using fossil fuel is affecting on market negatively, which make renewable energy cost more. Fossil energy prevent the development of renewable energy as well preventing from creating supportive clean energy, in this contain should not implement fossil fuel motivation in midterm of Bulgaria. In conclusion, the fossil fuel in Bulgaria is limited compared with other countries. Should consider extra measurement to increase investment share renewable energy in wallet of energy production in Bulgaria fast way and more effective

In Ireland the researchers, Chesser, Hanly, Cassells and Apergis, (2019) have put the micro on renewable energy system and household energy consumption. The government has realized through operating strategies to incentive growth of accuracy of the minute (micro res) on residential level. The growth of electric energy accuracy was partially slow which may condole partially government mechanism support without comparable effectiveness with other countries. Analysis been done on group of data scanning Ireland household budget, it seems like even with financial motivation provided to resident to adopt micro accuracy (micro res) , the pan can benefit from it only wealthy and average families according to Logit model result, since this facility consider as luxury purchase some of politics has work to enhance effectiveness measurement using energy in residential houses, though updated houses use less energy than old houses (Waqas et al., 2017). The study continued finding limitation of using energy to household and what if per minute's accuracy (micro res) has effect on limitation of using energy. However, accuracy per minute is model to give static numbers only to monitor the use of electricity. Ireland is one of 8 countries member of united Europe has share on renewable energy less directed on national work plan to reduce poorness ten, while politic of energy still in continuous in processing importance of Ireland citizen to fight climate change and achieving environmental goal through enhancing devices provide energy and micro res – accuracy per minutes and result of the analysis this politic need to make modifications (Bhatti et al., 2016).

Kamoun, Abdelkafi and Ghorbel, (2019) has written an article discussing the impact of renewable energy on sustainable growth with evidence from panel of (OECD) organization economic cooperation and development countries, the research continues with analysis on effect of renewable energy and electricity consumption from renewable energy to provide net average. It has been used panel model and implemented on curve of adjusted average for 13 situated countries without organization united economic and development country, that cover in year 1990 till year 2013. The literature contributes through analysis of spoiled variable independent to energy on two types: one on renewable energy and

second on fossil fuel (Akram & Iqbal, 2016). The result has presented the technology of renewable energy innovation effect on net average productivity positively. The innovation of renewable energy technology can enhance growth direction sustainability in united organization economic and development countries. It is require from industrial politics in organization united economic and development countries to encourage consumption of renewable electricity because it has large positive impact on growth direction sustainability and the authors has concluded with welcoming idea of renewable energy and to be improved the technology (Akram, Abrar Ul Haq, & Umrani, 2019).

This article displays comparison analysis in wide range for renewable energy the untraditional and politics of energy and gabs in BRICS countries. It been notes smart movement to the green economic household to secure on natural sources. An article written by (Pathak and Shah 2019), in Brazil that has sustainable politic for energy and it is the main source production to bio fuel after hydroelectric energy until the year of 2014, however it is support wind energy and solar energy through limited term-logy to generate energy from sun power and wind energy. Coming to Russia, they need to enhance legal and organizational frame with more of motivations in energy policy. China are working on enhancing wind energy and as well hydroelectric energy, but it needs strong politics coordination to limit carbon dioxide emission increment. India need to review energy politics and require extra motivations and special politics for energy consumer in field of infrastructure technics for research and generate energy (Akram, Abrar ul haq, & Raza, 2018). South Africa need more education to increase the use of renewable energy and to limit the elicitation of coal. In addition, BRICS need to reline energy politics according to its geographic situation, economic, social and environmental, that will assist in shaping politics of energy globalization and more financial stability (Bhatti, Waqas, Abid, & Malik, 2018).

The increment of economic activities in developed economic, demand of traditional energy increase. Consumption of traditional energy has negative input to environment that is why the interest of political creator has converted to encourage renewable energy generator and use through economic activities to guarantee low carbon economic. The paper target to study renewable energy in producing economic and emission of dioxide carbon fast in most developed economic countries. The study display samples on using annual data from 1990 to the year 2012. Experimental result confirms the big bond on long-term between variables. As well, the result present consumption of renewable energy contributes in positive in economic production and it has negative result on emission of dioxide carbon. From concluded result, it is suggested to political creator in those economics to proceed with more effective policy to generate more renewable energy and use it through economical activities to guarantee sustainable economic development (Paramti, Sinha & Dogan, 2017).

An article has been written by Alnaser & Alnaser, (2019) focused on research projects has been executed and first sample in gulf cooperation council countries from the 70s. It first begun in Kuwait, followed by Saudi Arabia in the 80^s, United Arab emirate in 90^s, Bahrain, Oman Qatar on 21st century. Now, approximately all gulf cooperated council has proceeded with large project in solar energy and wind energy, especially Kuwait currently around 70 MW include with context of plan 2000MW by the year 2030, United Arab Emirates currently with range 300 MW with plan 2500 MW with coming year 2030, Saudi Arabia with goal to be reach for renewable energy 3450 GW by reaching year 2020 and 6000 MW and another is expected in year 2023 and 200000 MW by year 2030. In such speed of using renewable energy and wind, energy will case an impact. The main impact: huge decrement in electric price by solar energy in region. Second, effect increment in renewable energy investors. Third, rise of innovation designs for houses to be use in its structure in installment and complete renewable energy device. Fourth, rise many of services and maintenance for renewable energy technology companies. Fifth, build academics workshops and programs for solar energy technology and other renewable energy technology in high education institution and technical organizations. Sixth, more concern and studies on main network disorder because of renewable energy connection. Seventh, huge reduction on individual share of carbon in gulf cooperation council. Eighth, use household device and industrial more efficiency and low consumption. Ninth, increase in battery manufactory to store electricity in solar energy.

An article has been written in Pakistan explain renewable energy and technologies energy has become significant part in development. The writers continue their search by sharing valuable resources of renewable energy such as solar energy, wind energy, biomass and water energy. Few numbers of companies from private sector and public sector are involve with development and improvement of renewable technologies in countryside. This paper is a discovery research of renewable energy technology and operate new developed policy for countryside. The analysis clarifies the relation between fossil fuel energy, clean energy, residence in countryside, energy possibility, national policy, international policy to retrieve back network outside of Pakistan area. The analysis of research is also discovering the household are living in modern areas are consuming electricity more than residence in countryside, while minimum income limit comes from agriculture section. Moreover, the research paper suggests, the government should provide renewable projects in countryside to enhance electronic employment, living level and economic. The continuous existence of electricity availability does not contribute in meeting the need of household and trading. Therefore, to control on electricity demand or reduce it, require rising renewable energy use and government should execute best policy such as china and United

States. Other politics related is by resources of energy and enhancement of technology, water energy, solar energy, waves, thermal earth energy and energy source of flow are much efficiency than main energy resources such as fuel, coal, gas in countryside in Pakistan (Raza, Wasim & Sarwar, 2019).

The research of (Marcelo and Santiago, 2015), has suggest energy distribution resource service as innovation framework model of electrical network to organize distributed energy and integration of renewable energy. The stand depends on none- centralize infrastructure, stratifications and concentrate on electricity consumption concept – factors with economics motivations such as trading, residential and industrial- that can produce energy or store it or consume it. The stand consists from six levels, which are:

- Financial level
- Local control level
- Internet level
- System control level: economic transition and actual time control
- Market transactions level
- Business level

The main purpose is to provide framework to organize many distributed subset systems physically and heterogeneous that consists of energy resources in timeframe and various horizons in order to send economic emission, backup scheduling to merge large amount from renewable energy and dynamically save on user service level requirement and restrictions on level system and adoption with it. By using stand structure, the benefit of flexible distributed energy for different scenarios identified to integrate renewable energy. The stand has present results of using stand to organize flexible energy, facilitate opportunities to emerge large amount of renewable energy and limit emission of dioxide Carbone and operations cost.

In present time, one of directions to store energy to industrial sector and Russia society economic is inserting storing measurements technical feasibility energy, economic and renewable energy resources. Likewise seems impossible mostly to prove effectiveness of inserting renewable energy resources in moldering way. This coming back from the fact of compering should be in circumstance of job, identical raw material, and climate and so on. In other word, it is important to compare saving energy measurement and use renewable energy technology in shade of circumstance ability to compare, which require in lots of situations solution to complicated problems. Based on current analytic methodology to collect, classify and processing large data including statics methods, neural networks, mysterious ways, it has been developed method to subscriber analyze and modeling process consumption energy in buildings. In the same time, it has been suggested method to select group of measurement to enhance energy efficiency in buildings. The original model suggested, way selecting measurement to save energy with taking consideration flexible structure multi-levels, in addition to different compatibility and importance of indicators that is evaluated. The algorithm allows visualization suggested merging one economic standard for energy recovery plan and impact of storing energy that is reflection natural indicator for energy effectiveness. The model allows adding official signature on procedure of increment efficiency of energy in buildings and it is possible to benefit energy managers responsible on enhancing flaws energy.

Sergey Guzhov and Krolin (2018) in depth of transforming energy, it has become development of energy services integration concentrate on electricity option, no escape from it for integration energy service providers. The implementation of renewable standard portfolio has changed modality competition in electrical industry. Environment reinforcement for consumers will affect vertical relationship series electricity supply. Both will direct to deep change in decision-making behavior at integration energy service providers. Based on that and looking to renewable portfolio standard and consumers preference, ideal decision discover in electricity trading through province. First, has initiate structure electricity circulation for integration energy service providers under renewable portfolio standard and it has explained the complex relation between demand and supply of electricity between trading subject. Then taking the maximum profit as target were its initiating decision model ideal for all topics with condition noncooperation and cooperation on sequence. Eventually, investigation of model validity done and suggested method through analytical example. The result has shown the model which been initiate assist integration energy service providers in obtaining on electricity clean and more economical in context of business model service energy integration centered around electricity, possible to reinforce organized developed to electric market and merge energy service and industrial energy renewable. Eugeniyas, Gorevaya, Dmitry and Gorevoy (2016) claims that renewable energy is one of the most directions controversial to generate energy in future. From a side, it is expensive, and investment do not pay off, only in countries with high solarium. From another side, it is lead to present technology decision, organized and new management in energy market to change market structure, participant and work regulations. Companies enjoy with new opportunities, can use in condition to be able to choose work model matches with situations.

Paulina, et al., (2017) conducted the research with the main purpose of Allyu Solar project is to enhance development sustainability for rural society or modern in Arica & Parinacota, north of Chile through use solar energy. The period of

project 5 years and it is stand on 3 crutches: initiate solutions energy able to repeated and to developed, develop human financial capital ability for efficient use of solar energy and last point is to warranty sustainable include effective solutions for renewable energy, business model, support network, society participation and suitable institutional framework . regarding the first, the project follows method society participation through” participated building method”. On the first year of the project it has been consider the method in collecting information and building main line for solar situation, second year improving “referenced projects” and this initiative will be serve as example to local society around how solar energy can use effectively in production process.

For the third year the paper present Ayllu project execution for four referenced projects under development:

- Solution process alpaca fibers that is mill fibers included and unit share electric in city of Visviri.
- Tourism in way of caravan before Spain in rural areas Putre.
- Agriculture shrimp river through massive use for energy solar in valley Camarones.
- Dray solar, credit system, storage fruit and vegetables in caleta vitor and valley of chaca.

The projects describe in technical side, society and culture that clarify achievements that is been done when it is solution suggested integration instead of individual technical method.

A research made by Yuchen, Shuqiang and Zhiwei (2018) with elaboration structure energy, connecting network on wide range by renewable energy as new technology to absorb solar energy, using centralization generation solar energy system thermo-logy storing to make it source able to schedule without increasing non-certainty system. The research cover transaction process energy and efficiency of transforming thermo-logy between unit’s solar energy centralized, basic operation models build on sequence. Through designing different operation positions, examples are simulated.

Value main information gathered by Swarnkar and Lata (2017) in consideration to enhance operation results that the analysis implications present, the focus of solar energy station has specific significations in dealing with uncertainty regard solar energy, extend production cycle, enhance effectiveness use tanks storage heat and economic effectiveness. The research provide analysis in photoelectric solar energy, small hybrid wind turbines are applied in Jaisalmer, Rajasthan. There are three different situations for a hybrid power system ranging from five kW to 100 kW. First situation comprehend four kilowatts of solar photoelectric and one kilowatts of small wind turbines, while second situation considers forty-one kilowatts of solar photometric and three kilowatts of wind turbines total size fifty kW, which third situation The one hundred kW system includes seventy kW of solar photoelectric and thirty kW wind power. The emulation of homer (hypothesis, operationalize, measure, evaluate, replicate, revise, report) used to calculate total amount of generated energy, diverse system cost, economic schedule and financial for all three situations. Financial feasibility in which, period of paying off and average internal return calculated by renewable energy- efficiency technology screen program. All the three situations are friend to environment with low emissions comparing with diesel or network and feasibility economic for different applications.

(Cheol, Lee, Jae, Nam and Youn 2018) express study of building zero economic execution for energy according to politics support energy renewable that has entered Korea to enhance extension of renewable energy. Korea politics has classified in supporting renewable energy in generation trading politics and self-consumption politics. In order to select policy to support renewable energy, it is must to consider style of consumption energy for the building where it will be installed renewable energy. In this research, will perform bills system of industrial electricity in Korea, policy support of renewable energy mainly on building using peak power during daytime and building using peak energy in nighttime. In addition, they analysis relation between building style energy consumption and supportive policy of renewable energy through calculation capacity required to execute zero energy building.

Jeong, Lee and Sang (2016) states that the government announced on different policies to active and develop renewable energy. It is designed to enhance capacity accumulative for energy save system to 2gw in 2020. It is require viewing economic feasibility to save energy system and distributed sources of energy that is participate in market trading energy through energy mediation reliable through owning clients (Akram, Murugiah, & Arfan, 2017). Walking through analysis when consumer with distributed energy source small to participate in market mediation from 2015 to 2029. Therefore, the government need to think in currency on broker energy business in near future.

The research conducted by Rajab, Khalil, Amhamed and Asheibi (2017) focuses on Libya as it is one of the countries enjoy with high capability from renewable energy. Presently, production of electricity in Libya from fossil fuels to meet demand in local electricity market. in near future will increase the demand on energy massively. This will direct demand growth on energy to increase consumption of petrol and gas in Libya. In addition, it will increase the emission of dioxide Carbone out large. Therefore, it is require putting immediate plan to use substitute energy to cover some of load requirement. For example, the streetlight in Libya form around 20% from electricity consumption (Ullah et al., 2016) The streetlight system depends on high pressure sodium which it is work on electricity network. The classifications of lights go from 250 to 400 watt. While the country struggle to meet their requirement from electricity, suggested to replace traditional streetlight with led which work by solar energy. The research provides system status for streetlight by solar

energy with height of 4-kilo meter in city of Almarj. The investigation has been done in two suggestions, traditional lighting and system lighting led by solar energy. Feasibility study has been done for street lighting system. The comparison done with cost, energy save and emission dioxide from two suggested systems. Cost of led street light system by solar energy is 1250200 LD, while cost system streetlight with high pressure sodium is 2117255 LD. In addition, do not contain streetlight system led by solar energy on emission of dioxide Carbone.

Mutaz and Harb (2018) concluded that the growth peak demand photoelectric energy is one of the most problems that modern civilization face. Jordan is a country with very limited natural source and consume energy bill large amount of total local production. Solar energy considers as promising renewable energy source, that can solve many problems in the country if it was used well, considering most of the days in Jordan is sunny days. The research will analyze and search peak requirement and solar radiation curves on side impact of installing square solar agriculture on Jordan peak requirement. This will go through practical calculation to execute suggested method. The methodology will study actual data status on energy consumption and solar radiation. Moreover, mathematical model will be used to modeling data and results. The research describes and evaluate possible solution to fit with peak requirement status in Jordon. The study has been performed and was able to identify possible solution on problems. Mathematical model has identified evaluation solar agriculture network connection as an ideal solution to the problem. it is possible to solar agriculture to reduce from peak demand during peak time which direct to more curve to generation flat. The trading evaluation indicate that solar agriculture it will not be only possible solution, it will be able to implement merchant.

Zulfiqar (2017), the energy fit directly with local production amount and play main role in developing society and economic in the country. The challenges of energy face are enormous. There is no one solution to everything. However, renewable energy should play big role in emerging future energy. Between different renewable energy, solar energy considers as most population and most wealthy. The development and improvement of renewable energy, non-traditional substitution and renewable such as solar energy, wind energy, bioenergy and so on with continuous interest. Solar energy considers the hottest field in investment in energy at present time, but there is lots of controversy around future technology solar energy and market solar energy. Those opportunities and challenges will be discovered in Pakistan that solar energy face according to general understand concept of sustainable development, the region identify wised possibilities for solar energy and present condition. The obstacles exanimate through full group of solar energy, discuss political issue, rules and responsible institutions. As well, it is discussed specialized market where renewable energy can compete traditional energy.

A research made by Zhang, Xiaoying, Yang, Wang, Chen and Wang X (2019) focuses on concentration of renewable energy is new technique to generate energy that has wide range interest in last years. The research is on field level to focused solar energy station is very difficult and hot in research concentration solar energy station in present time, in this research transaction energy operation and heat transaction. Basic Models operation has initiated and economic models respectively. The results have revel that is possible to enhance efficiency and stability generated solar energy station concentration through the way enhancement ability on concentration solar field centralize and percentage use tank heat storage and transformation heat efficiency.

Danielle, Carvalho, M.Luiz, Abrahão and Ricardo (2018), in the centrality supply and change framework proposed at the present time, vitality requests were considered for a clinical office: power, clean high temp water, steam, and cooling. A superstructure tending to all decisions of gear and centrality assets was worked, with standard hardware comparatively as consistently complex types of progress, for example, upkeep chillers and cogeneration modules. Two attainable power source assets were open: sunshine based photovoltaic hugeness and biomass (sugarcane bagasse). The arrangement of a numerical model subject to blended whole number straight programming gave the ideal budgetary game-plan, required by the structure of the framework (gear introduced) and its development method (how to work every hardware, all through one operational year). The target work thought about the minimization of complete yearly costs, which solidified fixed costs (hardware) and variable costs (support and centrality costs). A reference framework was masterminded, where basically standard apparatus was used (no cogeneration, no sun based or biomass utilities open). The ideal monetary strategy merged the usage of biomass to pass on warmed water and steam, with a yearly cost that was 11% lower than the reference plan. Regardless of the way that the cash related ideal game-plan did not present cogeneration modules, it abused sun based and biomass points of interest for accomplish yearly least expense.

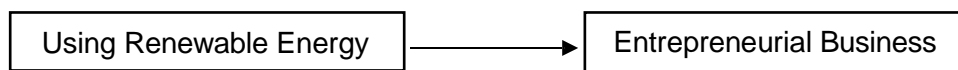
The research assessed by Richard, James, Karl, Sergey, Kankiewicz and Dise (2016) says that the precision of sun-controlled vitality figures as a section of geographic impression loosening up from a solitary point to territories crossing a few hundred kilo meters. The conjecture models that are assessed unite solar anywhere, European Centre for medium-range weather forecast, global forecast system, high risk rural roads, neutral detergent fiber digestibility and satellite-based cloud improvement. The measure time skylines run from one hour ahead to two days ahead. Similarly, another exactness metric is presented: this estimation evaluates the expense of calming figure blunders with help age if the conjectures over predict, or with decay if there should develop an occasion of under prediction.

Muhit, Karim (2018), solar-framework mix structure course of action has been proposed as of now. The structure is required to give a rational and reasonable force supply to the air condition loads. Differential enhancer and plan P channel mosfet direct controller progression-based charge controller has been utilized to achieve snappier charging. An adjusted hand-off-based Switching between sunshine based and structure has additionally been made using focal force being conveyed from sun arranged; an altered changing to sun orchestrated and decreasing force use from cross segment. The contrary route around, on the off chance that sensible yield being modestly less, by then power request, by then it will change to both sun masterminded and sort out (Mahmood et al., 2014). At last, when framework supplies rule power when unending yield ends up being deficient. A constant on the web Wi-Fi module based watching circuit has been consolidated and changed as per screen the entire framework for competent development of the structure.

Carmen, Bratu, Ruşinaru and Mănescu (2018), feasible improvement supports obligation, setting the movement of conservative power source at its inside. In this manner clients become prosumers. The essential for budgetary reality powers affiliations, more than it limits occupants, to think about beneficial undertaking. The paper bases on the assessment of cost-adequacy according to prosumers' undertaking, much more unequivocally, hypothesis made by affiliations. The critical monetary records are reviewed and investigated dependent on conditions to help the speculation related choice. The intelligent evaluation is showed up by a consistent assessment of a propelled customer.

Right now, a research from Hachim, Dounia and Barhdadi (2018) that plans to introduce a model of characteristic stun by applying sun-controlled centrality follows the achievement that Morocco has encountered like normal charge, and its vitality to move its ability in zap to Africa. A photovoltaic dimensioning of a town called "Boumhaout" organized in the south of Morocco, which has a spot with a typical and desert zone that looks like country zones in sub-Saharan Africa, is being done so as to make an evaluation among framework and sun powered zap to show that the abuse of photovoltaic establishments is solid and fiscally shrewd to cover hugeness essentials for desert zones.

Winanti, Halimi, Purwadi and Heryana (2018), it is starting at as of late needed to destroy issues by prudence of land reasons. The execution of increasingly humble expansion grid structures for submitted districts will be one response for deal with the electrical importance straightforwardness issue especially in some remote systems where sorted out far from the central cross fragment, for instance, youthful domains, remote island in like manner as some outer islands. Contemplating this issue, Indonesian government has pushed Pre-shock Program in 2017. The critical goal of this program is to manufacture the stagger degree by giving Energy Saving Solar Lamps” Lampu Tenaga Surya Hemat Energi – Ltshe”. To help this program, an assessment and structure of daylight-based essentialness saving light is presented starting at now. The specific purpose for this evaluation is to make LTSHE model as a section of assurance to national charge degree fulfillment program and to assist government with actioning related to insignificant cross zone progress by utilizing the right arrangement and size for a capably strong course of action. The noteworthy part target and objective to be created are the fulfillment of essential significance by utilizing new sensible force source resources by 23% by 2025. The research present to the affiliation equipment certification of LTSHE is not sensible in some zone with low sun fueled irradiance in Indonesia, at the present time, in Sumatera area.



The hypothesis of the study is;

Ho: There is no effect of use of solar energy to increase the entrepreneurial business in Bahrain.

METHODOLOGY

Since the research discusses about the economic implication of renewable energy for entrepreneurial in Bahrain. The research expanded the analysis by comparing renewable energy users with those who are using fossil fuel to generate energy (Electricity Bill). The sampling frame is the ministry of electricity database which list number of households who are using renewable energy as source to generate energy and random households are using traditional resource – fossil fuel to generate energy. The nonprobability sampling method (Convenience Sampling) is used for research finding. This method will enable to gain information that is related to current phenomena to analyze and draw general true finding from fact discovered. And 100 sample was used for current analysis. The regression was used for hypothesis analysis.

Research Instrument

In this research, there are three tools that were used to gather information which were considered as essential elements

Entrepreneurial Business: The study used a total five question to measure the entrepreneurial Business in kingdom and the responses from participants will be taken by their ratings for each of the items using a 5-point likely scale ranging from 1 to 5 as (1 = Strongly agree, 2 = Agree, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree).

1. Do you think if household will use more renewable energy it will bring more jobs in the country?

2. Do you think if government provide the subsidies to renewable energy sector then it will boost further private investment in solar energy business?
3. Do you think using solar energy can improve the savings of citizens by reducing their cost?
4. Do you think the solar energy business bring competition to local market?
5. Do you think the solar energy usage reduce commercial energy cost in your business?

Using Renewable Energy: is calculated through two response 'yes and no', if the household had solar at their home, is consider yes, otherwise no.

RESULTS AND DISCUSSION

The study used regression analysis for hypotheses analysis. The analysis was done in two steps, at the first step the validity and reliability were analyzed and at the second stage, the regression was analysis was conducted (Abrar ul haq, Jali, & Islam, 2019). The results are discussed in following tables below;

Table 1: Reliability Statics of Entrepreneurial Business

Cronbach's Alpha	N of Items
0.758	5

The table 1 represents the reliability statics of entrepreneurial business, there are 5 questions that displays entrepreneurial business which responds to towered renewable energy, those questions are interpreted as 5 items so the alpha coefficient can analyze the information. The Alpha coefficient has analyzed the five items as 0.758 that means $\alpha \geq 0.70$, which indicate that items has high internal consistency, the relation of Alpha and number is high, reliable and no redundant elements or duplication. As the researcher Keith, (2016), said that alpha coefficient is well-known use for statics and common use to proof the test and measurement established or depend on research projects suitable for presentation. Alpha coefficient is regularly used in studies in science education, it was indicated in 69 different research published in four leading magazines to teach science in one year (2015), usually measure for reliability. Alpha value described excellent for (0.93-0.94), strong (0.91-0.93), reliable (0.84-0.90), robust (0.81), fairly high (0.76-0.95), high (0.73-0.95), good (0.71-0.91), relatively high (0.70-0.77), slightly low (0.68), reasonable (0.67-0.87), adequate (0.64-0.85), moderate (0.61-0.65), satisfactory (0.58-0.97), acceptable (0.45-0.98), sufficient (0.45 -0.96), not satisfactory (0.4-0.55) and low (0.11).

Table 2: Correlations

	Entrepreneurial Business	Household Size	Average Age	Total Income	Renewable Energy Usage
Entrepreneurial Business	1.000	-.072	.094	.275	.449
Household Size	-.072	1.000	.003	.218	-.118
Average Age	.094	.003	1.000	.148	.238
Total Income	.275	.218	.148	1.000	.213
Renewable Energy Usage	.449	-.118	.238	.213	1.000

In table 2, it shows that the correlations between the dependent variable (DV) Entrepreneurial Business and among other variables. Each factor has the value that represents their own relation with dependent variable (Entrepreneurial Business). As we can see there is a negative relation between the Household Size and Entrepreneurial Business (-0.72). in addition, it shows that there is a positive relation between the Average Age and Entrepreneurial Business (0.094), and positive relation between Total Income and Entrepreneurial Business (0.275), and positive relation between Renewable energy usage and Entrepreneurial Business (0.449). That result comes with researchers (Abrams, Bosma, Carney, Cox, Miller and Willis, 2019). The study has review on how the impact of economic, society, and individual politics considerations on established companies. Though notable difference between those three factors, except there is wide result can implement in different markets, the corresponds of entrepreneurs to those motivations very important definite during endeavor building their business. The result of analysis was there is challenge limitation in the market to specify priorities and proposed solutions that can be implemented.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.491 ^a	0.241	0.209	0.60307

a. Predictors: (Constant), Renewable Energy Usage, Household Size, average Age, Total Income

The research has further carried out a regression analysis to establish the statistical significance relationship between the independent variable, Renewable energy usage and the dependent variable, Entrepreneurial Business. The model summary table reports the strength of the relationship between the model and dependent variable. R, the multiple correlation coefficient, is the linear correlation the observed and model predicted values of the dependent variable. Its large value indicates a strong relationship. R Square, the coefficient of determination, is the squared value of the multiple correlation coefficient. It shows that 24.1% of the variation in time is explained by the model. Adjusted R Square is a corrected R Square static that penalizes model with large numbers parameters. Those statics, along with the standard error of the estimate, are most useful as comparative measures to chosen between two or more model.

Table 4: ANOVA

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.971	4	2.743	7.541	0.000 ^b
	Residual	34.551	95	.364		
	Total	45.522	99			

a. Dependent Variable: Entrepreneurial Business

b. Predictors: (Constant), Renewable Energy Usage, Household Size, Average Age, Total Income

As Table 4 shows the output of ANOVA analysis, where there is statically difference in regression means. It shows the significant value is 0.000 (P= 0.000), which is below 0.05.

Table 5: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
(Constant)	3.758	0.423		8.892	0.000
Household Size	-0.033	0.044	-0.070	-0.751	0.454
Average Age	-0.004	0.011	-0.033	-0.353	0.725
Total Income	0.004	0.0018	0.209	2.222	0.030
Renewable Energy Usage	0.551	0.129	0.404	4.254	0.000

a. Dependent Variable: Entrepreneurial Business

The coefficients table provides necessary information to predict entrepreneurial business from household size, average age, total income and renewable energy usage, as well as determine whether household size, average age, total income and renewable energy contribute statistically significant to the model by observing sig column.

$$\text{Entrepreneurial Business} = +3.758 - 0.033 (\text{Household Size}) - 0.004(\text{Average Age}) + 0.004 (\text{Total Income}) + 0.551 (\text{Renewable Energy Usage})$$

This estimation shows the relationship between dependent variable (DV) for Entrepreneurial Business and independent variable (IV) Renewable energy usage. This estimate shows that the amount increases in entrepreneurial business that would be predicted by 1 level increase in the predictor. The renewable energy usage is statistically significant at 1% level of significance level. Moreover, household size has negative impact on entrepreneurial business as the beta value is -0.033, however, this is insignificant statistically. Similarly, Average Age of the household also has the negative effect on entrepreneurial business as its beta value is -0.004 and this variable is also insignificant statistically in current study. Meanwhile, the coefficient for total income is 0.010, this means for every level increase in total income 0.010 increase in entrepreneurial business and it is statistically significant at 5% level of significance.

Lastly, the coefficient for renewable energy usage is 0.551, which means for every level increase in renewable energy usage, there is 0.551 level increases in entrepreneurial business and his variable is highly significant at 1% level of significance. The analysis concluded as Table 4.7 present, positive effect of solar energy usage on entrepreneurial business at level 0.10 of significance. Therefore, the formulated hypothesis is rejected. There is effect of use of solar energy to increase the entrepreneurial business in Bahrain. This study comes along with Schwalbach (2016) research where it said that companies' thinks by using environment perspective are in general more likely to be innovative and profitable than competitors. A survey has been done to companies that thinks 100% renewable energy is trustee and environment benefit. 14% of responded are interested in executing the project, while 82% agrees about existing features

to use renewable energy over traditional method. 95% of participant sense that there is a market significant with renewable energy but 50% thinks that this cannot attract clients. The variable renewable energy usage was measured by if dummy variable and two values assigned, the value 1 was

CONCLUSION & RECOMMENDATION

The research value in presenting valid data that will assist in increasing awareness of how solar panel as “renewable energy” can effect economy and individuals in good way through showing result of implemented projects and finding tools that can convince consumers to replace electricity with solar as well to presenting the difference between electricity and renewable energy to help to understand the need to go with solar panel direction instead of staying with current electricity system. The analysis has been recognized that the household has perception that if the household will used more solar energy, it will boost the local businesses in related industry. Therefore, solar energy has strong effect on entrepreneurial business growth within country.

Through the analysis that has been found in Entrepreneurial Business model, there is no statistically significant different in Household Size, Average Age and Total Income in consuming renewable energy because there are a lot of households who are consuming energy in traditional way, but on the other side, those that are using renewable energy has been noted statistically significant difference in consuming energy. This kind of result will encourage entrepreneurial business to put more effort to create motivation to use renewable energy because of the positive impact results from consumers. The study has found that there is positive impact on solar energy usage on entrepreneurial business. For each level increase in renewable energy usage, there is 0.551 increase in entrepreneurial business. There is a negative impact on household size on entrepreneurial business. For each level increase in household size, there is – 0.033 decrease in entrepreneurial business. There is a negative impact on average age on entrepreneurial business. For each level increase in average age, there is -0.004 decrease in entrepreneurial business.

There is a positive impact on total income on entrepreneurial business. For each level increase on total income, there is increase in entrepreneurial business. Based on the conclusion, the study recommended that, believe of entrepreneur sustainability will be the most important wave in developed countries. Because of the fact of the relationship between entrepreneur and sustainability still in the appearance, it is more imposed than adjective and sanguine. Therefore, there are many open inquiries regarding what if the entrepreneur could create sustainable economic value and to what it is extent. Some barriers related to legal factors and politic factors can kink these possibilities inside the country and other developed countries. From that been said, our findings analysis concludes with matches results with other researchers analysis findings. The sustainable energy sources in Bahrain are still in the appearance in entrepreneurial business and it is growing gradually. The research analysis agreed, from many entrepreneurial business side that renewable energy sector can improve business, because of its privacy and economic ability whence value creation, employment opportunity, innovation, knowledge transfer and technology, the project coordination opportunity in the country depends on flaws of market, government, industrial policy and ratio facilitate in trading business practice, treated as factor such ability to absorption is final factor in encouraging entrepreneur in field of renewable energy. It is comprehending business owners or region on acquisition external knowledge and learn from it as well use it.

Renewable technologies have become more efficient, which means entrepreneurial businesses can get more energy by investing in it, using renewable energy indirectly help companies improve their performance and earn higher revenue. Clients would be interested to purchase from companies with partners and investors that are engaged in an environment-friendly that meets their sustainable standards. In addition, by investing in renewable energy resources, it shows that companies are considering for the future. Switching to renewable energy can boost investors' confidence, support company's valuations and improve company's reputation among consumers; the increase in using renewable energy can reduce risks in general. Companies can combat climate change and prevent health issues that relates to the use of fossil fuel. If renewable energy adopted on a wide range, it will help in reducing risks related to this issue in future. Finally, by transferring to renewable energy, companies and household can reduce electricity bills significantly in long period.

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