Green Organizational Identity: Antecedents And Consequences: An Empirical Study

TANIA MUSHTAQUE¹, MUHAMMAD NAWAZ TUNIO²*, ZUNERA AKBAR³, MUSHTAQUE JARIKO⁴

¹Institute of Business Administration, University of Sindh, Jamshoro, Pakistan
²Greenwich University, Karachi, Pakistan, Department of Business Administration, Alpen Adria University, Klagenfurt, Austria
³Department of Business Administration, University of the Punjab, Gujranwala Campus, Pakistan
⁴Institute of Business Administration, University of Sindh, Jamshoro, Pakistan

Abstract: Purpose: This study aims to test the framework of green organizational identity to check the positive impact of environmental organizational culture and environmental leadership on green innovation performance and green competitive advantage and via mediator – green organizational identity.

Design/methodology/approach: Cross-sectional research design was applied to this study. Data collected from 400 respondents and proposed hypothesis were verified through Structural Equation Modelling (SEM) technique and mediation analysis.

Findings: Findings indicate a positive impact on green organizational identity. Besides this green organizational identity plays a partial mediator role and has a positive impact on green competitive edge and green innovation performance. Small and medium enterprises (SMEs) have a low environmental organizational culture that environmental organizational culture and environmental leadership have significant and environmental leadership than large organizations. SMEs should improve their environmental organizational culture and environmental leadership to enhance the green organizational identity.

Practical implications: Through the green organizational identity model organizational will able to enhance their green organizational identity that will give assist to gain green competitive advantage and to improve green innovation performance.

Originality/value: This study applies the theory of green organizational identity and develops an integral conceptual model to check its sources and outcomes.

Keywords: Environmental leadership, Environmental organizational culture, Green organizational identity, Green innovation performance.

INTRODUCTION

The environment is changing rapidly because of Global warming, increase in pollution, use of toxic substances, improper disposal of waste. All these problems are often due to organizations. Stakeholders also imposed pressure on organizations to consider the responsibility of environmental protection. If the company seems to irresponsible regarding environmental issues than the concerned stakeholder would not stop taking action against the organization (Chen, 2011) Environmental management and protection responsibility is often considered under the umbrella term Corporate Social Responsibility (CSR). CSR aspect “environmental responsibility” that organization follows with its core value is beneficial and create value for society and organization too (Halme & others, 2007). Two main sources of Environmental pressures, consumer environmentalism and environmental regulations that would change the competition patterns of industry (Chen & Chang, 2012) and leave behind other traditional competitive edge perspectives like cost, quality of products, etc. Now organizations compete on the basis of green edge and innovation which is environment friendly. Organizations are confronted with many environmental challenges. With reference to (Chen, 2008a) In the current era environmental issues have been noticed the massive amount of pollution is directly associated with the manufacturing industry.

To provide protection in real meaning firms need to change the way of doing business in every aspect. (Chen, 2008; Porter & Van der Linde, 1995). The adoption of preventive measures are not adequate for environmental protection (Chang & Chen, 2013). Effective dealing with environmental management challenges contains elements that cover all aspects of organizational operations (Lee, 2009).To conquer the challenges related to environmentalism, few concepts have been applied by organizations such, green production, green products, green marketing, etc. Environmental management is an essential part of the business. Many organizations still do not agree and consider unnecessary investment for environmental management. Organizations that give value
Corporate environmental management

According to Chen (2008a), a massive volume of pollution in the environment is because of the manufacturing industry. Organizations confronted with environmental forces including governmental policies of environmentalism, stakeholder’s concern for the environment, and competitive pressure (Rugman & Verbeke, 1998). Companies should struggle to carry operation which are eco-friendly and satisfy the regulation related to environment protection and consumer environmental awareness (Berry & Rondinelli, 1998). For manufacturing industries today, concern for environment protection is the main problem due to increasing global warming, and to trap this issue as an opportunity many businesses are striving for (Chen, 2011). Environmental management by the organization is defined as concepts, approaches, process, managerial activities that can assist an organization to meet the environmental legal standards, to attain environmental goals, take action and measures for reduction of pollution and waste, search for new ways to gain benefits of business opportunities through development in environmental management in order to bring improvement in efficiency and effectiveness of environmental actions (Berry & Rondinelli, 1998). Adoption of proactive strategies for environmental management could interlinked objective of environmental protection associated with different departments in an organization to resolve the environmental issue by utilization of innovative green technology (Greeno, 1992). Organizations enjoy the benefits of first-mover who are green innovation pioneers (Chen, 2011). Organizations may use the green concept in product design, a package for maximization of competitive advantages (Porter & Van der Linde, 1995b).

Corporate Social Responsibility (CSR) and Strategic CSR

Corporate social responsibility (CSR) is defined as situations when an organization is committed to actions which is beyond compliance such as “actions that appear to further some social good, beyond the interests of the firm and that which is required by law” (McWilliams & Siegel, 2001). Various perspectives exist for CSR. According to stakeholder theory view engagement in CSR practices is beneficial for a firm that reflects the importance of non-financial stakeholders, because the organization does not follow CSR practices then these stakeholders may stop supporting business (Jones, 1995). The institutional theory argues that organizations are frequently involved with stakeholders for transactions on the basis of cooperation and trust, which motivates to be honest. The institutional theory asserts that companies involved in repeated transactions with stakeholders on the basis of trust and cooperation are motivated to be trustworthy, honest, and ethical. For this CSR is favorable for good performance because it reflects these behaviors (Jones, 1995). Resource-based view highlight that social responsibility for the environment can generate capability or resource that take towards the sustained competitive edge (Hart, 1995). Husted and Salazar (2006) argue for CSR organizations should act strategically rather than doing investment forcefully. Reinhardt (1998) study showed that organizations can earn handsome and abnormal returns who are engaged in CSR. Hence, the firm may apply CSR to gain a sustainable
competitive edge over its rival. Rondinelli and Vastag (1996) organization may take actions due to increasing environmental regulation pressure to market for the adoption of environmental protection and management practices. Currently, the organization understands the advantages in the result of a proactive approach to environmental policies to improve organization identity (Montabon, Sroufe, & Narasimhan, 2007).

Green innovation performance
Green innovation is segregated into the production processes and products, as well as technological innovations that are involved in prevention for pollution, energy-saving, recycling of waste, environment-friendly product design, or organizational environmental management (Chen et al., 2006). Generally, green innovation is considered and viewed as a way to evaluate the magnitude of commitment. Organizations are putting efforts to bring green innovation in this dynamic environment. Where the protection of the environment is on high priority (Chang, 2011). Sanchez (1997) argued that the leader to comply with changing environmental trend organization should modify their operation and strategies. Companies that highly follow environmental ethics get increment in resource productivity due to green innovation (Chen et al., 2006). Environmental management performance can be enhanced by green innovation to fulfill the requirements regarding environmental protection can influence environmental regulations that affect organization's ability to bring innovation.

Green competitive advantage
Competitive advantage is the status of a business where its rivals cannot replicate its strategies and the organization enjoys different advantages from its competitive position (J. Barney, 1991; Coyne, 1986; Porter, 1980). Organizational activities related to environmental management and protection are considered as efforts that give efficiency and, that provide a competitive edge and better returns (Klassen & McLaughlin, 1996; Christmann, 2000). The latest research on environment management introduces a “green competitive edge” due to changing competition patterns. According to Chen (2011), a green competitive edge is a state where an organization gets the position of environmental management or innovation from the green perspective as compared to its rivals and competitors cannot replicate strategies of environmental management and in results, the firm can avail the sustainable benefits. By following environmental strategies, the competitive activity of the organization stimulates rivals to give a competitive response (Schumpeter, 1934).

Green organizational identity
Albert & Whetten (1985) provided a foundational definition of identity, it is the unique, core, and enduring characteristics of an organization. Organizational must require an identity for stakeholder (internal or external) to perceive organization how it interacts with other firms and people Albert (2000). Dutton and Dukerich (1991) define the organizational identity concept as a shared belief hold by organizational members in their minds. Therefore organizational identity concept not only describes the organization as a whole but also demonstrates that identity is what employees perceive mutually about their organization. On the base identity concept, Chen (2013) proposed the model of integral organizational identity in the subject of environmental management. Chen (2011) defines green organizational identity in which members mutually recognized themselves or got the notion of environmental management and protection to give the meaning of green behaviors. According to this author if the organization shows concern for environmentalism and leader also play role in environmentalism then member creates shared perception about that everyone is responsible and play role in environmental management. Organizational identity gives an organization a green competitive edge and improves green innovation performance (Chang & Chen, 2013; Chen, 2011).
H3: Green organizational identity has a positive impact on green innovation performance.
H4: Green organizational identity has a positive impact on the green competitive edge.

Organizational Culture positive impacts
In green business literature, the organizational culture concept is frequently used (Newton & Harte, 1997). To respond to environmental challenges many researchers argue that organizations will have to change the culture completely (Stead & Stead, 1992). A researcher who studied the culture clearly admits that following indicators of culture including norms, traditions, and corporate practices that provide shared perception (Albert & Whetten, 1985; Dutton, Dukerich, & Harquail, 1994), but the role of these indicators of organizational culture how to affect identity seems to be mostly unexplored. According to Chen (2011) define environment organizational culture as that gives value to the protection and management of the environment and provides interpretation to members to direct behavior according to culture. Environment-friendly organizational culture has a positive association with the green organizational identity (Chen, 2011). Balmer (1997) argues that organizational culture influence managerial initiatives. If the culture is environment supportive, the manager will take action for environmental management and protection. According to Hatch (1993) identity is how members define and experience themself, which is influenced by their beliefs and activities that are based on and justified by cultural...
values and norms. Organizational identity is a self-reflection object of the dynamic process of an organization’s culture (Hatch, 1993). Identity formulates by how members observed and experience which is influenced by their cultural beliefs and activities (Hatch, 1993). An organization’s identity that is culturally rooted delivers symbolic material from that the meaning inside the organization can be constructed (Balmer et al., 1997). Therefore, a close relationship between culture and identity (Christensen, 1995). Organizational culture’s symbol becomes an essential source for identity-creation material... (Hatch, 1993). According to Chen (2011), environmental organizational culture can have a positive impact on green organizational identity.

H1: “Environmental organizational culture has a positive impact on green organizational identity.” Environmental issues are at their peak stage of development, and from actions of environmental protection, companies can get an important competitive edge (Sandelands, 1994). Competitive edge is the state of the company where its rival cannot copy the competitive strategy executed by the organization, nor are rivals able to get the benefit that the company attains by the use of competitive strategy (Porter, 1980) and (J. Barney, 1991). Organizational culture is the critical element that has the capacity for the achievement of a sustainable competitive edge (Fernández, Junquera, & Ordiz, 2003). An organization that is a follower of green management can avail the “first-mover advantages” which lead towards competitive advantages (Porter & Van der Linde, 1995a). With reference to RBV, an extraordinary firm's culture that is unique, valuable inimitable, is considered as one major source to make a sustainable competitive edge (J. B. Barney, 1986).

According to Chen (2011), environmental organizational culture can generate competitive advantage and organizational identity plays the role of mediator between environmental organizational culture and organizational identity. Hence this study hypothesized that:

H5: “Environmental organizational culture of a firm has a positive impact on green competitive advantage.”

H10: “Green organizational identity mediates the relationship between environmental organizational culture and green competitive edge.”

To get sustainable progress organizational concerns for environmental ethics are seen as one type of superior organizational culture. Therefore, organization ethics for environmental concern can stimulate proactive action for environmental protection which can facilitate green innovation. (Chen et al., 2006; Porter & Van der Linde, 1995a). Green innovation is segregated into production processes and products, as well as a technological innovation that is involved in the prevention of pollution, energy-saving, recycling of waste, environment-friendly product design, or organizational environmental management (Chen et al., 2006). Organizational values for ecological ethics can influence green innovation and technology (Greeno, 1992; Schlegelmilch, Bohlen, & Diamantopoulos, 1996). Organizations are putting effort to bring green innovation in this dynamic environment. Where the protection of the environment is on high priority (Chang, 2011). According to Chen (2011) green organizational identity have a positive impact on green innovation performance. Generally, green innovation is considered and view as a way to evaluate the magnitude of commitment, it is also vital for the organization because for many reasons, as it causes a reduction in pollution to recycle useless materials and ultimately protect the environment (Alhaddid & As’ad, 2014). We can hypothesize that:

H 7: Environmental organizational culture has a positive impact on green innovation performance

H9: “Green organizational identity mediates the relationship between environmental organizational culture and green innovation performance.”

Environmental Leadership Impact

Cole &Kelly (1996) environmental leadership is dynamic process where organizational member influenced by their and play role in environment management and protection. According to Chen (2011) environmental leadership positively impact on the green organizational identity. Organizational identity is created by its leader’s interpretations about issues which drive organization’s behavior in that way (Foreman & Whetten, 2002). Leaders interpretations give view that influence member’s priorities and commitments, they desired to gain in environmental issue (Fernández et al., 2003). A main goal for leadership is the establishment of unified organizational identity that is understandable and can be followed by members (Scott & Lane, 2000). When employee finds and perceive the engagement of others in particular behavior they inspire and engage in that behaviors (Kim, Kim, Han, Jackson, & Ployhart, 2014). Employees lead by top managers for the involvement in organization’s environmental activities, ecological awareness of top managers is strongly connected with company environmental performance (Fernández et al., 2003). Environmental leadership is essential source of green organizational identity that gives green competitive advantage (Chen, 2011). Leaders are called as “managers of organizational meaning”. That shows the powers of leaders (Reitter & Ramanantsoa, 1985). Organizational identity is the product of influences from leader’s struggle and top management vision (Balmer et al., 1997). Leader can construct the Shared sense in followers about what is valuable (Kark, Shamir, & Chen, 2003) by reflecting desired pattern of behavior (Shamir, Zakay, Breinin, & Popper, 1998). It is hypothesized that:

H 2: “Environmental leadership has positive impact on green organizational identity.”
Environmental leadership is an essential source of green organizational identity that gives improvement green innovation performance (Chang & Chen, 2013). Leadership has positive impact on innovation (Borins, 2002).

H8: “Environmental leadership has a positive impact on green innovation performance.”

H11: “Green organizational identity mediates the relationship between environmental leadership and green innovation performance.”

Through environmental leadership, organizations can gain two advantages: meeting demand in the market by providing green products or services compared to their rivals. Secondly, reducing costs by using less energy, material, and low waste (Chen, 2011).

For the survival of an organization, generating profits is essential, and environmental leadership (although reflecting social responsibility) is not likely to be purely altruistic. It must be a strategy used for competitive advantage improvement. If it is so, then identification and measuring the organization benefits becomes necessary if the strategy is fully justified (Robinson & Clegg, 1998). According to Chen (2011), environmental leadership can generate competitive advantage, and organizational identity plays the role of a mediator between environmental leadership and organizational identity. Therefore, it is postulated:

H6: “Environmental leadership has a positive impact on green competitive edge.”

H12: “Green organizational identity mediates the relationship between environmental leadership and green competitive advantage.”

**METHODOLOGY**

**Sample and Instrumentation**

This study deployed both convenience non-probability and probability sampling techniques. Probability sampling was used to select the manufacturing organization, and non-probability sampling was used to collect data from employees. To select the organization, systematic sampling techniques were applied according to (Saunders, Saunders, Lewis, & Thornhill, 2011). Convenience sampling was followed for the employees’ selection. With reference to (Kline, 2011), the necessary response for this study is 320. To achieve the minimum level of response, for the quality preference and effectiveness for this research, 400 questionnaires were distributed. From 400 distributed surveys, an achieved response rate was 77%, and usable questionnaires were 309. Respondents of this research had considerable knowledge about environmental management and protection who evaluated their own organizations and rated opinions about environmental culture, environmental leadership, green identity, green competitive edge, and green innovation performance.
Questionnaire survey is used for data collection. Survey was segregated into two section. First section was designed to get information about organizational size, respondent age, gender. Second section was design to measure the variables of study.

Five point likert scale (from strongly disagree to strongly agree) was used to measure the response of every question. The measurement of “environmental organizational culture” contain six items adopted from (Chen, 2011). “environmental leadership” was measured by four items adopted from (Dechant & Altman, 1994). Measurement of “green organizational identity” includes six items adopted from (Chen, 2011). “Green competitive advantage” includes eight items adopted from (Chen, 2011). “Green innovation performance” measurement include eight items adopted from (Chen, 2013).

**Descriptive Statistics**

Reliability of this research data was checked through Cronbach alpha (α). Reliability is related with consistency and repeatability of indicators. According to cronbach (1951) the preferable value of cronbach should be equal to or above (≥.7). Table 1 demonstrate the reliability and descriptive analysis. Cronbach (α) of variables demonstrate favorable figures because it exist between the

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental organization culture</td>
<td>3.8398</td>
<td>0.99183</td>
<td>0.933</td>
</tr>
<tr>
<td>Environmental leadership</td>
<td>3.7597</td>
<td>1.02915</td>
<td>0.888</td>
</tr>
<tr>
<td>Green organizational identity</td>
<td>3.8188</td>
<td>1.02857</td>
<td>0.938</td>
</tr>
<tr>
<td>Green innovation performance</td>
<td>3.8163</td>
<td>0.92804</td>
<td>0.921</td>
</tr>
<tr>
<td>Green competitive edge</td>
<td>3.8305</td>
<td>0.92112</td>
<td>0.929</td>
</tr>
</tbody>
</table>

Ranges of (0.888-0.938). The cumulative reliability of study data is (0.892). Which denotes that in this study reliability of the measurement is satisfactory and acceptable. In descriptive analysis the mean and standard deviation of data were calculated. All values of mean are observed between ranges of (3.7597-3.8398). The standard deviation values was recorded between (.92112-1.02915).
Confirmatory Factor Analysis
To check the proposed hypothesis study adopted SEM by using IBM AMOSS 22. According to Kline (2011), SEM is suitable for the study where more than one dependent variables are included. To employ SEM two step procedure was performed (Hair, 2009). First confirmatory analysis (CFA) was run to make sure validity and reliability of the construct. For CFA measurement model was drawn on AMOSS, linked all variable with their respective construct items and allowed all variables to freely covariate with each other. Various models fit indices were check for model fit. With reference to (Kline 2011) acceptable value of normed chi-square (CMIN) should be below than 3. Value for (GFI) and (CFA) should be more than (0.95), acceptable value for (AGFI) is (>0.8), (TLI) should be (>0.9) preferable value of PCLOSE is near to 1, (RMSEA) should be (<0.5) is expectable. All Fit indices values of data were satisfactory. In calculated result value of various indices were observed as GFI = 0.835, AGFI = 0.806, TLI = 0.938 and CFI = 0.944.Value of Normed chi-square=1.993, PCLOSE =0.021 and RMSEA =0.057.

Measurement Model
Fit indices of measurement model are Chi square=895.071, DF=449, normed chi-square=1.993, GFI=0.835, AGFI=0.806, TLI=0.938, CFI=0.944, RMSEA=0.057, PCLOSE=0.021.

Table 2 : Factor Loading

<table>
<thead>
<tr>
<th>Variables</th>
<th>No of items</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental organization culture</td>
<td>6</td>
<td>0.878, 0.843, 0.818, 0.831, 0.800, 0.860</td>
</tr>
<tr>
<td>Environmental leadership</td>
<td>4</td>
<td>0.775, 0.863, 0.807, 0.816</td>
</tr>
<tr>
<td>Green organizational identity</td>
<td>6</td>
<td>0.833, 0.886, 0.842, 0.871, 0.801, 0.824</td>
</tr>
<tr>
<td>Green innovation performance</td>
<td>8</td>
<td>0.748, 0.768, 0.715, 0.789, 0.817, 0.762, 0.756, 0.755</td>
</tr>
<tr>
<td>Green competitive edge</td>
<td>8</td>
<td>0.817, 0.816, 0.780, 0.823, 0.827, 0.751, 0.766, 0.731</td>
</tr>
</tbody>
</table>

Table 2 shows factor loading that was checked to confirm loading of indicators on their respective construct. Values of factor loading for environmental organization culture was between (0.800-0.878), for environmental leadership was between (0.775-0.863), for organizational identity (0.801-0.886), for green innovation performance (0.715-0.817), for green competitive edge (0.731-0.827). All items were loaded on satisfactory values.

Discriminant and Convergent Validity
According to Fornell & Larcker (1981) convergent reliability and discriminant validity were verified. Under this approach three phase were followed to check convergent validity. In first the factor loading of each variable was checked and required value for loading is (>0.7). In 2nd phase composite reliability (CR) was analyzed that is acceptable if (>0.8). In last average variance extracted (AVE) was checked and its value should be (>0.5).

Table 3 CR and AVE of every variables were presented, that indicates value of all variables meets the standard. To prove discriminant validity square root value of AVE should be more as compared with its and other variables correlation. These values donated in bold figures with diagonal manner. All Square root values of AVE satisfied the criteria. After proving discriminant and convergent validity.

Structured Equation Modeling
Proposed hypothesis of study were check by SEM and Mediation analysis. Structural model (SEM) was drawn with proposed causal relationship between variables. Structural equation modelling was run to check proposed hypothesis. Fit indices of SEM were calculated that were Chi square= 922.383, DF=450, normed chi-square=2.050, GFI=.831, AGFI=.802, TLI=.935, CFI=.941, RMSEA=.058. These values were favorable and satisfactory. Then all proposed relationships of study were individually verified.

As table 4 display the SEM results of all proposed causal relationship of model. The impact of EOC on GOI is significant (Unstandardizedβ=0.124, standardizedβ=0.118, p>0.05) and impact of EL on GOI is also significant (Unstandardizedβ=0.656, standardizedβ=0.689, p<0.001) these results support results support H1 and H2 hypothesis respectively. The impact of GOI on GIP is significant (Unstandardizedβ=0.559, standardizedβ=0.577, p<0.001) and impact of GOI on GCA is also significant

Table 3: Psychometric Properties

<table>
<thead>
<tr>
<th></th>
<th>CR</th>
<th>AVE</th>
<th>GOI</th>
<th>GIP</th>
<th>GCA</th>
<th>EOC</th>
<th>EL</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOI</td>
<td>0.937</td>
<td>0.711</td>
<td>0.843</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GIP</td>
<td>0.918</td>
<td>0.584</td>
<td>0.742**</td>
<td>0.764</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The impact of EOC on GCA is significant with impact of EL on GCA is also significant (Unstandardizedβ=0.193, standardizedβ=0.230, p<0.01) which support proposed hypothesis H6. The impact of EOC on GIP is non-significant (Unstandardizedβ=0.065, standardizedβ=0.063, p>0.05) and result of this relationship does not support hypothesis H7. The impact of EL on GIP is significant (Unstandardizedβ=0.656, standardizedβ=0.689, p<0.05) results of this relationship support hypothesis H8. All hypothesis were tested by the direct impact of one variable on other. The summarized regression weights and significance results of all mentioned relationships were provided in table 4.

Mediation Analysis

After SEM proposed hypothesis related to mediation were tested. This study use Kenny & Judd (2013) approach which involve four phase to verify the mediation existence between variables. This approach evolved from baron and Kenny (1986), James and Brett (1984) and Judd and Kenny (1981) studies to check mediation. According to Kenny (2013) two categories of mediation exist, that are partial mediation and full mediation, To satisfy the conditions of full mediation, independent variable impact on dependent variable, independent variable impact on mediator, mediator impact on dependent variable and indirect impact of independent variable via mediator on dependent variable should be significant. But while controlling mediation independent variable impact on dependent variable should not be significant, to meet the condition of partial mediation results of following path, independent variable impact on dependent variable, independent variable impact on mediator, mediator impact on dependent variable, indirect impact of independent variable via mediator on dependent variable and while controlling mediation independent variable impact on dependent variable should be significant. In case of any path between independent variable to mediator, mediator to dependent variable or indirect effect of independent variable without controlling mediation on dependent variable proved insignificant than no mediation exist in model. First Mediation was tested between environmental organizational culture and green innovation performance through green organizational identity. Results of direct and indirect path provide evidence for the existence of partial mediation between EOC and GIP through GOI. Following direct paths exposed that EOC has its significant impact on GOI (Unstandardizedβ= 0.666, Standardizedβ=0.630, p<0.001). GOI has its significant impact on

Table 4: Regression Weights

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Unstandardizedβ</th>
<th>Standardizedβ</th>
<th>S.E</th>
<th>C.R</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOC→GOI</td>
<td>0.124</td>
<td>0.118</td>
<td>0.069</td>
<td>1.795</td>
<td>†</td>
</tr>
<tr>
<td>GOI→GIP</td>
<td>0.559</td>
<td>0.577</td>
<td>0.082</td>
<td>6.806</td>
<td>***</td>
</tr>
<tr>
<td>GOI→GCA</td>
<td>0.467</td>
<td>0.529</td>
<td>0.070</td>
<td>6.643</td>
<td>***</td>
</tr>
<tr>
<td>EOC→GIP</td>
<td>0.065</td>
<td>0.063</td>
<td>0.066</td>
<td>.974</td>
<td>ns</td>
</tr>
<tr>
<td>EOC→GCA</td>
<td>0.094</td>
<td>0.102</td>
<td>0.057</td>
<td>1.651</td>
<td>**</td>
</tr>
<tr>
<td>EL→GOI</td>
<td>0.656</td>
<td>0.689</td>
<td>0.074</td>
<td>8.886</td>
<td>***</td>
</tr>
<tr>
<td>EL→GIP</td>
<td>0.167</td>
<td>0.181</td>
<td>0.084</td>
<td>1.996</td>
<td>*</td>
</tr>
<tr>
<td>EL→GCA</td>
<td>0.193</td>
<td>0.230</td>
<td>0.072</td>
<td>2.677</td>
<td>**</td>
</tr>
</tbody>
</table>

Note: ns=non-significant, *=p<0.05, **=p<0.01, ***=p, 0.001, †=>0.05.

Table 5: Direct Effects

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Unstandardized β</th>
<th>Standardized β</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>EOC→GOI</td>
<td>0.666</td>
<td>0.630</td>
<td>***</td>
</tr>
<tr>
<td>GOI→INN</td>
<td>0.744</td>
<td>0.668</td>
<td>***</td>
</tr>
<tr>
<td>GOI→GCA</td>
<td>0.685</td>
<td>0.644</td>
<td>***</td>
</tr>
<tr>
<td>EOC→INN</td>
<td>0.145</td>
<td>0.141</td>
<td>†</td>
</tr>
<tr>
<td>CC→GCA</td>
<td>0.188</td>
<td>0.201</td>
<td>**</td>
</tr>
<tr>
<td>EL→GOI</td>
<td>0.746</td>
<td>0.780</td>
<td>***</td>
</tr>
<tr>
<td>EL→GIP</td>
<td>0.225</td>
<td>0.320</td>
<td>*</td>
</tr>
<tr>
<td>EL→GCA</td>
<td>0.270</td>
<td>0.243</td>
<td>**</td>
</tr>
</tbody>
</table>

Note: ns=non-significant, *=p<0.05, **=p<0.01, ***=p>0.001.

Controlling mediation independent variable impact on dependent variable should not be significant, to meet the condition of partial mediation results of following path, independent variable impact on dependent variable, independent variable impact on mediator, mediator impact on dependent variable, indirect impact of independent variable via mediator on dependent variable and while controlling mediation independent variable impact on dependent variable should be significant. In case of any path between independent variable to mediator, mediator to dependent variable or indirect effect of independent variable without controlling mediation on dependent variable proved insignificant than no mediation exist in model. First Mediation was tested between environmental organizational culture and green innovation performance through green organizational identity. Results of direct and indirect path provide evidence for the existence of partial mediation between EOC and GIP through GOI. Following direct paths exposed that EOC has its significant impact on GOI (Unstandardizedβ= 0.666, Standardizedβ=0.630, p<0.001). GOI has its significant impact on
GIP (Unstandardizedβ= 0.744, Standardizedβ=0.668, p=<0.001). EOC has its significant impact on GIP (Unstandardizedβ= 0.145, Standardizedβ=0.141, p=0.05). An indirect path between EOC to GIP via GOI revealed that EOC also has significant impact on GIP (Unstandardizedβ= 0.433, Standardizedβ=0.421, p=0.001) with lower and upper bias-corrected confidence interval (Lower BCCI=0.315, Upper BCC=0.558). All these values support our H9 hypothesis “green organizational identity mediate the relationship between environmental organizational culture and green innovation performance.”

Second mediation was tested between environmental organizational culture and green competitive edge through green organizational identity. Results of direct and indirect path provide evidence for the existence of partial mediation between EOC and GCA through GOI. Following direct paths exposed that EOC has its significant impact on GOI (Unstandardizedβ= 0.666, Standardizedβ=0.630, p=<0.001). GOI has its significant impact on GCA (Unstandardizedβ= 0.685, Standardizedβ=0.644, p=<0.001). EOC has its significant impact on GCA (Unstandardizedβ= 0.188, Standardizedβ=0.201, p=0.01). An indirect path between EOC to GCA via GOI revealed that EOC also has significant impact on GCA (Unstandardizedβ= 0.378, Standardizedβ=0.421, p=<0.001) with (Lower BCCI=0.257, Upper BCC=0.498). All these values support our H10 hypothesis “green organizational identity mediate the relationship between environmental organizational culture and green competitive edge”.

Third mediation was tested between environmental leadership and green innovation performance through green organizational identity. Results of direct and indirect path provide evidence for the existence of partial mediation between EL and GIP through GOI. Following direct paths exposed that EL has its significant impact on GOI (Unstandardizedβ= 0.746, Standardizedβ=0.780, p=<0.001).

<table>
<thead>
<tr>
<th>Relationships</th>
<th>Unstandardized β</th>
<th>Standardized β</th>
<th>sig</th>
<th>LBCCI</th>
<th>UBCCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC→GII→INN</td>
<td>0.433</td>
<td>.421</td>
<td>***</td>
<td>.315</td>
<td>.558</td>
</tr>
<tr>
<td>CC→GII→GCA</td>
<td>0.378</td>
<td>.405</td>
<td>***</td>
<td>.257</td>
<td>.498</td>
</tr>
<tr>
<td>LL→GII→INN</td>
<td>0.408</td>
<td>.440</td>
<td>***</td>
<td>.225</td>
<td>.564</td>
</tr>
<tr>
<td>LL→GII→GCA</td>
<td>0.341</td>
<td>.404</td>
<td>**</td>
<td>.200</td>
<td>.474</td>
</tr>
</tbody>
</table>

Note: ns=non-significant, *=p<0.05, **=p<0.01, ***=p, 0.001.

GII has its significant impact on GIP (Unstandardizedβ= 0.744, Standardizedβ=0.668, p=0.001). EL has its significant impact on GIP (Unstandardizedβ= 0.225 Standardizedβ=0.320, p=<0.05). An indirect path between EL to GIP via GOI revealed that EL also has significant impact on INN (Unstandardizedβ= 0.408, Standardizedβ=0.440, p=<0.001) with (Lower BCCI=0.225, Upper BCC=0.564). All these values support our H11 hypothesis “green organizational identity mediate the relationship between environmental leadership and green innovation performance”.

Fourth mediation was tested between environmental leadership and green competitive edge through green organizational identity. Results of direct and indirect path provide evidence for the existence of partial mediation between EL and GCA through GOI. Following direct paths exposed that EL has its significant impact on GOI (Unstandardizedβ= 0.746, Standardizedβ=0.780, p=<0.001). GOI has its significant impact on GCA (Unstandardizedβ= 0.685, Standardizedβ=0.644, p=<0.001). EL has its significant impact on GCA (Unstandardizedβ= 0.270, Standardizedβ=0.243, p=0.01). An indirect path between LL to GCA via GOI revealed that EL also has significant impact on GCA (Unstandardizedβ= 0.341, Standardizedβ=0.404, p=<0.01) with (Lower BCCI=0.200, Upper BCC=0.474). All these values support our H12 hypothesis “green organizational identity mediate the relationship between environmental leadership and green competitive edge”.

**Comparison Analysis between SMES and Large Enterprises**

The distinction criteria between large and SMES is followed which is define by “Ministry of Economic Affairs of Pakistan”. The criteria to differentiate large and SMES is based on number of employees in organization. If an organization consist on employees <200, considered under the SMES and if an organization has employees >200, considered as large enterprise.

Table 7 shows that environmental organizational culture, environmental leadership, green organizational identity, green innovation performance and green competitive advantage in large organization of Pakistan is significantly more as compared to SMES of Pakistan.

As table 7 shows that environmental organization culture and environmental leadership has positive impact on green organizational identity and green organizational identity has significant impact on green organizational identity and green innovation performance to improve organizational identity and green innovation in SMES, organization must be focus on environmental organizational culture and environmental leadership.
Table 7: Difference between Large and Small organization

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean of large enterprise</th>
<th>Mean of SMEs</th>
<th>Mean difference</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental organization culture</td>
<td>4.1550</td>
<td>3.6139</td>
<td>0.5411***</td>
<td>4.903</td>
</tr>
<tr>
<td>Environmental leadership</td>
<td>4.1066</td>
<td>3.5111</td>
<td>0.59548***</td>
<td>5.226</td>
</tr>
<tr>
<td>Green organizational identity</td>
<td>4.2106</td>
<td>3.5380</td>
<td>0.67263***</td>
<td>5.980</td>
</tr>
<tr>
<td>Green innovation performance</td>
<td>4.1328</td>
<td>3.5896</td>
<td>0.54317***</td>
<td>5.291</td>
</tr>
<tr>
<td>Green competitive edge</td>
<td>4.1822</td>
<td>3.5785</td>
<td>0.60370***</td>
<td>5.995</td>
</tr>
</tbody>
</table>

Note: ns=non-significant, *=p<0.05, **=p<0.01, ***=p, 0.001.

DISCUSSIONS

Proposed hypothesis were confirmed in two stage. First, hypothesis were tested through SEM and in second stage all hypothesis were tested through mediation analysis.

Results shows EOC has positive effect on GOI that goes in favor of proposed H1. Furthermore it shows if organizational culture give value and respond to environmental management and protection than all organizational member perceive and feels that organization has tradition and goal for environmental protection. Result of EL impact on GOI that match with results of (Chen, 2011) also with our proposed hypothesis that provide reason for the acceptance of H2 Results indicates that GOI significantly impact on GIP and GCA. On the basis of results H3 and H4 are accepted and this result match with previous studies (Chen, 2011; Chang & Chen, 2013). This relationship state that shared perception by members regarding environmental protection brings environment friendly innovation that improve product process, utilization of resource and give competitive advantage to organization where its rival left behind in environmental protection. H5 hypothesis is accepted because results also show EOC significant impact on impact GCA. Environmental leadership shows significant impact on green competitive edge that supports H6.

H7 is hypothesis environmental organizational culture has significant impact on green innovation performance results of this hypothesis don’t support it therefore it was not accepted. H7 is the contribution in this study. Impact testing of EL on GIP is also contribution to this study as no previous study checked the direct effect between these variable. This study proved a significant impact of EL on GIP that supports H8.

Proposed hypothesis H9, H10, H11 and H12 were tested through mediation analysis. All mediation results provide the evidence for partial mediation existence in aforementioned hypothesis as shown in table 9. the impact of EOC and EL on GCA via GOI is significant in indirect path that support our H9 and H12 existence of mediation between these two variable also prove by (Chen, 2011). H10 is contribution in this research and result shows the impact of EOC on GIP via GOI is significant in indirect path that support our proposed hypothesis.

Latest research on management and microeconomics concentrated on the importance of organizational size, due to organizational size large companies get advantages (Amato & Amato, 2004). Moen (1999) provided a reason for the advantage of organizational size that large companies have more resource. According to Huang and Wang (2004) large organization get the advantage of firm size because of possessing economies of scale and scope. In manufacturing new product development require more R&D expense, therefore large organization have better performance than small organization in product development (Cockburn & Henderson, 2001). In manufacturing industry advantage of organizational size often exist (Chen, 2011). Other than the advantages of economies scope and scale, large Organization also enjoy advantages related to purchasing (Zulauf & King, 1985). According to Chen (2011) large organization also have advantages related to organizational green competitive edge, green organizational identity, organizational culture and environmental leadership in Taiwan manufacturing industry.

CONCLUSION

The aim of study was to provide assistance for manufacturing industry to cope with rising environmental challenges, turning these challenges into great opportunities and how organization can compete in new pattern of competition due to environmentalism. Outcomes of research meet the established objective. Except one hypothesis all results went in favor of prosed hypothesis of study. This research proposed a model of organizational identity that improve green competitive edge and green innovation performance. With the view of organizational identity, organizational environmental culture and environmental leadership provide source for identity- building which leads towards green competitive edge and green innovation performance. The concept of “green organizational identity” is applied. Results proved that green organizational identity partially mediate relationship between it sources and outcomes the relationship in research framework.

This study revealed that “environmental organizational culture” and “environmental leadership” just not have positive impact on “green organizational identity” but also have positive impact on “green innovation performance” and “green competitive edge. And it is conclude that organizations should focus on enhancement of environmental culture and environmental leadership, which will not only create effects on green organizational identity.
In difference analysis it is also found that large organization have more competitive advantage as compare to SMEs, because large organization get advantage due to firm size and these organization also possess scope and scale of economies that give advantage over SMEs. The framework of this study view organizational identity from green dimension that will provide support to organization in the latest trend of environmentalism which demands for “sustainable development”. Most of Pakistani organization are SMEs, which have deficiency of resources and for this reason they cannot fulfil the environmental protection laws and regulation. Organization failure to comply with these regulation can provide serious damage. This study found that in manufacturing industry of Pakistan it is necessary to establish environmental organizational culture and environmental leadership which not only give organization “green identity” but also leads green competitive advantage and improvement in green innovation.

Contribution
This research has contributed in both theory and practices. First contribution is made in literature and the theory of green organizational identity by explaining its relationship with different variable on the basis of result and how the organizational identity concept is involve in environmental management. Second contribution is related to organizational practices and literature, this study shows positive impact of environmental organizational culture and “environmental leadership” on green organizational identity, green competitive edge and green innovation performance. That will assist the manufacturing industries of Pakistan to achieve the goal of sustainable development in growing environmental challenges. Third theoretical contribution of study is defining the mediating role of organizational identity. Which state that “green organizational identity” partially mediate relationship of, environmental organizational culture to competitive advantage and green innovation performance. “Green organizational identity” also partially mediate relationship of, environmental leadership to competitive advantage and green innovation performance. Fourth theoretical and practical contribution of study indicates that in SMES of Pakistan have low environmental culture, environmental leadership, green competitive edge and green innovation as compared to large organization. For SMEs it necessary to raise culture and leadership related to environmental concerns so they can enjoy the benefits of competitive advantage and green innovation even with few resources.

Limitations
This study faced certain limitations including short time period and lack of resources. First limitation was raised due to short span of time that bounded our study in design selection. Because in few months longitudinal study was not possible therefore cross-sectional study was carried out. Second limitation was lack of resources because of it data collection was not possible from all cities of Pakistan.

Recommendation for Future
This study tested proposed hypothesis by cross sectional research design so Future researcher should focus on longitudinal research design. Because in cross-sectional study change in organizational identity and its effects on dependent variable in different phase of development. The change can only determine with longitudinal study. Upcoming study may also focus on specific manufacturing industry like textile, electronics etc. This study was conducted on manufacturing industry of Pakistan so, further research should be conducted on other country.

REFERENCES


