

# THE ROLE OF ENVIRONMENTAL CONSCIOUSNESS, GREEN INTELLECTUAL CAPITAL MANAGEMENT AND COMPETITIVE ADVANTAGE ON FINANCIAL PERFORMANCE OF THE FIRMS: AN EVIDENCE FROM MANUFACTURING SECTOR OF PAKISTAN

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## ABSTRACT

*The main objective was to analyze the impact of firms' environmental consciousness and green intellectual capital impact on their competitive advantage and financial performance. Ensuing cross sectional research design, a sample of 480 respondents was gathered using convenience sampling technique by distributing survey questionnaire, compiled on the base of past literature, into manufacturing sector organizations of Pakistan. Structural equation modeling tool was applied to test postulated hypotheses. Results revealed that environmental consciousness has positive influence on green intellectual capital and financial performance but not on competitive advantage. Furthermore, green intellectual capital has impact on competitive advantage as well as on financial performance. Likewise, competitive advantage also has positive effect financial performance. This research has provided road map to manufacturing organizations that how environment friendly activities are important for firms' financial performance. Moreover, this research framework, first in its nature, was tried in the organizational settings of Pakistan.*

**Keywords:** *Environmental consciousness, green intellectual capital, competitive advantage, financial performance, Pakistan.*

## 1) INTRODUCTION

As an outcome of emergent environmental attentiveness, the sustainability of the company has been changing according to the international regulations. The importance of Environmental consciousness has been increased. The “green” issue has become universal concept. The developing country like Pakistan facing lots of environmental issues which cause pollution and other harms for society (Weiss & Mughal, 2012). Therefore, it is required for corporations to take initiatives to properly compact with the influence of environmental issues and should adopt such ways through which an organization will be able to survive in era of green politics. Most of studies conducted in this field have concentrated on supply chain management. They have given slight vision on the problem of environmental consciousness and green intellectual capital (Huang & Kung, 2011). Therefore, main objective of this research is to fill gap in previous research by investigating the impact of environmental consciousness on competitive advantage and financial performance through intervening role of green intellectual capital. The environmental consciousness as stockholder view and stakeholder view in this research has based on the study of Singhapakdi et al. (1996). “Perceived role of ethics and social responsibility (PRESOR)” this theory has first been evolved by Singhapakdi et al. (1996) and gave the idea of stockholder and stakeholder view, the objective of his research was to make organizations be familiar with conception of moral principles, determination of his work was to aware management that how organization can be socially responsible and focus on ethics to protect the interest of society. In this work, environmental consciousness refers to the entire view of any individual and organization regarding environmental safety, environmental controlling, and green politics (Ahmed et al., 1998). Intangible assets are key elements of companies to gain competitive advantage in knowledge based economy. Hence most of studies have done on the concept of intellectual capital, but idea of green intellectual capital has recently given by Chen (2008a) and defines Green intellectual capital as knowledge, skills, abilities, expertise and understanding regarding environmental protection. Chen (2008a) categorized GIC into green human, green relational and green structural capital. Kenneth W. Green Jr et al. (2012) used ROI, sales growth, profitability and profit growth to measure financial performance. This research carry out to fill the gap in existing literature and proposed research question as: Does green intellectual capital perform a part to aware the

manufacturing companies regarding environmental issues to gain competitive advantage and to improve financial position of the company?

## **2) LITERATURE REVIEW**

The prior studies in the areas Environmental Consciousness, Green Intellectual Capital Management, Competitive Advantage and Financial Performance are reviewed in order to develop the framework and hypotheses the study.

### **2.1) Environmental Consciousness**

In the most recent era, awareness about social and environmental issues has been increasing in society, therefore society has been provoking firms too, to look at responsibilities which they have taken on. As a consequence, the number of growing firms have been making their plans consistent and realizing their social and environmental responsibilities. Carroll (1991) concluded that CSR can be distributed into different level of duties because it is a pyramid of all responsibilities. And these responsibilities are ranked with respect to their importance to fulfill the economic need of the society. When firms will realize their economic responsibilities ultimately move to satisfy social and environmental problems of citizens. Schwartz & Carroll (2003) introduced three areas of CSR to properly explain the CSR, which contained economic, ethical and legal responsibilities. And all responsibilities have equal importance. The strategies of the firms are formulated on the basis of social and environmental activities. Buysse & Verbeke (2003) assessed that an organization which is connected with large number of stakeholders should implement proactively environmental policies, in support to it, Buysse & Verbeke (2003) identified significant positive relation between stakeholders and environmental strategies. Huang & Kung (2011) investigated the impact of environmental consciousness and green intellectual capital on competitive advantage of manufacturing firms. This study recommended that if an organization is highly environmental consciousness, employees and management have enough skills, abilities, knowledge, creativity and attitude to properly deals with environmental issues, have proper information about market networks plus have strong relations with outsiders of the company, it means the infrastructure of the company is supportive to protect the environment, ultimately that company will achieve the edge over other manufacturing companies. Chang (2011) determined that company which has concentrated on environmental ethics will gain competitive advantage because company has improved its

processes and products which can lower environmental issues. Chen (2011) concluded that if an organization focused to provide environmental culture and properly deal with environmental issues that organization will gained competitive advantage. Further, trust and loyalty of consumer can be attained by considering environmental concerns and by implementation of environmental strategies, customer will be loyal when company produced environment friendly products (Vaishnavi et al., 2014). Besides, Yang et al. (2011) argued that if organizations are managing its production system in efficient way, implementing strategies regarding environmental concerns, and also have superior environmental performance, then these organizations, in due course, will achieve higher financial returns and goodwill in the market. Marchi, Maria, & Micelli (2013) said that as competition has been increasing day by day and to survive in competitive environment the organization should improve its environmental policies and strategies to enhance environmental and financial performance of the company, this study concluded that environmental management has been really important to gain competitive advantage and to enhance financial performance of the organization. Based on these understandings, current study postulated that:

*H1: Environmental consciousness is positively associated with financial performance.*

## **2.2) Green Intellectual Capital**

Intangible assets of the company are known as intellectual capital, which are consists of skills, aptitudes, competencies, involvement, understanding and knowledge of the employees which leads to attainment of its goals. It also include technologies, culture, consumer associations, communication system and brand of company, which contributes toward value addition of firm (Chen, 2008a; Dzikowski, 2000; Stewart, 1997). According to Segelod (1998), firms which are based on knowledge are gaining competitive edge through immaterial resources and intellectual capital. Intellectual capital contributes majorly to the success of company (Muhammad & Ismail, 2009). Ahangar (2011) also investigated the positive influence of intellectual capital on financial performance. Hence, in past years, most of the studies have been conducted on the concept of the intellectual capital. But the idea of the green intellectual capital has been introduced recently by Chen (2008a) due to increasing trend of green politics. In this regard, green management has become the most important part of managerial activities and key component of the firms' strategies. Green intellectual capital refers to the knowledge,

skills, abilities, expertise understanding, information and competencies regarding environmental protection and environmental issues (Chen, 2008a). Chen (2008a) categorized the green intellectual capital into green human capital, green structural capital and green relational intellectual capital. Bontis (1999) defined the human capital as knowledge, skills, expertise and abilities expressed by employees. If they are ingenious, inventive, have learning and accepting change capability plus if they are motivated then long term performance of company will be enhanced. Chen (2008a) gave new idea of green human capital and said that it refers to the knowledge, capabilities, expertise, understanding, intelligence, vision, obligation and skills of employees regarding environmental safety and to properly deal with environmental issues. "Structural capital comprising of firm's system, mechanism, procedure, processes, culture, philosophy (Bontis, 1999). Consequently, Chen (2008a) gave new idea of structural capital as green structural capital and define that it refers to the culture of organization, competencies, patents, trademark, exclusive rights, corporate image and managerial capabilities regarding environmental safety or green innovation. Bontis (1999) described the relational capital as gaining of information by the company about market channels, customers and supplier relationships, and governmental or industry networks". Chen (2008a) brought novelty in concept of relational capital through green relational capital and said association of firm with its stakeholders, market channels and external bodies regarding environmental safety. Huang & Kung (2011) investigated the impact of environmental consciousness and green intellectual capital on competitive advantage of manufacturing firms and this study recommended that if an organization is highly environmental consciousness, employees and management have enough skills, abilities, knowledge, creativity and attitude to properly deals with environmental issues, have proper information about market networks and have strong relations with outsiders of the company, the infrastructure of the company is supportive to protect the environment, that company will achieve the edge over other manufacturing companies. If environmental problems are aggressively recognized, companies like to expand business based on the interests of shareholders and stakeholders, and expand the more aggressive environmental strategies, companies will put large number of resources to green intellectual capital. Based on these understandings, current study postulated that:

**H2.** *Environmental consciousness is positively associated with green intellectual capital.*

### **2.3) Competitive Advantage**

Competitive advantage refers to the qualities of the firm by which an organization used its expertise, competences and resources efficiently which cannot be imitated by its competitors (Barney, 1991). Porter & Millar (1985) argued, success or failure of firm is decided by competitive advantage, this study indicated that competitive advantage is helpful for firms to achieve its goals. A firm can gain competitive advantage when more economic paybacks are attained by firm than its opponents. The suggestion about competitive advantage has initiated from the “value created for the customers.”, if a firm has focused on productivity, novelty and cultural consistency then competitive advantage can be attained. The study of Hall (1992), drawn a clear difference among the intellectual capital such as resources and intellectual capital as abilities, and indicates that competitive advantage can be attained through substantial resources. Barney (1991) recommended that if firms want to attain persistent competitive advantage then should formulate those plans which cannot be replicated by its opponents. Hafeez et al. (2002) argued that profitability can't maintain only through competitive advantage because environment is continuously changing and CA can be reduces with the passage of time, to maintain profitability continuous innovation and improvement in processes has required, also said that resources, skills and effectiveness are sources of CA and all of these are interconnected. Organizational performance will be enhanced through competitive advantage (Li et al., 2006). Organization which engaged in corporate social performance attracted more competent future job candidates that is major source of competitive advantage which competitors could not imitate (Greening & Turban, 2000). Chiou et al. (2011) conducted their research on green innovation and environmental performance and concluded that if an organization join in with their supplier who provide in return the material which is environment friendly and helpful to gain ecological objectives and competitive advantage as well, the incorporation with supplier leads to innovative products, processes and innovative managerial activities which enhance the environmental performance of the company, when the environmental performance of the company improved that organization will ultimately gain competitive advantage because the company has superior products, superior processes and superior management. Huang & Kung (2011) analyzed the impact of environmental consciousness on competitive advantage through the intervening role of green intellectual capital and concluded that there was positive association between environmental consciousness and competitive

advantage. Taken together, companies that can improve social responsibility and environmental responsibility, creating a good reputation to improve environmental performance, which leads to an overall improvement of competitive advantage. Based on these understandings, current study postulated that:

*H3. Environmental consciousness is positively associated with competitive advantage.*

According to Chen & Chang (2011) if an organization spends more on environmental related activities and green intangible assets that leads to green competitive advantage for the companies because this organization has been showing commitment to the environmental issues and investing in green intellectual capital of the company. The study of Hall (1992), draw a clear difference among the intellectual capital such as resources and intellectual capital such as abilities, and indicates that competitive advantage can be attained through substantial resources. Green intellectual capital is groundbreaking, due to it companies will be able to differentiate themselves from their competitors. These unique characteristics are the basis on which companies are establishing its maintainable competitive advantage. To build green intellectual capital, can become an obstacle for competitors, can safeguard competitive advantage by securing the market. Based on these understandings, current study postulated that:

*H4. Green intellectual capital is positively associated with competitive advantage.*

## **2.4) Financial Performance**

Organizational performance states that how good organization perform to attain its market and financial objectives (Yamin et al., 1999) and investigates the association between competitive advantage and financial performance Li, Ragu-Nathan, Ragu-Nathan, & Subba Rao (2006) studied the connection between competitive advantage and organizational performance, and concluded that if supply chain management strategies implemented in better way the firm will gain competitive advantage and ultimately it leads to improve its market and financial performance. The study of Jennings & Beaver (1997) indicated that most of the small firms can't perform well and fails to achieve competitive advantage because of inefficient management. Zahra (1996) suggested that when an organization adopt advanced

technology with the changing environment it will contribute to improve the financial performance of the company. Saeidi et al. (2015) analyzed the relationship between CSR and financial performance and this research indicated that if organization is involved in CSR through legal, economic and discretionary actions for the society it will leads the company to gain competitive advantage and ultimately that company will have better financial performance in the long run. Organizational performance will be enhanced through competitive advantage, competitive advantage has direct and constructive influence on organizational performance (Li, Ragu-Nathan, Ragu-Nathan, & Subba Rao, 2006). Sydler et al. (2014) conducted research on intellectual capital and financial performance of the company and said that intellectual capital is a source of competitive advantage which contributes to enhance the financial performance of the company, this research has contributed for managers who will be able to calculate the value of intellectual capital directly, if an organization has spent more on advertisement leads to better relationship with outsiders of the company and that will ultimately enhance the profitability of the company. Based on these understandings, current study postulated that:

*H5. Competitive advantage is positively associated with financial performance.*

Bontis, Wu, Chen, Cheng, & Hwang, (2005) also investigates the impact of intellectual capital on market value and financial performance of the company and concluded that intellectual capital has been positively associated with financial performance of the company, all three approaches of intellectual capital leads to superior financial performance of the company. Positive association among all approaches of intellectual capital and performance of the company has been found by Sharabati et al. (2010), they proved that intellectual capital enhanced the productivity, profitability and value of the company. Sydler et al. (2014) conducted research on intellectual capital and financial performance of the company and said that intellectual capital is a source of competitive advantage which contributes to enhance the financial performance of the company. So, in the case of green intellectual capital, it is assumed that higher the green intellectual capital means higher the firms' financial performance. Based on these understandings, current study postulated that:

*H6. Green intellectual capital is positively associated with financial performance.*

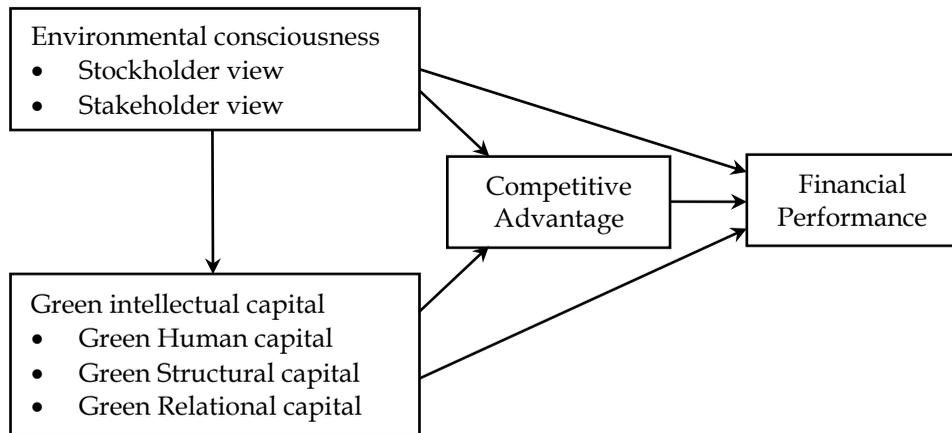


Figure 1: Theoretical Framework

### 3) METHODOLOGY

To test proposed theoretical framework shown in Figure 1, the target population of the was the directors of industrial safety and environmental protection departments, who were working in manufacturing sector of Pakistan, because the manufacturing companies have immense influence on environment (Sarkis, 1995). The analytical process was deductive (Collis et al., 2003; Sekaran, 1983) as this study purpose was to test the theory existed in literature. Cross sectional research design was adopted (Sekaran & Bougie, 2003), as during research process only one time respondents were contacted. The study setting was totally non-contrived. Data was collected through survey, by selecting respondents using purposive non-probability sampling technique (Bryman & Bell, 2007), compiled on the base of past literature. Following Kline (2011) criteria for sample size, 550 questionnaires were distributed among the respondents and in response 480 questionnaires were received, showed 87% response rate. Among the collected data, directors of 51.3% companies revealed that their company is ISO-14001 certified. 33.3% companies were established 30 or more than 30 years ago, 46.7% companies were established between 20 to 29 years ago and the rest of the companies were established in last 19 years. The respondents took one month to fill the questionnaires. Questionnaire was comprised of two parts, first part contained demographic information of respondents and their organization i.e. years of establishment, revenue size, capital size and ISO-14001 Certification. The second part of questionnaire was consisted of items regarding all variables. Total of 47 items' scale was used to measure all variables. EC was measured with 12 items, stockholder and stakeholder was

measured with 4 and 8 items respectively by following Huang & Kung (2011) provided scale. Green intellectual capital was measured through green human capital with 5 items, green structural capital with 8 items and green relational capital with 5 items by following Chen (2008a) provided scale. Competitive advantage was measured with 10 items scale adopted from Chen (2008a). The financial performance was measured with 7 item scale adopted by Yamin et al. (1999). Five point Likert scale was used to measure items' response ranging from "strongly disagree" to "strongly agree". To analyze the collected data Structural Equation Model (SEM) technique applied by following (Anderson & Gerbing, 1988) two step procedure through using IBM SPSS, AMOS and Excel data analysis computerized tools.

*Table - 1: Descriptive Statistics*

<b>Variables</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Cronbach's <math>\alpha</math> value</b>
<b>Environmental Consciousness:</b>			<b>0.842</b>
Stockholder view	3.7525	0.96196	0.883
Stakeholder view	4.0708	0.7605	0.943
<b>Green Intellectual Capital:</b>			<b>0.753</b>
Green human capital	3.9780	0.82156	0.931
Green structural capital	3.5529	1.00	0.956
Green relational capital	3.9607	0.87288	0.941
<b>Competitive advantage</b>	4.1217	0.68131	0.956
<b>Financial performance</b>	3.9438	0.72512	0.951

#### **4) RESULTS AND DISCUSSION**

Table -1 shows descriptive statistics and Cronbach's  $\alpha$  values of each variable. Descriptive statistics results exposed that there is no any kind of issue of normality and reliability in the collected data. After performing the descriptive statistics on collected data, confirmatory factor analysis (CFA) was performed to check validity of the instrument by following Fornell & Larcker (1981)'s validity assessment criteria. Before assessing convergent validity and discriminant validity through CFA, model fit indices were assessed of measurement model. According to Kline (2011) model fit indices' assessment criteria is: the value of normed chi square should be  $< 3$ , the value of GFI "Goodness of Fit Index", AGFI "Adjusted Goodness of Fit Index", TLI "Tucker Lewis coefficient" and CFI "Comparative Fit Index"

should be > 0.9 and the value of RMSEA “Root Mean Square Error of Approximation” should be < 0.08. The fit indices of the measurement model were Chi-square=2157.707, DF = 988, Normed Chi-square= 2.184, GFI = 0.905, AGFI = 0.873, TLI = 0.914, CFI = 0.921, RMSEA = 0.063. All fit indices were meeting the Kline (2011) threshold criteria. After it, convergent validity and discriminant validity was assessed using Fornell & Larcker (1981)’s assessment criteria. For convergent validity, according to

*Table - 2: Factor Loadings*

<b>Variables</b>	<b>No. of Items</b>	<b>Factor Loadings</b>
<b>Environmental Consciousness:</b>	<b>2</b>	0.563, 0.622
Stockholder view	4	0.810, 0.886, 0.803, 0.741
Stakeholder view	8	0.7863, 0.820, 0.810, 0.716, 0.788, 0.881, 0.908, 0.799
<b>Green Intellectual Capital:</b>	<b>3</b>	0.708, 0.689, 0.745
Green human capital	5	0.790, 0.908, 0.828, 0.840, 0.918
Green structural capital	8	0.969, 0.892, 0.743, 0.901, 0.721, 0.809, 0.706, 0.884
Green relational capital	5	0.739, 0.903, 0.928, 0.825, 0.944
<b>Competitive advantage</b>	<b>10</b>	0.895, 0.762, 0.744, 0.908, 0.791, 0.801, 0.860, 0.787, 0.860, 0.776
<b>Financial performance</b>	<b>7</b>	0.776, 0.929, 0.859, 0.859, 0.889, 0.849, 0.790

Fornell & Larcker (1981), the values of factor loading of each variable should be > 0.7, the Composite Reliability should be > 0.8 and Average Variance Extract (AVE) should be >0.5. For discriminant validity, square root of AVE should be greater than correlations of all the variables. Table-3 and Table-4, factor loadings and psychometric properties of the collected data, showing that there is no any kind of issue concerning convergent validity and discriminant validity. In Table-3, diagonal bold values are showing square root of AVE. As discussed earlier environmental consciousness and green intellectual capital was not global scale. So, to test validity of these two constructs with their dimensions, second

Table - 3: Psychometric Properties - I

	CR	AVE	GRC	CA	GSC	STA	FP	GHC	STO
<b>GRC</b>	0.940	0.759	<b>0.871</b>						
<b>CA</b>	0.953	0.673	0.307**	<b>0.820</b>					
<b>GSC</b>	0.947	0.694	0.543**	0.174**	<b>0.833</b>				
<b>STA</b>	0.940	0.664	0.451**	0.117**	0.400**	<b>0.815</b>			
<b>FP</b>	0.948	0.725	0.075**	0.209**	0.237**	0.181**	<b>0.852</b>		
<b>GHC</b>	0.933	0.736	0.493**	0.433**	0.493**	0.341**	0.203**	<b>0.858</b>	
<b>STO</b>	0.885	0.659	0.392**	0.270**	0.321**	0.350**	0.038**	0.380**	<b>0.812</b>

Table - 4: Psychometric Properties - II

	CR	AVE	FP	CA	EC	GIC
<b>FP</b>	0.948	0.725	<b>0.851</b>			
<b>CA</b>	0.954	0.673	0.210**	<b>0.820</b>		
<b>EC</b>	0.520	0.352	0.199**	0.309**	<b>0.593</b>	
<b>GIC</b>	0.757	0.510	0.228**	0.427**	0.906**	<b>0.714</b>

order CFA was performed to test convergent validity and discriminant validity. Results are shown in Table-3 and Table-4. Results are confirming again convergent and discriminant validity in second order CFA. After it, SEM was applied to test hypotheses. SEM is the best and modern technique to analyze data when there are more than one dependent, independent and mediating variables (Kline, 2011). The fit indices of the structural equation model are Chi-square=2206.259, DF = 998, Normed Chi-square= 2.211, GFI = 0.909, AGFI = 0.875, TLI = 0.912, CFI = 0.919, RMSEA = 0.064. Again, all model fit indices are meeting the threshold criteria suggested by Kline (2011). Later study proposed hypotheses were tested one by one through regression weights which were obtained by applying SEM. Table-5 showing the regression weights of each variable. Results revealed that EC has significant association with GIC (Unstandardized  $\beta = 0.980$ , Standardized  $\beta = 0.906$ ,  $p < 0.001$ ), which has been supporting  $H_2$ . That's mean Environmental consciousness is positively associated with green intellectual capital. As expected, EC has no direct association with CA (Unstandardized  $\beta = -0.567$ , Standardized  $\beta = -0.436$ ). This relationship has been proved insignificant in Huang & Kung (2011) study. Similarly, this study has not supported  $H_3$ . It means environmental consciousness is not associated with

competitive advantage. Additionally, the association between GIC and CA has proved significant and positive (Unstandardized  $\beta = 0.496$ , Standardized  $\beta = 0.411$ ,  $p < 0.001$ ) which has supported *H4*. It means green intellectual capital is positively associated with competitive advantage. Similarly, the association between CA and FP has been proved significant and positive (Unstandardized  $\beta = 0.147$ , Standardized  $\beta = 0.141$ ,  $p < 0.05$ ), which supported *H5*. It means competitive advantage is positively associated with financial performance. In addition to it, EC has been positively associated with FP (Unstandardized  $\beta = 0.337$ , Standardized  $\beta = 0.244$ ,  $p < 0.001$ ), which has proved *H1*. It means environmental

Table - 5: Regression Weights

Relationships	Unstandardized $\beta$	Standardized $\beta$	S.E.	C.R.	P
EC $\rightarrow$ GIC	0.980	0.906	0.182	5.397	***
EC $\rightarrow$ CA	-0.567	-0.436	0.714	-0.795	ns
GIC $\rightarrow$ CA	0.496	0.411	0.085	5.831	***
CA $\rightarrow$ FP	0.147	0.141	0.070	2.092	*
EC $\rightarrow$ FP	0.337	0.244	0.102	3.316	***
GIC $\rightarrow$ FP	0.213	0.168	0.094	2.256	*

Note: ns=not significant, \*= $p < 0.05$ , \*\*= $p < 0.01$ , \*\*\*= $p < 0.001$ .

consciousness is positively associated with financial performance. In the same way, the association between GIC and FP has been proved significant and positive (Unstandardized  $\beta = 0.213$ , Standardized  $\beta = 0.168$ ,  $p < 0.05$ ) which supported *H6*. It also means green intellectual capital is positively associated with financial performance.

## 5) CONCLUSION

The objective of this research was to analyze the importance of environmental consciousness for manufacturing firms of Pakistan in this era of green politics, and the role of intellectual capital towards environmental protection, sustained competitive advantage and superior financial performance for the firm. The findings of this research have been supported the proposed theoretical framework and also proved the validity of this research. The results of this work have been indicated that EC in terms of stockholder view and stakeholder view has been positively associated with

GIC and this will lead to sustained CA which ultimately leads to better financial performance. EC has significant association with GIC which indicates that when issues regarding environment has viewed positively then the organization will be able to invest more resources in intellectual capital (Ramus & Steger, 2000). GIC has significant positive association with CA which depicted that if importance has been given to intangible assets it will create competitive position for the firm (Chen, 2008b; Chen et al., 2006; Stewart, 1997). GIC has positively associated with FP which indicated that if an organization has skilled and experienced employees with the organization, strong culture and efficient management and have strong relationship with externals that organization will be able to get better financial performance (Bontis et al., 2005). CA has significant positive association with FP which indicated that sustained CA is a source of superior financial performance (Yamin et al., 1999). The correlation between EC and FP has also proved significant which shows that corporate social performance leads to better corporate FP (Cohen et al., 1995).

The world has been entering into green period, environmental regulations and policies from the government has been putting pressure on manufacturing companies, firms also facing burden from stockholders and stakeholders as well. The worldwide climate has been changing that results environmental adversity as well, the understanding and awareness about environmental issues has been increasing in society day by day, the concern about environmental protection has been increasing in the society as well (Chen, 2011; Chen et al., 2006). This work has major contribution for business domain and the management of the company because it delivers guidelines to the managers that how to manage its green management and intangible assets properly to gain competitive advantage over its competitor which will ultimately leads to superior financial performance of the manufacturing companies. This research recommended that if a firm is considering and protecting the interest of its stockholders and stakeholders, taking environmental issues into consideration and managing its intellectual capital efficiently, by this the firm can gain competitive advantage over its competitors and which will ultimately lead to higher profitability and higher financial growth as well. Because now markets have become global from regional markets, therefore to meet the challenges of global markets the active manufacturing companies in Pakistan should formulate and establish its own regulations, rules and strategies within the firm along with international rules and regulations to survive in global environment. Most of the manufacturing companies in Pakistan have been started to

understand that the greater focus on environmental issues and environmental protection will lead to create more business opportunities for the companies itself. They have understood that by the improvement of green process and green production the firm can comply with the worldwide policies and regulations and as an outcome of it the firm not only be able to protect the environment but also can gain sustained position in global market and competitive advantage as well.

Though this research has major contributions for manufacturing companies of Pakistan but this research has some limitations as well. First of all, respondents of this research were manufacturing companies of Pakistan, therefore the finding of this research cannot be generalized to service sector. Secondly the cross-sectional research design has been adopted to collect the data from respondents, not longitudinal. Thirdly this research has been conducted in developing country, like Pakistan therefore the findings of this could not be applicable in developed countries. This research has opened many doors for new researchers to conduct their research in any other sector besides manufacturing sector and can compare their findings with this study. They have to conduct their research in other countries and developed countries as well. They should adopt longitudinal research design to conduct their research. This research also provides opportunities for future researchers to expand their literature by considering this work as base. Future researchers can also test the role of corporate social responsibility along with environmental consciousness on competitive advantage and financial performance through the mediating role of green intellectual capital.

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