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Inclusive Labor Markets and Poverty Reduction: An Empirical Analysis of South Asian Economies

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Abstract: Gender disparity in employment is one of the most serious and grim challenge of the modern world including south Asian countries. Although south Asian economies have taken significant leaps towards economic development in recent decades yet its economic, political and social institutions still remain one of the less developed in terms of providing decent opportunities for its people. Our paper focuses on the drivers of gender parity in employment for which the ratio of female to male labor force participation rate has been used as a proxy over the period 1995 to 2015 using panel data and the drive towards more inclusive labor market in order to eradicate widespread poverty in south Asian region. Our results suggests that the ratio of female to male labor force participation is positively associated with level of economic freedom index, democracy, ICTs infrastructure, trade openness, GDP per capita growth rate and GDP per capita while democracy squared, quadratic GDP per capita and inflation tend to decrease gender equality in south Asian case. Although quadratic gdp per capita and quadratic democracy has negative impacts on the ratio, female to male employment policy recommendation has been proposed for making labor market flexible and inclusive. Our proposition is that in order to achieve inclusive growth and development more inclusive labor market institutions should be developed to alleviate poverty.

Keywords: level of economic freedom index, ICTs infrastructure, GDP per capita, institutionalized democracy, trade openness; south Asia
JEL Classification: P33, B15, H54

1. Introduction

The phenomenon of economic development as experienced during industrial revolution and in recent decades in east and south East Asia has comprised of two main transitional processes. The first one relates to the migration of workers from agriculture sector into the manufacturing and services sector. The second is that of urbanization which involves the migration from rural to urban areas. These Transitions are the result of mechanization of agriculture, increasing literacy rates, lower fertility rates and other social and economic factors that affect the participation of the general population in the labor markets. In south Asian context though the labor force participation of male has increased substantially; the women

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of the region lags behind in every field of work and therefore, in social and economic aspects it has profound impacts on poverty reduction in the region, achievement of sustained economic growth and development of a more plural and progressive economies. Women unemployment is of great concern in the developing south Asian countries because of highly exclusive and discriminating labor markets. Female education is still considered a taboo in major parts of these developing regions which has caused poverty in women and children to a greater magnitude and incurs substantial inefficiency costs and other socio economic challenges for society as a whole.

The importance of this socio-economic problem in the development process has produced an ample academic research to address this complex phenomenon. Esteve and Volart (2004) have shown that gender equality in labor market has positive effects on the economic growth of the country. Desai and Jain (1994) had explained that eliminating gender disparities in labor market empowers women which in turn gives women more decision making power in their lives.

An elaborate literature has emerged around the labor force participation of women and its complex connection with development. According to one hypothesis there is a U-shaped relationship between economic development and women's participation in the labor market although this relationship is controversial and can only be settled through empirical studies. Studies conducted at country levels has found that such a relationship exists in Pakistan (Mujahid *et al.*, 2013) while in Indian case it is not yet evident (Lahoti & Swaminathan, 2013; Rao *et al.*, 2010).

According to ILO statistics, the female labor force participation has remained comparatively stable in the past two decades at 52% globally. At country level, female labor force participation varies greatly across emerging economies and developing countries. In south Asian, North African and middle eastern countries only one-third of women are in the work force.

According to international labor organization (ILO), it has been estimated that working poor are seven times more than the ones without any work at

all. There is a growing concern among the policy makers that joblessness is becoming one of the biggest obstacles in putting a halt to the growth and development in the country.

On the contrary male labor force participation has fallen from 81% to 77% worldwide mainly because of higher education enrolment rates among male youth. Although there is an increase in women participation rate, gender disparity is still widespread especially in south Asia. In 2013, the women labor force participation rate in south Asia was 30.5% and this participation rate in the region has fallen mainly due to the situation in India. According to ILO the gender inequality is highest in south Asian regions especially in Afghanistan, Pakistan and India, and it is lowest in Nepal a case which is exception to the region.

Women's participation rate in the labor market in south Asia is somewhat showing odd trends with participation rates falling in India in the recent years, although the economic growth of India was high during the past two decades. Similarly, in the context of Bangladesh, Nepal and Pakistan, the female labor force participation rates have risen as compared to India, although human development has fallen in these countries. In contrast, the labor force participation of women in Sri Lanka is stagnant despite tremendous achievement in the levels of human development and achievement of high economic growth. The reason of the puzzle can be slower improvements in literacy, health and high population growth which offsets the positive impacts of economic growth.

The youth bulge in South Asian countries is of major concern for policy makers and it is one of the most challenging tasks to provide sound economic opportunities for the youth. In order to accommodate this youth bulge, the government must work towards more inclusive labor markets. South Asian nations have a demographic dividend that should be steered towards enhancing growth by creating for them opportunities like quality education, employment, work-life balance, life-long learning and child investment. This demographic dividend has been for the most part missed due to the practice of child marriage, high dropout rates from schools, child illness and death, maternal morbidity, informal work, insecurity and displacement, insecure old age. This demographic transition if remain continued then by 2030, especially youth female population among the

general population could make an important proportion of the labor force. Thus, the present situation would then require an absorbing labor market and in order to move towards inclusive and flexible labor market more laws needs to be enacted and enforced that prohibits discrimination on gender basis, domestic violence and other rigid social practices in the society.

According to UNESCO an estimated figure of 16.3 million young girls are denied access to secondary education, similarly half of the young girls in south Asia are subjected to early marriage before the age of 18. Over 22% female youth in South Asia become pregnant before the age of 18, which according to World Bank costs almost 30% of GDP over their lifetime.

In low income countries (LIC), people normally find jobs in low productive activities, where the wages are low and people find it is quite difficult to sustain their basic necessities of life and therefore, are trapped in what is called vulnerable poor by World Bank. Technology has a fine character in creating better and productive jobs for the people. This would provide individuals with healthier working environment and it has positive relationship with gender equality. Gender equality in the labor market is very important for achieving sustainable economic growth and development.

Taking into account the convoluted nature of female labor force participation, it is imperative to study this socio-economic factor at micro, macro and household levels. Thus macroeconomic conditions as well as job opportunities on micro level and costless search for the job should be explained (Quisumbing, 2003). At the macro level it has been found that if employment and educational opportunities are provided to women, it would certainly decrease household poverty along with resources in women's hand has shown positive implications regarding human capital. At the household level, important factors such as level of education, economic status, number of children and the labor market status of the spouses need critical scrutiny. Although the outcomes of economic growth are not always positively related with increase in gender equality yet there are many positive dimensions, if that growth is inclusive in

nature.

Gender inequality in term of opportunities and the exclusion of female workforce in economic activities has produced many challenges for the developing world in general and in South Asia in particular. This is because exclusion of women from availing economic opportunities has long lasting negative effects on both economic development and eradication of poverty. One of the main themes of millennium development goals (MDGs) is empowering women and achieving gender equality. The focus on increasing gender equality in South Asia is significant for at least two reasons. First employment opportunities for women are crucial in the fight against poverty because it has direct as well as indirect impact on the welfare of women, children and household. Indirectly it generates more plural and sustainable growth for society as a whole.

The promotion of gender equality is crucial component of human development and inclusive economic growth strategy. Analysis of the historical data concludes that there is a statistically positive relation between gender parity in education and development process. Many studies have shown that there is a positive association between gender equality and economic growth measured by GDP per capita.

According to the World Bank study, equal access for employment is necessary for inclusive growth because gender equality in a broader sense means women empowerment, fairness in incomes, equity, enhancing productivity levels, minimization of efficiency losses as well as it is an opportunity that will help in broadening base of taxpayers and generate more resources for social protection systems. It has also been observed that gender equality gives women space in decision making, innovation, generates competition and expansion of entrepreneurial activities.

The growth, employment, and poverty nexus for south Asian nations has always been confusing and has never been straightforward. For example, in case of Pakistan in the periods of high economic growth, poverty has both declined in 1980’s and has increased in 1960’s. In the periods of low economic growth poverty has sharply increased in 1990’s and declined in the 70’s. The inclusiveness of growth is quiet essential for ensuring better

standard of living and high economic growth. Gender disparities such as no provision of rights to the labor, poor labor organization, poor utilization of the remittances, no mechanism related to skill development, no regulation of microfinance to the poor in order to start their own businesses etc. have adversely affected the labor market which in turn has plagued the economies of south Asia.

South Asian labor markets are characterized by large informal sector and a small salaried or formal sector. Persistent gender inequality in south Asia can be attributed to rigid social norms cultural factors and biased labor market institutions. The labor markets in these countries are permeated with discrimination, violation of basic human rights, and lack of decent work environment, child labor and unfair compensating procedures. Informal and marginalized employed workers face difficulties on multiple platforms.

The aim of this paper is to shed light on this important economic and development problem. The focus will be on productive employment because it is the important link towards achieving economic growth and poverty eradication. The difference in the labor market outcomes which produces losers and winners is probably a matter of access to productive employment and unequal shares of the poor in the labor market process.

This study tries to empirically find the main drivers of gender parity in employment. For gender parity, the ratio of female to male labor force participation rate is used as a proxy using cross sectional data from 1995 to 2015 for five south Asian countries. Any change in the ratio of the female to male labor force participation will show either decrease or increase in gender equity in employment. In order to bring focus towards some of the mostly studied facts, some key factors which are associated with the labor force participation rate of women are increases in the education levels of women, the rise of urban areas because it provides access to formal employment, skill accumulation, more tolerable environment to women because of diversity and also cities and urban places produce better and innovative ideas.
Similarly, GDP per capita has weak U-shaped relationship with women employment participation rate as has been hypothesized and more

economic liberalization has somehow mixed results for female participation in labor market. The level of economic freedom and index value of south Asian countries have also been included in the model because we are interested whether female labor force participation increases or decreases with changes in the level of economic freedom. Similarly, we are also interested in the impact of legislations such as laws that prohibit gender discrimination and domestic violence, on the inclusion of women labor in labor markets.it is because several studies have highlighted that existence of social norms, violation of basic human rights in workplace, unfair compensation in employment, early child marriages and domestic violence have excluded female worker from labor market.

The purpose of this paper is to analyze the effect of labor market institutions, economic growth and development on gender equality. This paper also examines the impact of infrastructure, institutionalized democracy, economic freedom, educational attainment, urbanization rate and laws regarding women's rights on the inclusion of women in labor markets. As there is wide spread poverty among south Asian women so, we try to connect the inclusive and flexible labor markets with poverty reduction. Our hypothesis is that in these developing south Asian countries poverty can be effectively reduced and eradicated through making labor markets more flexible, responsive and inclusive in order to create equal opportunity and decent work for all.

Given the huge population share of women in developing south Asian countries and rapid economic growth which has helped millions of people to break the shackles of poverty however, this economic growth has also been accompanied by inequality and employment vulnerability. These challenges are particularly persistent in the labor markets. As is evident from many empirical studies labor markets play very significant role in the economic development of a nation. The international labor organization has developed a policy framework for making labor markets more inclusive. This frame work is based on three pronged approach. The rationale for this approach is that employment plays very significant role in economic and social system. It is Labor market that converts economic growth in well- being of the population; therefore, it is imperative that these markets work correctly and flexibly. In this regard this paper studies

the empirical trends of the poor and vulnerable population especially women and young people participation rates in the labor market of India, Pakistan, Nepal, Sri Lanka and Bangladesh.

This paper also attempts to provide empirical evidence that would be helpful in devising strategies for reducing the level of poverty, in expanding and creating jobs and opportunities. Similarly, the promotion of inclusive labor markets is a global agenda and is crucial in lifting millions of people from poverty in to decent and standard life. Also the involvement of female workforce in economic activity is the best strategy for eradicating poverty and therefore it is on the top of global development agendas of achieving sustainable economic and social development. The significance of inclusive labor markets in the fight against poverty is well documented and it is the way to include half of the world population in decent work and economic opportunities.

2. Literature review

To study gender inequality in labor market outcomes, it can be approached theoretically from two broad aspects. One is individual choice and the other is about structural constraint. Although the differences between the two approaches have converged overtime but still some differences remain.

Individual choice model is the neo-classical approach which attempts to explain gender and labor markets. One possible explanation by (Polachek, 2004) is that gender disparities in labor markets are because of the difference in investments on human capital on gender basis where woman is considered for biological reproduction and are restricted to participate in the labor market. For example, it is widely stated that in reality there is no such thing in customs and laws that restricts women from working but if there are less prospects of job opportunities in labor markets for women; then certainly households and parents will invest only in male children's education as they can access better opportunities and can give positive returns.

Neo-classical economics has helped in recognizing gender discrimination but failed to recognize its determinants. For feminist economists such as

(Figart, 2005), gender discrimination is more than a dummy variable as treated in empirical analysis. She has explained that gender discrimination is more than inequality in wages; it is about access to better opportunities, resources and compensations for women workforce. Prakash and Eastin (2013) has found "S- shaped" relationship between gender disparity and level of economic development. According to their study there are three stages; in the first stage of development the equality of both genders increases initially and then declines as income rises further because the norms and deep rooted social values related to gender discrimination resist to give way to nascent social institutions and therefore, discourage women labor force participation rate by decreasing the opportunity cost of leaving market, in the final stage however, as women population attains more education and society as whole becomes aware of basic human rights through higher literacy levels, social rigidity fades away; in the final stage, the level of economic development accompanied by technological advancement increases gender parity and more women enters formal and high paid jobs. This has certainly positive consequences for both sustained economic growth and poverty reduction.

By the same virtue Gelleny and Richards (2007) emphasized that globalization has positive impacts on female labor force participation rate because international trade and foreign direct investment both increased economic and employment opportunities especially for women because foreign firm can be more flexible in hiring women. However, in the long run it has been found that foreign direct investment can also generate an increase in gender inequality because sometimes foreign firm mostly offers technical expertise to male workers if there is vast gender gap in education levels of the two genders. One aspect of globalization is that it decreases state revenue and in turn it's potential to provide social security of which women are the primary beneficiaries, therefore, globalization can adversely impact gender equality. The importance of gender equality in labor market is crucial in two broad aspects one is regarding social status and the other is empowering women economically as strategy to reduce poverty in the region.

Hilary (2004) argued that well-judged labor market policies can play a vital role in the eradication of poverty. In this research paper the rights of the workers are crucial for making labor markets more inclusive. Proper

technical assistance, better working conditions, heath of worker, better human rights and strengthening of the legal system which results in absolute removal of human right violation are a necessary part of the inclusive labor market.

Rodgers (1999) examined that promoting gender equality requires insurance of better working environment for women and protecting their rights in the working place. Women should be treated equally as men in the work place.

Huynh and Kapsos (2013) concluded that the existence of vulnerable and informal jobs which are the determinants of the poor work and security of the jobs are specifically related with economic class. According to them, the poor and middle class in developing Asia face series barriers in accessing quality jobs and furthermore gender inequalities in terms of acquiring quality jobs are more prevalent with female worker than their male counter parts regardless of the economic class. Similarly, for youth who are poor or near poor there are stark challenges in acquiring education and access to productive employment.

Rubery (2015) examined the impacts of regulation in labor market on different type of contracts. The paper concluded that coverage of the non-standard contracts such as care work in case of women should be enhanced in developing and developed countries alike. Employer should be made accountable for suppressing voice and rights of the workers in employment and enacting regulation that put restraints on the employer ability of hiring and firing worker.

3. Data

To empirically examine the determinants of the labor force participation of women in labor markets we have used econometric model which has ten independent variables and our dependent variable is the ratio of female to male labor force participation (used as a proxy for inclusive labor markets). To empirically study the key drivers of ratio of female to male labor force participation time span is taken from 1995 to 2015 of five south Asian nations. Thus, the ratio tells the gender gap in employment

and the increase or decrease in the indicator explains the level of gender equality and inclusiveness of labor markets. Moreover, since south Asian labor markets are segmented and exclude mostly women from formal employment therefore, we have included variables that affect labor market institutions which need improvements and regulations in order to move towards more inclusive labor markets.

3.1 Variables Selection

We have selected eleven independent variables among which five Variable are control variables. We want to control for level of economic development on gender equality, Inflation, population growth, GDP per capita growth so that the impact of economic ups and downs can be separated, and the impact of globalization. Because we want to empirically evaluate the impact of democracy, ICTs and the level of economic freedom on the participation of women in labor markets. As our hypothesis indicates, labor markets are governed by social and economic institutions which can either inclusive or exclusive. As we know, South Asian labor markets are highly discriminative which excludes mostly women, youth and minorities from participating in formal employment. Therefore, we have included Democracy, level of economic freedom index and ICTs which have the potential to change these labor market institutions in the favor of every one.

The Level of Economic Freedom index calculates ten (10) important components of economic freedom and every component is scaled from 0 to 100. These components are then calculated from many sub variables equally weighted and then aggregated to compute the score of each country. The Data for the level of economic freedom has been taken from www.freetheworld.com for five south Asian nations from 1995-2015.

GDP (US 2010) is used to control for the level of economic development. It has been assumed that with increase in the level of economic development women labor force participation initially declines up to a threshold and then rises again. Therefore, we have included square of GDP to measure the hypothesis by Boserup's (1970) that gender parity in employment and economic development has U-shape relation. The source of data is World Bank Indicators. For measuring macroeconomic stability,

inflation rate is used. The data set is taken from World Development Indicators (WDI).

The measure for democracy has been taken from polity IV project, where the country's level of democracy is scaled on a 21-point spectrum, giving -10 to fully institutionalized authoritarian regimes and +10 to institutionalized democratic governments (center for international development and conflict management, university of Maryland).

To account for demographic factor one indicator has been included: total population growth rate. Higher growth rate of total population has adverse impact on gender parity in employment. Data Source is World Development Indicators (WDI).

It has been assumed that openness to trade has positive impacts on employment opportunities as well as labor force participation rate of women there by increasing gender parity. We have taken the exports of goods and services as percent of GDP for trade openness. The higher the volume of exports relative to the imports the more it will create economic opportunities for people.

The study have included two indicators of ICTs, mobile phone subscriptions & fixed telephone lines (per 100 people) as explanatory variables. The GDP per capita growth is included separately from GDP per capita and its quadratic form in order to control for the economic shocks that may impact gender parity in employment, for a more accurate picture of the model.

3.2 The Econometric Methodology

The relationship that we want to estimate is based on the above review and the framework we have described. We have chosen ordinary least square regression model with fixed effects. Our econometric model is as follow:

$$logGE_{it} = \alpha_i + \beta_1(gdp_{it}) + \beta_2 \log(gdp_{it})^2 + \beta_3(mbcs_{it}) + \beta_4(tlphn_{it}) + \beta_5(lef_{it}) + \beta_6(democ_{it}) + \beta_7(democ_{it})^2 + \beta_8(X_{it}) + \varepsilon_{it} \quad (1)$$

Where,
GDP per capita and its square are for economic development

Mobile phone subscriptions: per 100 people and fixed telephone lines are for ICTs infrastructure

X_{it} : is for the list of controlled variables which includes inflation, population growth rate, gdp per capita growth rate, and trade openness for which we want separate the impact on gender equality.

GE: is the measure of gender parity at a time t of country i and the ratio of female to male labor force participation rate has been used as a proxy. **"α"** shows fixed effects that reflect time differences across country.

β_1 is the elasticity of Ratio of female to male labor force participation to gdp and β_2 is the elasticity of ratio of female to male labor force participation to square of GDP per capita in order to reflect the U-shape relationship. β_3, β_4 shows the elasticity of gender equality to mobile phones and telephone lines (ICTs infrastructure) and β_5 is the elasticity of the gender equality to level of economic freedom, β_6, β_7 are the elasticity of the gender equality to democracy and its quadratic term. X is control variables that affect the female participation in labor market it include gdp per capita growth rate, population growth rate, inflation and trade openness.

The source of the data is the online database of world development indicators and international labor organization (ILO).

4. Estimation of the model and Result analysis

The following Table 1 shows the main descriptive statistics prior to the transformation of the data to logarithmic form for five south Asian nations from 1995 to 2015.

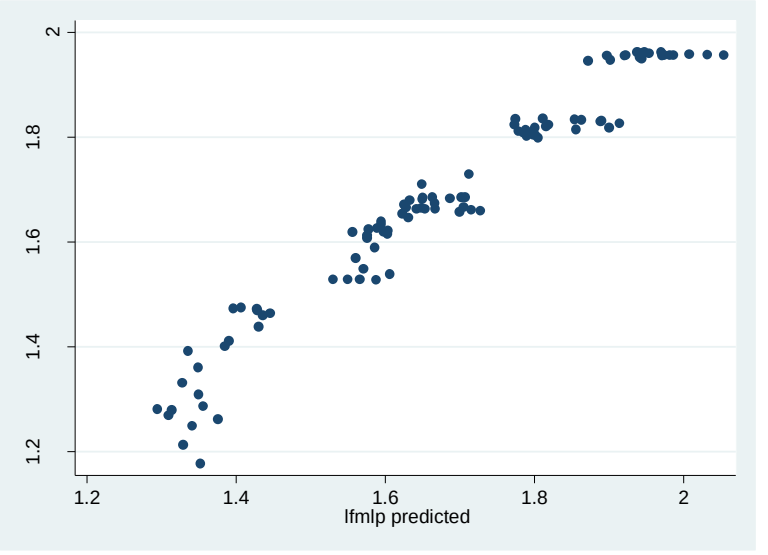
Table 1: Descriptive Statistics

Variables	Observations	Mean	Standard Deviation
Gender Parity in Employment	105	53.3250	23.4567
GDP per capita	105	1114.163	743.149
Mobile subscription	105	27.5162	32.5872
Telephone	105	3.3895	3.9185
Inflation	105	7.6853	3.7224
GDP growth	105	3.6747	2.1734
Population growth rate	105	1.5134	0.5493
Trade openness	105	18.5432	7.5563
Level of economic freedom	105	6.1152	0.3614
Democracy	105	5.7804	2.6493

The results of three post estimation tests are given in the last three rows of the Table given above. The test for multi collinearity in our case has value greater than 10 which is obvious because we have included two quadratic terms one is democracy squared and the other is GDP per capita squared. Since we have quadratic values in the model therefore we have VIF (Variance inflation Factor) slightly greater than 10 thus our model is correct. The last one is the joint F-test and the results show that indeed ICTs, democracy and level of economic freedom have significant impact on gender equality in employment in south Asian economies.

For a quick assessment of the model we had run scatter plot of the observed verses predicted values of the ratio of female to male labor force participation.

Figure 1: Scatter Plot



Source: Author's own formulating technique

On Y axis observed values are plotted while X axis shows predicted values of the gender equality. We should expect to observe a 45 degree relation in the data under study and thus in our case the model seems to be doing well in predicting the gender equality in employment.

Economic freedom is important ingredient for democratic development and making labor market more inclusive. In our estimated model the level of economic freedom has positive impact on gender equality in employment as well women rights. The coefficient associated with level of economic freedom has positive value and is statistically significant. Thus it supports our proposition that with the increase in the level of economic freedom gender equality increases in labor market. Similarly economic freedom is necessary for democratic development which in turn will include women and marginalized minorities in labor market. Therefore our hypothesis that with increase in the level of economic freedom labor market can be made inclusive. The positive impact of the level of economic freedom on women employment is because it addresses biasness of the social and economic institutions which impede women from participating in economic activities present in south Asian

economies. Similarly, level of economic freedom index uses those variables which are imperative for making inclusive labor markets.

Two indicators of ICTs, mobile phone subscriptions & fixed telephone lines (per 100 people) are used in this study. The coefficients associated with both indicators are positive and statistically significant at 5 % significance level. This shows that improvement in infrastructure has very significant impact on gender equality in south Asia since in these societies women are culturally bound and are restricted due many structural problems thus access to these facilities can be a blessing as they break barriers to information and labor market. These results also supports World Bank 2004 study "Gender equality and economic development: the role of information and communication technologies" which concludes that with the improvement in the level of ICTs Gender Equality can be increased in education and economic activities. Thus in south Asia the increase in the level of communication technologies women can participate in economic activities as well as access education and vocational skills.

Table 2: Level of Communication Technologies

Variables	Co-efficient
GDP per capita	0.0002 (10.39)
GDP per capita square	-0.912 (-23.03)
Mobile subscription	0.0014 (6.45)
Telephone	0.0104 (4.74)
Population growth	0.236 (-15.29)
Inflation	-0.0014 (-0.86)
Trade openness	0.0079 (8.08)
Democracy	0.0373 (5.68)
Democracy squared	-0.0036(-4.72)
Level of economic freedom	0.0983 (3.59)
GDP per capita growth	0.0027(0.987)
Constant	6.284 (25.94)
N	105
R-Squared	0.953
Adjusted R-Squared	0.947
RMSE	0.048

The coefficient associated with institutionalized democracy is positive and statistically significant at 5% significance level which means in south Asian countries with the increase in the level of institutionalized democracy gender equality increases. These results are also in line with study Prakash and Eastin (2013). To check for nonlinear relation the coefficient associated with quadratic democracy is negative and statistically significant which means that increase in democracy up to certain level democracy tends to lower gender equality, holding other factors constant.

The coefficient associated with inflation is negative and statistically insignificant. Thus as the level of inflation increases women employment falls in south Asian context although the coefficient is statistically insignificant contrary to the hypothesis that with the level of inflation and the decrease in purchasing power of male increases women labor participation.one possible explanation can be that in south Asian countries more women work due acute poverty especially in India, Nepal and Bangladesh therefore rising inflation can decrease their labor force participation.

The study have included GDP per capita growth rate along with GDP per capita in order to control for economic shocks that may impact gender equality. In our model the coefficient associated with GDP per capita growth is positive and statistically insignificant. The results do not change the argument that gender equality increases initially with economic development.

The estimated coefficient associated with trade openness is positive and statistically significant. Thus our results show that increasing Exports relative to imports increases gender parity in employment as well as more openness to international trade may empower women thus improving their labor market participation. Furthermore; it can also be due to the fact that south Asian countries' exports are labor intensive therefore more exports mean more employment.

The coefficient associated with population growth is negative and statistically significant. Thus our results indicate that increasing population decreases gender equality in employment. This can be true in

the context of developing countries especially in south Asia because these countries are already experiencing population bulge which has raised socio-economic issues like poverty, Illiteracy, violence, exclusive labor markets and limited economic opportunities for their citizen.

Given the model, the estimated coefficient associated with the GDP per capita is positive showing that with the increase in economic growth the labor force participation of women also increases. Thus gender equality increases with the level of economic development. To check for the U-shape relationship we have included quadratic GDP per capita and the coefficient associated with it is negative and statistically significant at 5 % significance level. Thus with increase in GDP per capita up to a certain threshold gender equality seems to be decreasing in our model. Thus our estimation does not support the hypothesis of U-shape relationship between economic growth and gender equality in south Asian context. The estimated coefficient may also suggest partial inclusive growth in these countries although the results statistically insignificant.

5. Conclusion and Policy Recommendations

Our model estimates based on panel data for five south Asian countries from 1995 to 2015 suggests that democracy, ICTs infrastructure, GDP per capita growth , level of economic freedom index and level of economic development tends to increase the gender equality in employment while quadratic democracy, quadratic GDP per capita, population growth rate and inflation lowers gender parity in employment. Since our main variables have positive impacts on women labor force participation in labor market south Asian countries need more inclusive labor markets to economically and socially empower women population in order to eradicate poverty.

Democracy has very important role in promoting gender equality, human rights and equality for all in every sphere of life. Although in our model the quadratic democracy has negative relation with gender equality in south Asian case which may be due to the fact that south Asian countries are not institutionalized democracies which are permeated by high corruption level and political instability which in turn may discourage the

birth of more plural institutions in labor markets. The governments of these countries need to promote democratic values and built more liberal and inclusive social, political and economic institutions, these south Asian countries need institutionalized democracy in order to achieve inclusive growth which is the best possible strategy for economic development and poverty reduction.

Level of economic freedom in south Asian countries is humiliating and as our study suggests economic freedom index has positive and significant impact on the labor market participation of women. Democratic regimes enable women to own and operate business with ease and protection, empowering women economically and in decision making process. These components play very significant role in plural labor market institutions and creates virtuous circle which in turn strengthen labor market outcomes and gives way to more inclusive economic growth. In short, inclusive labor markets are characterized by expanding formal sector and contraction of the informal sector. It is therefore, imperative to inject the economy with more investment in education, better and efficient regulation of the markets and creating sound legal system that prohibits corruption, domestic violence, discrimination against women and minorities and property.

Similarly, ICTs infrastructure availability tends to improve gender equality in employment and increase women access to labor markets reducing transaction costs and barriers to information both of these structural problems in labor markets has produced highly skewed outcomes. Since women in these south Asian economies are bound by age old social, cultural and occupational norms and cannot break these barriers instantly, mobile phones and telephone actually increase their proximity to labor markets as well as benefit from the speed and efficiency of these technologies.

Trade openness if regulated efficiently can bring more productive and innovative ideas and technology which society as a whole. The conclusion of our study is that inclusive labor markets are governed by plural social, economic and political institutions. To achieve plural and stable institutions south Asian nations needs institutionalized democracy, economic freedom, better infrastructure and sustained economic growth to

enact more inclusive labor markets for inclusive economic growth and poverty alleviation.

On the basis of the conclusions, the study recommends the following suggestions:

- In the light of the study it is imperative that governments in these countries should promote democracy and create more plural institutions so that it benefits not only the elite but also women, youth and minorities who are otherwise discriminated and marginalized.
- South Asian countries need to promote women entrepreneurship along with male entrepreneurs so that this young and dynamic population could tap new opportunities. Therefore governments in these countries programs aimed at releasing women time from household chores to labor market opportunities by investing in infrastructure and transportation facilities. Governments should provide safe and clean working environment for business and worker and must opt strategies that provide equal opportunities for all.
- South Asian countries are experiencing population explosion and the region has one of the largest youth populations which will either prove a curse or a valuable asset depending on how government tackles it. In order to realize this dividend government in these countries need to provide basic education and market skills to the masses which can only be done through plural economic and political institutions to create more formal economy. Education for women should be prioritized as well as south Asian countries need to reform educational curricula for quality education and upgrading skills. Programs targeting especially poor women provide double dividend, it decreases inequality as well give access to more formal jobs thus breaking the poverty trap. By enacting legislation that include women in property rights and inheritance and property rights reforms will specifically benefit rural women.
- Policies should be designed to change and reform cultural norms and traditions in south Asia. Urbanization and education can make

social rigid norms more flexible and including gender equality in educational curriculum will promote and improve women participation in labor markets.

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Does performance relate to ownership structure and information disclosure? Evidence from banking sector of Pakistan

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Abstract: The study aims to test the relationship among ownership structure, information disclosure and the performance of the Banking Sector of Islamic Republic of Pakistan. Panel set of data is collected from the annual reports of 24 sample banks from the year 2005 to 2014. The study developed the disclosure index of the Pakistani banking sector which was not measured by any previous research. Ownership concentration of banks is measure by Herfindahl index (HHI), and the performance of banks is measured by Tobin's Q. Simultaneous regression model 3SLS is used to test the mutual relation among three ownership structure, information disclosure and firm performance. The regression result shows that the information disclosure has statistically significant positive effect on ownership structure. Increase in adequate disclosure will increase the trust of investors on the bank; they will find their investment less risky and invest a big sum of money. The result infers that the ownership structure has statistically significant negative effect on firm performance. In most of Pakistani banks the ownership is separate from control which increases the controlling cost and has negative impact on performance. Additionally the result also shows the link between the firm performance and information disclosure is statistically significant and positive which infers that the strong banks with good performance disclose more about their financial results as compare to weak banks.

Keywords: Information Disclosure, Ownership Structure, Tobins Q
JEL Classification: D82, G30, F36, G32

1. Introduction

The ownership structure has major role in corporate governance as it confirms the manager's incentives and performance of the firm they manage. Ownership structure doesn't influence firm's performance directly as information disclosure is additionally an element to influence firm's performance. Therefore, it is necessary to determine the association among information disclosure, ownership structure and the firm's performance. The study measures how the ownership structure affects the firm's performance when it is affected by information disclosure. In the

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study three major types of the ownership structure of a bank is defined and their impact on the level of information disclosure. It includes managerial ownership, government ownership and private ownership.

The quality of business information is beneficial for stakeholders that rely heavily on such information in deliberating and comprehending how the various elements of a bank behave economically. Therefore, the enhancing diversification and, complexity in bank's business required to adopt the international accounting standards on information disclosure that gave the impression of bank's financial reportage and so satisfy the wants of most users. The study reveals that ownership structure is not a single measure of firm's performance while quality information disclosed by firm also affects the firm's performance. So it should not be ignored while measuring the bank's performance. The study considers that bank's performance is affected by the ownership structure which is affected by the information disclosure, and firm's performance affects the level of information disclosure.

Although ownership structure determines both firm's performance and information disclosure, it should be considered explicitly that ownership structure may be as well be an outcome of both information disclosure and firm performance. Results of previous studies infer that firm performance ownership structure, information disclosure could be interdependent. That is the quality or level of information disclosure affects the ownership structure, ownership structure influence firm performance, and also firm performance influence the information disclosure.

Consequently, it is not absolutely right to consider that ownership structure unidirectionally finds outs firm value; however, the framework should be broadened in order to determine explicitly the mutual relationship among firm performance, information disclosure and ownership structure. Chau, and Grey (2002) found a positive relationship between ownership concentration and quality of information disclosure. Hu, and Izumida (2009) found that the relationship of ownership concentration with Q either could be positive or negative. In case of managerial ownership it the expected relationship is positive while in case of non-managerial ownership it will be negative. Beverly (2007) determined the positive relationship between information disclosure and

firm's performance. Holderness (2014) determined that there is negative relation between firm's age and ownership concentration. Din, Javed and Imran (2013) found that the relationship between leverage and ownership concentration is negative. Lu et al., (2007) determined that large ownership has negative association with ownership concentration. The results of past studies inferred a positive relationship between the size and the financial performance of the firm. Chhibber and Majumder (1999) found a positive relationship between firm size and performance. Leng (2004) also inferred the same results by using data from Malaysian firms. Pathirawasam, and Wickremasinghe (2012) determined a positive relationship between firm's performance and leverage. Jalila, and Devi (2007) found negative association between the managerial ownership and the quality of information disclosure. Jalila, and Devi (2007) determined a positive relationship between the government ownership structure and the quality of information disclosure. It was also found positive relationship between private/institutional ownership and the quality of information disclosure exists.

The study employs panel data which is collected from the annual reports of 24 banks in Pakistan from the year 2005 to 2014. Due to non-availability of data for some banks for ownership structure and disclosure index, the study has trimmed the dataset to 24 banks. The study also dropped some banks which did not provide data on the complete set of ownership structure and information disclosure in their annual reports.

2. Literature Review

McConnell and Servaes (1990) determine the association between performance and ownership structure for a sample of 173 firms from 1976 and 1093 firms from 1986. The study discovers the major association between performance and inside ownership. The study finds that up to the 50 percent of inside ownership the relationship between performance and ownership is positive, after that it becomes negative. The study tends to additionally realize a major direct relationship between performance and the ownership of shares owned by inside investors. Findings of the study confirm the hypothesis of study that firm's performance is associated with the equity ownership structure of the firm. Another study (Cole and Mehran, 1998) tends to determine the value of stock prices and the structure of ownership for a sample of establishments which were indulged from mutual ownership to equity ownership. The study discovers

that when the restrictions on the ownership structure were not imposed the revenues of the firm rise considerably, and the managerial ownership and the firm's employee ownership increased considerably. However the changes in the managerial ownership and changes stock ownership plan of employees are inversely related.

Cho (1998) investigates the association among the structure of ownership, investment, and value of the firm that specialize in whether or not ownership structure affects investment. This study proofs that the performance affects the ownership structure. Similar association has been examined by Demsetz and Villalonga (2001) Moreover the results also conclude that spread ownership creates some agency problems, additionally it provides some benefits which balance those problems. Chau and Grey (2002) determine the relationship of ownership structure with the extent of information disclosure which the companies disclose voluntarily. The study collected the data from the annual reports of the companies which are listed in in Singapore and Hong Kong stock exchanges. The study finds out that the relationship of ownership structure and information disclosure is positive.

The nonlinear relationship between company performance (Tobin's Q) and managerial ownership is well documented by Davies, et al (2002). Same nonlinear relationship is also examined by Welch (2003) determines the connection between the ownership structure of the company and performance. This study includes the data from sample companies which are listed in Australian stock exchange. Spiegel and Yamori (2004) indicate that the disclosure is widely thought to be an important factor for market disciplinary measure in a very advanced money segment. Kobeissi (2004) provides a robust contribution to business research by providing the results of organizational type and ownership structure on firm performance. Ibrahim, et al (2004) displays some option reporting and performance measures which could be utilized by Islamic banks which are more in accordance with their built up goals. Medeiros and Quinteiro (2005) demonstrate the relationship of disclosure of financial information with performance, while observing positive effects of the level of information disclosure on the economic value of business. Tadesse (2006) determine the role of larger disclosure in fostering banking industry stability. The study documents that larger disclosure and tight external

audit needs area unit powerfully related to banking industry stability.

Huang (2006) infers that the disclosure of some accounting numbers like profits and loans could be enough for industrial sector companies while it is not enough level of disclosed information by the banks. Likewise, Hirtle (2007) determines the connection among the amount of disclosed information by the bank holding corporations, the level of risk faced by the bank and the performance. Lu, Liao and Yang (2007) consider that the ownership, performance and information disclosure are determined as both exogenous and endogenous variables and affect each other in determining their values. Three stage least squares is used to infer the results of relationship among ownership, Performance, and disclosure. Ali, et al (2007) aim to determine the relationship of ownership structure and information disclosure. The study is based on the theory of agency cost. The study infers that in government ownership increases the agency cost. The study also infers a negative association between the family owned firms and the level of information disclosure.

Iannotta, et al (2007), Balsmeir and Dirk (2010) and Bruton, et al (2010) determine the different types of ownership and measures the effect of concentration of ownership on the performance of the banks. Majid and Ismail (2010) study that disclosure and therefore the capital needs of banks greatly affect the approach banks area unit expected to be performed. Rouf and Harun (2011) inspect the relationship of managerial and non-managerial ownership structure with the level of information disclosed voluntarily. The results infer a positive association between non-managerial ownership and disclosure, and a negative relation of disclosure with managerial ownership.

Jalila and Davi (2012) determine the relationship of different ownership structures with the level of information disclosed voluntarily. The study measured the level of ownership concentration in family and non-family owned firms and compare it with the disclosure level. Overland, et al (2012) also determines the different measures of ownership structure and their relation with the firm performance. The study infers that the most important measure of ownership that is widely used in previous studies is herfindahl index (HHI). Bhatt (2013) determines the relations between risk management disclosures, governance, and the market rating of the fair value gains and losses (FVGL) for US depository financial institution holding corporations (banks). The study realizes that banks with sturdy

company governance disclose more regarding their risk management practices which the market rating of the FVGL increases with the extent of disclosure. Sowerbutts, et al (2013) observe the practices of disclosure in the annual reports of the companies over time to time around worldwide. Htay, et al (2013) finds the relationship among the information disclosure and corporate governance. Merve and Nizamettin (2013) provide empirical observation on measuring determinants of information disclosed voluntarily among the Turkish companies registered on Istanbul stock exchange. On the other hand, Juhmani (2013) discovers the relationship between ownership structure and the level of information disclosed voluntarily.

Hamid (2014) aims to test the relationship among the information disclosure and deposits of the bank. And Holderness (2014) determines the variables which are related to the ownership structure of a firm which includede cultural behaviors, legal securities for investors, and other religious issues have no significant relationship with the ownership structure. The effect of different ownership types on the performance of the bank is studied by Rahman and Reja (2015). The study found a negative relationship of managerial ownership with firm performance, Government ownership is also found negatively related to performance. Only the institutional ownership has the significantly positive relationship with the performance.

3. Theoretical Framework

Information disclosure is very important for the stability in the banking sector. Investors and other stake holders use the information disclosed in the annual reports of the bank to analyze risk and challenges faced by the bank, to assess the returns and losses of the bank, to analyze the stability and market strength of the bank, and to assess the future outlooks and growth of the bank. The information disclosed by the banks should be adequate and useful for the investors and other stakeholders. The inadequate disclosure can cause the financial crisis in the bank. The banks with high profits and with strong market place disclose more about their financial results, while the weak banks are always reluctant to disclose about their financials to the general public in their annual reports.

The more adequate and high level of disclosure insure equity and debt investors that the bank is not bearing too much risk and the money of

investors is safe. So, information disclosure is an important term to meet the financing needs of the bank specially to attract the large investors. The investors will be reluctant to put a large sum of money in the bank in case of having no proper information about the financials of the bank, while the investor who has all the necessary information about the bank to make investment decision will trust the bank and invest more and more because he will be aware about each and every thing and finds his investment safe.

This study is concerned about to investigate the association among the structure of ownership, quality or level of information disclosure and the firm's performance. Ownership structure doesn't influence firm's performance directly; information disclosure is additionally an element to influence ownership structure and firm's performance. Moreover all of these three variables are interdependent.

Information disclosure influences the ownership structure. There is a positive association between information disclosure and ownership concentration. High and adequate disclosure is associated with low risk. Adequate levels of information disclosure attract the strong investors (government or private/institutional) to better assess the risk and returns of the business. It develops the trust of the investor on the firm and motivates him to purchase the shares of the firm and make equity financing. The association between information disclosure and performance is positive. A lot of disclosure is related to lower risk, especially idiosyncratic risk, and successively with higher risk-adjusted returns. Larger disclosure is related to effective risk taking and therefore improved risk-return trade-offs, though the direction of effort is unclear. Inadequate public disclosure by banks contributed to the money crisis. This can be as a result of investors, unable to evaluate the risks that banks area unit bearing, withdraw their deposits in times of general stress. Predictability of stock returns is also associated with the level of disclosure.

Ownership structure affects the firm's performance. In case of non-managerial ownership (government or private) the association between ownership concentration and firm performance will be negative because of the fact that the management is not in the hands of owners and it rises the controlling cost of the firm and managers incentive, that's why there would be a negative impact on performance. While in the case of managerial ownership the relationship between performance and

ownership is positive because when the managers are the owner of the firm they will strive more to enhance their wealth, moreover in this case the managers incentives and controlling cost of firm will reduces that will lead increase in performance of the firm.non managerial ownership is positively associated with information disclosure level. The external owners will demand more disclosure to analyze the risk and returns of the business, so the managers will disclose more and more to meet the disclosure requirement because of external pressure. While in managerial ownership the association between ownership structure and information disclosure is negative because there would be no pressure of external owners to disclose more, moreover the managers as the owners will prefer to keep some secrets about business of the firm.

Firm performance also affects the information disclosure. There is a positive link between adequate levels information disclosure and bank performance. The banks with good performance and risk adjusted returns will be more willing to disclose about their financial performance in the annual reports, while the banks with poor financial performance will be reluctant to show accurate and adequate information about their financial results in their annual reports. Firm performance has negative relationship with ownership concentration by the external or non-managerial owners. In case of non-managerial ownership structure when the performance of firm is high the more and more external owners want to participate in the bank as owner by purchasing its shares, it leads to lesser concentration of ownership in the hands of few large owners. The schematic representation of the model is given below in Figure 1.

Figure 1: The Diagrammatic Representation of the Model

Source: Lu, Liao, and Yang (2007)

4. Data and Variables

The present study has utilized the secondary data set. The data set consists of time series and cross sections. The time period involved is from 2005 to 2014. The cross section includes 24 banks. These 24 sample banks have more than 80% share in the banking industry of Pakistan and include major corporate banking sector. Panel dataset is collected from the annual reports of 24 sample banks provided on their websites from the year 2005 to 2014.

The ownership structure of a bank can be defined as the division of ownership of equity regarding the voting rights, capital and identity of the equity holders. Ownership concentration (HOLD) is measured by Herfindahl index (HHI) that is the squared sum of holdings of all shareholders, taking the distribution into account. HHI has been measured in a lot of studies to examine the relationship of ownership concentration with other variables. (Cubbin and Leech, 1983; Demsetz and Lehn, 1985; Leech and Leahy, 1991; Renneboog, 2000; Goergen and Renneboog, 2001). In all researches the HHI has been measured for large shareholders because of the limited data resources.

In most of the previous studies bank's performance is measured by Tobin's Q ratio. James Tobin, (1968) introduced this ratio, and proposed that the total market value of a company in the stock market is equal to its replacement costs. The Tobin's Q ratio is calculated as the market value of a firm divided by the total asset value of the firm.

The study has measured disclosure index (DISC) using the method described by Huang, (2006). Disclosure Index of each sample bank from the year 2004 to 2014 is calculated to determine the extent or quality of information disclosed by each bank voluntarily in annual reports. According to Basel requirements of disclosure, 33 variables are essential to disclose by each bank. Bank is awarded score 1 and 0 against each variable. If the variable is present in annual report then 1 otherwise 0, then taking the aggregate of scores for each bank and dividing by the total number of variables.

Huang, (2006) determined the Basel requirements of information disclosure described the nine categories of information Disclosure which are given below, these categories are further sub divided in 33 variables that are necessary to disclosed by the banks.

1. Loans: it includes the, problem loans, credit risk, loans by maturity, and counterparty type.
2. Other Earning Assets: it includes the details of securities i.e. by type of securities and for holding concern
3. Deposits: it describes the deposits in terms of maturity time and type of customer.
4. Other Funding: it describes the time of funding i.e. for short period or long term.
5. Memo Lines: it refers to the disclose information about off-balance-sheet items, reserves, contingent liabilities and capital ratio.
6. Other or non interest Incomes: it includes the disclosure of loan loss provisions, and list of non-interest bearing incomes.
7. Credit Risk: it includes loan loss provisions, breakdown of loans, and breakdown of impaired loans, loan classification, real estate lending, and loan concentration.
8. Market Risk: it refers to the breakdown of Market exposure, FX exposure and Duration.
9. Market Discipline: it includes market signals, corporate governance, accounting policies, and reporting frequency.

Leverage (LEV) is calculated by dividing the total liabilities to the total assets. Leverage ratio shows the financial strength of a firm to pay back to its debtor. Leverage has positive association with information disclosure. A high Leverage indicates that the bank is involved in more risky type of business and according to past studies the more risk leads to more profit. Leverage has negative link with ownership concentration. High leverage shows the high risk so the large owners will be reluctant to put a big sum of money in more risky business.

Age (AGE) of the bank is measured by calculating the number of years of incorporation of the bank. Bank Age is negatively related to ownership concentration. The inverse association between ownership concentration and bank age is just because of the reason that bank founders sold their stakes over time for diversification in their business or the bank is issuing shares often for acquisitions, and therefore diluting the ownership of present shareholders.

The relationship between ownership concentration and large ownership is

negative. The owners who own more than 20% shares of the firm are considered as large owners and are given the number 1 otherwise 0. The variable is denoted as LAR. If there are more than one large owners ownership will be more dispersed. For example a owner having 100 % shares of the bank will be scored 1 and the measure of ownership concentration will be $100^2 = 10000$. On the other hand if the owner sold its 50 % shares to another person then the score of large ownership (LAR) will be 2 and consequently the ownership concentration will decrease $50^2 + 50^2 = 5000$.

Size (SIZE) is calculated as the log of market capitalization of firm. It is an equity-related proxy of size, and assumed more suitable for researches which involve equity holdings. Size of the firm is measured by taking the log of total value of market capitalization of the firm. Previous studies reported that size influences performance positively. Large size provides the benefits of both economies of scale and scope. When a bank becomes larger and larger, increase its market capitalization then its capacity to generate revenues gradually improves.

Managerial ownership (MAN) is measured as the percentage of equity held by chief executive office, top management, directors and their spouse. There is a negative association between the managerial ownership structure and the quality of information disclosure. In managerial ownership the association between ownership structure and information disclosure is negative because there would be no pressure of external owners to disclose more, moreover the managers as the owners will prefer to keep some secrets about business of the firm. Managers will avoid showing losses of the business.

Government ownership (GOV) is determined as the percentage of equity held by federal or provincial government, government institutes and general public. The association between government ownership and information disclosure is positive. The government ownership is principally affected through the government linked firms that area unit expected to own larger disclosure so as to mitigate the upper agency cost and to watch any dysfunctional governance structure of the businesses that they hold. In fact, Eng and terrorist group (2003), proofs show significant positive relationship between government structure and information disclosure.

Private ownership (PVT) is measured as the percentage of equity held by

other banks and private institutions. There is positive association between information disclosure and private/institutional ownership structure. An investigation of yearly reporting practices demonstrated that the degree of outside ownership is decidedly connected with voluntary exposures. Specifically, the outcomes additionally demonstrated that the level of data exposure is liable to be high in outsider or institutional controlled firms Chau and Grey (2002).

This study includes a total of ten variables. Three variables are endogenous variables (HOLD, DISC and Q) while the other seven are exogenous variables (LEV, AGE, LAR, MAN, GOV, PVT and SIZE).

5. The Model

To describe the relationship among ownership structure, information disclosure and firm's performance three equations are developed. The functional form of the equations is as follow**:**

$$HOLD = f(DISC, LEV, AGE, LAR) \quad (1)$$

$$Q = f(HOLD, LEV, SIZE) \quad (2)$$

$$DISC = f(Q, MAN, GOV, PVT) \quad (3)$$

The equation form of the model is as follow:

$$HOLD_{it} = \alpha_1 + \alpha_2 DISC_{i,t} + \alpha_3 LEV_{i,t} + \alpha_4 AGE_{i,t} + \alpha_5 LAR_{i,t} + \varepsilon_1 \quad (4)$$

$$Q_{it} = \beta_1 + \beta_2 HOLD_{i\,t} + \beta_3 LEV_{i,t} + \beta_4 SIZE_{i,t} + \varepsilon_2 \quad (5)$$

$$DISC_{it} = \gamma_1 + \gamma_2 Q_{i,t} + \gamma_3 MAN_{i,t} + \gamma_4 GOV_{i,t} + \gamma_5 PVT_{i,t} + \varepsilon_3 \quad (6)$$

Where:

HOLD= measure the ownership concentration of firm (measured by Herfindhal Index)

Q= performance of the firm (measured by Tobin's Q)

DISC=quality/level of information disclosure of firm (measured by disclosure index)

LEV= leverage of firm measured by debt ratio (total liabilities /total

assets)

AGE= establish time

LAR= Total score of large owners (one or more than one shareholders who possess 20% or above shares of the banks)

SIZE= log of firm's total market capitalization

MAN= Managerial ownership (includes the percentage of equity held by chief executive office, top management, directors and their spouse)

GOV= Government ownership (consist of the percentage of equity held by federal or provincial government, government institutes and general public)

PVT= Private ownership (includes the percentage of equity held by other banks and private institutions)

The subscript i and t represents the cross sections and time period. α_1, β_1 and $\gamma 1$ are the constant intercept terms. Since the log of variables is taken. Therefore the slope coefficients represents the elasticity i.e. the percentage change.

6. Three stage least squares (3SLS)

Simultaneous regression model three stage least squares (3SLS) in the software STATA is used in this study to analyze the mutual relationship among ownership structure, information disclosure and firm's performance. It further find outs the endogeneity, exogeneity of ownership structure, information disclosure and firm's performance. 3SLS was introduced by Zellner, and Theil (1962). It is the combination of two stage least squares (2SLS) and seemingly unrelated regressions (SUR). In this study three stage least squares measure the effect of ownership structure on firm performance and, the effect of information disclosure on ownership structure, and the effect of firm performance on information disclosure. The representation of 3sls is given above in equation 4, 5 and 6.

7. Results and Interpretation

In the study the descriptive statistics of the data describes the properties of data. It consists of the summary statistics which explain the features of the data used to conduct the research. It depicts the mean, standard deviation,

minimum and maximum points of the data which depict a true image of the data.

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Q	.1131159	.1230562	.0075282	.6654513
DISC	.6791217	.1140559	.5151515	.8787879
HOLD	3.771396	.141912	3.410137	3.993247
LEV	.865835	.0973056	.0034674	.9842451
AGE	23.98729	23.96939	0	73
LAR	1.347458	.5116035	1	3
SIZE	6.803082	.3672249	5.774535	8.012957
MAN	4.877357	11.99057	0	67.41
GOV	29.22049	28.58213	.0025	93.89
PVT	54.9617	32.83064	0	99.2238
Number of observations : 236				

The mean value of Q i.e. 0.113 indicates the good performance of Pakistani banks. According to James Tobin, (1968) the value of Q between 0 and 1 ($0 < Q < 1$) is favorable. The average of information disclosure i.e. 0.679 indicates that the Pakistani banks are more willing to disclose in their annual reports and disclose more about their financial performance in their annual reports. Mean value of leverage is 0.86. Standard deviation for this variable is 0.09 where minimum value is 0.003 and maximum is 0.98. Low value indicates low variation in the data set. Mean value of bank age is 23.98. High value indicates large variation in the ages of the different banks which are included in the study. The average value of managerial ownership is 4.87% that is very low as compare to the mean values of government ownership 29.22% and private ownership 54.96%. This is the main reason of insignificant results of the relationship between managerial ownership and disclosure level. The values of other variables in the above table look normal that's why their results are statistically significant in reg3 model.

Table 2: Results for 3sls Regression

	Equation 1	Equation 2	Equation 3
Variables	HOLD	Q	DISC
DICS	0.6972* [0.104] (0.000)		
LEV	-0.9302* [.0798] (0.000)	0.2763* [0.059] (0.000)	
AGE	-0.0025* [0.0003] (0.000)		
LAR	-0.05064* [0.0122] (0.000)		
HOLD		-0.28751* [.0421] (0.000)	
SIZE		0.1611* [.0143528] (0.000)	
Q			0.4121* [.0651] (0.000)
MAN			-0.0008 [0.0006] (0.222)
GOV			0.0035* [.0004] (0.000)
PVT			.00438* [.0004] (0.000)
Constant	.57551* [.0618] (0.000)	0.4277** [0.177] (0.016)	3.3832* [.0367] (0.000)
P Value	(0.000)	(0.000)	(0.000)
R^2	0.32	0.51	0.58
Endogenous Variables : HOLD Q DISC No. of Observation: 236			

Note: The value in [ ] indicate the standard errors and the value in ( ) indicate the Prob. values.
* and ** indicate that the coefficient is statistically significant at 1% and 5%, respectively.

Equation 1

The coefficient has the expected sign and it is statistically significant at 1% level. HOLD has positive relationship with DISC. The value of coefficient 0.69 indicates that an increase in DSIC will increase the percentage HOLD in the banking sector by 0.69. Adequate levels of information disclosure shows the lesser level of risk faced by the bank and attracts the strong investors (government or private/institutional) to better assess the risk and returns of the business. It develops the trust of the investor on the firm and motivates him to purchase the shares of the firm and make equity financing in large amount. A lot of disclosure is related to lower risk, especially idiosyncratic risk, and successively with higher risk-adjusted returns. Larger disclosure is related to effective risk taking and it develops the confidence of the investors to purchase shares of the bank. Inadequate public disclosure by banks contributed to the money crisis. This can be as a result of investors, unable to evaluate the risks that banks area unit bearing, withdraw their deposits in times of general stress and sell their shares to avoid the risk of loss.

The negative relationship between HOLD and LEV exists. The coefficient has the expected sign, and it is statistically significant at 1% level. The value of coefficient -0.93 demonstrate that increase in LEV by 1 will decrease the percentage HOLD by 0.93. A high Leverage indicates that the bank is involved in more risky type of business; it also shows that the obligations of the business are more than its assets. High leverage shows the high risk so the large owners will be reluctant to put a big sum of money in more risky business.

The negative relationship between HOLD and Age exists. The coefficient has the expected sign, and it is statistically significant at 1% level. The value of coefficient -0.0025 exhibits that 1 year increase in Age will decrease the percentage HOLD by 0.0025. The negative association between ownership concentration and bank age is just because of the reason that bank founders sold their stakes over time for diversification in their business or the bank is issuing shares often for acquisitions, and therefore diluting the ownership of present shareholders.

There is a negative relationship between HOLD and LAR. The coefficient has the expected sign, and it is statistically significant at 1% level. The outcome value of coefficient -0.0560 shows that increase in LAR by 1

will decrease the percentage HOLD by 0.0560. The study assigned the score 1 to the owners who owns more than 20% shares in the bank. if there will be more than one large owner the total score of LAR will increase and the concentration of ownership gradually decrease. In the case of more score of LAR the ownership will be more dispersed.

The intercept term of equation 1 is 0.57% it means that if all independent variables are equal to zero then 0.57% change in holding id due to other variables which are not included in the model. P value of constant term is 0.000 it means that it is statistically significant at 1%.

It's a statistical measure of how close the data is to the fitted regression line. It shows the goodness of the model. It should be positive and greater than 0. R square of equation 1 is 32% it means that the strength of the relationship between the model and the response variables is 32%. It is a measure of accuracy of the model. It is the standard deviation of the differences between predicted values and actual values. A lower value of RMSE is good. RMSE of equation 1 is 10% that shows that the deviation in the model is low.

Equation 2

Q and HOLD have negative relation. The coefficient has the expected sign, and it is statistically significant at 1% level. The value of coefficient -0.2875 demonstrates that increase in percentage holding by 1 will decrease the Q by 0.2875. The data from annual reports of Pakistani banking sector shows the concentration of the ownership in the hands of external owners (government and private). Non managerial ownership (government and private) the association between ownership concentration and firm performance will be negative because of the fact that the management is not in the hands of owners and it rises the controlling cost of the firm and managers incentive, that's why there would be a negative impact on performance. The relationship between Q and LEV is positive. The coefficient has the expected sign, and it is statistically significant at 1% level. The value of coefficient 0.2763 demonstrates that if LEV increase by 1 then Q will increase by 0.2763. High level of leverage shows that the debt is greater than the assets of bank and the bank is facing the higher level of risks. Evidence from previous researches had shown that the high risk leads to high profitability.

The relationship between Q and SIZE is positive. The coefficient has the expected sign, and it is statistically significant at 1% level. Coefficient value 0.1611 indicates that if SIZE increase by 1% then Q will increase by 0.2763. Large size provides the benefits of both economies of scale and scope. When a bank becomes larger and larger, increase its market capitalization then its capacity to generate revenues gradually improves.

The intercept or the constant term of equation 3 is 0.42% it means that if all independent variables are equal to zero then .42% change in holding id due to other variables which are not included in the model. P value of constant term is 0.016 it means it is statistically significant at 5% level.

It's a statistical measure of how close the data is to the fitted regression line. It shows the goodness of the model. It should be positive and greater than 0. R square is 51% it means that the strength of the relationship between the model and the response variables is 51%. It is a measure of accuracy of the model. It is the standard deviation of the differences between predicted values and actual values. RMSE is 7% that shows that the deviation in the model is low.

Equation 3

DISC and Q has positive relation. The coefficient has the expected sign, and it is statistically significant at 1% level. The value of coefficient 0.4121 demonstrates that increase in Q by 1 will increase the DISC by 0.4121. The banks with good performance and risk adjusted returns will be more willing to disclose about their financial performance in the annual reports, while the banks with poor financial performance will be reluctant to show accurate and adequate information about their financial results in their annual reports.

The relationship of DISC with MAN has the expected sign, but it is statistically insignificant at 1% and 5% level. Most of the banks in the banking sector of Pakistan have a very low or zero percentage of managerial ownership in their ownership structure that's why the results of this study are insignificant in the case of managerial ownership.

DISC and GOV has positive relation. The coefficient has the expected sign, and it is statistically significant at 1% level. The value of coefficient 0.0035 demonstrates that if GOV increase by 1% then DISC will increase by 0.0035. In case of government ownership the government as an

external owner will demand more additional levels of the disclosure from the management of the bank to assess the risk and returns of the business.

DISC and PVT have positive relation. The coefficient has the expected sign, and it is statistically significant at 1% level. Coefficient value 0.0035 exhibits that if PVT increase by 1% then DISC will increase by 0.0035. The other banks and other institutions as external owners will require more and more disclosure from the bank's management and will demand to provide more fact and figure about the financial performance of the bank in their annual reports. Specifically, the outcomes demonstrated that the level of data exposure is liable to be high in outsider or institutional controlled banks.

The intercept or the constant term of equation 2 is 3.38% it means that if all independent variables are equal to zero then 3.38% change in holding will occur due to other variables which are not included in the model. P value of constant term is 0.000 it means it is statistically significant at 1%. R square of equation 2 is 58% it means that the strength of the relationship between the model and the response variables is 58%. It shows the goodness of model. RMSE is 9% that shows that the deviation in the model is low.

8. Conclusion

This study determines the interrelationships among ownership structure, information disclosure and firm's performance. Data of past ten years (2005-2014) of 24 sample banks from the Pakistani banking sector is included to construct this research. Dissimilar to past studies, the paper investigates the likelihood that ownership structure, information disclosure and firm's performance are determined in both endogeneity and exogeneity.

This study found that ownership structure has a positive significance with information disclosure, information disclosure has positive significance with firm's performance and firm's performance has negative significance with ownership structure. The negative relationship of firm's performance and ownership structure exists due to non-managerial ownership structure. In case of non-managerial ownership the controlling cost raises that has a negative impact on firm's performance. Firm's performance is an outcome of both ownership structure and information disclosure. Banks will disclose more about their financial performance to attract the investment

from external owners so it will increase the ownership concentration, furthermore the banks having external owners (government and private) with sound financial performance are more willing to disclose about their financials because of external pressure of owners, so as a result information disclosure will increase. In case of managerial ownership the managers are less willing to disclose the information to the general public. In addition the external owners increase the cost of controlling and managing activities of firm so it has a negative impact on performance, most of the banks which are included in study have non-managerial ownership structure either government or private that's why the inverse relationship exists between firm's performance and ownership structure.

Information disclosure is an important term to increase the performance of the banks. Bank should disclose more and more about their financials to show their credibility to the customers and investors. in case of external ownership the bank with high disclosure quality can attract a large number of shareholders or investors rather than a bank with poor disclosure levels will find it difficult to attract shareholders, because nobody will have a trust on bank, they will find their investment risky in a bank which is reluctant to show its financial conditions in a better way. In the banking sector of Pakistan the portion of managerial ownership is very low. To have pleasant effects on the performance of banks the portion of managerial ownership should be raised. For future exploration, we may point at the expansion of the investigation by joining a few others issues, for example, obligation and research and development cost both as endogenous and exogenous variables in measuring the firm's performance.

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Do SMEs really contribute towards poverty reduction? An empirical analysis to explore the impact of Washing Machine sector on the poverty status of its employees in Gujranwala district

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Abstract: Poverty is a multifaceted phenomenon relying on a number of different social, economic and demographic aspects. An understanding to the true perspective of nature, intensity, and causes of poverty can be considered as a prerequisite for effectual course of action to reduce poverty. The present study attempts to investigate the impact of various socioeconomic and demographic determinants on the poverty status of 517 employees of 322 washing machine producing units operating in Gujranwala District. To estimate the probabilities of being poor, an econometric approach of logistic regression analysis with maximum likelihood estimation has been employed. The factors of household size and persons per room are found to be significantly and positively correlated with the probability of being poor. While skill level of the employee, gender of household head, average household educational points, physical assets, agricultural income housing ownership, availability of medical facilities, nature of housing structure, sources of drinking water, nature of sanitation system used, availability of sui gas, gross primary school enrollment rate, satisfaction regarding present job along with participation rate are found to be negatively and significantly associated with the probability of being poor. SMEs are also found to have a negative impact on the probability of being poor, adding positively to the argument that SMEs in this case are really contributing to enhance the living standard of its workers.

Keywords: Poverty, Washing machine producing Units, SMEs, Gujranwala.
JEL Classification: I30, O13, D63

1. Introduction

Poverty is considered as denial of opportunities and a continuous state of deprivation about basic necessities of life. Poverty and inequality are strongly interlinked, and recently, there appears to be a gradual increase in

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inequality both at international and national levels. According to United Nations Development Program, about 80 percent of the world's population resides in countries with increasing income inequality. Moreover, the share of poorest 40 percent of the world's population in global income is about 5 percent, while richest 20 percent account for 75 percent of world income.

The problem of mass poverty has been a major challenging factor against the pace of development in Pakistan since its independence. The number of the destitute has increased with the passage of time, expressing the immensity of this problem. Lack of food, shelter, health and educational facilities, unemployment, uncertainty, powerlessness, unhygienic living conditions, lack of representation and freedom are considered to be the major determinants of poverty. Majority of people in Pakistan, particularly in rural areas and also in so called urban areas, are characterized by most of the factors responsible for poverty described above, representing the dismal situation of socioeconomic and demographic indicators. According to the World Bank and the United Nations Development Program (UNDP), the poverty rate in Pakistan ranges in between 25.7 percent and 28.3 percent in contrast to the government's estimates of 23.9 percent[1] (World Bank, 2006). The failure of official planning and the market economy in lessening this problem emphasize the implication of some new and effective policy measure. The protection of the rights of the vulnerable segment of the society and participation of whole population are considered somewhat essential for long run economic development of Pakistan.

The subject of poverty is not considered as a new one in development economics. Significant work has been done to address the issue of poverty along with its consequent impact on economic and social aspects of both developed and developing countries. Considerable research has been conducted in Pakistan to analyze different dimensions and extent of poverty[2]. The present study is an attempt to explain and investigate the

1 World bank (2006)

2 Naseem, 1973; Alluadin 1975; Mujahid, 1978; Irfan and Amjad , 1984; Malik,1991; Zaida, 1992 etc.

determinants of poverty among the workers of light engineering sector in Gujranwala.

The major aspect of economic development model of Pakistan has always been the maximization of output growth, with little emphasis on the issues of widespread poverty, socioeconomic differentials, and inauspicious demographic issues. In spite of high rates of economic growth along with steady improvement in major macroeconomic indicators, it has failed to trickle down to the Pakistan's poor. Pakistan has experienced economic stagnation and poverty in 1950s, increasing growth and poverty in the 1960s, stagnant growth along with declining poverty in the 1970s, increasing growth and declining poverty in the 1980s and, declining growth with increasing poverty [MHCHD/UNDP (1999)][3]. The head count ratio of poor was found to be 30.6 percent in 1998-99, with a high rise of 34.5 percent in 2000-01, and a gradual decline up to 23.9 percent and 22.3 percent in 2004-05 and 2005-06 respectively[4].

From a worldwide perspective, SMEs are recognized as engine of economic growth[5] because of their dependence on indigenous skills and technology, innovativeness and expansion of industrial linkages. SMEs are endogenously based enterprises as their linkages with the large multinational corporations lead to rapid growth and expansion of SMEs (Safdar & Siddiqi, 2011a). They also play a vital role in employment generation[6] and poverty reduction[7]. In addition they contribute towards resource mobilization[8], revenue generation through export earnings[9], increase in savings, and equitable distribution of income, promotion of craftsmanship, egalitarian structure of society and development of an entrepreneurial culture. SMEs are also instrumental in skill acquisition through a system of informal apprenticeship and also provide training ground for upgrading and developing skills.

3 Pakistan Development Review 38 : 4 Part II (Winter 1999) page No. 859
4 See Government of Pakistan, Pakistan Economic Survey, 2009-2010
5 See Gebremariam et.al (2004), Beck et.al (2004,2005) and Tambunan (2008)
6 See Birch (1979), Noriyuki et.al (1998) and Osmani (2004), Safdar & Siddiqi, (2011c).
7 See Mukras (2003), Antonio (2003) and Liu et.al (2008), Safdar & Siddiqi, (2011b).
8 By organizing money market through banking sector and other financial institutions.
9 See Reason et.al (2004), Karadeniz et.al (2007), Nazar et.al (2008).

The SMEs constitute more than 99 percent of businesses in Pakistan and all these activities are handled by the private sector and most of these do operate in the informal economy[10]. There are about 3.2 million economic establishments. In Pakistan, 99 percent of these are accorded as SMEs, according to the definition of SMEs by SMEDA. Their contribution towards value addition in manufacturing sector is 35 percent. SMEs contribute 30 percent to GDP. Their share in manufactured exports is 25 percent. They contribute 99 percent towards employment generation[11].

With the development and overtime growth of SMEs and their role in foreign exchange earnings, employment generation and income distribution is of paramount importance[12]. According to a study conducted by Board of investment (2007), there are about 2500 registered units of Light Engineering Sector along with a much larger number of units operational in unorganized sector. Majority of these units are operating in the cities of Karachi, Lahore, Gujranwala, Gujarat and Sialkot. The study is based on the SMEs (Washing Machines Producing Units) in Gujranwala district.

Do SMEs really contribute towards poverty reduction? This is the claim made by approximately all the studies focusing on the role of SMEs along with their positive contribution towards GDP, export earnings and employment generation. They do play an important role in poverty reduction through employment generation. As in Pakistan 90% of the very small establishments accounts for 80% of all non-agricultural sector employment (FBS).That's why it is taken as a fact that SMEs really contribute towards poverty reduction. No empirical study has yet been undertaken to quantify the extent of poverty in the workers of SMEs to find out the real contribution of SMEs toward poverty reduction. This study is pioneer in its nature as no empirical study in these districts has so far been conducted to find out the determinants of poverty of the employees of a particular sector (Light Engineering Sector).

10 Refers to all economic activities that fall outside the formal economy regulated by state.

11 Economic census of Pakistan 2005.

12 ibid

2. Literature Review

Considerable work has been done on poverty in the case of Pakistan. The focus of most of the studies[13] was to concentrate only counting population below the poverty line at provincial or national level, provincial level or to find out the impact of different socio-economic variables on the poverty status of the discussed population. However, a brief review of the work done with respect to different socio-economic factors is discussed below.

Household employment can be determined with the help of different indicators. Among these determinants, the rate of participation in the labor force, changes in jobs and the real rate of unemployment are mainly focused by economists (Chaudhary, 2009; Haq, 2005). The participation rate is considered to be an imperative variable relating to employment status of the household (Haq, 2005). Poor health, lower income per capita, disability, intensive religious and customs beliefs, lower status and general welfare level along with minimal asset holdings are considered as main factors for lower participation rate in LDCs (Lipton, 1983).

In the late 1990s, the stability of Gini ratio of per capita expenditure in rural areas exhibited that the growth of agricultural income helped reducing poverty in Kyrgyz Republic (Aziz-ur-Rahman, 2007*)*. According to IFPRI data, less inequality in land ownership and less diversified agricultural income helped reducing poverty in canal colony areas of Punjab (World Bank, 2002). The present study is going to investigate the impact of presence of agricultural income on the probability of being poor.

According to literature, poverty is related to a variety of characteristics of a household such as those relating to education, demography, community, physical assets and infrastructure (Chaudhary, 2009; Jan et.al, 2008; Bruck et.al, 2007; Piachaud, 2002). Physical assets are considered as an important factor contributing significantly to per capita income. Possession of physical assets like land or livestock reduces the probability of being poor by 55 percent in rural Pakistan (Pasha and Jamal, 2001). Therefore, asset redistribution can be utilized as an efficient instrument

13 See Amjad and Kemal (1997); Ali and Tahir (1999); Jafri (1999); Arif et al. (2000) etc.

for poverty reduction, particularly in rural Pakistan.
The gender issue plays a vital function in poverty analysis. The significance of female-male ratio or sex ratio in a household is well established to find out their approach toward work. The severity of cultural norms is severe in rural areas as compared to urban areas suggesting that a high female-male ratio might be associated with household poverty (Chaudhary, 2009). Lower female-male ratio of workers is found to have a negative relation to depth, incidence and severity of poverty (Malik, 1996).

Large proportion of rural households in Punjab live without any drainage system with about 42 percent having open drains and 56 percent without any sanitation system (PIHS, 2001-02). Majority of poor households were found to have no sanitation system in the union council of Dhamayal (Haq, 2005). Unavailability of proper sanitation system increases the chances for poor from suffering poor health as compared to non-poor (Cheema, 2005). The study is going to employ the presence of sanitation system on the probability of being poor.

Education and training are the most important investments in human capital (Becker, 1993). Education plays a vital role in acceleration of economic growth which in turn reduces poverty. Therefore, the relationship between education and poverty requires much attention. There exists an inverse association between education of the household and poverty (Haq, 2005). Higher degree of educational attainment is associated with greater employment opportunities. Different types of indicators are usually employed to characterize education in a household living standard analysis. These involve household size, level of educational attainment, gross primary school enrollment rate and educational codes etc. (Chaudhary, et.al, 2009).

Gross primary school enrollment rate is an important indicator of educational attainment in a country like Pakistan (Chaudhary et al., 2009). Education is found to be a key determinant of living standards in Mozambique, with even one individual from a household having education beyond the primary level reduces the probability of being poor

(Simler et.al, 2004). Therefore, the impact of gross primary enrollment rate should be considered as an important determinant of poverty analysis.

Shelter is referred as overall framework of personal life of the household. Three components are usually employed to evaluate shelter, by differentiating poor and non-poor households involving: services[14], housing and the environment. The housing indicators comprises of building type (type of materials), the resources through which household has access to the housing facility (ownership or renting), and household equipment (Poverty Manual, 2005).

Ownership status of dwelling is considered as an important determinant of poverty as it would lower the probability of being poor[15] (Arif and Bilquees, 2007). The ownership of housing unit is considered as the main factor necessary for extricating a household or individual from poverty (Chaudhary et.al, 2009). There exists a vicious cycle between acquisition of assets and poverty as ownership of dwelling or land is negatively related with both transitory and chronic poverty, implying that land-owners are mostly characterized by non-poor status (Arif and Bilquees, 2007). Ownership of house is very frequent in the rural areas of Pakistan where they live in a joint family system (Siddiqui, 2009).

Quality and type of housing unit can be considered as the result of poverty on one hand, but it also contributes to the chances of being poor in the form of unhealthy and unhygienic living conditions. It is also recognized that poor households live in more poorer and precarious sanitary conditions, which in turn add to the poorer health and thus lowering productivity of household and aggravating poverty (Chaudhary et.al., 2009). The type of housing structure in terms of nature of material used, different housing services and utilities are considered as important determinants of poverty both in rural and urban areas (Jamal, 2007). The present study has employed the impact of type of housing structure (kacha or packa) on the probability of being poor.

14 The focus of the service indicator involves the availability and the utilization of communications services, safe drinking water, energy sources and electricity (Poverty Manual, 2005).

15 Being an important component of shelter, it can act as security for borrowing and be sold during difficult times (Arif and Bilquees, 2007).

Access to basic amenities is considered as the major factor distinguishing poor from non-poor (Poverty manual, 2005). This preposition is also support by PIHS 2001 as about 30 percent of household fall below poverty line having access to electricity as compared to about 49 percent having no electricity (Cheema, 2005). Lacking access to infrastructure is certainly a universal problem for the poor affecting both their well-being and productivity. About 52 percent of the poor were found to live in households having electricity as compared to 76 percent of non-poor households in Pakistan (World Bank, 2002).

The housing congestion, characterized by persons per room is also incorporated in the welfare function (Jamal, 2004). A large household size increases the probability of being poor or remaining in chronic poverty. The impact of household size on poverty is well-known, poverty increases with the increase in household size (Cheema, 2005). Literature suggests that household size, number of earners and dependency ratio are high in poor households as compared to non-poor households (Gebremedhin, 2006). It is therefore assumed that the larger households are more prone to poverty exposure.

In the present study, the dependency ratio is calculated as the ratio of the number of household members below 15 and over 64 to other members of the same household. It is therefore expected that a high dependency ratio is positively correlated with the level of household poverty in context of present study.

The importance of female-male ratio or sex ratio in a household is evident from the fact that it determines the households' attitude toward work (Chaudhary, 2005). Generally, it is believed that female members of the household in Pakistan have to face cultural rigidities in order to work outside from their household, discouraging their active participation in the labor force. Thus, it suggests that a high female-male ratio increases the chances of being poor (Chaudhary et.al, 2009). The present analysis has employed the female male ratio as an important demographic variable to consider its impact on probability of being poor.

The age and gender of the household head are considered as central in determining the attitude toward employment. It is commonly believed that the age and gender of the household head significantly influences poverty (Chaudhary et.al, 2009). Literature suggests contradictory results regarding the importance of age of household head. Age of household head is not always found to be significant in linear terms in all poverty analysis (Fissuh and Harris, 2004), while, it was found significant in case of rural areas of Cholistan in Pakistan, where increase in age of household aggravates the probability of being poor (Chaudhary, 2005; Chaudhary et.al 2009).

In developing countries like Pakistan, the women are disadvantaged as compared to men. One determinant of gender gap is either female-headed household are less economically stable as compare to those headed by male. But in contrast to the above argument, the incidence of poverty was found to be higher in households having male heads in contrast to female-headed households (PIHS, 2001). 35 percent of households below poverty were headed by males as compared to female-headed households where this percentage is about 22 percent (Cheema, 2005).

Education and training are considered as most important investments in human capital. (Becker, 1993). Education contributes positively to economic development which in turn reduces poverty. Therefore, the relationship between education and poverty requires much attention. There exists an inverse association between education of the household and poverty (Haq, 2005). The higher educated household head is more likely to attain greater incomes and thus lowering the chances to be poor. According to PIHS 2001, prevalence of poverty in illiterate household heads is about 43 percent as compared to about 24 percent in literate household-heads (Cheema, 2005). The present study has hypothesized that education of household head contributes positively to improve the living standard of household.

On the basis of the above mentioned determinants of poverty, research model presented in Fig 1 has been produced by the author for analytical purposes.

3. Research Method

According to the World Bank (2000), "poverty is pronounced deprivation in wellbeing". This definition leads to two different inquiries as, what is meant by well-being and against what benchmark, the extent of deprivation can be measured. According to second approach, the command of people on a specific type of consumption good is considered as well being as of food, shelter, health care or education. This approach is much broader and encompasses important social determinants which are crucial for human development in addition to food and non-food items.

The broadest approach to well-being is the one expressed by Amartya Sen (1987); according to him well-being is the result of potential to function in society. Thus, poverty is the outcome of lacking of key capabilities by people, and so having insufficient education or income, or poor physical condition, or low self-assurance, or low insecurity, or a sense of helplessness, or the absence of rights as liberty of speech.

The concept of poverty cannot be easily expressed, though; it can be defined in terms of absolute poverty as lack of resources in relation to needs and lack of resources in relation to the resources of others, i.e., relative poverty. According to the poverty theorists, the concept of absolute poverty is more related to the problems of developing countries as compared to the relative poverty. Thus, the present study has attempted to estimate and analyze absolute poverty in the workers of washing machine producing sector of Gujranwala district.

After defining poverty, it will be helpful to identify a benchmark to differentiate poor from non-poor. For this purpose, an indicator of welfare as income or consumption per capita is defined. Income defined as consumption plus change in net worth, is generally employed in developed countries as a measure of welfare, but it tends to be critically understated in developing countries like Pakistan. Consumption is less inconspicuous and can be used to measure permanent

income to some extent.

The consumption per capita can be considered as most frequently utilizing measure of welfare. In order to incorporate differentiation in need by age, and economies of scale in consumption, some analysts employ consumption per adult equivalent scales. The Organization for Economic Co-operation and Development (OECD) scale [16] = (1 + 0.7 × (NA [17] - 1) + 0.5 ×NC[18]) is widely used and also employed in this study.

In Pakistan, a number of studies have been conducted during the last three decades in order to analyze the nature and extent of poverty. Most of the studies[19] are primarily based on data generated through different Household Income and Expenditure Surveys (HIES), employing the calorie-intake approach to assess poverty. Whereas, a few recent studies have utilized the basic-needs approach to assess the severity of poverty.

In the present study, the official poverty line has been utilized after inflating it for the period 2008-09. Planning Commission of Pakistan has estimated the absolute poverty line of Rs. 673.54 per month per adult equivalent[20], by employing PIHS 1998-99 data. The Commission then adjusted the poverty line for the 2000/01 period by using Consumer Price Index as Rs. 723.40 [21] per month per adult equivalent and in 2004/05 it was estimated as Rs. 878.64 per month per adult equivalent. Amjad et.al (2008) has employed same poverty line suggested by Planning Commission by using the CPI for the period of 2007and the adjusted poverty line was calculated as Rs. 1023 per month per adult equivalent.

16 Handbook on Poverty and Inequality, Chapter No. 2, Page No. 29
17 Number of adults in the household
18 Number of children in the household
19 Naseem (1973), Irfan and Amjad (1984), Malik (1988), Amjad and Kemal (1997), Ali and Tahir (1999) and Qureshi and Arif (2001).
20 Household consumption expenditures are adjusted in order to capture the differences in consumption needs with respect to age, sex and economies of scale as per adult equivalent expenditures. The adult equivalent scale suggested by OECD (1 + 0.7 × (NA − 1) + 0.5 ×NC) is being employed in the present study. Where NA is number of adults and NC is the number of children in a particular household.
21 Pakistan Economic Survey (2006-07) "Comparative Vulnerability Profile for 2000/01 and 2004/05"

The present study has inflated the poverty line developed by Planning Commission, for the year 2008-09 and a poverty line of Rs.1398.23 per month per adult equivalent has been utilized for distinguishing poor from non-poor.

After selecting the data collection process, different indicators of poverty and an appropriate measure to differentiate poor from non-poor, the next step is to explain the analytical techniques employed to find out the probability of being poor among SME's employees in the present study. Poverty profile is the most appropriate manner in order to analyze the correlates of poverty, where household welfare across different population groups is compared with respect to different characteristics.

The FGT[22] indices being the most commonly employed poverty measures are used to calculate a more detailed poverty profile of the employees of Washing machine producing sector in Gujranwala District. The most frequently utilized FGT poverty measures include the Head Count Index (P0)[23], Poverty gap index (P1)[24] and poverty severity index (P2)[25]to present a more detailed insight to different dimensions of poverty.

The present study will not only help to find out the major determinants of poverty among workers employed in washing machines producing units of Gujranwala, but will also facilitate Government to formulate policies to readdress the issue of poverty in a particular sector. It would be more appropriate to point on this stage that this study is the first one undertaken to highlight the issue of poverty among the employees of a particular sector of SMEs in Gujranwala district.

22 Foster, James, J. Greer, and Eric Thorbecke. 1984. "A Class of Decomposable Poverty Measures."Econometrica 52 (3): 761–65.

23 It is utilized to measure the incidence of poverty as the proportion of population living below the poverty line.

24 It is employed to measure the degree to which individuals lie below the poverty line as a percentage of the poverty line.

25 It can be measured by averaging the squares of the poverty gaps with respect to the poverty line.

3.1 Sources of Data

In the present study, primary data collected through a detailed survey of the employees of Washing machine producing sector, is being utilized for analytical purposes. The survey has been conducted in the district of Gujranwala from Feb, 2009 to Feb, 2010. The format of the employee questionnaire, covering broad aspects of each employee's socioeconomic and demographic, characteristics can provide a deep insight to the causes of poverty in the employees of the Washing machines producing sector located in Gujranwala District.

3.2 Sampling design

According to a survey conducted by author, the total numbers of employees working in 322 washing machines producing units of Gujranwala were found to be 2027; applying following formula for sample selection, a sample of 517 was selected for unknown population.

$$n = \frac{NZ^2P(1-P)}{Nd^2 + Z^2P(1-P)} \qquad (1)$$

where
n = sample size
N= Target Population (2027 units)
Z =Area under the Normal Curve (100 percent) i-e 3.0 approx
Guessed value of P= 0.50 or 50% percent for maximum sample size
d = Acceptable Error i.e. (6.1 percent or 0.061)

By applying the given values to eq.1:-

$$n = \frac{2027*3*3*0.5*0.5}{2027*0.061*0.061+3*3*0.5*0.5}$$

$$n = \frac{4560.75}{465.7407} = 465.74$$

Say approximately considered sample size= 517 employees

3.3 Logistic Regression Analysis

To estimate the probabilities of being poor, logistic regression analysis with maximum likelihood estimation is employed. In the analysis dependent variable takes the value 1 when the household is not poor and 0 when household is poor. The independent variables are classified into three categories, i.e. economic characteristics of household, social characteristics of household and demographic characteristics of household. Economic characteristics of household involves household employment[26], household incomes in the form of per capita income, structure of household consumption expenditures, household property and assets including agricultural income and physical assets. Social characteristics of the household comprises of health[27], education encompassing gross primary school enrollment rate and average educational codes per household, shelter including ownership of house, type of housing structure, availability of electricity, nature of fuel used for cooking and persons per room. Demographic characteristics of household involve dependency ratio (child and old age dependency ratio), female male ratio, age, gender and education of household head.

The logistic model is defined as:

$$\log [P/(1-P)] = \propto + \beta_1 x_1 + \beta_2 x_2 + \ldots\ldots\ldots + \beta_k x_k = \propto + x\beta \quad (2)$$

Here P is the probability of being poor, while $P/(1-P)$ shows the odds

26 It comprises of variables like participation rate, female male ratio (workers) and level of skill of the employee working in the SME.

27 It includes access to medical facilities, sources of drinking water used by the household and type of sanitation system used.

ratio. $\propto$ = constant and x are vector of independent variables, β are the logistic coefficients.

At times it is easier to interpret the model in terms of probabilities, i.e. odds ratios. A value of odd ratio greater than 1 indicates the increase the probability of being poor while less than one indicates the decrease in the probability of being poor.

Estimates of the relative odds (odd ratios) associated with a particular category of a covariate of interest can be obtained as:

$$Prob\ (Y = 1|x) = \exp(\propto + x\beta)/[1 + exp(\propto + \beta x)] = \Lambda\ (\acute{x}\beta) \qquad (3)$$

Where $\Lambda\ (.)$ indicates the logistic cumulative distribution function

As equation (2) is non-linear and standard OLS technique cannot be applied, Maximum likelihood estimation has been employed in order to calculate the coefficients for each independent variable. To interpret the effect on independent variables on the probability of being poor, marginal effects of explanatory variables on dependent variable are also calculated. These marginal effects can be derived as probability derivatives which represent the instantaneous rate of change in dependent variable due to per unit change in independent variable of interest.
The marginal effects are given as:

$$\frac{\partial\ E\ [\ y\ |\ x]}{\partial x} = \Lambda\ (\acute{x}\beta)\ [1 - \Lambda\ (\acute{x}\beta)]\beta \qquad (4)$$

3.3.1 Instrumental Variable Approach

Basic model employed for analytical purpose is

$$Poor = a0 + a1X + a2Improvement\ in\ living\ standard + e \qquad (5)$$

Where
Poor =1 (if household falls below the poverty line)
= 0 (if household does not fall below poverty line)

X = Economic, social and demographic characteristics of households along with age and gender of household head.

Improvement in living standard means that whether the said light engineering unit is contributing to improve the living standard of its employees or not and *e* is the error term.

Out of the above mentioned determinants, the improvement in living standard has an endogenous relationship with poverty status. Direct estimation would lead to biased estimate of impact of washing machine sector on the poverty status of its employees. Two approaches can be used to deal with this problem (instrumental variable approach and simultaneous equation approach). While in the present study IV approach has been applied.

This approach involves those variables that are highly correlated with improvement in living standard but as compared to with poverty status. A binomial Logit model is employed to determine the impact of a set of explanatory variables on improvement in living standard due to working in the Light Engineering Unit.

$$Impl^{28} = b_1 + b_2 Z + e \qquad (6)$$

where
Z = Instrumental variable and it comprises of satisfaction with the job, income dependency on Light Engineering Sector, no. of years in the present job, income differential of earlier and present job, improvement in level of skill with the present job and change in consumption pattern [29].
Impl = 0 (if improvement in living standard is negative)
= 1 (if improvement in living standard is positive)

The fitted values of *impl*, after the estimation of equation (6) will be

28 Improvement in living standard due to working in the Washing machines producing Unit.
29 Consumption pattern involves asset accumulation comprising of total household assets and productive assets.

incorporated in poverty equation (2) to find out the probability of being poor.

The impact of a particular washing machines producing unit on the improvement in the living standard of a worker can be quantified by considering different factors like satisfaction level, income dependency, working experience along with improvement in skill and change in consumption pattern. The computed values of all these explanatory variables will then be incorporated in the eq. (5) to get the impact of SMEs on poverty reduction.

4. Estimation Results

The FGT indices are being employed to measure the nature, extent and severity of poverty in the observed sample. The calculated results are being discussed in the table 4. According to Headcount Index, 40.68 percent of employees working in Washing machines producing units fall below poverty line. Poverty Gap index is being employed to measure the degree to which individuals lie below the poverty line as a percentage of the poverty line is estimated to be 0.158 in the present case. Whereas, poverty severity Index of 0.056 is being measured by averaging the squares of the poverty gaps with respect to the poverty line.

As the present study is considerably based on the primary data set collected though a survey of Washing machines producing units of Gujranwala district. A maximum likelihood Logit regression model is being employed to analyze the determinants affecting poverty status of the employees of surveyed units.

The estimated results of instrumental equation (4) yields results presented in Table (4). According to the results satisfaction with the present job has a positive impact on the improvement in the living standard. As a unit change in an satisfaction level increases the odds of improvement in the living standard by 4.358 units (the probability of improvement in living standard over the probability of not any improvement in living standard), holding all other independent variables constant. Income dependency on the Light engineering unit has a significant and negative impact on the improvement in living standard. An increase in the income dependency by

one unit leads to decrease the living standard by 0.647 units. Number of years in the present job implies a positive and significant impact on the living standard of an employee working in the light engineering unit. Income differential between present and past job exerts a positive influence on the living standard of an employee working in the Light Engineering Unit as 1 unit increase in the income differential leads to enhance the odds of living standard by 2.408 units. Improvement in the level of skill of the employee employs a significant and positive impact on improvement in the living standard of an employee working in a Washing machine producing Unit in Gujranwala District.

The imputed values of *impl* (improvement in living standard) are then incorporated in the eq. (5) and the estimated results regarding probability of being poor are obtained.

In case of estimated results regarding Gujranwala District, the factors of household size and persons per room are found to be significantly and positively correlated with the probability of being poor. While skill level of the employee, gender of household head, average household educational points, physical assets, agricultural income housing ownership, availability of medical facilities, nature of housing structure, sources of drinking water, nature of sanitation system used, availability of sui gas, gross primary school enrollment rate, satisfaction regarding present job along with participation rate are found to be negatively and significantly associated with the probability of being poor. The variables of age and education of household head, child and old age dependency ratios, female male ratio of members along with workers and availability of electricity are proved to be insignificantly influencing the probability of being poor with correct signs representing their impact on the poverty status of households.

The skill level of the employee is found to be significant at 99 percent confidence level implying a negative impact on the probability of being poor. The coefficients involved in the logistic regression are also presented in terms of odds ratios and marginal effects. The odds ratios explain the impact of a unit change in an independent variable on the odds

of being poor (the probability of being poor over the probability of being non-poor), holding all other independent variables constant. Involvement in the skilled category of employees decreases the probability of being poor as a unit change in skill status from unskilled or semi-skilled to skilled level decreases the odds of being poor by 0.095 units. An individual, who is involved in the skilled category of workers, has expected chances of being poor which is 0.377 less than someone who is unskilled or semi-skilled. In the case of skill level of employee, the marginal effect will show the impact of being skilled on the probability of semi-skilled or unskilled, keeping the rest of the skilled labor characteristics the same as those of semi-skilled or unskilled labor.

Variables like age and education of household head are found to be insignificant in the present analysis. The gender of the household head is found to be significant at 90 percent confidence level implying a negative impact on the probability of being poor if the household head is a male.

Household size being the major demographic factor is significant at the 99 percent confidence level and exhibits a positive influence on the probability of being poor. The estimated result is being supported by the literature [30] which suggests that higher household size is positively associated with poverty augmenting factors. It is generally hypothesized that more educated, healthy and adult individuals in a household adds positively to the income level of household and reduces the chances of poverty, if members of household are not educated and adult, they increases the chances of poverty .Therefore a large household size increases the chances of being poor.

Child and old age dependency ratios are found to be insignificant in the present analysis.

Education and training are the most important investments in human capital. Education plays a vital role in acceleration of economic growth which in turn reduces poverty. In the present study, the variable of average educational codes is being constructed based on the sum of the

30 See for example (Reyes, 2002),Cheema (2005), (Gebremedhin, 2006), Arif and Bilquees (2007), (Chaudhary et.al., 2009) etc.

points [31] of a given household divided by the household size of that household. The estimated results suggest that education has the significant inverse relationship with the probability of being poor, implying that the higher education of household members are more likely to be associated with greater incomes and thus, having lesser chances to fall below poverty line [32]. It means that higher level of education in a household lowers the probability of being poor. Similarly, gross primary school enrollment rate is an important indicator of educational attainment in a country like Pakistan and is significantly proved to lessen the poverty chances of a household if the number of children registered in primary schools is high.

Female-male ratio of members as well as of workers of a household is found to be insignificant in the present context.

Overall participation rate is found to be significant in the analytical process at 99 percent confidence level. The possession of physical assets (like motor cycle, television, refrigerator, property etc.) is significantly and inversely related to the probability of being poor. Ownership of a housing unit reduces the chances of a household to fall below the poverty line[33]. Agriculture as an additional source of income reduces the chances of being poor in present analysis. The factor of housing ownership is found to be negatively associated with the probability of being poor. The type of housing structure in terms of nature of material used, different housing services and utilities are considered as important determinants of poverty both in rural and urban areas[34]. Variable of nature of housing structure is estimated as a significant variable in the analytical process employing a negative impact on the probability of being poor if a household is living in a kacha (mud) house. Access to medical facilities also diminishes the chances of being poor.

31 0 points to a household member having no education, 5 points for up to secondary level and 10 points for up to college/university education.

32 See Nasir (2001), Cheema (2005), Arif and Bilquees (2007).

33 See Arif and Bilquees (2007)

34 See Jamal (2007).

Access to basic amenities is considered as the major factor distinguishing poor from non-poor. That's why variables like access to electricity and type of fuel used for cooking purposes are also included in the present profile of poverty. Results suggest the access to electricity is found to be insignificant in the present analysis and use of Sui gas as a medium of cooking fuel diminishes the chance of being poor as access to these basic amenities helps in improving the living standard and thus the productivity of a household.

The factor of persons per room is proved to be significant at 95 percent of confidence level, suggesting that an increase in congestion in residential place intensifies the chances of being poor. Differences in the sources of drinking water give vital clues about the fact that poor have limited access to the safe drinking water. Deprived access to drinking water supply and proper sanitation system consecutively increases the chances of worse health condition of poor as compared to non-poor. The theory has been supported by the empirical results as the variable of nature of drinking water is significant at 90 percent confidence level and it reduces the chances of being poor of a household if they have access to piped and safe drinking water supply.

The impact of light Engineering sector on the poverty reduction can be captured by the variable of *impl* which is calculated with the help of eq (4), and the imputed values are the incorporated in the basic Logit Model. Estimated value of *impl* is found to be significant at 99 percent confidence level implying a negative impact on the probability of being poor. According to the estimated results, a one unit change in the variable of improvement in living standard leads to change in the odds of being poor (the probability of being poor over the probability of being non-poor) by 6.14 units, holding all other independent variables constant. . Variable of improvement in living standard decreases the probability of being poor as a unit change in satisfaction regarding job decreases the odds of being poor by 0.152 units. Employees expressing positive satisfaction level towards their present job have expected chances of being poor which is 0.038 less than someone who is having less satisfaction regarding his present job status.

Thus, adding positively to the argument that SMEs are really

contributing in enhancing the living standard of its employees and eventually reducing poverty.

The present analysis has been undertaken by utilizing 517 observations relating to Washing machines producing sector of Gujranwala. The likelihood ratio chi-square of 1697.916 with a p-value of 0.0001 tells that the estimated model as a whole fits significantly better than the empty model. The -2 log likelihood (220.141) has been employed to compare the fit of this model with Model 0. The Pseudo R-squared is considered as improvement from null model to fitted model. The R^2 is the Cox and Snell pseudo R square value which is found to be 0.076 in this case. The Pseudo R^2 represents the degree to which the parameters of the model improve the prediction of the null model. Smaller value of Pseudo R^2 represents the improvement in the fitted model.

5. Conclusion

Poverty alleviation policies have been given due considerations to eradicate poverty at all levels in Pakistan along with reasonable economic growth rate in different time periods. Poverty reduction strategy was launched by the Government of Pakistan in 2001 in response to the rising trend in poverty during 1990s. Different policies and projects undertaken by the Government regarding poverty alleviation resulted in declining the extent and severity of poverty in some areas but not in all the regions of Pakistan. It may be due to lack of micro level policies as compared to the application of macro level projects. Mega projects to eradicate poverty may result in some immediate and positive outcomes but low level projects deals with the gross root poverty and result in long term changes in the poverty structure of masses.

Development of SMEs can be considered as such a policy measure that deals with the poverty at its roots and produces results that are long lasting in its nature. It not only provides employment opportunities to the poor people but also make them productive component of the economy through informal training system, as SMEs contribute 30 percent to GDP and their share in export earnings is about 25 percent.

The present study can be considered as an attempt to understand the role of SMEs in poverty reduction. In the present study, it is attempted to analyze the different factors affecting poverty status of the employees of a particular sector using Logit Model. The main findings of this empirical analysis are described as:

Household size and persons per room in a household are found to be strongly associated with poverty and the presence of these variables increases the probability of being poor.

Skill level of the employee, gender of household head, average household educational points, physical assets, agricultural income housing ownership, availability of medical facilities, nature of housing structure, sources of drinking water, nature of sanitation system used, availability of sui gas, gross primary school enrollment rate, satisfaction regarding present job along with participation rate are found to be negatively and significantly associated with the probability of being poor.

According to the empirical results, contribution of SMEs towards poverty reduction as a dummy variable (IMPLS) is significant at 1 percent level implying a negative impact on the probability of being poor. Thus, adding positively to the argument that SMEs is this case is really contributing to enhance the living standard of its employees.

Emphasis should be given to the issues of increasing employment opportunities through establishment of small and medium enterprises, health facilities, construction of physical economic infrastructure and implementing new labor policies to improve the living standard of the above stated 80% of non-agricultural labor force working in SMEs.

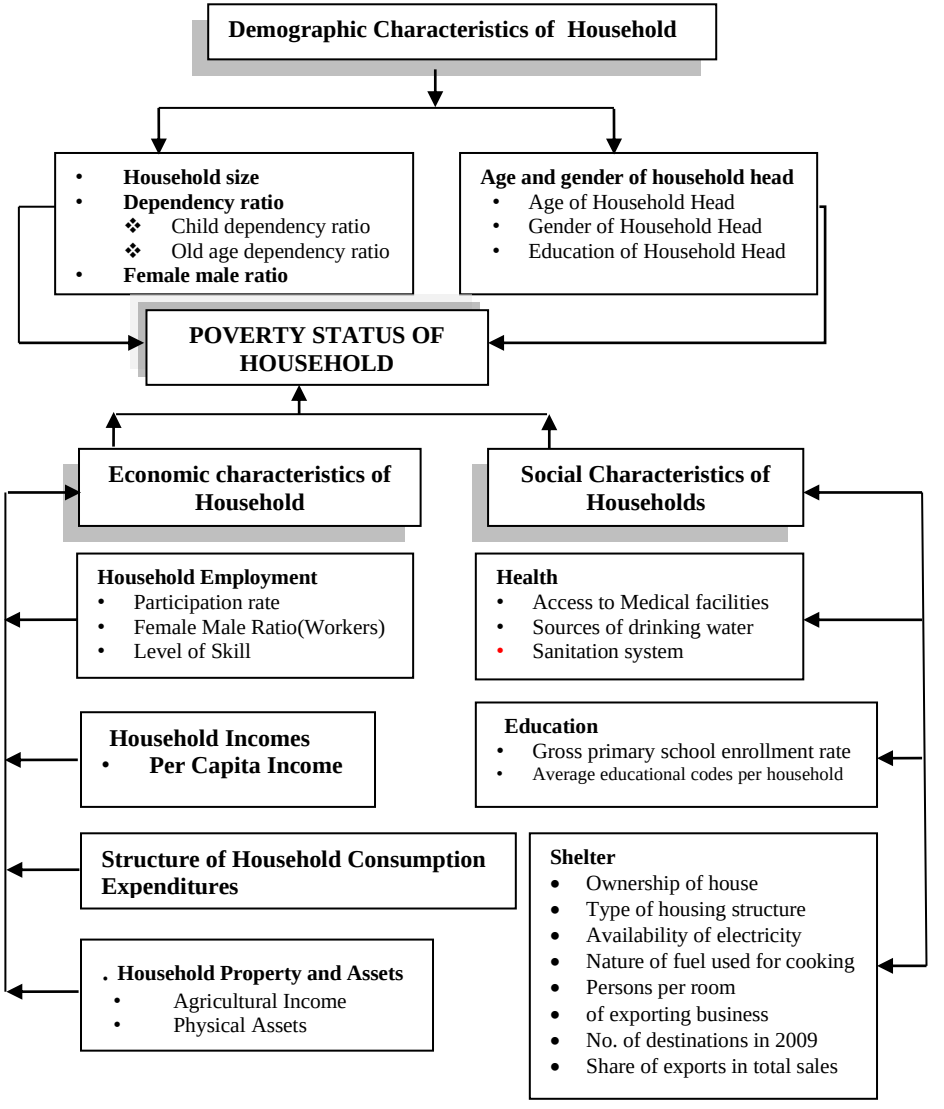
Government should focus on the development of training centers that could provide basic training to the employees of the workforce of these small units. Financial assistance along with access to global markets can exert positive impact on the development of these industrial units and thus on the poverty reduction.

Government should give attention to basic infrastructure, availability of facilities like electricity, Sui gas, safe drinking water and good governance

besides some other socio-economic and demographic variables to alleviate poverty.

Annexure

Fig: 1 Research Model: Poverty Profile of Household



Source: Author (2011)

Table 1: List of the Variables Used For Logistic Estimation of Poverty Determinants

Variables	Variables Description
Dependent Variable	
POV	0= if the household is poor, 1 =Non poor
Explanatory Variables	
AGEH	Age of Household Head (years)
EDUH	Education of Household Head (0= Illiterate, 1= Literate)
SEXH	Sex of Household Head (1=male, 2=female)
HSIZE	Household Size
FMRM	Female male ratio (Members)
FMRW	Female male ratio (Workers)
PARR	Participation Rate
EDUC	Average Educational codes per household member
HOWN	Ownership of Housing Unit (0=not own, 1=own)
HSTR	Structure of Housing unit (0=Kacha,1=packa)
PHYAS	Physical assets (0=no physical assets, 1=has physical assets)
MEDFC	Access to medical facilities (0=no access, 1=has access)
PER/R	Persons per room
WAT	Drinking water facility (1=piped drinking water, 2=through hand 0=otherwise)
ELEC	Access to electricity (0=no access,1=has access)
CFUEL	Nature of fuel used for cooking (1=sui gas/wood, 0=otherwise)
GPENR	Gross primary school enrollment rate
IMPLS	Improvement in the living standard due to present job
SKILL	Level of Skill of the respondent (1=unskilled, 2=semi-skilled, 3= skilled)

Table 2: List of the Variables Used for Binomial Logistic Estimation of Improvement in Living Standard due to present job

Variables	Variables Description
Dependent Variable	
IMPL	(0= improvement in living standard is negative,1= improvement in living standard is positive)
Explanatory Variables	
SATS	Satisfaction with the present job (0=not satisfied,1=satisfied)
IDEP	Income dependency on Light Engineering Sector (percentage
YEARS	No. of years in the present job
YDIFF	Income differential of earlier and present job (Percentage Change)
IMPLS	Improvement in level of skill with the present job (Yes=1,No= 0)
CONSP	Change in consumption pattern (Improvement=1,not improved=0)

Table 3: Poverty Indices Based on Calculated Poverty Line

District	Headcount Index $P_0 = {}^{N}P/_{N} \times 100$	Poverty Gap $P_1 = \frac{1}{N}\sum_{i=1}^{N}\frac{G_i}{z}$	Poverty Severity $P_2 = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{G_i}{z}\right)^2$
Washing Machines	40.68	0.158	0.056

Source: Calculated from the SME survey by author, 2010

Table 4: Results of the Instrument Variable Equation

PREDICTORS	COEFFICIENT	ODD RATIOS
SATS	1.472**	4.358
IDEP	-0.436*	0.647
YEARS	1.256**	3.511
YDIFF	0.879*	2.408
IMPLS	1.492**	4.45
CONSP	0.734*	2.08
CONSTANT	-4.81	-
Log likelihood=-763.45		Pseudo R^2= 0.232
No. of observations=517		
LR Chi^2 (6)=136.33		
Prob.>chi^2=0.000		

*** indicates that coefficients are significant at 1 percent level

**indicates that coefficients are significant at 5 percent level

* indicates that coefficients are significant at 10 percent level

Table 5: Estimated results of Logit model

Gujranwala	B	Odd ratios	Marginal effects
Skill	-2.352***	0.095	-0.377
HHH age	0.013	1.013	0.006
HHH edu	-0.056	0.946	-0.011
HHH gender	-1.069*	0.343	-0.043
HH size	1.518***	4.563	0.265
Child depratio	35.445	2.47+e15	0.109
Old depratio	26.150	2.27+e11	0.024
FM ratio	0.082	1.085	0.036
Average hh points	-1.829***	0.161	-0.183
Agri income	-2.774***	0.062	-0.196
Physical assets	-3.208***	0.040	-0.105
Housing ownership	-1.405***	0.245	-0.087
Medical facilities	-1.024**	0.359	-0.024
Housing structure	-0.914**	0.401	-0.028
Persons per room	0.521**	1.684	0.134
Drinking water	-0.489*	0.613	-0.059
Sanitation	-0.30**	0.970	-0.042
Electricity	-0.517	0.596	-0.021
Cooking fuel	-0.705***	0.494	-0.030
Enrollment rate	-0.044***	0.957	-0.115
Job reduced poverty	-1.885***	0.152	-0.038
Work	-0.528	0.590	-0.009
Participation rate	-2.525***	0.080	-0.038
Constant	-45.097***	-	-

Log Likelihood=	220.141
Pseudo R-Squared = 0.076	
LR Chi^2 (23)=1697.916	
No. of Observations=517	
Prob. > Chi^2=0.000	

******* Indicates that the coefficients are significant at the 1 percent level.

****** Indicates that the coefficients are significant at the 5 percent level.

***** Indicates that the coefficients are significant at the 10 percent level.

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Green Entrepreneurship: Exploring its Attitude and Working Mechanism

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Abstract: This paper presents a case study of green small and medium enterprises in the area of Lahore. These firms are related to different sectors of economy owned by male or female. In this study, the attitude of green entrepreneurs and their pattern of working and running businesses are analyzed. This study identifies owner-manager attitudes and working mechanism in SMEs to the environment. The research is based on primary data done through interview presented in the form of case studies of randomly selected seven green firms. . The results have shown that these companies are achieving financial and non-financial objectives at the same time by using their differentiated inputs, outputs, qualities and decisions from conventional companies. They are also creating awareness about this field through their work, and suggested to promote it through public and private sectors among masses.

Keywords: Environment, Forestry, Public Health, Quality of life
JEL Classification: K23, Q23, I18, I31

1. Introduction

Globally, the world is in a transitional phase of moving towards green economy. A key theme of priority for the United Nations Conference on Sustainable Development (Rio+20) is "green economy in the context of sustainable development and poverty reduction." The green economy is concept that has emerged prominently in various national and international forums. The green economy is defined as "An economy in which economic growth and environmental responsibility work together in a mutually reinforcing fashion while supporting progress on social development, simultaneously improving human well-being and social equity, and significantly reducing environmental risks and ecological scarcities. (Creech et al., 2012)"

The main goal for transition to a green economy is to ensure economic growth and investment as well as to increase environmental quality and social inclusiveness. To achieve such objective United Nations Environmental Programme (UNEP) suggests incorporating both public and private sector for investing at least 1.5 to 2 percent of global Gross

Domestic Product (GDP) per annum in greening various sectors (Creech *et al.*, 2012). Moreover, the main indicator for economic growth that is GDP needs to be adjusted to account for pollution, resource depletion, declining eco-system services and the distribution of natural capital and its consequences. This transition clearly represents great opportunity for business and those companies that understand and act on that opportunity (UNEP, 2012).

As the population of the entire world increases everyday with the addition of billions of individuals and for every newcomer, basic necessities of life are required. These necessities lead us towards more consumption and more usage of resources through which more production occurs and more degradation of natural resources is created. This circle moves on and on and never ends but natural resources are affected severely in the form of depletion and degradation. Moreover, high consumption and production decreases the quality of life by making everything artificial and contaminated that producing bad results not only on human being but also on every creature and on nature itself. These consumption and production activities are related to economy and to fulfill the increasing demand of society many small and medium sized firms come into market daily and provide goods & services. These SMEs play a vital role in enhancing economy not only from investment and profit perspective but also create job opportunities, income and reducing poverty around the world.

The central role of entrepreneurship in boosting economies has been emphasizing by all stake holders in all countries especially after the financial crisis of 2008. Governmental and non-governmental organizations have allocated considerable funds to promote businesses and help entrepreneurs. Priority has been given to environment friendly business plans and investments to support sustainable growth, environment protection, small and medium businesses and innovation. In both developed and developing countries, small and medium enterprises (SMEs) constituent vast majority of enterprises. Almost 95% of enterprises of the world are SMEs as Japan has highest number of SMEs around 99%, India has more than 80%, South Africa has 91%, EU-27 has 99.8% and Pakistan has nearly 90% SMEs in their respective countries that produce considerable contribution to their GDPs. According to

International Labor Organization (ILO), it is believed that these small enterprises contribute in poverty reduction, job employment and creating incomes in the form of developing new start-ups or expanding the existing one (Creech *et al.,* 2012).

Although these activities are beneficial for economy from one point of view as it boost it up but there is a problem to consider that such high entrepreneurial/business activities create negative impact on environmental conditions. Thus, we have to look for such entrepreneurial activities that solve the problem of environmental degradation and also boost the economy. *Green entrepreneurship* is the solution to this problem.

Green entrepreneurship is an emerging field that generally relate to nature and entrepreneurship. It focuses on long term phenomenon and sustainable growth that combines three sectors that are environment, society and economy (Giddings *et al.,* 2002). Defining green entrepreneurship is hard because it a new concept and attracted researchers since 90s. Every researcher defines it in his own way and terminology but most common terms used for green entrepreneurship are: *eco-entrepreneurship, ecoprenernurship, ecological entrepreneurship, environmental entrepreneurship, enviro-preneurship, sustainable entrepreneurship or sustainopreneurship.* Broadly, green entrepreneurship defines in either a process approach means method or technology related to green and output approach meaning producing specific types of output/products that are green/sustainable (Measuring Green Entrepreneurship, OECD, 2011).

SMEs all over the world have very little understanding of environmental management and going green. The concept of green process or products is still at the infancy stage and demands attention of the experts. Managing a green business is considered sometime as expensive or sometimes as money saving opportunity. It is the environmental consciousness that can operate in every function of daily life. The dilemma of greening the business is not a choice between profit and planet but a win-win situation (Karagulle, 2012). These SMEs create substantial employment and economic output in the form of translating innovative ideas into economic opportunities, revitalizing social and productive networks and raising

productivity. Various researches in the world has shown that countries with hi start-up rates benefit from higher economic growth.

In Pakistan, despite the mainstream of industrialization and large scale sector, the role of SMEs is also encouraging and important as it comprises of 90 percent of all enterprises in the country, provides jobs to 80 percent of non-agricultural workers, and their share in GDP is 40 percent (SMEDA, 2016). Small and medium enterprises face financial and other resource challenges as compared to large sale firms but still its growth rate is worth noticing. These SMEs require positive and favorable policies for its up-gradation. There is no single hard and fast definition of SMEs in Pakistan which can be implied by different firms. According to SME policy 2005, small and medium enterprises can be defined either in the form of "employment size" or "asset" (excluding land and building). Different sets of standards for separate SMEs are defined by government authority (SMEDA, 2005). Small and medium enterprises are diverse in nature in terms of production, size, employment, resource availability, management structure, growth and so on. SMEs operate in different sectors at different levels and both in urban and rural areas. Small firms are more diverse and operate in more heterogeneous sectors of economy of Pakistan, they are found in every industry whether they are registered or not. On the whole, small enterprises play a key role in development of society as these provides jobs, and improve indicators of economic growth (Saleem, 2012)

As Pakistan faces many challenges including unemployment, poverty, energy crises, financial crises, there are also increasing threats of water pollution, air pollution, resource depletion, increasing solid waste, and contaminated & artificial food. Most of the environmental pollutants and depletion are because of conventional production processes and traditional output that produce negative effects not only on environment but humans are also affected by emitting carbon emissions, fumes, harmful non-degradable wastes, contaminated water and artificial food. Thus, there is a dire need to cope these challenges by introducing green businesses because it provides such products, processes, and services that reduce environmental impact or improve natural resources as well as create livelihoods (Karagülle, 2012). Green business can be large or small,

owned by male or female of any age. Green businesses are often local businesses, meaning it either source or supply goods or services within local community (Chapple, 2008).

This paper presents a case study of green small and medium enterprises in the area of Lahore. These firms are related to different sectors of economy owned by male or female. In this study, the attitude of green entrepreneurs and their pattern of working and running businesses are analyzed.

2. Literature Review

Petts (1998) investigated the link between personal attitudes of individuals (management and non-management) with the actual potential and requirements among the SMEs that translate their behavior in response to corporate environment. The aim of the research is to understand employees' attitudes and environmental compliance in adopting environmental concerns. The researcher depicted that individuals are concerned about the environment by showing their willingness and understanding to enhance the quality of life. Age factor is also important as younger people showed less concern regarding environment while older showed high concerns. Findings also show that small companies are taking proactive steps regarding environment concerns and revealed characteristics as training, empowerment, positive attitudes & beliefs, and organizational structures that boost the organizational learning.

Noci and Verganti (1999) examined that eco-efficiency and green issues are the drivers to change the structure and culture of business sector as consumption increases and natural resources are scarce so there is a need to move towards green businesses. Green business requires strategic change and innovation in product line as well as it is a challenge for R&D practices. Moving towards green business is easy for larger corporations because they have financial, technological and human resources but for small firms this process is complex. The authors focused on the product innovation in SMEs and analyzed its performance by reviewing four case studies and showed that SMEs require a new perception of a product life-cycle and all its related processes.

Hillary (2003) has explored the environmental impact and performance of SMEs in Europe by studying two types of data that are pan-EU EMAS

survey and review study. The aim of this study was to investigate the implementation of environmental management system EMS standards like ISO 14001 and voluntary self-regulation i.e. eco-management and audit scheme EMAS among SMEs of EU member countries. These EMAS & ISO are the means that provide enterprises a facility for adopting environmental practices and enhance their performance. Both are applicable to small as well as medium-sized enterprises and contribute to sustainable development.

Paredo and Chrisman (2006) warned the society that scarcity of natural resources, overpopulation and over utilization leads to environmental degradation and chronic poverty and in this scenario community needs to understand its local culture and issues. To do something for the common good community based enterprise (CBE) evolved as an entrepreneurial activity to reduce the effects of poverty and increase sustainability. CBE arises in the environment of macroeconomics stress and disequilibrium or far equilibrium from previous one. It is based on collective and complementary efforts of individuals to start it and requires social capital which is easy for community to get. CBE proved as a prospective strategy for sustainability because it connects all the elements of community like social, legal, political, environmental and cultural.

Choi and Gray (2008) examined the business practices of socially responsible entrepreneurs by investigating the key non-conventional policies and decisions they have employed in building successful triple bottom-line companies. Socially responsible companies are not only the non-profit companies with no perception of making money but profitability is also their motive to run. Social responsible entrepreneurs achieve financial and non-financial objectives at the same time by using their qualities and decisions that are different from conventional companies. Social responsible companies have a purpose behind enterprise to serve for social and environmental values.

Allen and Malin (2009) have depicted that environmental concerned entrepreneurs are becoming the need of society as the population and globalization increase every day. The over utilization of finite natural resources cause the environmental degradation and damaged quality of

life. Green entrepreneurs have different values, motivations, mission, belief and practices that contribute to sustainability. Unconventional theories that included high integrity, social justice and sustainable product & process are the basis of green entrepreneurship.

Rasi *et al.,* (2010) have explored the environmental initiatives implementation in small and medium enterprises of Malaysia. The authors divided the environmental initiatives into two kinds, one is reactive strategy that focuses on controlling the pollution after its occurrence and the second is proactive strategy that focuses to change the processes or products to prevent pollution. SMEs are adopting environmental practices mostly at the management level while the environmental system could not be converted into practices because these SMEs pay more attention to process-based changes and ignoring product-based changes. So, these SMEs have more potential to develop proactive strategies in-spite of slow achievement of sustainability.

Moorthy *et al.,* (2012) have developed the study to find out the key drivers for Malaysian small and medium enterprises (SMEs) to go green and analyzed the behavior of owner-manager of SME through the Theory of Planned Behavior (TPB). The research showed five main drivers; economic benefits, financial initiatives, stakeholder demand, legislation, and the last resources, motivation and knowledge which foster the environmental consciousness. All these drivers have significant relation with the adoption of green practices.

Nulkar (2014) has investigated the importance of environmental strategies and sustainability by being inquisitive about the benefits of traditional firms to planet and humans. Over the years, the sustainability and environmental consciousness have increased due to various researches and the proliferation of availability of information. The author analyzed few small and medium enterprises of India through in-depth interviews and found that the potential contribution of Indian SMEs to greening the businesses and paying attention to sustainability is not being realized yet. Thus, various green strategies and their benefits have been suggested to SMEs as traditional green practices must take a step towards adopting green strategies because green practices are short term goals and green strategies are long term efforts that need to be implemented.

Yacob *et al.*, (2013) have examined the small and medium enterprises SMEs owner/managers attitude towards awareness of environmental impact, issues and adoption of green practices. There is a positive relation between owner/managers perception, attitude towards environmental impact, efforts to reduce environmental issues and adopting green practices. SMEs have huge impact on economy and environment because it constituent almost 90 percent of global enterprises and with increasing awareness about greening the firms and sustainability, the burden of adopting environment friendly business practices lie on SMEs

Khan (2014) intended to recognize all the possible ways in which the initiation or growth of an entrepreneurs business can get influenced by social and economic factors in the industrial hub Chennai which is one of the prime states of Tamil Nadu, India. This research is conducted through a survey carried via well-structured questioners. Factors like government policies, technology at hand, education, gender, work experience, social and economic culture etc. have vital impact on the small and medium scale enterprises, which further effect and contribute in the economic development of the country. It is shown that all these factors had immense impact on the performance and growth of these small scale enterprises.

Cekanavicius *et al.*, (2014) have developed the study to clarify a definition of green business and to know the differences between countries regarding business penetration by green ideas, the authors established case study of the firms of Ireland and Lithuania. The findings of this study revealed that both countries differ significantly in terms of economic, cultural and political developments. The companies of Lithuania are more concerned about the costs of greening the business while the Irish companies are more concerned in reaping the benefits of going green.

3. Data and Methodology

Case study method is one of the most popular methods of qualitative research and it covers the phenomenon in depth rather than breadth. Case study consists of detailed and complete investigation of the unit of

analysis. It gives more emphasizes on the careful and intensive analysis of the particular topic. This approach is based on the assumption that unit of consideration or the case is of typical of a cases of certain type therefore by thorough study of that case generalization would be drawn that will be applicable to other cases of the same type. Moreover, case study method also deals with the processes and their interrelationships. It is mostly used for new topics or behaviors that need exploration (Mark *et al.,* 2009; Kumar, 2005 and Kotari, 1990)

For this study multiple cases with holistic unit of analysis is preferable so, that the findings of one green firm as a whole can be generalized for other green firms. This present study explores the questions of how, what and why and it discovers the green business field from the scratch so there is no existing theory we measure. There are different sources of data like interviews, observation method, archival records, documents, participant observation and physical artifacts that can be used in any combination according to the need of research and circumstances. The choice of data collection technique also depends on the constraints of time, finances and access.

As the data of this research work is primary and need exploration of the green firms and their working behavior so interviewer`s technique is used. The interviews can provide extensive information that will help in making conclusion. These interviews are open-ended so that participants can talk more comfortably without thinking the time constraints and can provide details and unlimited answers. Moreover these interviews provide respondents` goals and beliefs and spontaneity. (Christine, 2001).

4. Results & Analysis

The case studies evidenced here are drawn from primary data in the form of interview with owners-managers of companies. The first case described is that of SGH, an organic food company, the second case is Herbal Essensuals an organic cosmetic organization, third is Green Earth Recycling – manufacturer and retailer, fourth is Green Technologies Pakistan an environmental consultancy and product developer, fifth is Solar Shop in a trading sector providing solar technology, sixth case is Olive Pakistan – manufacturer and the last seventh case is Pak Green

Enviro Engineering an environmental consultancy.

Table 1: Summary of Business Sampled

Business	Sector	No. of employees	Age of business (years)
SGH	Food	10-15	2
Herbal Essensuals	Cosmetic	5-8	3
Green Earth Recycling	Manufacturer, Retailer	150	22
Green Technologies Pakistan	Consultant	15	6
Solar Shop	Trader	15-20	5
Olive Pakistan	Manufacturer	150-170	9
Pak Green Enviro Engineering, Ltd.	Consultant	12	7

4.1.1 SGH

SGH is an organic food company that provides nutritional edible products and health services in the field of nutritional support, medical nutritional therapy, fitness advice, nutrition career counseling, and nutrition guidance. It was founded in 2014 in the form of sole proprietorship by a female entrepreneur Saba Gul Hassan, an MPhil graduate in the discipline of Food sciences and Human Nutrition. This organization is green and is determined to provide healthy and chemical free home grown food stuffs.

Being a nutritionist and dietitian, her inspiration to start the business was to change the life style of people by developing healthy food habits in them and she really wanted to enter into this field by her own choice.

Initially, she was using her own home grown gluten free home products and herbal teas so she thought she should avail herself this opportunity to make it as a business to provide gluten free and organic products to the people to convert them from unhealthy life style to a healthy and pure life style. For this she stared growing vegetable like tomato for organic tomato sauce, various herbs for teas and medicine and other products like Quinoa i.e. a good substitute for rice, cereals etc. at her own farm without using chemical, pesticides and fertilizer. Now, she is not only making above mentioned products but also educating people regarding healthy life style through consultation, conducting workshops and different awareness programs. Thus, she is benefiting the society through her work but actually is not aware from environmental point of view.

As she is a sole proprietor of this project and began this business in a small way by using her own land and investment as resources with the support of her family. She is still self-sufficient and uses her own money for further expansion. She faced no hurdles in starting this venture and translates her idea of educating the masses about organic food into reality. Initially, she considered this field is costly and profit is important for establishing this business but when as firm grew and products are produced in the bulk then per- unit cost is decreased and profit is raised. She further expressed that these organic food stuffs are bit expensive because of their pure raw material so the balance between cost and benefit remains maintained.

Her mindset behind starting this venture was to generate income by providing healthy organic food to people but as she was asked about green business and environmental concerns of her business then she told she has “no idea about green businesses”. She is basically health conscious and not environmental conscious but she has bit knowledge that chemicals, inorganic fertilizers etc. could harm the food and environment both. When she was acquired about environmental problems and measures to mitigate them then she told “she does not have much awareness about environmental aspects of her business”.

SGH is an organization that believes in simple working style. Its workforce consists of 10-15 workers who are assigned different duties from sowing seeds and herbs to final products to end users; also they

advertised the products through social media and indigenous organic markets. The owner uses her own land for raw material and processes them at home for making products like sauces, muffins etc. with proper hygiene. After preparation of the products, packaging is done to supply. SGH utilizes its raw material sustainably as per requirement of the customers in order to not to waste them and manages the wastage (if any) on routinely basis. SGH is making Eco-Friendly products that in return preserve the land quality and fertility also by not using any chemicals or fertilizers to obtain the raw materials but the process to make the products which is only sauce and muffins is simple because most of their products are dry and ready to use like tea herbs or leaves, quinoa that cannot put negative impacts on the environment.
At the end, she is happy and satisfied whatever she is doing and in future she wants to further expand this business.

4.1.2 Herbal Essensuals

Herbal Essensuals is an organic handmade cosmetic organization which gives chemical free customized beauty products. It is a sole proprietorship started in 2013 by a female entrepreneur Faiza Shabbir who is a mother of two kids and a housewife. She holds multiple degrees in different subjects but on the top she studied eastern medicine and is an herbalist. While studying eastern medicine she decided to enter in this field and provides pure beauty stuffs to everyone. She described her passion for this field as "it's not about ideas, it's about making ideas happen." She is very compassionate about this business and her passion is shown in her products which are prepared with great effort and love. She also creates awareness regarding cosmetic and natural products through different programs in different universities and local organic markets. She is aware of going green and knows the impacts of business on environment and society.

In this case, the background of entrepreneur favored her to enter in this field. She chose this line by observing a daily routine problem of fake and chemical oriented beauty products that exploit the customers especially women by creating false promises. She observed health issues by the usage of inorganic products and decided to introduce her own line of

organic homemade cosmetic items. She described her products as "chemical free, without preservatives pure products that are prepared from homegrown herbs." The line of products includes handmade herbal soaps, herbal oils, shampoo, herbal scrubs, face wash, creams, masks, serum, lip balms, etc. it also includes herbal medicines, seeds, herbs and powders. The entrepreneur also pays special attention to her customers and prepares customized products on their demand. She believes that every individual is unique and needs unique products. Moreover, she told that she wanted to have a detailed conversation with her clients for quality assurance. She knows about sustainability and green business and said that "our company not only provides chemical free beauty products but also uses our own homegrown herbs that are free from any artificial fertilizers and other chemicals." She further added that "being a naturopath, my intention is to save the land and environment from any harmful material." Thus, in terms of green business she is benefitting the society and environment through her knowledge about nature and products.

When the questions of investment and other resources are raised then the owner answered that she started this project from a small scale with her own investment and by using her own kitchen garden for various herbal raw materials. She still using the same resources and create funds from family members. Initially, she faced many hurdles like not recognizing her idea of this business, male dominant business trend and unavailability of several ingredients; she said that "I had to scourge the streets to find the right ingredients. In this male dominated market, I was almost never taken seriously which was very frustrating." According to her this field of organic cosmetics is costly and demands more effort, awareness, trained people and required skills. The profit in such businesses is of secondary concern; the "most prioritized thing is the idea and passion to implement that idea into reality" she said. After the initial struggle of establishing this idea, profit comes automatically in return.

As the owner is naturopath, a graduate of Tib and also an environmental conscious person, her mindset or vision to start this business is to provide the safe, healthy and natural products to people in order to preserve the environment and also to generate a source of income. She also expressed that "we should not forget the environment, it's an important entity as environmental problems are rising day by day at the global level such as

climate change, global warming, air pollution, etc. that also affects the agriculture and in return food quality, so everyone should play his/her on role to make the environment save". By considering these factors, she wanted to contribute to lessen the environmental burden by introducing such products that are safe and natural and also environmental friendly.

As an Herbal Essensuals is a sole form of venture started from a very small scale at home with the simplest working mechanism by using GMO free no imported herbs or seeds are used. The entrepreneur with her team of more than five personals prepare products by growing their own herbal raw materials and in some cases rely on local organic materials chosen by the owner herself. All products are made at home with proper care and hygiene followed by growing own herbs, cutting, crushing, mixing, molding and then packaging into paper boxes or bags. Every product has different kind of manufacturing process but the ingredients for all are natural and homemade. Herbal Essensuals utilizes its raw material sustainably according to the requirement of customers and manages to reuse the leftover in new product as the owner told that "as such there is no waste material produced from their processes." She suggested to save the environment and side by side availing the opportunity of doing such eco-friendly businesses. She is satisfied and happy with her business and wants to expand it in future.

4.1.3 Green Earth Recycling

Green Earth Recycling (GER) Company is an environmental conscious organization dealing with the manufacturing different plastic products such as lumbers and sheets through recycling of various plastic scrap, plastic bags and post-consumer beverage carton packaging. It devised environment friendly, high quality and long lasting wood alternative putting together a winning combination of material and technology. The products resemble like wood with strong resistant, termite and water proof, maintenance free and easy to handle that save the cutting of trees. This company was founded in 1994 in the form of private partnership and now is running under the supervision of Zafar Bhatti, a chief executive officer of the company. Mr. Bhatti is a retired army officer who has interests in innovation, alternative energy, technology and recycling. He

started this firm to provide alternatives of wood in the era of forest depletion resources through recycling plastic. Through these plastic sheets and green lumbers all kind of furniture can be made and in construction purpose they are also helpful. It provides safer and toxic free alternative for hardboard. This firm is aware about sustainability and performing in the line green businesses successfully but it produces less as compared to its potential because of no or little awareness regarding their products and its usage among masses. The manager of the company defined about its capacity as "our production is low against our installed capacity because people do not aware about our product."

The rationale or inspiration behind starting this business is clear that is to conserve trees up-to its maximum limit and provide its alternative material. The entrepreneur paid high attention in adopting green practices to save the environment as well so; he started production through recycling tetra packs and other plastic wastage and grabbed this opportunity for generating income. He really wanted to start this business and entered into this field in 1993 with proper planning. Initially, the company is started with little investment and was producing few product but with the passage of time, Green Earth Recycling (GER) started to produce wide range of products from green plastic wood including benches, chairs, tables, play areas, gates, landscape timbers, decks for houses, parking stops, bus stops counters, different cabins, dust bins, sheets, chip board, irrigation pipes etc. All these products are made from recycled plastic which look like wood and have better qualities like cheap, light weight, water proof, termite and insecticide free, slip resistant, splinter proof, maintenance free, durable and long lasting but on the top these are environment friendly. It also prepares customized products on the demands of customers. The owner says that he was "immensely disappointed" when officials discouraged him to produce irrigation pipes although its cost are also less than the traditional pipes.

The funding and resources for production at the time of starting this project were collected from personal savings of partners and from family and friends but once the business is established and products are produced in the bulk form, the problem of investment is reduced and now the "system is maintained." GER faced serious issues in the starting years as the entrepreneur described "Lack of awareness regarding environmental friendly products, limited capital and untrained workers are the main

hindrances in establishment of business and still people are unaware." The owner of the company also said that "profit is important for every business but for me my aim is more important."

As this firm is producing environment friendly products and the entrepreneur himself is environmental conscious person so, this firm is truly achieving sustainability by conserving natural resources and providing its alternatives. GER is utilizing the opportunity to not only attain monetary benefits but also resolved environmental problems of solid waste in the urban areas and depleting forests resources of the country. In this way, this company benefiting the society in the form providing alternative eco-friendly products and on the other hand is conserving the environment by utilizing the waste material through recycling and reusing.

Green Earth Recycling carries out the recycling of plastic materials and post-consumer beverage carton packaging such as generated by Tetra Pak. They collect the scrap plastic and post-consumer beverages carton packaging from the suppliers and then recycle them in their plants to produce plastic wood and chipboard (sheet) respectively. The owner also told that "Green Earth Recycling is probably the only industry of its kind and size in the country with 150 employees that recycles used tetra-packs to produce above mentioned plastic products and his focus is to take care of the increasing problem of solid waste and diminishing trees." The company is playing its role to save the environment through its recycling operation that in return also lessen the burden in landfill sites for dumping the waste as owner expressed that "their recycled products are environment and health-friendly and can be used to manufacture a wide range of products". Their plastic wood product is not only cheaper than wood, as the owner told, but is also long lasting and does not require maintenance. It also takes care of environmental degradation and pressure on our depleting forests.

Moreover, the owner of the company is innovative person and has intentions to bring innovations in methods, technologies and products such as he imported machinery from Germany with improved and efficient technology.

Being a SME firm, the behavior of owner is collaborative and less rigid which means there is more room for creativity and innovation. There is cohesive work environment in the firm where all employees have to be in regular collaboration with one another to translate this idea into reality. Also, both the entrepreneur and his employees are aware of green business concept and sustainability so, they concerned both aspects i.e. environment as well as profit.

4.1.4 Green Technologies Pakistan -- Go Green

Green technologies Pakistan is a leading project developer & environmental consultancy started with the purpose to provide experts' advice to investors, clean-tech firms, construction companies, factories, and other clients on environmental issues arising due to their business activities. It has five main areas in which green technologies team provides its services to clients including renewable energy, environment and waste management, climate change and sustainability, agriculture and lastly in the field of water followed by sub-categories of each area. This firm was established in 2010 but before it was formerly known as Green Technology Environmental Corporation which was founded in 1997 in the form of partnership but now it is running as independent organization by a male entrepreneur Dr. Ata ul Haq who belongs to the field of environment. He is a foreign degree holder in this specialized field and is an internationally certified waste manager.

As the green technologies Pakistan is an environmental consultancy so its rationale is matched with the background of entrepreneur Dr. Ata Ul Haq who is masters in environmental policy and a waste manager. The idea behind starting this venture was to utilize his knowledge and creating awareness among investors and businessmen about environmental impacts. Thus, he availed himself this opportunity and started as a business. Although this field was new in 1997 but in 2010 it was fully established and trend of environmental consultancies increased with the further emphasis by the government to check the impacts of businesses on environment and society. Initially, this consultancy started with limited funds and had limited services with few clients but as time passes it explored more areas of opportunity and now is providing services in

almost every area related to environment. The areas of expertise of the firm ranges from various renewable energy projects like biomass, biodiesel, wind, solar and thermal, waste to energy, provides in-house expert advices on waste management projects involving planning, pre-feasibility, feasibility, different local governmental agreements and approvals, environmental impact assessment (EIA), designing, tender documentation, supply of equipment, installation, construction management, commissioning, testing, star-ups, improvement in waste collection, and operational activities. It also focuses on climate change and sustainability and analyzes its impacts on environment and society. It provides cost effective and innovative solutions to these problems and tries to reduce the negative emissions of businesses. Green Technologies Pakistan also pays special attention to agricultural and water related issues. Through these services this company is providing benefits to environment and society and also educates people regarding environment led problems as the manager of this firm described that "our consultancy is not only check the environmental impacts of any business but also aware them to mitigate those problems." It tries to resolve various issues of noise, air and water pollution. This problem solving is the basic rationale to start this consultancy.

The source of resources for this business is obtained from clients in the form of their fees in advance while in the starting of this consultancy, partners had invested from their personal savings and loans. Like other businesses this consultancy also faced serious issues of limited funds and lack of technology. The manger also told that with the help of teamwork and collaboration these problems have been solved.

Green technologies Pakistan is not a product based company it is a service provider to other companies. This consultancy is aware of going green and creates awareness and resolves environmental issues generating from different business activities like construction of any type, chemical factories, and industries. It checks the environmental impacts of these activities on land, soil, air, water and society. Its owner as well as employees are environmental conscious and know how to cope up with such issues. All over the behavior and mindset of this organization and its people are pro-green. This is a true green firm in terms that it gives special

focus on environmental issues and suggested to pay attention on environmental degradation, depletion of natural resources, its distribution and availability in the era of rising population. It not only sorts out environmental issues but also attains monetary benefits which are necessary for smooth running of business mentioned by its concerned manager. Moreover, the respondent showed positive attitude in adopting green business practices and suggested that this field should be promoted among people by government and other institutions as green SMEs are important for society to reduce poverty and unemployment. It can also contribute in the economy of country.

This firm is not any kind of processing industry that follows any process or methodology to operate its activities. It is an environmental consultancy which provides services in different fields of environment. The firm is basically providing solution for the environmental issues like solid waste management, water and agricultural issues, greenhouse gas emissions, sanitation issues, etc. The organizational structure is cohesive and collaborative in nature as the manager described that our company does not believe in command and control style of working, we believe in teamwork." Different duties are assigned according to the ability of person like in making an environmental assessment study, different team members with specialized knowledge of different fields as geologist, hydrologist, engineers, environmentalists, zoologist, botanist, statisticians are required to work collaboratively on single project. Employees are also environmentally aware and give their inputs while keeping the main cause of this firm in their minds. The manager also told while replying that size of firm matters for greening the business but small companies can also adopt green business practices if they are committed to their vision. He said that "in order to run the green business employer and employees both should be pro-environmental and innovative in their approach so that they can achieve competitive advantage over other conventional business." Green technologies Pakistan is an environmental conscious SME and implements the idea of going green through its services.

4.1.5 Solar shop

The company solar shop was established in 2008 as a partnership among three members but at present is totally running under the supervision of

Mr. Nadeem Jaffer who belongs to IT & telecom sector. Firstly, it dedicated to the development of new energy products designing, production and installation of solutions all over the Pakistan operated through Lahore head office but after 2011 Solar Shop is acting as trader/distributer. It imports products from different countries and supply it to its selected customers with the service of installing the complete setup. The main purpose of this company is to provide alternative renewable energy solutions in the form of solar panels, batteries, emergency chargers for phones, notebook, MP3/MP4, Digital camera and any other small devices, solar street Lights and solar advertising lamp, Solar tube wells, etc. The industry of solar products is in its initial stage now and people are not much aware of this as Mr. Jaffer said that "here people are not aware of this industry, and this field is already in crisis before its emergence."

Solar Shop Company is started haphazardly as Mr. Jaffer was in telecom sector and worked there for 9 years but not satisfied from his job and then started with his friend who was dealing already in solar industry. So his previous boss told him about a company named J.K.S that had intention to enter into the field of Solar Panel and wanted a consultancy services. Then he and his friend agreed to provide consultancy to that company regarding this field by importing solar panels and batteries from Germany and America and also producing some of its parts locally. For this he contacted and visited different big companies, institutes, architects companies to market this technology but they were not much interested. Initially he and his friend faced many difficulties to run this kind of business where there is no market or people are price conscious because every green business or technology is costly, also having no environmental conscious mindsets and due to unavailability of trained labor. But gradually they developed some of their clientage to provide them services to install the solar panel/system that involves mostly doctors, schools and organizations or companies that work on day and night basis.

They are actually not environmental conscious. They have chosen this field as a new opportunity to solve the problem of load shedding by providing alternative energy. But with the passage of time, their morale got down as they saw the response of people. Afterwards they shifted their

business from manufacturing to trading/distributing solar setups. The owner told that “people are price conscious; they are not quality conscious so they are not willing to invest in this field.”

All the three partners were doing jobs before starting this firm so they used their own savings as an investment. Moreover, one partner belongs to abroad who invested more than other two members, while the rest of the two provided their expertise and contacts. After the establishment of business and selection of clients, the resources for running it becomes smooth. According to the owner the field of green business is not costly but it seems to be because “you have to pay the all cost at one time.” The profit margin in this field is relatively more than conventional business because the product is different than traditional products and profits can be achieved through product differentiation as mentioned by the entrepreneur. Mr. Jaffer told that “we do not sell to anyone we selected our customers and our profit margin is moderate although its pace is slow but we provide quality products.” furthermore, he said that “the field of solar energy is good for Pakistan but here people are not willing to spend money.”

The owner of Solar Shop acknowledges the concept of green business and said that “green business is like to save the world and is good in terms that it reduces carbon footprints to zero level.” He showed positive attitude towards its adoption and mentioned that his company is also saving the environment through providing alternative energy technologies. He said “through solar technology the problem of electricity shortage can be solved.” He further suggested adopting the field of green businesses but he also showed concerns regarding customers as they are not aware or even they do not want to spend money in this area. Solar shop is providing eco-friendly solutions to customers but at personal level both the employers and employees are not environmental conscious, they are just doing business like any other business because it was started haphazardly.

Solar Shop is a trading company which imports solar setups or equipment from foreign brands and provides to its customers. Their total numbers of employees are 15-20 i.e. based on external and internal both who perform their duties for installation and maintenance of panels/set ups. The company only deals with those clients who are well aware with the solar

technology and really want to install it not to those clients who are price conscious and are not actually interested with this technology. At last, the company is implementing the idea of going green by providing Eco-friendly products and they want to expand their current business in future also.

4.1.6 Olive Pakistan

Olive Pakistan is a manufacturing company providing organic olive based products to health conscious consumers. It was founded in 2007 in the form independent organization by a male entrepreneur Sheikh Azam Nazir who is business oriented professional having multiple degrees in the field of social sciences and is working for multiple organizations as a consultant and expert. Olive Pakistan is a firm which promotes the production of olives in Pakistan and gives pure & nutritious items without any chemical for better healthy lifestyle. It provides '*khaalis*' organic olive based products made by organically grown olives Its main purpose is to provide an opportunity of income generation to local farmers through purchasing olives and every part from them.

The owner came into this field with the intention of providing healthy food to people and not by concerning environmental aspect although he is aware of organic food and environmentally concern businesses. He works with different agro-based& herbal related forums. He started this firm to promote olive growth in Pakistan and to improve the lives of Pakistani farmers. He found this field as an new opportunity of achieving financial and non-financial goals at the same time because Pakistan meets its demand of olives mostly by importing it rather than producing it so, he found this area as a good business idea to develop as he said "olive Pakistan is a product development firm & marketing with a niche to achieve its motives."

Initially, the owner invested his own money in this enterprise as he was working in different organizations so he used his savings to boost it up but later on as the market for its products grow the issue of capital reduced over time. He found this field costly as the production of olives in Pakistan is not up to its potential and also it produce in far flung areas like

northern areas of Pakistan so transportation cost is high. The entrepreneur also told about the difficulties which he faced in starting this business as "less availability of olives, lack of latest equipment and lack of government support are the basic hurdles here in this field." About profit margins in this business he mentioned that profit margin is not much high, "it is based on consumer demand."

The owner knows the concept of green businesses and is aware of sustainability. He is providing environment friendly products to people but he did not choose this field by keeping intention of environment in his mind. He is not environmental conscious but a health conscious. He came after seeing that this field is new which can develop niche market. The owner showed positive attitude in adopting green business and suggested to promote this field in Pakistan as "here people are not aware about green business so public and private sector both should promote this field to provide a new business opportunity to people."

Olive Pakistan believes in working under the rule of collaboration and cooperation among all members. The owner also described that "every employee is important for the company". It produces various products like olive oil, olive based jams, olive pickles and sweets with the help of labor force of 200 people. This company prepares products on small scale based on consumers demand. It buys only organic olives from selected farmers relating to every part of country mostly from northern areas of Pakistan and southern Punjab, and then processes them in its own plant, then manufactures into various items and then packaged. The company sells their product to only health conscious consumers through special organic markets and exhibitions. Thus, the company implements the idea of going green through providing healthy (*khaalis)* organic products.

4.1.7 Pak Green Enviro-Engineering

The company Pak Green Enviro-Engineering Pvt. Ltd. was established in 2009 as a sole proprietorship running under the supervision of Mr. Hafeez Nasir who is a PhD. degree holder in Environmental management. It is an environmental consultancy dealing in three divisions i.e. Pak Green Enviro-Engineering, Pak Green Laboratories and Pak Green Techno-Legal services followed by further sub-divisions of each. The purpose of

this venture is to provide reliable environmental services, attain reliance in environmental consultancy and replace foreign consultants.

The owner started this business with proper intention and planning as he was doing job in a renowned company at then but working in a marketing sector which is not relevant to his field and qualification so he with his three friends with same educational background began to work on this idea of providing consultancy to different firms about their environmental impacts. He left the job and dedicated himself to this new line. Initially, he and his team members began to operate business activities from home but later on his friends left him and but he still stuck to this idea and continue his business with proper office. He then registered his company and hired few employees and now running his consultancy firm with up to 15 workers, each assigned with relevant duties. The rationale behind this start-up was to provide environmental services and to generate income and make autonomy because he feels that "in job you have to bind yourself with one kind of work, while in business you are free to make any change." He grabbed the opportunity of giving expert advice to investors as a business which relates to his qualification and choice of sector.

At the starting, Mr. Nasir and his friends invested themselves in the company but when his friends left him than he alone arranged resources for its operations. According to him this field of consultancy does not require much finance to start because it is based on project and client demand. But later on with the evolution of market and trend of this business, finance is required for installing with latest equipment and technology. Once the firm gets established resources are generated from clients in the form of their fees in advance while the profit margin in such business also depends on projects. The owner told that "profit is important for any business but for environmental concern businesses vision matters more" because after the establishment of business profits get increased automatically.

The owner and his all employees are environmental conscious and fully aware about its impacts. This enterprise is a service provider to other companies and checks the impacts of them on society and environment. This consultancy implements the idea of going green by providing its

services like Environmental approvals, Environmental Impact Assessment (EIA), Initial Environmental Examination (IEE), analytical monitoring, wastewater treatment systems installation, air emission control devices and legal services. The company also deals in import and manufacturing of different industrial and laboratory equipment. The behavior and mindset of this organization and its people are pro-environment as its owner said "Pak Green is a team that works for sustainable development keeping in view development not at the cost of the environment." In addition, the entrepreneur also acknowledges the adoption of green business practices. He further shoed desirability in the promotion and awareness of such field among people as "green firms are important not just for society but also for ecological conditions."

Pak Green is an environmental consultancy having collaborative and cohesive working style where each task is dependent on all experts of every department ranging from environmentalists, geologist, hydrologist, engineers, zoologist, botanist, statisticians to marketing and accounts department. It operates in a productive environment, with the full support of skilled and professional expertise, laboratory and library facilities from Department of Environmental Sciences, Lahore College for Women University, Lahore, Industrial Linkage & Sustainable Development Studies, GCU Lahore and Chemical Engineering Department, UET Lahore. All employees work as a team and know the importance of greening the business. The respondent answered on the question of size of firm that "firm size does not matter in starting green businesses; it is the vision and idea that matters." He is satisfied with his current business and sad that "our company not only achieves environmental benefits but also gains financial goals" and in future he wants to expand its company by creating more department and services.

4.2 Analysis

Seeking commonalities in all case studies gives us insight into knowing the objectives of this study through interviewing entrepreneurs of SMEs. The findings of this study emerge as all entrepreneurs except the owner of Solar Shop have specific intention to enter into this specialized field having clear purpose to benefit the society and save the environment in any form. These entrepreneurs are environmentally aware and have

relevant qualification to start related businesses. Out of seven startups` owners only two that are SGH`s owner and Olive Pakistan`s owner did not intentionally start their businesses by keeping environmental aspect in their minds. SGH`s owner does not know about green business and even does not know that her business falls under this category. But the rest of them are fully aware about greening the business and its importance. They somehow are doing green businesses in the form of providing eco-friendly products and environment related services either by using pro-environment raw materials or processes having least environment impacts of it, which depict their behaviors regarding implementing the idea of going green. All studied entrepreneurs have used their personal savings for establishing business and expressed that green businesses are not much expensive and small companies can also adopt this field by staying focus on its vision only, these findings are contrary to Lee (2009) who portrayed in his study about expensiveness of green practices for small companies. Moreover, about profit margins these entrepreneurs described that profits are needed to run the business smoothly but the most important achievement is the fulfillment of one`s vision as the owner of Hebal Essensuals said "most prioritized thing is the idea and passion to implement that idea into reality." About working mechanism these entrepreneurs do not properly differentiate between conventional and green businesses , they only expressed that in green businesses, owner's objective/vision is the primary goal to start the business while the other things are of secondary concerns. One common point of view described by all enterprises about style of working is to maintain collaboration & cooperation among all members and departments of company and work as a team. In addition to that, both employer and employees should know about environmental aspects of their business activity so that a productive outcome in the form of green business could emerge. SMEs are freer to make changes and innovation as compared to large scale businesses because of rigid working environment there as mentioned by these owners. They also highlighted that owners can also achieve cost effectiveness and competitiveness by producing differentiated products than others. These companies are only interested in selling their products to quality and environmental conscious consumers and they have selected their target customers or clients to whom they provide services. Through their businesses they do not only achieve financial motives but also

contribute in improving the quality of people` lives by educating them. They show satisfaction with their current startups and want to expand it in future. Thus, the findings here are matched to Petts (1998) that owners are concerned about the environment by showing their willingness and understanding to enhance the quality of life. They all acknowledged the concept of green economy and showed positive attitude in adoption of environmental concern practices. Furthermore, they are in a strong favor to promote this field to reduce poverty and unemployment by the help of governmental and other institutions. In the end, they suggested that green entrepreneurs must be focus on their ideas of saving environment through creating new solutions to resolve the environment related issues. They must be passionate, innovative, and hardworking and on the top should act as an environmentally-responsible citizen. In Mr. Nasir words, "eco-preneurs should be goal oriented rather than profit oriented."

5. Conclusion

This study identifies owner-manager attitudes and working mechanism in SMEs to the environment. The research is based on primary data done through interview presented in the form of case studies of randomly selected seven green firms. The cases reported here are all small environmental concern start-up businesses of city Lahore which are defined through number of employees described by SMEDA. The case studies make clear that although sustainable entrepreneurship or ecopreneurship in the SME sector remains in its infancy, findings here are matched with Petts` (1998) and Choi and Gray`s (2008) that owner-managers of studied businesses are concerned about the environment and have perception behind starting enterprise to serve for social and environmental values. Generally, they are aware of green businesses and its importance in this world of scarce resources and are providing environment friendly products and services. They possessed positive attitude about adoption of green businesses practices and showed concerns regarding burden on sustainability and quality of life. The research has shown that collaboration, cooperation, teamwork, less rigidity, innovation and are the style of operation in such firms that distinguish these green enterprises from other`s. commitment to vision/ idea and awareness about going green among all members of company are the real motivators behind green businesses through which owners attain benefits. The results

have shown that these companies are achieving financial and non-financial objectives at the same time by using their differentiated inputs, outputs, qualities and decisions from conventional companies. They are also creating awareness about this field through their work, and suggested to promote it through public and private sectors among masses. Ecopreneurship or Green entrepreneurship is a complex issue to fully understand and manage. It takes many forms and emerges under different conditions, moreover this new field has limited researches and studies on it but despite its limitations, it is an increasingly important and emerging area of business especially in recent years.

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Re-Evaluation of Non-Economic Hindrances in the Economic Performance of Mena Region

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Abstract: This study attempts to relate political and structural performance with the economic growth of MENA region. This region is endowed with one of the most vital natural resources i.e. oil & gas but still it lacks in its economic progress. Recently the wave of Arab Spring also caused to the slower pace of development in this region which ultimately led to retarded economic well-being of people. Factors like the level of Stateness in these nations, market competition, extent of regional co-operation and their structural barriers are used to evaluate the impact of non-economic variables on the economic growth of these nations. Time span of the study is from 2006-2015 and results are estimated using Fully Modified Least Squares (FGLS) Technique. Findings of the Model reports that except structural barriers which are measured by constraints on the management bodies to improve governance structures, all other three variables affecting positively to the economic growth of this region. However impact of Stateness is stronger than the other two factors. On the basis of these findings it can be concluded that these nations should try to reduce their. Moreover more efforts should be made to increase the level of competition in markets and interconnectedness among neighboring nations.

Keywords: Panel Data, market competition, Structure of the government, Regional development
JEL Classification: C23, D41, H11, R58

1. Introduction

In political geography, Stateness is considered an imperative tool for economic development because of the reason it defines the sovereignty of the state in implementing rules and regulations. Stateness reflects the capacity of a nation to rule out any sort of disorder within its territory and make it possible for all citizens to approach basic needs for survival. On the other side, economic development has been the ultimate objective of every political process. GDP per capita growth has been one of the main measurements for the analysis in development studies. Different factors have been explored which can cause change in GDP per capita growth of nations. Earlier economists only believed in economic dynamics

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responsible for this change but now the trend seems getting changed and institutional and political factors are considered more imperative parameters in this regard. Institutional and political factors like stateness, regional cooperation, structural constraint, Socio economic barriers are observed more important players in changing the fate of nations. Stateness is the institutional centrality of the state. It varied in important ways among nations, and that institutions and political behavior could be understood only if the state were brought back into the center of political analysis. (Evans, 1997).

This research studies the role of such factors for the first time for MENA region. The intuition behind it is this that this region is passing through the political transformation after the Arab Spring 2011. This is the reason that there exists economic and financial uncertainty to large extent. On the other side it is believed by the analysts that this region has great potentials and very much diversified both in terms of labor resources and Hydrocarbon Resources. Moreover political geographers are considering this wave of political shift as a positive step towards increased competitiveness and building more transparent and accountable institutions. Because earlier this region has been prone to 'one dictator-one policy' issue without focusing on consensus building among all interest groups in the society and ignoring the common interests of masses. This current wave of change has at least opened up new window for investors in the long run with this confidence that institutions are turning into more democratic side as compared to earlier times. However in short run these nations are in transitionary phase and less stable as before or being expected in future. Keeping in view these both sides of the picture, this study has tried to explore the link between such political transformational factors and economic progress of this region and aiming to evaluate that how much this wave of democracy is helping these nations to make the maximum use of their potential resources in the right direction.

At present times, the important socio-economic challenges which this region is facing are high levels of unemployment[35], heightened corruption

[35] In many countries like Morocco, Egypt and Tunesia this rate has touched to the peak of 10% over the last decade.

with less transparency, commodity price volatility due to increased fuel and food imports, more dependence on state-owned enterprises and less focus on private sector. It has been observed that the major cause of this acute problem of unemployment is the market rigidities in this area. Restrictive natured system in terms of labor regulations has kept the business activities quite slow in this region and estimates suggests that to bring economic revolution in the societies these nations have to double their job capacity in the next coming ten years. This region is divided in two categories by World agencies i.e. resource-rich and resource-poor nations and the situation differs for both types of these nations. It is expected that more for resource-poor nations the effects of such transformational factors will be more negative and severe as compared to resource-rich nations. Moreover it is also anticipated that many of the resource-rich nations will be observing positive effects as well like Qatar, Kuwait, Morocco and Saudi Arabia. Hence all this diversified experience of the same event i.e. Arab Spring in the same region has become an attraction for the researchers to foresee and try to evaluate the exact impact of such democratic reforms on the economic well-being and prosperity of these nations.

2. Literature Review

Boh (1962) found regional cooperation as an imperative indicator for trade development which causes overall improvement in economic progress of nation. Intra-regional trade among the Asian Countries has promoted the intra-regional market. For expansion of intra-regional market, regional trade agreements are observed very important tool in history. Regional cooperation is needed not only to expand the trade but also for nourishing the industries. Regional cooperation has caused the development in Asian countries Cambodia and South Vietnam imposed low tariff to those countries from which they have trade agreement.

Dash (1996) observed in a case study of Indian economy from the perspective of regional agreement SAPTA that each South Asian economy reduced its tariff rate on various items just to increase the market space of each country and to enhance the political confidence among South Asian countries. Due to the excess and misuse of natural resources,

south Asian countries have to face the degradation of natural resources and economic pollution. By this regional integration, the use of natural resources has also become efficient and reduced the risk of health in people.

De Melo & Tsikata (2015) explained that at present times, regional integration is one of the way to increase influential political power in trade. This has been helpful in increasing the participation of developing nations in world markets. It is due to this ideology of 'connectivity' that now the world is observing North-South trade instead South-South. Author claimed that PTA's create a sound ground for good politics. This is the reason that now the focus is not only on commodity market integration but also on fiscal and monetary policy areas. The author concluded that political motives, distribution of gains and geography are the imperative factors playing their role in connecting regions with each other and this ultimately leads to increased size of the economy in terms of high economic growth.

Jensen (2016) and Matusik (2016) proved that competition in markets surge economic growth through improved aggregate productivity and capital accumulation. This enhanced economic growth then makes possible for new producers to enter into the markets which leads to more competition in reaction. The authors evaluated that this competition leads towards inclusivity and society gets more connected in production processes.

No such empirical study is available which is focusing on the direct relationship of structural constraints, stateness with economic growth. However few studies are present discussing the impact of structural transformation on economic growth of nations and similarly in case of impact of stateness on democracy not on economic progress. But the theories suggest that it is the state which acts as a key institutional player both in protecting or suppressing the political liberties in a society (Holmes 1995).

3. Hypotheses

On the basis of the review of past literature, this study formed four hypotheses for evaluating the impact of non-economic factors on the economic development of MENA region. These are:

H_1: There exists significant relationship between stateness and economic growth.
H_2: Regional cooperation significantly enhances economic growth.
H_3: More competition in market leads to significantly increased more economic growth.
H_4: Structural constraints restrict economic growth.

4. The Model

Pooled Ordinary Least Square (OLS) method has been used to find the relationship between desired variables, however the post estimation tests showed the presence of hetreoskadasticity and autocorrelation in the model. For hetreoskadasticity and autocorrelation, Breusch-Pegan and Wooldridge tests have been applied respectively. Nevertheless to remove these two problem, fixed effect model has been applied but still these two issues remained there along with the occurrence of contemporary cross correlation in the data. For checking cross panel correlation, Pesaran Test was being applied. These postestimations again nullified the choice of the model i.e. Fixed Effect Model and diverted towards more refined estimation technique which is being suggested by experts to deal with these three problems simultaneously. Now the proposed model in this situation is Fully Generalized Least Square (FGLS) which handles with these three problems very much sophisticatedly in its estimation procedure. STATA software is used for the estimation of models. The study is being conducted for MENA region which is characterized by many features. However the most notable defining features of MENA region are their resource availability and the size of their native population. Here in this study the segmentation has been done on the basis resources like oil and gas reserves and the time span of the data set is from 2006-15. Those nations exporting oil and gas and large number of expatriate residents are considered as Resource-Rich nation and nations

importing and small producers of these two resources are reported as Resource-Poor nations (World Bank, 2014). Hence the following model is designed for the present study:

GDP per capita growth (GDP) = f (Stateness (S), Structural Constraint (SC), Regional cooperation (RC), Market Competition (MC), Resources (R))

Model Specification:

$$GDP_{i,t} = \alpha + \beta_1 S_{i,t} + \beta_2 SC_{i,t} + \beta_3 RC_{i,t} + \beta_4 MC_{i,t} + \beta_5 Res_{i,t} + \mu_{i,t}$$

Here, α, β's, are the coefficient of the equation and μ is residual "i" and "t" represents number of cross sections (N) and time period (T).

4.1 Variable and Data Sources

This section contains information about the variables and their data sources.

Variable	Definition	Data Source
GDP per capita growth	"GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products."	World Bank (2015)
Stateness	Stateness refer that there is clarity about the nation's existence as a state with adequately established and differentiated power structures or the institutional centrality of the state. It is divided into following parts: **1.** Monopoly on the use of force **2.** State identity **3.** No interference of religious	Transformation Index of the Bertelsmann Stiftung (2015)

	dogmas **4.** Existence of basic administration structure The Scale ranges from 1-10 points. 1 showing adequately established and differentiated power structures has weak influenced on the nation's existences as a state and 10 depicting that adequately established and differentiated power structures has strong influenced on the nation's existences as a state.	
Structural constraint	Structural constraint refer that structural difficulties constrain the political leadership's governance capacity. Structural constraint limited the management performance. Due to the structural constraint, political leaderships do not find the actual result of their actions. Scale of ranking is again 1-10 where 1 point is showing low structural constraints on governance and 10 reports high structural constraint on governance.	Transformation Index of the Bertelsmann Stiftung (2015)
Regional cooperation	Regional cooperation refers that how much political leadership is willing and able to cooperate with their neighborhood countries. Political leaderships want regional cooperation to develop good relation with their neighbor countries, to cooperate with their neighbor countries in national and regional organization and to support the international and regional cooperation for the sustainable growth and development. Again the ranking of the scale is from 1-10	Transformation Index of the Bertelsmann Stiftung (2015)

	points. 1 point showing that the political leadership of that state is uncooperative with their neighbors, international and regional integration and 10 shows that the political leadership of the state has largely expended its international relation, cooperation with their neighbors and regional integration.	
Market Competition	Market competition is related to freedom of launching business, no discrimination on the basis of ownership in between private, public, local or foreign enterprises and on size of the business. The scale is covering 1-10 units, 1 referring to less market competition, showing week institutional frameworks and heavy adhoc based State based intervention. It also shows the existence of large informal sector. 10 on the other side shows small size of informal sector and large extent of market competition.	Transformation Index of the Bertelsmann Stiftung (2015)
Resources	A dummy Variable showing '1' for resource-rich nation and '0' for resource-poor nation.	World Bank (2015)

5. Results and Interpretation

In this section the results of estimated models are presented. Starting from Pooled OLS and ending up at the final model FGLS has shown the role of Stateness has been dominating in all three Models. Its effect has been seen positive and highly significant for this region showing that here power structures are clearly defined and administrative setup does not allow the interference of conflicted sources into the ruling mechanism of these nations. For other three variables, the effect has been observed

significantly positive except for structural barriers.

Table 1: Results of whole Panel

Variable	Pooled OLS	FE	FLGS
Stateness (S)	1.0187 (0.4790, 0.8960)	0.9934 (.5675, 0.154)	1.1253*** (0.0201,0.000)
Structural Barriers (SB)	-0.4198* (.8639, -0.0675)	-0.0067 (.0567, -0.730)	-0.4345*** (0.0061,0.000)
Cooperation (RC)	0.6328 (.4325,0.756)	0.6568 (.0479, 0.974)	0.6429*** (0.0007,0.000)
Market Competition (MC)	0.2875 (.1538, 0.2397)	0.0198 (.0087, 0.671)	0.3342 (0.0342, 0.000)
Resources	2.0986* (2.5123, 0.091)	2.2454* (2.4495, 0.083)	2.3634* (1.3990, 0.0931)
Controls	Yes	yes	yes
Constant	5.0563** (.9643, 0.0261)	3.0198* (.0345, 0.090)	6.3109*** (0.0078, 0.0000)
R-Square	0.52		
Post estimations			
Wooldridge test	41567.436 (0.000)		No Autocorrelation
White Test	470.37 (0.000)	Modified Wald Test 7.2e+05 (0.000)	No Heteroscadicity
Cross sectional	7.687 (0.000)		No Panel Correlation
Breusch-Pagan LM	6789.45 (0.000)	Hausman Test (56.98, 0.0000)	

*****, **, * shows level of significance at 1%, 5%, 10% respectively. controls include population, inflation, exports.**

These results confirm the hypotheses of the study that structural barriers

restrict economic growth because due to these constraints political governance in nations gets affected. Positive impact of regional cooperation on growth is also in line with theory as it opens up more opportunities for the nationals of nations to participate in economic activities. Same has been found in case of this region. Similarly market competition is showing positive effect on economic growth in these nations as well confirming that competition is healthy for better economic performance. However out of all positively affected non-economic factors, the role of State sovereignty and regional cooperation seem to be more imperative in improving the economic well-being of these nation. The variable labeled resources is also showing a positive effect for these nations concluding that the resource rich nations are having better performance as compared to resource poor.

5.1 Model Estimation for Resource-Rich Nations

Now in this section the same Model has been estimated separately for two categories of MENA region i.e. Resource-rich and Resource-poor nations. The purpose is to see the robustness of the Model estimates in both cases individually. The Equation 1 shows that signs of estimates remained same for all variables in case of Resource-Rich nations as well however the positive impact of Stateness is found stronger as compared to the negative effect of other variables. Moreover the study has tried to explore individual cross sectional and Period effects for each nation as well.

$$GDPP_{(rich)} = -15.2730 + 5.1185*S - 0.6098*SB - 2.1720*RC - 0.2368*MC + \mu t$$

R-square= 0.30 D.W= 2.35

Table 2: Results for Resource-Rich Nations

Cross sectional Fixed Effects (Resource rich nations)		Period Fixed Effects	
Algeria	-4.3712	2006	-0.6753
Bahrain	-1.9139	2007	-0.4538
Iraq	13.5837	2008	0.3129
Kuwait	-3.7093	2009	-3.6126

Libya	-4.4224	2010	-2.0442
Oman	-5.2610	2011	-6.2637
Qatar	2.2967	2012	7.5485
Saudi Arabia	7.4608	2013	3.2811
Syria	-4.6251	2014	0.9584
Turkey	-0.9502	2015	0.2732
United Arab Emirates	-6.9451		
Yemen	7.9414		

The Table shows the average impact of all these institutional factors in economic progress of nations. Except for the nations like Qatar, Saudi Arabia and Yemen, all others are showing negative effect of such factors in economic growth of these nations.

5.2 Model Estimation for Resource-Rich Nations

Here the same process has been done for Resource-Poor nations and again results are same for all variables except for Stateness. The reason is that the nations included in this panel are mostly closed economies and prone to the external influence. However the value of R-Square shows that the as compared to resource-rich nations, in resource-poor economies these factors are explaining economic growth more i.e. 52%. This indicates that if such institutional inefficiencies are removed from their economic systems then the pace of economic growth can be increased easily.

$$\mathbf{GDPP_{(poor)} = -5.47525 - 0.31209*S - 3.2476*SB - 0.3616*RC - 0.0818*MC + \mu_t}$$

R-square= 0.53, D.W= 2.81

Table 3: Results for Resource-Poor Nations

Cross sectional Fixed Effects (Resource poor nations)		Period Fixed Effects	
Lebanon	-3.1548	2006	-1.3209
Tunisia	-2.3725	2007	3.5219

Sudan	4.9007	2008	1.1392
Morocco	2.2488	2009	-0.2175
Jordan	-1.4749	2010	0.8108
Egypt	2.4694	2011	-0.1496
Iran	-2.6166	2012	-1.1919
		2013	-1.7846
		2014	-1.0396
		2015	-1.0885

From the Table 3 separate cross sectional and period effects can be realized for resource poor nations. From estimates it is clear that except for Egypt, Sudan and Morocco, for all other nations the impact of these non-economic factors is negative in their economies. This shows that these economies are suffering from poor governance structures which are becoming a constant treason of their poor performance. This can also be observed from period effects as well starting from 2006-2015

6. Conclusion and Policy recommendations

This study tried to analyze the role of non-economic factors on the economic performance of an emerging region MENA which is endowed with oil and gas reserves of the nature. But despite having these resources still these nations lack economic pace of growth. What can be the reasons behind this, it has been tried to find in the present study. Various non-economic variables have been extracted to examine their effectiveness in measuring the economic progress of these nations. Out of those the impact of Stateness which means the legitimacy of state actors in these nations has highly significant and positive effect in MENA region. Similarly the regional ties with each other in the region are also contributing positively in the economic growth of these nations. Role of market competition is also being observed positive which confirms the theories regarding the role of market structure in economics. However the impact of structural barriers is found negative and significant proving that in these economies governance is not proper and it is the outcome of their closed nature of economic structures. On the basis of these results here are few

recommendations:

- These nations should try to remove institutional constraints so that the economic forces can play freely.
- Markets should be made more competitive so that more participation could be seen in the economic spheres.
- Regional ties should be focused more because such relation building opens new market for internal local producers and gives nations recognition in region.

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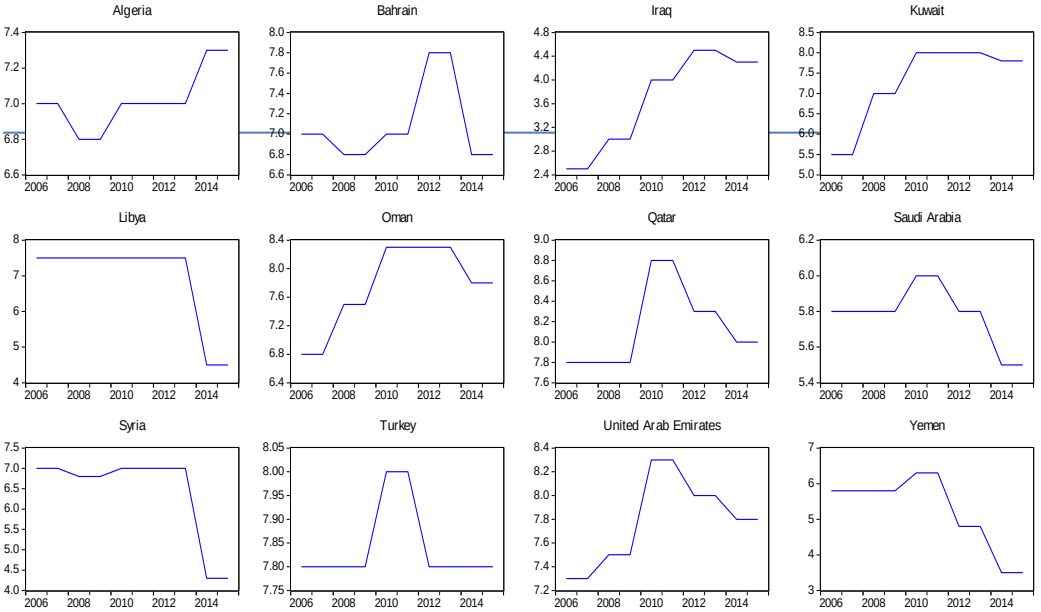
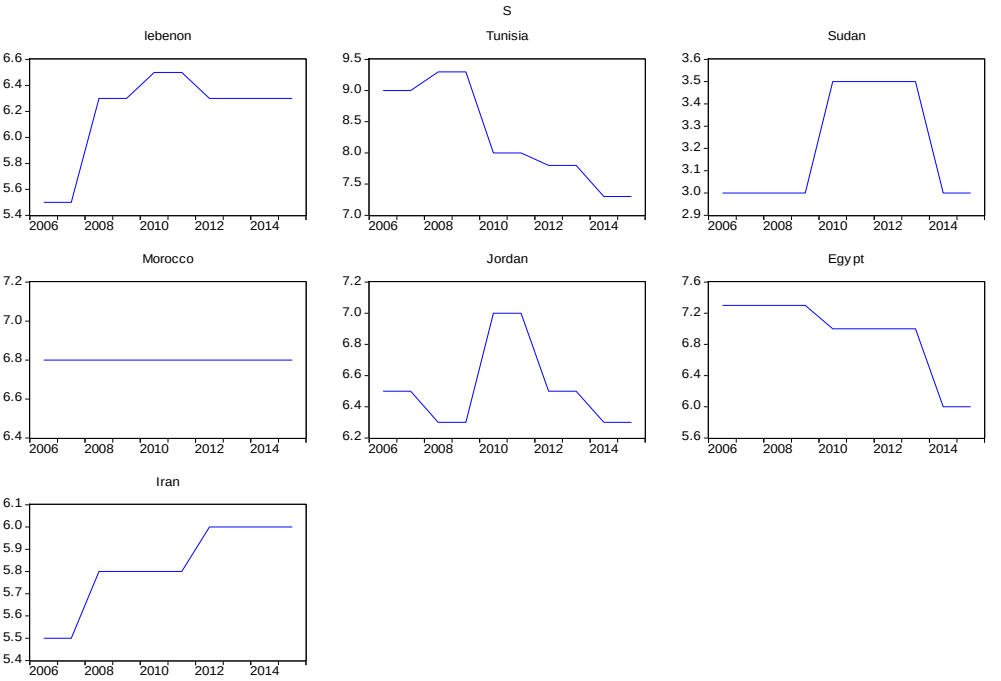
APPENDIX

Countries included in panel from MENA Region	Resource-rich	Resource-poor
Algeria	Algeria	Egypt
Bahrain	Iraq	Jordan
Egypt	Syria	Lebnon
Iran	Yemen	Tunesia
Iraq	Behrain	
Jordan	Kuwait	
Kuwait	Oman	
Libya	Qatar	
Morocco	Saudi Arabia	
Oman	United Arab Emirates	
Qatar	Libya	
Saudi Arabia	Turkey	
Sudan		
Syria		
Tunisia		
Turkey		
United Arab Emirates		
Yemen		

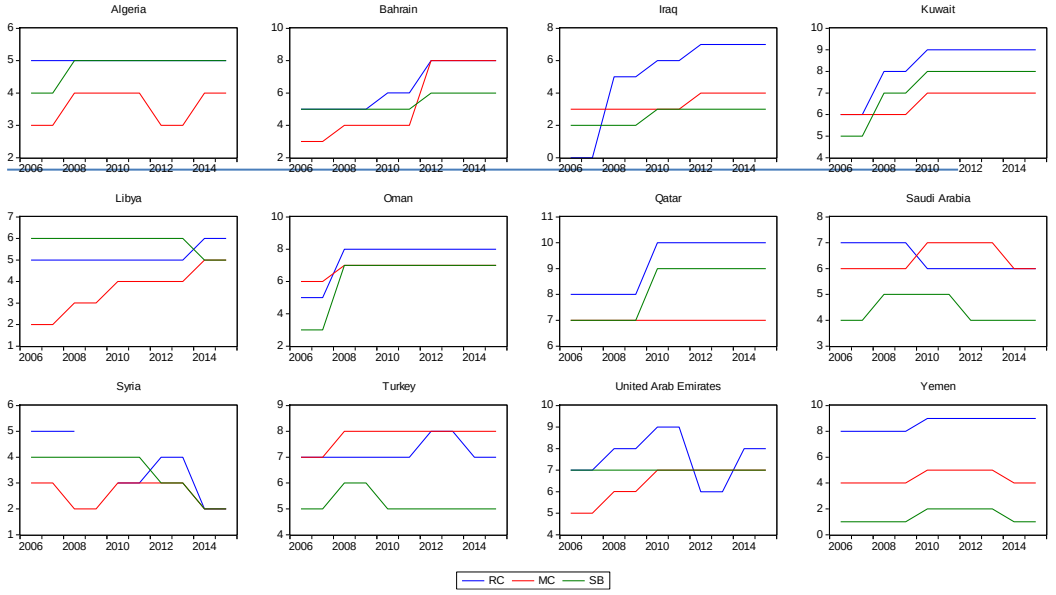
STATENESS IN RESOURCE RICH-NATIONS



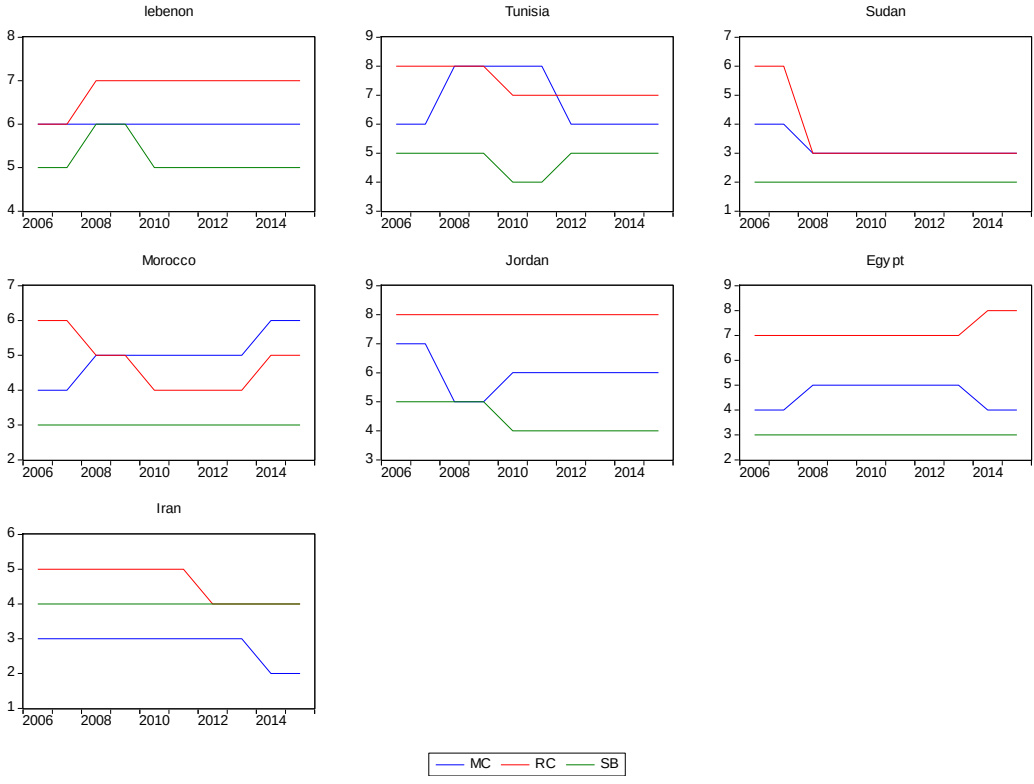
STATENESS IN RESOURCE POOR-NATIONS



RESOURCE RICH MENA NATIONS



RESOURCE POOR MENA NATIONS



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