Chapter 5: Identification of Performance Variables for PSASVs
5.1 Performance Variables in PSASV Industry

Industry competition at different levels and the value chain analysis of IT industry have brought out different factors impacting the performance of the firms. However, the segment specific factors determining performance and providing the required source of competitive advantage are not well pronounced. These factors can primarily be classified into two categories i.e., internal factors or RBV (Resource Based View) and external factors or MSV (Market Structure View) as indicated. The first sets of factors are internal to the organization. The other set of factors are dependent on external entities and are mostly out of control for the services vendor organization. Based on secondary literature reviews and interviews with the industry experts, the broad areas that affect package software services vendors’ strategy formulations turn out to be environment, financials, people, processes, structure, governance and technology etc (Rangarajan and Tiwari 2014). Explicit influencing factors coming out of the literature are indicated in Table 5.1.

Table 5.1: Internal Factors influencing the Strategy formulation and working of the Packaged Software Application Services Vendors

<table>
<thead>
<tr>
<th>No.</th>
<th>Factor</th>
<th>Area</th>
<th>Influencing factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Environment</td>
<td>Financial considerations (Cost, Profitability etc.) (Moore 2001)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>People</td>
<td>Skill development (Segars and Hendrickson 2000)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Process</td>
<td>Pre-sales solutions (Altaf and Schuff 2010)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Structure / Governance</td>
<td>Accessibility - Multi locations Operations (Lee and William 2003)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Structure / Governance</td>
<td>Geographical Locations (Osorio, Dutta and Lanvin 2013)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Organization structure</td>
<td>Organization structure (Raymond, Charles, Alan and Henry 1998)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Technology</td>
<td>Customization and Development Process (Kumar 2013)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Innovation (Han 2007)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Product Related Factors (Quality, Variety etc.) (Christopher; James and Gary 2012)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Rangarajan and Tiwari, 2014
<table>
<thead>
<tr>
<th>No.</th>
<th>Factor</th>
<th>Area</th>
<th>Influencing factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>External</td>
<td>Environment</td>
<td>Economic Conditions and Business Environment (Osorio, Dutta and Lanvin 2013)</td>
</tr>
<tr>
<td>11</td>
<td>External</td>
<td>Government</td>
<td>Regulations, Legislations and Policy (Osorio, Dutta and Lanvin 2013)</td>
</tr>
<tr>
<td>12</td>
<td>External</td>
<td>Industry</td>
<td>Dynamics (Harreld 2001)</td>
</tr>
<tr>
<td>13</td>
<td>External</td>
<td>Local</td>
<td>Issues (Richard 1999)</td>
</tr>
<tr>
<td>14</td>
<td>External</td>
<td>Mergers</td>
<td>Acquisitions (Dollinger 1990)</td>
</tr>
<tr>
<td>15</td>
<td>External</td>
<td>Other</td>
<td>Markets and players (Gartner Survey 2013)</td>
</tr>
<tr>
<td>16</td>
<td>External</td>
<td>Social</td>
<td>and Demographic Factors (Osorio, Dutta and Lanvin 2013)</td>
</tr>
<tr>
<td>17</td>
<td>Financials</td>
<td>Licensing</td>
<td>Costs (Guy and Celeste 2010)</td>
</tr>
<tr>
<td>18</td>
<td>People</td>
<td>Cultural</td>
<td>Issues and Knowledge Gap (Leidner and Kayworth 2006)</td>
</tr>
<tr>
<td>19</td>
<td>People</td>
<td>Process</td>
<td>Changes in the sales process (Debra and Ben 2010)</td>
</tr>
<tr>
<td>20</td>
<td>People</td>
<td>Product</td>
<td>Process (Gartner Survey 2013)</td>
</tr>
<tr>
<td>21</td>
<td>Structure</td>
<td>Globalization</td>
<td>related factors (World class IT, Knowledge of English etc.) (Karimi, Gupta and Somers 1996)</td>
</tr>
<tr>
<td>22</td>
<td>Governance</td>
<td>Role of</td>
<td>Industry organization i.e. NASSCOM (NASSCOM website)</td>
</tr>
<tr>
<td>23</td>
<td>Governance</td>
<td>Structure</td>
<td>and Governance - Alliances, Partnership, Vendors etc. (S Sarker, S Sarker, and Sahaym, 2012)</td>
</tr>
<tr>
<td>24</td>
<td>Technology</td>
<td>Data Protection</td>
<td>(Min, Daniel and Rao 2011)</td>
</tr>
<tr>
<td>25</td>
<td>Technology</td>
<td>Technology</td>
<td>(Subhankar 2012)</td>
</tr>
</tbody>
</table>

Source: Rangarajan and Tiwari, 2014
5.2 Identification of Factors (Internal and External) affecting the PSASVs - The quantitative construct

As part of the questionnaire based survey, a number of questions were asked to sample respondents regarding the internal and external factors affecting the PSASV industry. Subsequently, Exploratory Factor Analysis and Principle Component Analysis yielded a total of 12 factors as shown in figure 5.1. These 12 factors consist of 6 internal factors and 6 external factors. Correlation analysis between the dependent variables (Strategic Focus Attributes) and independent variables (Internal and External) indicated significant correlation of all the independent variables with the dependent variables with the exception of government regulations, legislations and policy related variables.

**Figure 5.1: Factors affecting the PSASVs**

<table>
<thead>
<tr>
<th>Internal factors (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Organization Structure</td>
</tr>
<tr>
<td>• Financial consideration (Cost, Profitability etc.)</td>
</tr>
<tr>
<td>• Skill Development</td>
</tr>
<tr>
<td>• Customization and Development process</td>
</tr>
<tr>
<td>• Product process and innovations, and</td>
</tr>
<tr>
<td>• Pre-Sales Approach</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>External factors (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Technology and Data Protection</td>
</tr>
<tr>
<td>• Country / Region specific Local Issues,</td>
</tr>
<tr>
<td>• Structure and Governance (Alliances, Partnership, Vendors etc.)</td>
</tr>
<tr>
<td>• Social and Demographic Factors</td>
</tr>
<tr>
<td>• Global Economic Conditions and Business Environment, and</td>
</tr>
<tr>
<td>• Quality of Customers</td>
</tr>
</tbody>
</table>

5.2.1 Exploratory Factor Analysis to identify influencing factors / variables

Factor Analysis and Principal Component Analysis method have been used to determine the variances. Eigenvalues associated with each linear factor before and after extraction and also after rotation has been observed. Before extraction, the SPSS has identified multiple linear factors within data set. The Eigenvalues associated with each factor represents the variance explained by a particular linear component. The same is also represented in terms of the variance explained by one particular factor with respect to the total variance. Subsequently, the Eigenvalues of the factors for rotation sums of squared loadings are observed. Rotation
has the effect of optimizing the factor structure and one consequence is that relative importance is equalized.

The same analysis is also then validated by the scree plot of the factor analysis. The scree plot graphs the Eigenvalue against the factor number. Factors are considered till the plot line is almost flat because each successive factor accounts for smaller amounts of the total variance after that.

The result of the rotated component matrix, which is a matrix of the factor loadings of each variable onto each factor, suggests the factors for analysis.

5.2.1.1 Total Variance Explained – Independent Variables
Table 5.3 lists the Eigenvalues associated with each linear factor before and after extraction and also after rotation. Before extraction, the SPSS has identified a total of 98 linear factors within data set. The Eigenvalues associated with each factor represents the variance explained by the particular linear component. The same is also represented in terms of the variance explained by one particular factor with respect to the total variance. If we see the factor loadings after extraction, then 12 factors are selected based on the Eigenvalues which explain approximately 86% of the total variance. Out of these 12 factors, factor 1 explains highest variance, which is 17.91% while other 11 factors explains 13.39%, 11.88%, 10.63%, 9.47%, 6.83%, 5.08%, 3.40%, 2.34%, 1.96%, 1.73%, 1.47% respectively.

In the final part of the table (labelled as Rotation sums of squared loadings), the Eigenvalues of the factors are displayed. Rotation has the effect of optimizing the factor structure and one consequence of the rotation for the data is that the relative importances of the 12 factors are equalized. Before rotation, factor 1 accounted for considerably more variance (16.9% ) than the remaining factors however after rotation the explanatory power of other 11 factors have increased and these factors explain 11.35%, 10.56%, 8.81%, 8.69%, 8.43%, 5.83%, 4.60%, 3.39%, 2.63%, 2.45%, 2.44% variance respectively.
The same analysis can also be confirmed by seeing the scree plot of the factor analysis shown in Figure 5.2. The scree plot graphs the Eigenvalues against the corresponding factor numbers. After the 12th factor, the plot line is almost flat, meaning that each successive factor is accounting for smaller and smaller amounts of the total variance. Hence, a total of 12 factors (Both external and Internal) were selected for the study.
The result of rotated component matrix, which is a matrix of the factors loadings for each variable onto each factor, suggests the following twelve factors i.e. Customization and development process, Technology and Data Protection, Product Process and Innovations, Country / Region specific Local Issues, Financial consideration (Cost, Profitability etc.), Organization Structure, Skill Development, Quality of Customers, Structure and Governance (Alliances, Partnership, Vendors etc.), Social and Demographic Factors, Global Economic Conditions and Business Environment, and Pre-Sales Approach. These 12 factors are further divided into i.e. internal and external factors. The six internal factors are Organization Structure, Financial consideration (Cost, Profitability etc.), Skill Development, customization and development process, product process and innovations, and pre-sales approach and the 6 external factors are Technology and Data Protection, Country / Region specific Local Issues, Structure and Governance (Alliances, Partnership, Vendors etc.), Social and Demographic Factors, global economic conditions and business environment plus quality of customers.

5.2.1.2 Total Variance Explained – Dependent Variables
Table 5.4 lists the Eigenvalues associated with each linear factor before extraction. Before extraction, the SPSS identified a total of 3 linear factors within the data set. The Eigenvalues associated with each factor represents the variance explained by the particular linear component. The same is also represented in terms of the variance explained by one particular
factor with respect to the total variance. If we see the factor loadings before extraction, then 1 factor is selected based on the Eigenvalues which explain approximately 74.5% of the total variance. This factor, referred as ‘Strategic Focus Attributes’ (SFA) here onwards, relates to Revenue of the Firm, Profit Margin, Customer Satisfaction and Employee Satisfaction.

**Table 5.4: Total Variance Explained – Dependent Variables**

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>% of Variance</td>
</tr>
<tr>
<td>1</td>
<td>2.234</td>
<td>74.468</td>
</tr>
<tr>
<td>2</td>
<td>0.703</td>
<td>23.426</td>
</tr>
<tr>
<td>3</td>
<td>0.063</td>
<td>2.106</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.

5.2.1.3 Final Variables for analysis

Table 5.5 lists the identified dependent and independent factors for the study.

**Table 5.5: Final Factors for further study**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Factor Type</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Independent (Internal)</td>
<td>Organization Structure, Financial Consideration (Cost, Profitability etc.), Skill Development, Customization and Development process, Product Process and Innovations, and Pre-Sales Approach</td>
</tr>
<tr>
<td>2</td>
<td>Independent (External)</td>
<td>Technology and Data Protection, Country / Region specific Local Issues, Structure and Governance (Alliances, Partnership, Vendors etc.), Social and Demographic Factors, Global Economic Conditions and Business Environment, Quality of Customers.</td>
</tr>
<tr>
<td>3</td>
<td>Dependent</td>
<td>Strategic Focus Attributes (Revenue of the Firm, Profit Margin, Customer Satisfaction, Employee Satisfaction)</td>
</tr>
</tbody>
</table>
Results and Discussion

5.2.1.4 Correlation amongst Strategic Focus Attributes, Internal Factors and External Factors

Correlation significance amongst independent variables and the dependent variable has been identified on the basis of the Pearson correlation coefficient at a significant confidence interval allowed as per the statistical standards. Appendix V presents the correlation amongst 12 variables (internal and external) and the strategic focus attributes related variable. The Customization and Development Process variable is having a Pearson correlation coefficient of -0.183 which is significant at 95% confidence interval (because the p value is less than 5% level of significance value). Similarly, other variables i.e. Technology and Data Protection, Product Process and Innovations, Country / Region specific Local Issues, Financial consideration (Cost, Profitability etc.), Organization Structure, Skill Development, Pre-sales Approach, Structure and Governance (Alliances, Partnership, Vendors etc.), Social and Demographic Factors, Global Economic Conditions and Business Environment, Government Regulations, Legislations and Policy are having correlation coefficient of 0.165, 0.342, 0.337, 0.586, -0.197, 0.222, -0.254, 0.153, 0.207, -0.022 respectively. Except Government Regulations, Legislations and policy, all other variables have significant correlation with strategic focus related attributes.

5.2.2 Regression Analysis

Regression analysis returns the R, R^2 and adjusted R^2 values. The R value represents the degree of correlation. The R^2 and adjusted R^2 values indicate the goodness of fit of the regression model.

ANOVA table indicates whether the regression model predicts the outcome variable significantly well. The value of F-statistics and level of significance conclude whether the model is correctly defined or not.

The Beta coefficient of correlation for each independent variable indicates the explanatory power of the variable in explaining the dependent variable.

The following regression equation is estimated for the research.
\[ SFA = \alpha + \beta_1 \text{customization and development process} \]
\[ + \beta_2 \text{Technology and Data Protection} \]
\[ + \beta_3 \text{Product Process and Innovations} \]
\[ + \beta_4 \text{CountryRegion specific Local Issues} \]
\[ + \beta_5 \text{Financial consideration (Cost, Profitability etc.)} \]
\[ + \beta_6 \text{Organization Structure} + \beta_7 \text{Skill Development} \]
\[ + \beta_8 \text{Quality of Customers} \]
\[ + \beta_9 \text{Structure and Governance (Alliances, Partnership, Vendors etc.)} \]
\[ + \beta_{10} \text{Social and Demographic Factors} \]
\[ + \beta_{11} \text{Global Economic Conditions and Business Environment} + \beta_{12} \text{Pre-Sales Approach} \]

Where:
SFA is strategic factors related attributes.
\(\alpha\) is the constant term of regression equation.
\(\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8, \beta_9, \beta_{10}, \beta_{11}, \beta_{12}\) are the coefficients of the independent variables.

Table 5.6 presents the model summary of regression. The table provides the \(R\), \(R^2\) and adjusted \(R^2\) values. In this table the \(R\) value is 0.926, which represents high degree of correlation. The \(R^2\) and adjusted \(R^2\) value indicates the goodness of fit of the regression model. The adjusted \(R^2\) value of 0.848 shows that 84.8% of the variation in the dependent variable, ‘SFA’, can be explained by the 12 independent variables i.e., ‘Quality of Customers, Structure and Governance (Alliances, Partnership, Vendors etc.), Country / Region specific Local Issues, Customization and Development Process, Social and Demographic Factors, Product Process and Innovations, Financial consideration (Cost, Profitability etc.), Technology and Data Protection, Skill Development, Global Economic Conditions and Business Environment, Organization Structure, Pre-Sales Approach.'
Table 5.6: Regression Summary

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Change Statistics</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>R</td>
<td>R Square</td>
</tr>
<tr>
<td>1</td>
<td>.926</td>
<td>0.857</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Quality of Customers, Structure and Governance (Alliances, Partnership, Vendors etc.), Country / Region specific Local Issues, Customization and Development Process, Social and Demographic Factors, Product Process and Innovations, Financial consideration (Cost, Profitability etc.), Technology and Data Protection, Skill Development, Global Economic Conditions and Business Environment, Organization Structure, Pre-Sales Approach

b. Dependent Variable: Strategic Focus Attributes (SFAs)

Table 5.7 is the ANOVA table which indicates that the regression model predicts the outcome variable significantly well. The value of F-statistics is 93.14, which is significant at 5% level of significance (the sign value is less than 0.05). Thus we can conclude that model is correctly defined.

Table 5.7: ANOVA Table

<table>
<thead>
<tr>
<th>ANOVAa</th>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regression</td>
<td>169.765</td>
<td>12</td>
<td>14.147</td>
<td>93.194</td>
<td>.000b</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>28.235</td>
<td>186</td>
<td>0.152</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>198</td>
<td>198</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Strategic Focus Attributes (SFAs)
b. Predictors: (Constant), Quality of Customers, Structure and Governance (Alliances, Partnership, Vendors etc.), Country / Region specific Local Issues, Customization and Development Process, Social and Demographic Factors, Product Process and Innovations, Financial consideration (Cost, Profitability etc.), Technology and Data Protection, Skill Development, Global Economic Conditions and Business Environment, Organization Structure, Pre-Sales Approach

The coefficient of each independent variable is presented in the table 5.8. Except for Pre-Sales Approach variable, all other independent variables significantly explain the variation in
Table 5.8: Coefficients of independent variable

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>(Constant)</td>
<td>0</td>
<td>0.028</td>
<td>-0.007</td>
<td>0.995</td>
<td>-0.055</td>
</tr>
<tr>
<td>Customization and Development Process</td>
<td>-0.183</td>
<td>0.028</td>
<td>-0.183</td>
<td>-6.612</td>
<td>0</td>
</tr>
<tr>
<td>Technology and Data Protection</td>
<td>0.164</td>
<td>0.028</td>
<td>0.165</td>
<td>5.945</td>
<td>0</td>
</tr>
<tr>
<td>Product Process and Innovations</td>
<td>0.341</td>
<td>0.028</td>
<td>0.342</td>
<td>12.354</td>
<td>0</td>
</tr>
<tr>
<td>Country / Region specific Local Issues</td>
<td>0.336</td>
<td>0.028</td>
<td>0.337</td>
<td>12.164</td>
<td>0</td>
</tr>
<tr>
<td>Financial consideration (Cost, Profitability etc.)</td>
<td>0.584</td>
<td>0.028</td>
<td>0.585</td>
<td>21.139</td>
<td>0</td>
</tr>
<tr>
<td>Organization Structure</td>
<td>-0.195</td>
<td>0.028</td>
<td>-0.193</td>
<td>-6.976</td>
<td>0</td>
</tr>
<tr>
<td>Skill Development</td>
<td>0.221</td>
<td>0.028</td>
<td>0.221</td>
<td>7.987</td>
<td>0</td>
</tr>
<tr>
<td>Quality of Customers</td>
<td>-0.072</td>
<td>0.028</td>
<td>-0.071</td>
<td>-2.573</td>
<td>0.011</td>
</tr>
<tr>
<td>Structure and Governance (Alliances, Partnership, Vendors etc.)</td>
<td>-0.253</td>
<td>0.028</td>
<td>-0.254</td>
<td>-9.176</td>
<td>0</td>
</tr>
<tr>
<td>Social and Demographic Factors</td>
<td>0.152</td>
<td>0.028</td>
<td>0.153</td>
<td>5.513</td>
<td>0</td>
</tr>
<tr>
<td>Global Economic Conditions and Business Environment</td>
<td>0.206</td>
<td>0.028</td>
<td>0.206</td>
<td>7.445</td>
<td>0</td>
</tr>
<tr>
<td>Pre-Sales Approach</td>
<td>-0.021</td>
<td>0.028</td>
<td>-0.022</td>
<td>-0.778</td>
<td>0.438</td>
</tr>
</tbody>
</table>

1. Dependent Variable: Strategic Focus Attributes (SFAs)

the dependent variable. The coefficient of variable ‘Customization and Development Process’ is -0.183 (which is significant at 95% confidence interval) indicating that if the independent variable
(Customization and Development Process) will change by 1 unit then the dependent variable will change by 0.183. Similarly, the coefficient of other explanatory variables are as follows; Technology and Data Protection (0.164), Product Process and Innovations (0.341), Country / Region specific Local Issues (0.336), Financial consideration (0.584), Organization Structure (-0.195), Skill Development (0.221), Quality of Customers (-0.072), Structure and Governance (-0.253), Social and Demographic Factors (0.152), Global Economic Conditions and Business Environment (0.206) and Pre-Sales Approach (-0.021). Amongst all these variables, financial consideration (Cost, Profitability etc.) is having highest coefficient which is indicating its high explanatory power in explaining the dependent variable.

The Reliability Statistics is shown in table 5.9 - Cronbach’s Alpha for the research variables.

**Table 5.9: Reliability Statistics**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variable</th>
<th>Number of Items</th>
<th>Cronbach's Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customization and Development Process</td>
<td>10</td>
<td>0.791</td>
</tr>
<tr>
<td>2</td>
<td>Technology and Data Protection</td>
<td>11</td>
<td>0.761</td>
</tr>
<tr>
<td>3</td>
<td>Product Process and Innovations</td>
<td>12</td>
<td>0.836</td>
</tr>
<tr>
<td>4</td>
<td>Country / Region specific Local Issues</td>
<td>8</td>
<td>0.705</td>
</tr>
<tr>
<td>5</td>
<td>Financial consideration (Cost, Profitability etc.)</td>
<td>12</td>
<td>0.764</td>
</tr>
<tr>
<td>6</td>
<td>Organization Structure</td>
<td>9</td>
<td>0.814</td>
</tr>
<tr>
<td>7</td>
<td>Skill Development</td>
<td>8</td>
<td>0.638</td>
</tr>
<tr>
<td>8</td>
<td>Quality of Customers</td>
<td>12</td>
<td>0.663</td>
</tr>
<tr>
<td>9</td>
<td>Structure and Governance (Alliances, Partnership, Vendors etc.)</td>
<td>12</td>
<td>0.689</td>
</tr>
<tr>
<td>10</td>
<td>Social and Demographic Factors</td>
<td>9</td>
<td>0.667</td>
</tr>
<tr>
<td>11</td>
<td>Global Economic Conditions and Business Environment</td>
<td>10</td>
<td>0.714</td>
</tr>
<tr>
<td>12</td>
<td>Pre-Sales approach</td>
<td>9</td>
<td>0.641</td>
</tr>
</tbody>
</table>

The computation of Cronbach’s alpha is based on the number of items on the survey and the ratio of the average inter-item covariance to the average item variance. Under the assumption that the item variances are all equal, this ratio simplifies to the average inter-item correlation. Table 5.9 shows that the Cronbach alpha value for all 12 variables which are used to conduct the study. The Cronbach's alpha for variables; Customization and Development Process,
Technology and Data Protection, Product Process and Innovations, Country / Region specific Local Issues, Financial consideration (Cost, Profitability etc.), Organization Structure, Skill Development, Quality of Customers, Structure and Governance (Alliances, Partnership, Vendors etc.), Social and Demographic Factors, Global Economic Conditions and Business Environment, Pre-Sales approach are 0.791, 0.761, 0.836, 0.705, 0.764, 0.814, 0.638, 0.663, 0.689, 0.667, 0.714, 0.641 respectively. Out of 12 variables, 7 variables are having the Cronbach’s alpha value of more than 0.7 which is considered very well for the study. Other 5 variables are having the Cronbach’s alpha value in the range of 0.6 to 0.7, which is in the acceptable range for further analysis. Thus, it can be concluded that the variables used in the study are reliable.
5.3 The Quantitative Construct: Conclusion

Based on the results, the PSASVs tend to be Strategizing around the Strategic focus attributes consisting of Revenue of the Firm, Profit Margin, Customer Satisfaction and Employee Satisfaction.

And, the key variables affecting the performance of the PSASVs are Customization and Development, Technology and Data Protection, Product Process and Innovations, Country / Region specific Local Issues, Financial considerations, Organization Structure, Skill Development, Pre-Sales Approach, Structure and Governance, Social and Demographic Factors, Global Economic Conditions and Business Environment and Quality of Customers not necessarily in the given order. Financial considerations involving Cost of administering the services and Profitability influenced by the external factors is having the highest say in the strategic direction of the organization.

5.4 PSASV: Identified variables explained with key attributes

Following sources have been leveraged to identify the attributes of the identified variables for research: Literature, Information available on PSSV website/Product website and detailed interviews conducted with 20 random respondents (experts and senior consultants). The inputs from respondents started repeating 50% after 5 respondents and 90% after 10th respondents. So, the input from 20 largely covers the attributes of the variables how it is perceived in the PSASV industry.

5.4.1 Organisation Structure

In order to provide the best mix of price and quality of service, PSASVs typically operate in a matrix organization structure, which can be divided into 2 parts: Functional organization structure and Geographical organization structure. Sample structure has been shown in figure 5.3.

Functional structure consists of verticals covering various industries like Manufacturing, Retail, Telecommunication etc. and are at the top tier of the service delivery structure. Packaged services form part of the horizontals and operate as centres of excellence for solution and resourcing to the verticals for the projects.
From a geographical perspective this can be showcased as onshore, offshore and near shore locations.

Services are delivered in the onshore-near shore-offshore mode to leverage the right skills at the right location at lesser cost. This is termed as Global Delivery Model (GDM) by the PSASVs and has been shown in figure 5.4. Under GDM, PSASVs take end to end accountability and ownership while ensuring project and deliverable quality at a minimal cost. Customers have increasingly begun to demand quality, ownership and accountability in addition to outsourced work at the same (or lower) price.

**Figure 5.4: Services Delivery – Location mix**

Onshore locations are typically those where the customer operates and PSASV resources are co-located with the customer (or in the same area as the customer). Near shore locations are those where the PSASV has operations in locations which are near to the customer’s geography of operation. For instance, for a customer located in Europe, Egypt or Turkey would be near shore locations for a PSASV to locate its support centres. Offshore locations
are typically those where the customer has no presence and are chosen because of lower costs of operation, large talent pool, availability of skilled resources, knowledge of English/customer’s language, good IT infrastructure and so on. India is a typical offshore location that possesses most of these qualities.

Advances in communication technology (emails, telephony, computing) have made location of support operations largely seamless in today’s rapidly changing world.

Multiple locations of operation also have advantages in terms of disaster recovery. If one operational location closes down for any reason, others can take over seamlessly.

PSASVs have seen consolidation over time with a few big players adopting the GDM and dominating the industry space. These big players are now able to set prices and have better bargaining power compared to smaller, niche players in the industry.

**Key factors to be considered:**

**Geographical Spread:**

Geographical spread helps PSASVs engage a wider range of required skills. This also serves as mitigation for risks arising out of disasters. Culture is part of the business environment for a particular geography or location of operation and is linked to the ‘way of doing things in a specific context and generally acceptable behaviour in that context’. What is relevant and accepted in one culture may be irrelevant and unacceptable in another. PSASVs adapt themselves to function in a particular way best suited to the culture of the market of operation.

**Skilled Manpower availability across different Geography:**

Being primarily a knowledge based industry, the IT industry depends heavily on availability of skilled manpower and conducive laws to thrive. Customer would like to see the same quality of deliverables from all the delivery locations and thus the choice of location for any near shore office becomes quite critical. However for most of the onshore roles, PSASVs relocate offshore resources to onshore roles to retain consistency in delivery.

**5.4.2 Financials:**

Like any other industry, the financial value proposition (and, hence a strategic element) for a PSASAV is to reduce cost and improve profitability without compromising on the quality of the service.
Increasing costs and decreasing billing rates make it extremely challenging for the PSASVs to deliver value on a continuous basis. Automation, optimization of processes and innovative models are applied by the PSASVs to ensure sustenance.

Value proposition is the promise of value to be delivered and a belief from the customer that value will be experienced. A value proposition can apply to an entire organization, or parts thereof, or customer accounts, or products or services. Creating a value proposition is a part of business strategy. Kaplan and Norton say ‘Strategy is based on a differentiated customer value proposition. Satisfying customers is the source of sustainable value creation.’

PSASVs have their own value propositions for their customers and they tailor their product offerings based on customer needs. This is typically based on a review and analysis of the benefits, costs and value that each organization, they are serving, can deliver to its customers, prospective customers, and other constituent groups within and outside the organization.

The cost of gaining a new customer is between 4 to 10 times more than retaining an old customer. Customer retention is the mantra of the successful business. New customer acquisition is costlier while retention is what ultimately builds the foundation of a company that is positioned for growth. Thus, all PSASVs focus to retain and grow their existing customer base. They use concepts of Cross-selling and up-selling to help maintain and improve margins. Quality and cost of service delivery also remains a crucial factor for customer retention. Pre-existing loyalty is present for existing customers and referrals can also be provided by existing customers. It also improves lifetime value of PSASV and helps in brand building.

Two main areas from a cost perspective of customer are TCO (Total Cost of Ownership) and ROI (Return on investment).

TCO is a type of calculation designed to help consumers and enterprise managers assess both direct and indirect costs and benefits related to the purchase of any IT component. The intention is to arrive at a final figure that will reflect the effective cost of purchase, all things considered. This typically covers Company size (sales, profitability, number of end users, type of end users), number of computers per knowledge worker, complexity of internal operations, historical capital spending, current economic/marketplace condition, competitive initiatives, demands from customers or suppliers, merger and acquisition activity, age of infrastructure, central versus decentralized IT operations, number of platforms, application complexity, application age, central versus decentralized purchasing, standardization, chargeback mechanism employed and so on.
ROI is the concept used by Customer to calculate the benefit from the investment made while implementing any IT solution. A high ROI means the investment gains compare favourably to investment cost. In purely economic terms, it is one way of considering profits in relation to capital invested.

One of the key factors that impacts the Reduction in TCO and improved ROI is the ratio to work distribution between different geographical location (Onshore, Near shore and Offshore) as depicted in figure 5.5 In order to optimise costs, PSASVs use different combinations during different stages of delivery.

**Figure 5.5: Ratio of work distribution between different geographical locations across phases**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Concept</th>
<th>Design</th>
<th>Build</th>
<th>Test</th>
<th>Deliver</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
<td>25%</td>
<td>50%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Creation by Author

PSASVs also consider different type of financial engagement with the customers based upon the individual customer’s need. Some of the most frequently used models are reflected in Table 5.10.

**Table 5.10: Billing Models used by PSASVs**

<table>
<thead>
<tr>
<th>Billing Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Price</td>
<td>A fixed price (FP) model is also called a Lump Sum model and is an ideal pricing mechanism for projects with a clear scope, established project management methodologies, and a stable set of requirements. Any additional requests or changes in scope are considered as additional order and thus charged extra.</td>
</tr>
<tr>
<td>Time &amp; Material</td>
<td>Time and Materials (T&amp;M) model is a popular pricing model typically used by PSASV for projects that span a long period of time. Also referred to as Cost and Materials (C&amp;M) model, in this method usually, work is done at the client organization's premises. The client is responsible for clearly defining the scope of work as well as overseeing the deliverables.</td>
</tr>
</tbody>
</table>
### Cost-reimburse model

In cost-reimbursable or cost-plus models, the PSASV is compensated for the expenses incurred, up to a prescribed limit and an additional balloon payment to allow for some profit. Cost-reimbursable model differs from fixed-price model in that the service provider is compensated to the extent prescribed in the contract, regardless of the nature of expenses incurred.

### Hybrid

Any combination of usage of 2 or more from above models

Source: Creation by Author

#### 5.4.3 Product Process and Innovations

Almost all Product Vendors come out with upgrades to existing products and/or brand new products to address changing business requirements. Older product versions are regularly phased out and newer versions enter the IT landscape. This ensures that innovation keeps happening and new technologies (and corresponding benefits such as efficiency) are passed on to the customers. This also ensures that PSASVs are constantly in sync with the innovations and incorporating latest developments into their framework. Business processes and ways of working also keep changing with time. As businesses evolve and move up the value chain, PSASVs who provide application services for such businesses also need to adapt their offerings to reflect changing needs. New releases ensure such technical and process changes are incorporated in the end product. Upgrades are a consequence of such releases and PSASVs have to stay updated about it to help their customers.

Hence, PSASVs innovate at multiple levels. One, in collaboration with the Product vendor they participate in developing and testing new features and functionalities in the product. Two, they support the Product vendor as well as customer in implementing the beta products as a ramp up partner. Many PSASVs work towards joint ‘go to market’ approach for innovative features with the product vendors. Last but not the least; they can innovate in the area of the delivery management to pass on the optimization benefits to the customer.

As described earlier a value chain is a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable product or service for the market. The concept comes from business management and was first described by Michael Porter (1985) - Competitive Advantage: Creating and Sustaining Superior Performance. Moving up the value chain in the PSASV context refers to providing more value added services and products to end customers and ultimately transforming into a trusted partner for such customers – rather than a mere IT vendor. When this happens, customers automatically get involved in the product development process and PSASVs automatically deliver services suited to the customer’s unique needs.
Innovative adaptation is required in the current scenario to the new technological advancements stated below to stay in the game for any PSASV.

**New dimension Products / Technology - Mobility, cloud**

With technology changing at a rapid pace (including computing power doubling as time goes on), several new advancements have been made in areas such as mobility, cloud computing, in memory analytics and big data. All of these have been made possible by the increase in computing power. The rise of mobility and mobile apps have led to several hitherto laptop/desktop based functionalities being exposed on mobile phones and other devices. Cloud based computing has made subscription based services possible and may play a large role in bringing down software licensing fees. In memory analytics and columnar databases (instead of conventional row based databases) make very large data computations possible and reports can be made available in seconds versus the earlier hours or days. PSASVs need to gear up to provide the support to these features to their customers accordingly. These features act as differentiators early on but as time passes, they become the norm rather than the exception. Bigger players such as SAP and Oracle have already started incorporating these features in their product suites.

**New functionalities in the product:**

Business processes and ways of working keep on changing with time. As businesses evolve and move up the value chain, the IT vendors and PSASVs who provide services for such businesses also need to adapt their offerings to reflect changing needs. Developments in the IT sphere also impact such changes e.g. the usage of mobile devices, cloud computing, big data, in memory computing and so on. PSASVs need to tailor their services to offer such functionalities accordingly.

Software Development (also known as application development, software design, designing software, software application development, enterprise application development, or platform development) is the development of a software program, application or product. The term ‘software development’ may be used to refer to the activity of computer programming, which is the process of writing and maintaining the source code, but in a broader sense of the term it includes all that is involved between the conception of the desired software through to the final manifestation of the software, ideally in a planned and structured process. Therefore, software development may include research, new development, prototyping, modification, reuse, re-engineering, maintenance, or any other activities that result in software products.
5.4.4 Skill Development

Resource cost in the form of salaries and wages is a very big cost component for PSASVs and have a direct impact on the margin (as part of direct costs). Thus, there has been a concentration of PSASVs set up in low cost and high quality geographies such as India and SE Asia. Such geographies are typically English speaking and have a large talent pool of resources available at relatively cheaper cost (than the USA and Europe for example), have good educational setups churning out quality fresh graduates every year who then form part of the job pool. Having a large pool of resources to choose from is beneficial for the PSASVs as they can then hire best-in-class talent for the job at hand and gain competitive advantage there from.

Knowledge of English:

English as a language skill has now become mandatory across the IT globe. Almost all business transactions and developments in IT occur in English except for a minority of local delta changes in regional languages. English is a core skill needed by almost all new joiners in the IT industry. Geographies such as India and SE Asia have become IT powerhouses on the back of the English speaking capabilities of their vast legions of developers joining the IT workforce every year. PSASVs are no different and this skill is a basic/core skill in almost all job profiles in the PSASV industry.

Education System:

A vibrant educational system ensures a consistent and quality flow of graduates entering the job pool. This ensures that the candidates getting recruited as freshers conform to certain norms (communication skills, presentation skills, logical thinking, analytical ability etc.), all of which are essential requirements for the PSASV services. PSASVs normally thrive where such quality graduates are readily available at the right cost to company and with the right skill mix. Recruiting and retaining the right resources then forms another major challenge for PSASVs as the cost of training and scaling up resources in relevant technologies is quite high.

In a PSASV context, modification of packaged software to meet individual requirements is known as Customization or tailoring of the solution to meet customer’s business process needs. Before an enterprise can automate its operations using packaged software, it must first make sure that the software caters to most of the processes it needs to automate. This step is called feasibility analysis. If the software already includes all the necessary capabilities, it is
simply a matter of selecting the correct configuration (often a complex operation in itself). Adding extra capabilities that are not included in the off-the-shelf package involves writing additional software code. This is known as customization.

5.4.5 Customization and Development Process

Customization or Custom developments are typically undertaken by PSASVs in order to address the missing functionalities in the product or to cater to changing business requirements. Standard business processes may need tweaking in certain scenarios that are typical of certain customers. Local legal requirements may change with time, thus needing such developments.

Customization can be divided into the following 3 basic types:

- The first level of customization, known as Individualization, is commonly referred to as ‘customization through configuration.’ Important aspects of corporate-identity such as the corporate logo and corporate colour-scheme should reflect a corporate design. Packaged software provides different options to different user groups. Reports reflect company identity and reflect information necessary to support an organization’s processes, workflow and individuality.

- The second level of customization is Tailoring and represents a stable middle ground for the applications continued ability to evolve. Packaged software comes with built-in assumptions and procedures about organizations’ business processes. These assumptions and procedures seldom match exactly with those of the implementing organization’s existing processes. Therefore, most implementation projects involve some degree of software tailoring so that the software fits current organizational processes. Tailoring may involve module selection, table configuration, or the addition of encapsulated new user functions.

- The third level of customization involves Core Code level Changes and New Custom Software Module additions to packaged software. This level of customization brings with it the complexities of true software development, integration and testing during each revision/upgrade cycle. Customizations at this level frequently undermine the confidence in the packaged software’s integrity and the overall application’s ability to evolve.

Maintaining any customization surely adds to the cost and is ultimately borne by the customer. Care needs to be taken while enhancing the standard processes as well to
ensure that the standard code does not impact the custom code and vice versa. Compatibility of the added change with the existing functions is the key here.

**Customer contribution to the product:**
As business processes evolve and become more complex, so do the tools and products that support such processes. Same is the case for PSASV vendors, their products and their customers who use these products. As customers move up the value chain, their requirements change. PSASVs must be able to adapt to such changing requirements and incorporate them in their services. If customers can properly communicate their business process knowledge and specific requirements to the PSASVs, this process becomes easy. The PSASV may then help vendor to incorporate such changes in the standard product build and make it available to other customers as well. This process benefits everyone in the PSASV ecosystem. This is typically seen in the case of large PSASVs such as SAP and Oracle who work closely with big customers and take their inputs in order to tweak their product offerings according to a particular business scenario.

In general, Product vendors do not advocate high degree of customization as it is difficult to maintain during upgrades. But it is important for the customers to get the localized functionalities. This is where PSASVs play a big role. They help customers develop additional functionalities but try to keep them as close to the standard as possible to facilitate ease of maintenance later on.

**Localization - process and language:**
IT products and services need to be customized according to the local markets being served by them (e.g. local legal compliance). Localization adds to cost as extra functionality must be added to the product or process in order to be compliant with local norms. PSASVs normally come out with support packs, patches or versions for localizing their products as per local requirements. Language requirements are similar in nature – the front end of the product may need to be customized to show the local language.
5.4.6  Pre-Sales Approach

Presales process for PSASV like any other industry, is a process or set of activities normally carried out before a customer is acquired.

In a typical sales cycle the stages are:
1. Contact.
2. Lead / Suspect.

The task of a presales person starts from the initial contact phase and often ends once the customer is acquired i.e. sale is made. In some cases, presales also provides initial or transitional support post sale.

The responsibilities of the presales team differ from organization to organization but in general include Solution Preparation/Proposal based on customers’ requirements, product demonstrations, proof of concept creation, creation of marketing documents and any other activity required to generate business.

The IT Services industry provides a vital and significant role for presales professionals. The role of presales falls right in the middle marrying the customer needs to the (provider) company's services or products. This role is especially crucial in these industries because the products and services are often heavily customizable and also because the requirements of different customers are often unique. The presales professional thus understands what the customer needs, develops an initial view of the solution the customer needs, then tailors the product or service of his company to meet what the customer needs, explains or helps sell this solution to the customer, helps close the deal or sale and often stays on to ensure that the delivery team or product specialists that follow him provide the intended solution.

Presales helps improve the chances of acquiring more business, hence, higher revenue and larger customer base market share.

Pre-Sales Challenges:

Presales challenges typically deal with knowledge issues, over-commitment and failing to understand the customer’s exact requirements on the part of the presales professionals.

Large PSASVs who supply very complex IT systems (SAP and Oracle have evolved beyond mere IT products and qualify to be called full-fledged systems in their own right), often face sales challenges while selling such products to old and new customers. A prime reason for this is the product complexity and very nature of the system, which implies high costs of deployment, licensing, hardware, support, upgrades and so on. Customers have increasingly
begun to question this large cost (bargaining power shift towards customers) and want to be shown quantifiable returns on their investments which can then be showcased to management and stakeholders to justify these large costs. PSASVs have hence come out with customized offerings for SME’s and other niche customers who do not need full-fledged solutions. Cloud based subscription services are such an example. These services are not as expensive as the traditional licensing options currently in use.

5.4.7 Technology & Data Protection:

PSASVs have to keep pace with the technological developments to stay in the competition. This directly relates to their ability to convince customer about the adoption of the new developments and what role the PSASVs can play in that. This means more business, higher revenue, better profitability, greater exposure for the employees and resulted satisfaction, and last but not the least, the satisfied customer.

Cloud, Mobility, In memory computing and Big data are the buzzing technologies today and while product vendors are busy incorporating these into their product, PSASVs are upgrading their knowledge and skill in these areas to serve the customer requirements in these areas.

Technology (from Greek τέχνη, techne, ‘art, skill, cunning of hand’; and -λογία, -logia) is the making, modification, usage, and knowledge of tools, machines, techniques, crafts, systems, and methods of organization, in order to solve a problem, achieve a goal, handle an applied input/output relation or perform a specific function. It can also refer to the collection of such tools, including machinery, modifications, arrangements and procedures. Technologies significantly affect human ability to control and adapt to their natural environments. The term can either be applied generally or to specific areas: examples include construction technology, medical technology, and information technology.

With technology changing at a rapid pace (including computing power doubling as time goes on, availability of smart devices such as mobile phones and tablets, cheaper telephony connectivity, cheaper internet connectivity, deeper penetration of smart devices such as mobile phones), several new advancements have been made in areas such as mobility, cloud computing, in memory analytics and big data. All of these have been made possible by the increase in computing power.

Electronic commerce (EC) is the process of buying, transferring, or exchanging products, services, and/or information via computer networks, including the internet. EC can also be beneficial from many perspectives including business process, service, learning,
collaborative, community. EC is often confused with e-business. PSASV vendors will have to modify their product offerings in order to be compliant with eBusiness aspects as mentioned above e.g. exposing functionality over the web as per customer needs etc.

**Data Protection:**

Information privacy, or data privacy (or data protection), is the relationship between collection and dissemination of data, technology, the public expectation of privacy, and the legal and political issues surrounding them. As Package software products are implemented and used across geographies, data protection concerns occupy prime mind-space for customers. As this issue is very high on the customers’ statutory compliance agenda, PSASVs have to pay equally high attention to this and have to sometimes hire resources to take care of these issues at a very high cost from the market and also put them through continuous training etc.

In the PSASV industry, privacy concerns exist wherever personally identifiable information is collected and stored – in digital form or otherwise. Improper or non-existent disclosure control can be the root cause for privacy issues. Data privacy issues can arise in response to information from a wide range of sources, such as: Healthcare records, Criminal justice investigations and proceedings, Financial institutions and transactions, Biological traits, such as genetic material, Residence and geographic records, Ethnicity and Privacy breach.

**Location-based service and geo-location:**

The challenge in ensuring data privacy is to share data while protecting personally identifiable information. The fields of data security and information security design utilize software, hardware and human resources to address this issue. Also as the laws and regulations related to Data Protection are continuously changing, it is important to keep abreast of any changes in the law and continually reassess the compliance with data privacy and security regulations. While some big service providers like SAP and Oracle offer a strong data protection mechanism, PSASVs have a different problem. Data uploads is one of the key activity during any software package application implementation. Customers provide very sensitive and confidential information that needs to be loaded into the system. However it’s the responsibility of the PSASV to ensure that the resources deployed for this activity are wary of the data and consequences and ensure that the data is not mishandled. Many a times organizations go in for signing of Data Privacy Agreements (DPAs) to have a legal clause attached to ensure data privacy.
Globalization:
Technology has been one of the principal drivers of globalization. Advances in information technology, in particular, have dramatically transformed economic life. Information technologies have given all sorts of individual economic actors - consumers, investors, businesses, valuable new tools for identifying and pursuing economic opportunities, including faster and more informed analyses of economic trends around the world, easy transfers of assets, and collaboration with far-flung partners.

As markets open up further and borders shrink, the playing field is levelled up for old and new entrants in the PSASVs. PSASVs can explore newer markets and enter newer market segments. As the world shrinks, business opportunities increase.

Also liberalization in different growing economies including India has opened up new markets for trade and commerce which is beneficial to all players in the ecosystem including PSASVs. The relaxation of restrictions in trade and commerce allows everyone to compete on a level playing field.

On the flip side, the whole world is exposed to economic shocks and resulting vulnerability. For example, the rest of the world economies did not remain unaffected by a badly performing North American economy during the last decade or so. This has serious impact on the PSASV business. Customers across the globe cut investments in IT systems the moment economic strife makes it presence felt. This is also termed as investor sentiment. This is an external variable that the PSASVs can do little about. As a part of financial planning they can do some hedging against such unforeseen factors.

Market fragmentation
A fragmented market is one where there are lots of small to mid-size companies and where even the big players face stiff competition. There will be no single dominant player. No single player will have a double digit percentage of the market share. This is a critical factor for PSASV /small IT vendors.

The reason this is the most critical factor is because of what it represents. First, it indicates that there are customers for the packaged software application services. Second, while there is lot of competition there is no competitor who is dominant (although there could exist a couple of ‘big players’ e.g. SAP and Oracle). Third, lots of other companies talking about the market and advertising in the market helps existing PSASVs. It creates awareness for
potential customers also without having to spend a cent. Finally, in a varied market there's sure to be several companies against which existing PSASVs compare favourably. Hence, there is better chance of becoming the best of breed when compared to these alternatives. Since there's no obvious option to choose, potential customers end up taking a somewhat random sampling of the market and good PSASV has better chance at being seen as a best of breed option when compared to a random set of alternatives.

In general this factor benefits the Package software industry with higher competition. But, it acts against the PSASVs with limited revenue and lesser margins eating into profits.

**Mergers and Acquisitions:**
From a legal point of view, a merger is a legal consolidation of two companies into one entity, whereas an acquisition occurs when one company takes over another and completely establishes itself as the new owner (in which case the target company still exists as an independent legal entity controlled by the acquirer). Either structure can result in the economic and financial consolidation of the two entities.

Mergers and Acquisitions (M&A) activity is increasingly seen in the PSASV industry with larger players such as SAP, Oracle and Microsoft acquiring smaller vendors and companies operating in niche areas or domains where the acquiring party wants to obtain a foothold. For example, Oracles’ acquisition of PeopleSoft and Siebel in order to obtain best of breed solutions that combine together into a dynamic whole that is bigger than the sum of its parts.

Market consolidation leads to lesser fragmentation of the market and concentrates bargaining power in the hands of the PSASVs.

**Government Regulations, Legislations and Policies:**
Regulations, legislations and Policies work both ways for the PSASVs as in any other industry. In some cases legislations level the playing field while in others they become necessary hurdles to be overcome in order to do business in a particular market.

Legislation (or ‘statutory law’) is the law which has been promulgated (or ‘enacted’) by a legislature or other governing body, or the process of making it. Another source of law is judge-made law or case law. Before an item of legislation becomes law it may be known as a bill, and may be broadly referred to as ‘legislation’ while it remains under consideration to distinguish it from other business. Legislation can have many purposes: to regulate, to authorize, to proscribe, and to provide (funds), to sanction, to grant, to declare or to restrict.
PSASVs are bound by the laws of the market (and geography) in which they operate. Restrictive legislations make the cost of compliance higher and efficiencies lower. In the case of the PSASVs, all players in a particular market or geography of operation are bound by the ‘laws of the land’ enacted by the Government. Such laws equally apply to all players and everyone is legally bound to comply with them. Governments also define rules and regulations for doing business within a particular geography – and correspondingly define how ‘easy’ or how ‘tough’ it is to do business in compliance with such rules. The Government thus forms part of the business framework in which a PSASV operates.

Government institutions may also be used for enforcing the law of the land e.g. the tax department, the police department and so on. As already stated, PSASVs are bound by the laws of the market (and geography) in which they operate and they will have to comply with them. Government institutions are the enforcers in such a system. Thus government institutions also form part of the business framework in which a PSASV operates.

Global trade organizations such as the WTO define the rules of engagement between nations for engaging in trade. As PSASVs operate within nations, they too are impacted by these rules of engagement. Simpler rules increase productivity, enhance efficiency and maximise shareholder value through increased trade etc. Vice versa is true for complex and convoluted rules of trade (or where member nations refuse to accept certain rules etc.).

Knowledge of and adherence to existing rules, regulations, legislations and policies by the PSASVs is a must and helps present a good global corporate citizenship face to their customers, facilitates business and, in turn, revenue growth.

### 5.4.9 Social and Demographic Factors

**Cultural reasons**

Culture refers to the cumulative deposit of knowledge, experience, beliefs, values, attitudes, meanings, hierarchies, religion, notions of time, roles, spatial relations, concepts of the universe, and material objects and possessions acquired by a group of people in the course of generations through individual and group striving.

In the PSASV context, culture is part of the business environment for a particular geography or location of operation and is linked to the ‘way of doing things in a specific context and generally acceptable behaviour in that context’. 
What is relevant and accepted in one culture may be irrelevant and unacceptable in another. PSASVs have to adapt themselves to function in a particular way best suited to the culture of the market of operation.

**Social / Demographic factors**

Socioeconomic characteristics of a population expressed statistically, such as age, sex, education level, income level, marital status, occupation, religion, birth rate, death rate, average size of a family, average age at marriage are known as demographic factors. A census is a collection of the demographic factors associated with every member of a population. Demographic factors are estimated by marketers.

There are a number of demographics that can affect a business. Demographics are various traits that can be used to determine services preferences or buying behaviours of consumers. Most companies identify their key customers through these traits. They target consumers with like characteristics in their advertisements and promotions. Targeting consumers with similar demographic characteristics helps maximize a company's sales and profits.

PSASVs need to define their particular market segments and areas of operations and target relevant customers accordingly in that particular segment. Demographics helps make this analysis and target relevant customers accordingly. PSASVs can tailor their offerings depending on the type of customer e.g. SME’s, large customers etc. Distinction can be made by sales revenue, area of operations etc. Vendors such as SAP and Microsoft have dedicated offerings for SME’s (scaled down versions of software that is cost effective) and full blown versions for other customers.

**Knowledge gap**

PSASVs almost always face an issue of knowledge gap while designing or customizing their services for end users/customers based on their understanding of the relevant business process and industry vertical in question. Hence, products and corresponding services keep getting upgraded, enhanced or patched as time goes on and business requirements change. A good service seamlessly integrates such changes with minimal down time and inconvenience to the end users. As time goes on, business processes (and related tools) mature and such gaps are minimized.
5.4.10 Structure and Governance (Alliances, Partnership, Vendors etc.)

Shareholders
A shareholder or stockholder is an individual or institution (including a corporation) that legally owns a share of stock in a public or private corporation. Shareholders are the owners of a limited company. They buy shares which represent part ownership of a company. Stockholders or shareholders are considered by some to be a subset of stakeholders, which may include anyone who has a direct or indirect interest in the business entity. For example, employees, suppliers, customers, the community, etc., are typically considered stakeholders because they contribute value and/or are impacted by the corporation. PSASVs are bound to increase returns for shareholders by performing business activities that maximise share price and thus increase shareholder value. Shareholders thus form an important part of the ecosystem for PSASVs and have a large say in the day-to-day running and operations of the PSASV.

Licensing
A software license is a legal instrument (usually by way of contract law, with or without printed material) governing the use or redistribution of software. Under copyright law all software is copyright protected, except material in the public domain. A typical software license grants an end-user permission to use one or more copies of software in ways where such a use would otherwise potentially constitute copyright infringement of the software owner's exclusive rights under copyright law. In addition to granting rights and imposing restrictions on the use of software, software licenses typically contain provisions which allocate liability and responsibility between the parties entering into the license agreement. Software licenses can generally be fit into the following categories: proprietary licenses and free and open source. The significant features that distinguish them are the terms which the end-users might further distribute or copy the software.

Product vendors provide need-based licenses to their end-user companies/customers. Licenses can be perpetual, named user, number based etc. Differential pricing can be used for different customers. They are now seeing a switch from a license based approach to a subscription based approach for services (e.g. cloud based services). Licenses form an important revenue mechanism for product vendors. PSASVs influence this in a big way when
they help the customers in product selection. Some PSASVs formally work with the product vendors to sell the licenses.

**Alliance and Partnerships**

A strategic alliance is an agreement between two or more parties to pursue a set of agreed upon objectives needed while remaining independent organizations. This form of cooperation lies between M&A and organic growth.

Partners may provide the strategic alliance with resources such as products, distribution channels, manufacturing capability, project funding, capital equipment, knowledge, expertise, or intellectual property. The alliance is cooperation or collaboration which aims for a synergy where each partner hopes that the benefits from the alliance will be greater than those from individual efforts. The alliance often involves technology transfer (access to knowledge and expertise), economic specialization, shared expenses and shared risk.

Several such alliances and partnerships exist in the PSASV industry. For example, SAP and Accenture’s alliance has stood the test of time for the last 30-plus years. Alliances help both parties to bring their core expertise to the table and the outcome is typically more than the sum of the parts. SAP for instance provides the product knowledge and Accenture provides business process and consulting expertise in that particular alliance.

**Governance Policy**

Information and technology (IT) governance is a subset discipline of corporate governance, focused on information and technology (IT) and its performance and risk management. The interest in IT governance is due to the on-going need within organisations to focus on value creation efforts. This is usually part of an organisation's strategic objectives and helps to better manage the performance of those responsible for creating the value in the best interest of all stakeholders. It has evolved from The Principles of Scientific Management, Total Quality Management and ISO 9001 Quality Management Systems.

Historically, board-level executives deferred key IT decisions to the company's IT management and business leaders. Short-term goals of those responsible for managing IT can be in conflict with the best interests of other stakeholders unless proper oversight is established. IT governance systematically involves everyone: board members, executive management, staff, customers, communities, investors and regulators. An IT Governance framework is used to identify, establish and link the mechanisms to oversee the use of
information and related technology to create value and manage the risks associated with using information and technology.

PSASV services need to comply with existing IT governance policy mechanisms in place at various customer locations.

**Partners / Vendors**

Both partners and vendors play a very strategic role in the PSASV space. Almost all major PSASV players have alliances and partnerships with product vendors as resellers in the supply chain. For instance SAP has strategic alliances with IBM and Accenture. Such partnerships help SAP to provide its product to several new customers and geographies without actually having a presence in these geographies. Vendors need to move up the PSASV value chain and become partners. The vendor then migrates from being a mere reseller of products to an actual partner who provides value added services such as support, upgrades, and installations. Partners and vendors both are very much needed and are important players in the IT services ecosystem.

**Role of Industry organizations like NASSCOM**

The National Association of Software and Services Companies (NASSCOM) is a trade association of Indian Information Technology (IT) and Business Process Outsourcing (BPO) industry. Established in 1988, NASSCOM is a non-profit organisation.

NASSCOM is a global trade body with over 1500 members, of which over 250 are companies from the US, UK, EU, Japan and China. NASSCOM's member companies are in the business of software development, software services, software products, IT-enabled/BPO services and e-commerce.

From PSASV perspective, NASSCOM facilitates business and trade in software and services and encourages the advancement of research in software technology. Industry organizations and bodies such as NASSCOM set the ground rules of operation and facilitate trade for industry participants (PSASVs inclusive).

**Controls like SOX:**

'Sarbanes-Oxley Act Of 2002 - SOX' is an act passed by U.S. Congress in 2002 to protect investors from the possibility of fraudulent accounting activities by corporations. The Sarbanes-Oxley Act (SOX) mandated strict reforms to improve financial disclosures from corporations and prevent accounting fraud. SOX was enacted in response to the accounting
scandals in the early 2000s. Scandals such as Enron, Tyco, and WorldCom shook investor confidence in financial statements and required an overhaul of regulatory standards.

The rules and enforcement policies outlined by the SOX Act amend or supplement existing legislation dealing with security regulations. The two key provisions of the Sarbanes-Oxley Act are:

1. Section 302: A mandate that requires senior management to certify the accuracy of the reported financial statement
2. Section 404: A requirement that management and auditors establish internal controls and reporting methods on the adequacy of those controls. Section 404 had very costly implications for publicly traded companies as it is expensive to establish and maintain the required internal controls.

As mentioned above, there is a direct cost impact for the PSASV players as their tools and processes - must be SOX compliant, provide a complete audit trail, and also adhere to local legal legislation and other controls similar to SOX. Compliance adds cost thus impacting margins as well.

Local legal compliance

Conforming to local legislation is not an option for the IT industry and its various players including PSASVs. Such laws might include SOX as already discussed, or any other local law (e.g. tax law) that must be complied with. There is a direct cost impact for the PSASVs arising out of the compliances.

Local legislations are specific to a particular region (e.g. Excise duty and CENVAT in India) and the PSASV services must incorporate these features accordingly.

5.4.11 Quality of Consumer

A customer may or may not also be a consumer, but the two notions are distinct, even though the terms are commonly confused. A customer purchases goods; a consumer uses them. An ultimate customer may be a consumer as well, but just as equally may have purchased items for someone else to consume.

Customers have bargaining power as per Porter’s 5-forces model in the sense they can decide pricing and service levels up to a certain extent. PSASVs have to customize their offerings to meet the demands and service levels of ‘big’ customers. PSASVs may also have to offer services at cost price to undercut other PSASVs in order to gain entry into a particular market.
segment dominated by a few big customers. Customers form a very important part of the PSASV value chain and are the prime reason why PSASVs are in existence.

Having techno savvy user’s act as a boon for PSASV end customers, as such users can typically resolve minor issues by themselves, ultimately resulting in cost cutting/saving on IT support expenditures. A train-the-trainer approach is normally followed by PSASVs in customer deployments across large organizations. Such pool of techno-savvy users are identified and trained, thus forming what is known as a ‘super user community’. These communities serve two purposes – they understand the business process (and thus can explain this to others when needed) and they also understand the tools used (and so they can resolve minor technical issues as needed thus forming a first line fix capability for the customers).

Other than regular sales connect, many PSASVs are using formal mechanisms such as Voice of Customer (VoC), Customer Satisfaction (CSAT) to map customers’ expectations and feedback on deliverables provided. However, one of the key points for PSASVs is to set correct expectations that the packaged application cannot do wonders from day one. It takes time for the People-System-Process to mature and deliver results, provided the users input the data correctly and on time. Educating the customer on what a package can offer plays a key role in this aspect.

5.4.12 Country / Region specific Local issues

Each country has its local laws and statutory compliance requirements, mainly in the area of taxation, government duties et all. At times if this is not delivered as part of the standard product, the customer demands customization to fulfil these requirements. Also there can be other issues related to specific regions like the concept of Day light saving, which is practiced mainly in US and in Europe, but not in Asia. Similarly the working days and weekend concept differs. Although most of the countries follows a Saturday / Sunday as weekend, few Middle Eastern countries observe weekend on Thursday/Friday, while some other countries in same region observe weekend on Friday/Saturday. Managing all this requires certain configuration as well as certain degree of customization, as per the case.
5.5 The value chain concept applied to Packaged Software Services Industry

The general concept of the value chain is easily adapted to the packaged software services industries. At a simplistic level, the value chain for package Software Applications Services industry looks like figure 5.6.

**Figure 5.6: Simple Package Software Services Value Chain**

![Simple Package Software Services Value Chain](image)

Source: Creation by Author

The end product is developed and made available by the product vendor. These products have pre-configured processes that can readily be used off-the-shelf and also have customization capabilities based upon customer requirements. The end customer assesses the products capabilities and his own requirements as put forth by the IT department in consultation with the existing user community. The customer is either approached by the product sales team explaining the features of the product and how it can help the customer, or the customer hires any PSASV to do a thorough product evaluation of various available products and suggest the best suited product to the customer. Once the product is selected by the customer, it has to procure the licenses to use the product and set up infrastructure to start the project. This follows the implementation of the project for the identified scope. Once implemented, the application is ready for use. For day-to-day issues in the implemented and running system, the customer hires PSASV support providers to resolve them. Product vendor continuously works on enhancing the features of the product and keeps coming up with the newer enhanced versions. The customer has to upgrade its systems from time to time to reap the optimal benefits of the implementation. This also requires PSASV support on the customer side.
The real world is not as simple as that depicted in Figure 5.6. Every node in the chain has its own sub-value chain with upstream and downstream activities that make the overall package software services value chain very complex. Figure 5.7 explains the complexity at a very high level wherein there are a number of activities associated with all the six nodes in the simple value chain for PSASVs.

**Fig 5.7: Real Life Package Software Services value Chain**
5.5.1 PSASV Value Chain Elements

This section looks at each of the nodes one by one to explain the overall PSASV value chain and its dependencies in detail. It also looks at the impact of the variables identified in the quantitative analysis on each specific node of the value chain.

Product Development:

Upstream activities: PSASVs require good Industry experience and specific domain knowledge to contribute to the development or enhancement of the product. Understanding the customer’s business requirements is key to any such developments. Technical advancements like cloud and mobility help in improving the product’s features and improving the quality of service provided. PSASVs also participate in the development and testing of new functionalities. Several PSASVs have to partner together sometimes along with product vendors to develop the product. This requires specialized skills on stakeholder management related aspects. Customers and PSASVs loop back / feed back to the product vendor which helps the product vendor to work towards keeping the customers satisfied.

Downstream activities: Products, in general, go through continuous enhancements that are rolled out to the customers in periodic releases. PSASVs play a key role in these enhancements including the beta testing at the customer end. Product vendors depend a lot on the marketing and sales offerings of the PSASVs to educate the customers about the product features. PSASVs also help the product vendor in the sale of licenses to the customers either directly or indirectly. PSASVs find themselves in a unique stakeholder management position as they have to interact with the customer on one side and work closely with the product vendor on the other side to ensure that customer expectations are met.

Upstream and Downstream processes in Product development have been depicted in Fig. 5.8. Variables influencing Product Development from the list of already identified variables from the quantitative analysis are shown in Table 5.11
Table 5.11: Variables influencing Product Development

<table>
<thead>
<tr>
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Customer requirement Gathering

Upstream activities: PSASVs help customers with the identification of the requirements by interacting with business users and IT representatives from the customer’s organization and representing their findings in a language understandable for the product design team. PSASVs also help the customers with ball park estimates of required budget and timelines for implementing the product over a pre-defined timeline.

Downstream activities: Output of the customer requirement gathering phase is the requirement or scope document that works as an input for the next phase. Feasibility of the scope along with critical success factors is defined by the PSASVs to measure the success of the project. Upstream and Downstream processes in Customer requirement gathering have been depicted in Fig. 5.9
Variables influencing Customer Requirement Gathering from the list of already identified variables from the quantitative analysis are shown in Table 5.12

**Figure 5.9: Upstream and Downstream processes in Customer Requirement Gathering**

**Table 5.12: Variables influencing Customer Requirement Gathering**

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**Product Evaluation & Selection (Customer with support from the PSASV):**

**Upstream activities:** Customer initially identifies the PSASV and then PSASVs help customers in comparison of the product and later the final selection of the product to be deployed. A criterion for this product selection is mainly driven by customer’s requirements and is supported by PSASV from Technical, feasibility and scheduling perspective. Financials (Implementation Cost, Maintenance Cost), availability of skilled labour and Migration Compatibility plays a major role in Product Evaluation and Selection process.

**Downstream activities:** Based on the selected product, PSASV provides high level plan to customer for Schedule (project plan for implementation), Technical Resource (Infrastructure requirements) and Human Resource (Manpower requirements).

Upstream and Downstream processes in Product Evaluation & Selection have been depicted in Fig. 5.10
Variables influencing Product Evaluation & Selection from the list of already identified variables from the quantitative analysis are shown in Table 5.13.

**Figure 5.10: Upstream and Downstream processes in Product Evaluation & Selection**

![Diagram of upstream and downstream processes]

**Table 5.13: Variables influencing Product Evaluation & Selection**

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**Preparation (Customer with support from the PSASV and the product vendor):**

**Upstream activities:** PSASVs provides technical support to customer for procurement of required infrastructure and related licenses. PSASV also support customer in getting the right resource identified and sometimes even trained as per the project requirement. PSASV also
help the customer by means of due diligence and internal business communication to all stakeholders from time to time basis.

**Downstream activities:** Output of the Preparation phase is this that the customer is ready for implementation.

Upstream and Downstream processes in Preparation have been depicted in Fig. 5.11

Variables influencing Preparation from the list of already identified variables from the quantitative analysis are shown in Table 5.14

**Figure 5.11: Upstream and Downstream processes in Preparation**

![Diagram showing upstream and downstream activities in Preparation]

**Table 5.14: Variables influencing Preparation**

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**Implementation (PSASV and product vendor):**

**Upstream activities:** During implementation phase, PSASVs help customers in executing the agreed project plan and converts the business requirements gathered into technical design documents. Based upon these design documents, PSASVs build the product configuration, deliver necessary customization and then gets the same tested thoroughly. Based upon the test
results, customer provides its acceptance to the delivered solution and accordingly the system goes live.

**Downstream activities**: Output of the implementation phase is that the system is live and available for business usage. Also all the necessary documentation of the implementation phase is stored for future reference purpose.

Upstream and Downstream processes in Implementation have been depicted in Fig. 5.12

Variables influencing Implementation from the list of already identified variables from the quantitative analysis are shown in Table 5.15

**Figure 5.12**: Upstream and Downstream processes in Implementation

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Support (PSASV and Product vendor)

Upstream activities: Post go-live, PSASVs help customers with Tools and process required to keep the system up and running. They also provide the necessary knowledge transfer and support customer to define a post go-live governance structure, Communication Matrix and Escalation Matrix.

Downstream activities: Output of the Support phase is delivery of solution to the issues/request raised as per the agreed quality and within defined timelines.

Upstream and Downstream processes in Support have been depicted in Fig. 5.13

Variables influencing support from the list of already identified variables from the quantitative analysis are shown in Table 5.16

Figure 5.13: Upstream and Downstream processes in Support

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</table>
Continuous Improvement (PSASV and Product vendor)

Upstream activities: PSASVs help customers with ongoing improvement activities by means of optimization and value adds.

Downstream activities: Output of the continuous improvement phase is Upgrade of the system, Enhancement of the solution and / or rollout of the solution for additional areas.

Upstream and Downstream processes in Product development have been depicted in Fig. 5.14.

Variables influencing continuous improvement from the list of already identified variables from the quantitative analysis are shown in Table 5.17

Figure 5.14: Upstream and Downstream processes in Continuous Improvement

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5.5.2 PSASVs Value Chain Characteristics

5.5.2.1 Significance of Value Chain Analysis for PSASVs

The value chain for PSASVs is significant because of the growing importance of systemic competitiveness, insufficiency of efficient service creation or delivery and effectively leveraging the global IT delivery model. Each of these points is discussed in detail below.

The growing importance of systemic competitiveness:

From the perspective of IT services itself, increasing IT coverage starting in the late eighties meant that the work process could be subdivided into an increasing number of work-stations, and the object of F.W. Taylor’s theories on work-organisation, though primarily for production organizations but applies equally for services chain, was to increase the efficiency of each of these work stations through ‘scientific management’ procedures. Increasingly, the approach in the global services industry shifted towards a more systemic focus.

Value chain analysis plays a key role in understanding the need and scope for systemic competitiveness for the effective operation of PSASVs. The analysis and identification of core competencies lead the firm to outsource those functions where it has no distinctive competencies. Mapping the flow of services in the overall value chain allows each firm to determine who else’s behaviour plays an important role in its success.

Only Efficient service creation or delivery is not enough:

The other reason why value chain analysis is important for PSASVs is that it helps in understanding the advantages and disadvantages of firms specialising in these services, and why the way in which service creation are connected to final markets may influence their ability to gain from participating in global delivery model.

As more and more firms and regions have improved their IT services capabilities in the last three decades, low-cost sources of supply (offshore) grew for buyers procuring on a global stage. Value chain analysis ensures that the analysis covers the whole cycle of service creation and delivery, including governance to the final market/end consumer. This forces the analysis to consider not just the efficiency of the service creation link in the chain, but also those factors which determine the participation of a particular group of services in final markets.
Leveraging Global IT Services Delivery Model:

The third major reason of how value chain analysis can be important for PSASVs is that it can help to explain the distribution of benefits, particularly income, to those participating in the global value chain. This makes it easier to identify the policies which can be implemented to enable individual players to increase their share of these gains. This is an especially topical issue at the turn of the millennium and has captured the attention of a wide variety of interested parties. Value chain analysis can help both understand these dynamics (positive analysis) and then fashion an appropriate policy response (normative analysis).

One of the key issues is how the service provider firms participate in the global economy rather than whether they should do so. If they get it wrong, they are likely to enter a ‘race to the bottom’, that is a path of immense rising growth in which they are locked into even-greater competition and reducing incomes. Immense rising growth is defined as an outcome when overall economic activity increases, but the returns from this economic activity fall. Value chain analysis can provide a key entry point into this analysis for PSASVs, as well as into the policy implications which are raised. This can be done by focusing on all the links in the chain and on all activities performed in each link, thus helping identify which activities are subject to increasing returns, and which are subject to declining returns.

5.5.2.2 Type of PSASV value chains

As described earlier there are two types of value chain. Buyer-driven chains and producer-driven chains. Package Software services are primarily of the latter type.

We are largely seeing a shift from a producer-driven to a buyer-driven world. But, the PSASV industry still continues to be hinged towards being a producer driven chain as the starting point for the chain is the product developed by the product vendors themselves. Though, in the real world, product vendors do connect with the business to understand the requirements and the functionalities are included in the product. For that manner, the PSASV chain embodies both producer and buyer driven governance.

Industries like PSASVs bring in another perspective with regard to being a producer driven or a customer driven chain or a shift from a producer driven to a customer driven one.

The key shift that we are witnessing in an increasingly globalised and competitive world is a transition from income accruing from tangible activities to those arising from intangible activities in the value chain. This is because intangible activities are increasingly knowledge and skill-based and are embedded in organisational systems. It is important to recognize that
the concept of ‘skill’ embodies the idea of income. ‘Skill’ is referred to aptitudes and knowledge which are not widely available. This is both inherently relative, and dynamic. The intangibles are to be found in all links but PSASV value chain is full of links that are particularly rich in intangible activities. The shift from producer- to buyer-driven chains is therefore illusory and arises because at this point in the competitive cycle, branding and marketing are becoming increasingly important in many chains. However, a closer examination of chains will show a pervasive shift to a wider arena of intangibles and it is because of this that a chain can simultaneously appear to be both buyer- and producer-driven. Similarly particular product families may simultaneously have buyer-driven and producer-driven chains, depending on which intangibles the lead parties dominate.