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Learning, Innovation and Entrepreneurship towards Flexibility

Sumant Kumar Bishwas[1] and Sushil[2]

Abstract

Organizations are working in a very uncertain and complex environment as compared to the past. Globalization, knowledgeable customers, technological advancement, and availability of skilled workforce are some of the major factors that catalyzed the environmental complexity in last one or two decades. Satisfying the diverse and changing customers' demand are the major parameters that decide about organization survival and growth. Flexibility is the process that gives strength to organization for managing these changes. Learning, innovation and entrepreneurship are the three important aspects that have emerged as critical processes for organization success, and effect the degree of flexibility. This study has explored the integration aspects of learning, innovation, and entrepreneurship with flexibility. This empirical study has been done based on the survey conducted on IT and Automobile industry in India. Step-wise regression method has been applied on 225 samples to explain the interrelations of learning, innovation, and entrepreneurship with flexibility focus in the organization. The final model reflects the effects of learning, innovation, and entrepreneurship factors on Flexibility.

***Keywords**: Entrepreneurship, Flexibility, Innovation, Learning, Process Integration.*

Introduction

Satisfying the diverse and changing customer demands is one of the primary concerns for the industry in the current knowledge era (Valle *et al*., 2011). Organizational success is determined by the extent it can manage the changes (Folami and Powers, 2009).With this uncertain environment, while some organizations not only survived but remain on the growth trajectory, there are organizations that even failed to survive or struggled for their existence (Drucker, 1985). Importance of survival and growth issues was also discussed in theories related to organization life cycle.

System theory defines organization as a complex system with various sub-systems within itself, and integration of these sub-systems has been described as one of the important aspects for system's performance. Integrated view of these sub-systems help to remain ahead in the competition. Scott (1961), in his Modern organizational theory, explained identification of important organizational processes and understanding of their interrelationships, as one of the important means to know the organization. Organizations are expected not only to identify these processes but also to think about integration of these for effective functioning considering organization as a system. Lane et al. (2006) have discussed the integration process of learning, innovation,

1. Assistant Professor (OB &HR), Goa Institute of Management, Goa
Email: skb.dmsiitd09@gmail.com
2. Professor (Strategy, Change and Flexibility), Indian Institute of Technology Delhi, New Delhi

with organizational structure. Similarly, integration of HRM, leadership, and strategy with organization change has been explained by Stace and Dunphy (1992). Importance of process integration was further explained by Bishwas and Sushil (2017) on their study about critical processes integration for organizational innovation.

This study has explored the integration aspects of three important organizational processes with Flexibility in the organization. The three critical processes (learning, innovation, and entrepreneurship) and its effect on flexibility have been explained using step-wise regression.

Learning, Innovation, Entrepreneurship and Flexibility

Learning has been considered as one of the necessity for succeeding in the competition (Prahalad and Hamel, 1990). It increases the renovation and adaptive capability of the organization (Sushil, 2004), helps in understanding the external and internal environment and act accordingly, and has been defined a necessity for organizational survival (Epstein, 2003). Continuous learning supports to remain ahead in the competition, and is described as one of the key things for growth (Maurer and Weiss, 2010).

Learning is one of the vital processes where failure results declining performance and threat of survival and growth (Senge, 1990).Learning has been defined as the foremost cause of organizational failure. As par Kotter and Cohen (2002), information availability, ready to learn, innovation oriented solution are some of the substantial concerns to empower the organization for long-term survival. Jitnom and Ussahawanitchakit (2010) explained learning as one of the organizational strategic capability. According to Schwandt and Marquardt (2000) findings, in next 10 years', only the organizations with learning orientation will survive and rest will be in trouble. Learning leads to improve the mutual understanding towards any integrated action in the organization (Campbell and Armstrong, 2013). As par Ortenblad (2004), organizational learning, work learning, learning climate, and learning structure are the three dimensions that decide whether the learning process is effective or not.

Managing the quick demand change by diverse customer require focusing on new innovative solutions. The findings of Xu et al., (2011) strengthens this view that "two-third per cent of the prosperous companies revenue derive from novel services and products emerged within five years' frame". Continuous learning process intensifies creativity leading to more innovation. Learning process facilitate knowledge acquisition that effect the innovation level significantly (Chermin and Nijhof, 2005).

In the current VUCA world, Innovation can be seen as a source of strength where learning facilitates the novel product development leading to customer satisfaction (Baker and Sinkula 1999; Vicenzi and Adkins, 2000), and Organizational ability to develop innovative solutions provides strength for its survival (Sushil, 2004; 2013).Both financial and non-financial performance measures (including innovation, CRM, and customer satisfaction) are effected by learning and innovation processes(Goh et al., 2012, Battor and Battour, 2013, Pantouvakis and Bouranta, 2013).

Customer satisfaction has been acknowledged as a vital aspect where innovation play a significant role to satisfy customer's demands. Organization's innovation orientation depends on the extent of customer satisfaction dimensions (Ruggles and Little, 1997). Innovative organization explore the possible opportunities from the uncertain environment because of their capability to attract new customers and markets better than their competitors (Michael and Pearce, 2009).

Sushil (2003) has highlighted that innovation and learning are strongly interrelated with each other that strengthen organization for long term growth. Calisi*et al*. (2013) have explained the

effect of learning on innovation. Innovation in the organization can be promoted through effective learning process (Hung et al., 2010). Incorporating flexible approach in the organization facilitates the process to manage the change (Heilbrunn, 2008).

Dreyer and Gronhaug (2004) have defined flexibility asone of the important resources for organization. Innovation and flexibility have been described as two critical parameters to measure the growth (Maisel, 1992). Importance of flexibility has been further discussed bySushil (2004, 2013) considering it as an instrument for managing the environmental uncertainty. The author has further, highlighted flexibility as one of the major issues which is interrelated with other critical processes like learning and innovation.Volberda (1998) has explained the concept of flexibility as organizations' capability to change and develop products, and strategies to manage the environmental uncertainty.Sharma et al. (2010) have provided a detail review on flexibility and its significance for organization.

The effect of environment uncertainty during strategic development is usually very high and flexibility concern is seen as a crucial aspect during that phase. Flexibility has been considered as atacticto gain more control in the turbulent environment. Concept of 'flexibility mix' classified flexibility into operational, strategic, and structural flexibility which explain significance and types of flexibility considering strategic, structural and operational dimensions (Volberda, 1997).As per Verdu et al. (2009), flexibility escalates the responsive ability of an organization that is related to internal, external, structural, and strategic flexibility. Eppink (1978) suggested to maintain a right fit between the organization and its environment. Integration of flexibility with other processes help to develop a collaborative culture and competence to amend as par the requirement.

Flexibility related to workforce supports to deal the workforce related uncertainty (Looise*et al*., 1998).The importance of this workforce related flexibility i.e. labour flexibility is about managing the uncertain demand and supply of labour in efficient manner (Upton, 1995).

Other than labour flexibility, strategic flexibility is another important flexibility dimension that enhances likelihoods of survival (Hitt et al., 1998; Sushil, 2014).Innovation and flexibility are the vital processes for organizational survival and growth (Bishwas and Sushil 2013).

Innovation and entrepreneurship are complementary to each other. According to Zhao (2005) combination of both are essential for organizational success in uncertainand complex environment. Michael and Pearce (2009) discussed the interrelatedness of entrepreneurship and innovation process. As par Molina and Callahan (2009), entrepreneurial orientation encourages risk taking that raise the degree of innovation and finally lead to organizational performance.

The mantras of LIFE suggested by Sushil (2007, 2013) can be seen as a guiding tool towards organization vitality and identification of the processes relevant to achieve high vital position. The first LIFE mantra has discussed about importance of integration of learning, innovation, flexibility, and entrepreneurship that have been acknowledged as critical processes for organization. These processes have been also explained as the vitalization process for the organization that contribute towards survival, and growth (Bishwas, 2011). This study strengthens the previous results on process integration with a specific focus on flexibility.

Methodology

This empirical study is based on the survey conducted on select IT and Automobile industries in India. The questionnaires for the survey have been selected from Bishwas (2015a; 2015b; 2015c).Non probability sampling techniques have been used for the data collection. Step-wise regression analysis has been used to explain the inter-relations between learning, innovation and entrepreneurship factors with flexibility. SPSS 20 software package has been used. Table 1 presents the respondents details.

Table 1: Respondents Details

Industry (n=225)	***IT***		***Automobile***	
	116 (51.55 %)		109 (48.45%)	
Average Work Experience	***Total***	***Within current Organization***		
	10.75 yrs.	6.47 yrs.		
Gender		***Qualification***		
Male	Female	Graduate	Masters	Doctorate
198 (88%)	27 (12%)	69 (30.66%)	142 (63.11%)	14 (6.22%)

Results and Discussion

The outcomes of step-wise regression analysis have been used to develop an integrated model that shows the interrelations between learning, innovation, and entrepreneurship factors on flexibility. The step-wise regression analysis has been discussed in detail.

Model Discussion

Three step-wise regression models have been developed consider ingthe three flexibility factors as dependent variables one by one (in a separate manner) and factors of other processes as independent variables (details provided in appendix). Table 2 provide the step-wise regression analysis results (details in Appendix A).

Table 2: Regression Results

Dependent Variable	Independent Variable	B-Value	R^2	SEE	Significance
Strategic Flexibility (VPF1)	Flexible Resource Usage (VPF2)	0.356	0.748	.44219	.000
	Access to Facility and Resources(VPI2)	0.197			.000
	Adaptive Capacity of Leadership (VPF3)	0.238			.000
	Proactiveness (VPE1)	0.242			.000
	Skills Variety (VPI3)	-0.086			.024
Flexible Resource Usage (VPF2)	Strategic Flexibility(VPF1)	0.419	0.741	.45217	.000
	Collaborative Environment (VPI1)	0.202			.000
	Skills Variety (VPI3)	0.133			.001
	Proactiveness (VPE1)	0.287			.000
	Organizational Learning (VPL2)	-0.218			.000
	Learning Structure (VPL3)	0.136			.007
Adaptive Capacity of Leadership (VPF3)	Strategic Flexibility (VPF1)	0.394	0.649	0.50434	.000
	Learning Structure (VPL3)	0.348			.000
	Skills Variety (VPI3)	0.161			.000
	Entrepreneurial Intensity (VPE3)	0.118			.024

Figure 1summarizes all the three step-wise regression models considering flexibility factors as dependent variables. The results show the effect of learning, innovation, and entrepreneurship (micro level factors) on flexibility factors. From the summary model, we can see that learning, entrepreneurship, and innovation factors strongly effecting the flexibility factors where the innovation factors are having higher effect as compare to other two processes. This strengthens the view that innovation and flexibility are highly interrelated processes and innovation focused organizations usually follow flexible approach more as compare to the less innovation ones.

The step-wise regression models considering flexibility factors as dependent variables separately, replicate its interrelationships with other processes. The above model suggests that Strategic flexibility (VPF1) is effected by Innovation (*access to facility and resources and skills variety*), entrepreneurship (*proactiveness*), and other two flexibility factors (*flexible resource usage and adaptive capacity of leadership*). Similarly, Flexible resource usage (VPF2) is effected by learning (*organizational learning and learning structure*), innovation (*collaborative environment and skills variety*), and one entrepreneurship (*proactiveness*) as well as flexibility factor (*strategic flexibility*). Adaptive capacity of leadership (VPF3) is positively affected by strategic flexibility (flexibility factor), learning structure (learning factor), skills variety (innovation factor) and entrepreneurial intensity (entrepreneurial factor).

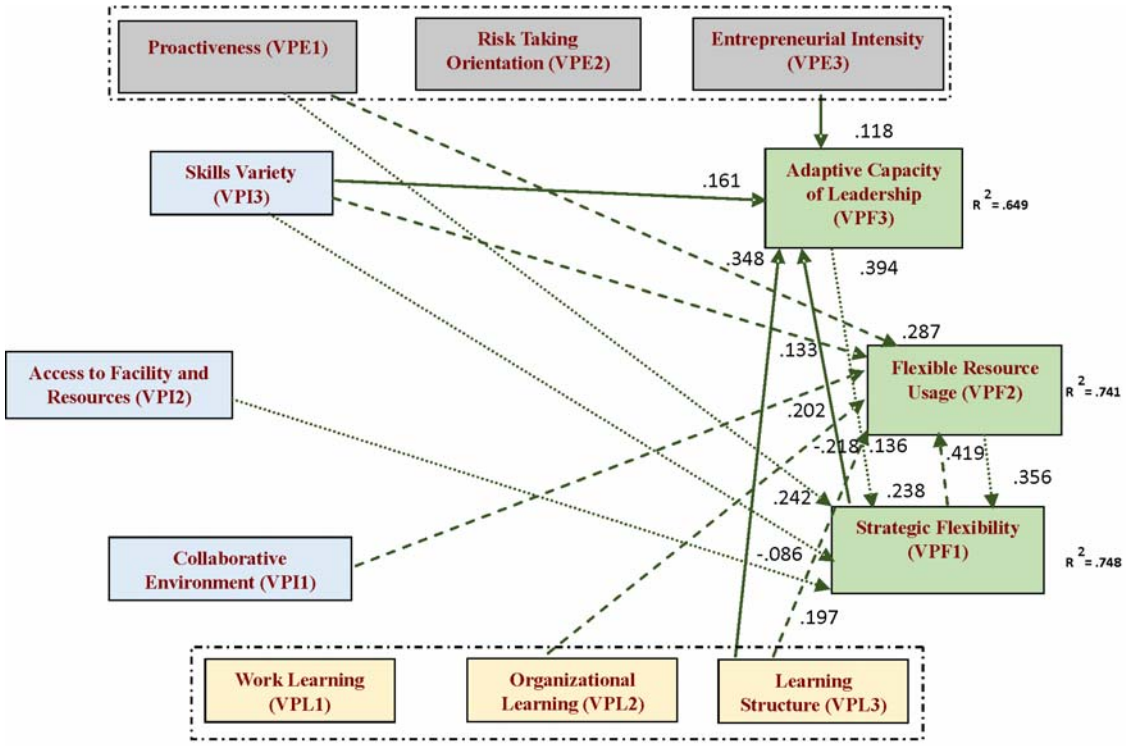

Figure 1: Summary of Step-wise Regression Models Flexibility as Dependent Variable

The results suggest that flexible resource usage, adaptive leadership capability, and proactiveness effect the degree of strategic flexibility in highly significant manner. Further, the negative value for skills variety supports the view that degree of skills diversity may restrict the strategic flexibility process. The next flexibility factor; flexible resource usage is highly effected by strategic flexibility followed by collaborative environment in the organization.The organizational learning factor is negatively related with flexible resource usage which shows that high organizational learning (well defined and rigid) reduces flexibility in usage of resources. Adaptive capacity of leadership (third flexibility factor) is again highly effected by strategic flexibility factor followed by learning structure. From all the three regression models we can conclude that out of the three factors strategic flexibility is highly effecting the two other flexibility factors which suggest that strategic flexibility need to be considered as the prime concern.

The final outcomes of this chapter strengthens the previous researchers' views which talked about interrelationships of critical organizational processes (Pascle, 1991; Baker and Sinkula, 1999; Chermin and Nijhof, 2005; Calisir*et al*. 2013).

Conclusion

Flexibility can be seen as one of the strategic resource for organization in the current uncertain and complex environment. Organizations that are ready to adapt the changes faster than their competitors will be able to remain ahead in the competition. Some of the processes like learning, innovation, entrepreneurship have emerged as critical ones for organizational growth and survival, and are having strong relation with flexibility. An integrated view of these processes may lead towards high possibility of survival and growth.

Strategic flexibility has emerged as the most important factor that is strongly effecting the other flexibility aspects. Further, Innovation process is highly related with flexibility followed by learning and entrepreneurship. Integrated view of learning, innovation, and entrepreneurship will help in developing a flexibility concern that will ultimately lead to organizational long term growth.

This study can be perceived as a fundamental work for research in process integration with specific focus on micro level flexibility analysis to manage the environment changes. The final model can be taken as a guiding framework for developing flexibility concept in the organization to understand the dimensions where it need to focus more during the planning and implementation process.

Limitations and Future Direction

The study is limited to select IT and Automobiles organizations in India that can be further extended to other industries for developing a generalized model. Specific organization focus detail case study can be conducted to validate the model.Various external variable's effect can also be considered as an extension of this study.

References

- Baker W. and Sinkula J. (1999) Learning Orientation, Market Orientation, and Innovation: Integrating and Extending Models of Organizational Performance, *Journal of Market-Focused Management*, 4 (4): 295-308.
- Battor M. and Battour M. (2013) Can Organizational Learning Foster Customer Relationships? Implications for Performance, *The Learning Organization*, 20 (4/5), 279-290.
- Bishwas S.K. (2011) Conceptualization of Organization Vitality based on Strategic Knowledge Management, *Global Journal of e-Business and Knowledge Management*, 7 (1), 45-52.
- Bishwas S.K. and Sushil (2013) Critical Issues for Organizational Growth and Success: A Systems Thinking View using Feedback Loop Analysis, *Proceedings of 31st International Conference of the System Dynamics Society*, Boston, USA.

- Bishwas S.K. (2015a) Achieving Organization Vitality through Innovation and Flexibility: An Empirical Study, *Global Journal of Flexible Systems Management*, 16 (2), 145-156.
- Bishwas S.K. (2015b) Organizational Flexibility and Entrepreneurship: Knowledge Management Perspective, *Proceedings of Fifteenth Global Conference on Flexible Systems Management,* SIU, Pune, India, 193-213.
- Bishwas S.K. (2015 c) Achieving Organization Vitality through Strategic Knowledge Management and Vitalization Processes: A Study of Select Industries (Unpublished Doctoral Thesis), Indian Institute of Technology Delhi, New Delhi, India.
- Bishwas S.K. and Sushil (2017) Integration of Critical Processes for Organizational Innovation, *Riding the New Trends: Navigating the Future through Effective People Management*, Emerald, India.
- Campbell T.T. and Armstrong S.J. (2013) A Longitudinal Study of Individual and Organizational Learning, *The Learning Organization*, 20 (3), 240-258.
- Calisir F., Gumussoy C.A. and Guzelsoy E. (2013) Impacts of Learning Orientation on Product Innovation Performance, *The Learning Organization*, 20 (3), 176-194.
- Chermin M.M. and Nijhof W.J. (2005) Factors Influencing Knowledge Creation and Innovation in an Organization, *Journal of European Industrial Training*, 29 (2), 135-147.
- Dreyer B. and Gronhaug K. (2004) Uncertainty, Flexibility, and Sustained Competitive Advantage, *Journal of Business Research*, 57, 484-494.
- Drucker F. (1985) *Entrepreneurship and Innovation: Practice and Principles*, Harper Business: NewYork.
- Eppink D.J. (1978) Planning for Strategic Flexibility, *Long Range Planning*, 11, 9-15.
- Epstein E.M. (2003) How to Learn from the Environment about the Environment: A Prerequisite for Organization Well-Being, *Journal of General Management*, 29 (1), 68-80.
- Folami L.B. and Powers T.L. (2009) Managerial and Functional Influences on Perceived Environmental Uncertainty, *Journal of Finance and Accountancy,* 1*,* 1-14.
- Gable G.G., Scott J.E. and Davenport T.D. (1998) Cooperative ERP Life-cycle Knowledge Management. *Proceedings of the Ninth Australasian Conference on Information Systems*, Sydney, Australia, 227-240.
- Garratt B. (1987) *The Learning Organization,* Fontana Paperbacks: London.
- Goh S.C., Elliott C. and Quon T.K. (2012) The Relationship between Learning Capability and Organizational Performance a Meta-analytic Examination, *The Learning Organization*, 19 (2), 92-108.
- Heilbrunn S. (2008) Factors Influencing Entrepreneurial Intensity in Communities, *Journal of Enterprising Communities: People and Places in the Global Economy*, 2 (1), 37-51.
- Hitt M.A., Keats D.W. and DeMarie S.M. (1998) Navigating in the New Competitive Landscape: Building Strategic Flexibility and Competitive Advantage in the Twenty-first Century, *Academy of Management Executive*, 12 (4), 22-42.
- Hung R.Y.Y., Lien B.Y.H., Fang S.C. and McLean G.N. (2010) Knowledge as a Facilitator for Enhancing Innovation Performance through Total Quality Management, *Total Quality Management*, 21 (4), 425-438.
- Jitnom S. and Ussahawanitchakit P. (2010) Strategic Learning Capability, Firm Performance and Sustainable Growth: An Empirical Study of Auto Spare Part Manufacturing Businesses in Thailand, *International Journal of Business Strategy*, 10 (4), 107-131.
- Kotter J.P. and Cohen D.S. (2002) Creative Ways to Empower Action to Change the Organization: Cases in Point, *Journal of Organizational Excellence*, winter, 73-102.
- Lane P.J., Koka B.R. and Pathak S. (2006) The Reification of Absorptive Capacity: A Critical Review and Rejuvenation of the Construct, *Academy of Management Review*, 31 (4), 833-863.
- Looise J.C., Riemsdijk M.V. and Lange F.D. (1998) Company Labour Flexibility Strategies in the Netherlands: An Institutional Perspective, *Employee Relations*, 20 (5), 461-482.

- Maisel, L. S. (1992) Performance Measurement: The Balanced Scorecard Approach, *Journal of Cost Management*, 5(2), 47.
- Maurer T.J. and Weiss E.M. (2010) Continuous Learning Skill Demands: Associations with Managerial Job Content, Age, and Experience, *Journal of Business and Psychology*, 25 (1), 1-13.
- Michael S.C. and Pearce J.A. (2009) The Need for Innovation as a Rationale for Government Involvement in Entrepreneurship, *Entrepreneurship & Regional Development*, 21 (3), 285-302.
- Molina C. and Callahan J.L. (2009) Fostering Organizational Performance: The Role of Learning and Intrapreneurship, *Journal of European Industrial Training*, 33 (5), 388-400.
- Ortenblad A. (2004) The Learning Organization: Towards an Integrated Model, *The Learning Organization*, 11 (2), 129-44.
- Pantouvakis A. and Bouranta N. (2013) The Link between Organizational Learning Culture and Customer Satisfaction, *The Learning Organization*, 20 (1), 48-64.
- Pascle R.T. (1991) The Two Faces of Learning, *Modern Office Technology*, 36 (3), 14-16.
- Prahalad C.K. and Hamel G. (1990) The Core Competence of the Corporation, *Harvard Business Review*, 68 (3), 79-91.
- Ruggles R. and Little R. (1997) Knowledge Management and Innovation: An Initial Exploration, Ernst & Young, available at http://www.providersedge.com/docs/km_articles/km_and_innovation.pdf retrieved on 20.07.2012.
- Sanchez A.M., Jimenez M.J.V, Perez M.A.P. and Luis-Carnicer P.D. (2009) Innovation and Labour Flexibility: A Spanish Study of Differences across Industries and Type of Innovation, *International Journal of Manpower*, 30 (4), 360-376.
- Schwandt, D. and Marquardt, M. (2000) *Organizational Learning: From World-Class Theories to Global Best Practices*, Boca Raton, St. Lucie.
- Sharma M.K., Sushil and Jain P.K. (2010) Revisiting Flexibility in Organizations: Exploring its Impact on Performance, *Global Journal of Flexible Systems Management*, 11 (3), 51-68.
- Scott W.G. (1961) Organization Theory: An Overview and an Appraisal, *Journal of Academy of Management*, 8-26.
- Senge P. (1990) *The Fifth Discipline: The Art and Practice of the Learning Organization,* New York: Doubleday.
- Stace D.A. and Dumphy D.C. (1992) Translating Business Strategies into Action: Managing Strategic Change, Journal of Strategic Change, (1), 203-216.
- Sushil (2003) Give a New 'LIFE' to Your Organization, *Global Journal of Flexible Systems Management*, 4 (1), 3.
- Sushil (2004) Give a New 'LIFE' to Your Organization, *Global Journal of Flexible Systems Management*, 4 (1&2), 3.
- Sushil (2007) From Learning Organization to Enlightened Organization, *Global Journal of Flexible Systems Management,* 8 (4), 3.
- Sushil (2013) *Flowing Stream Strategy: Leveraging Strategic Change with Continuity*, Springer, New Delhi.
- Sushil (2014) The Concept of Flexible Enterprise, in Sushil and E.A. Stohr (Eds.), *The Flexible Enterprise*, Flexible Systems Management, Springer, New Delhi, 3-26.
- Upton D.M. (1995) What Really Makes Factories Flexible? *Harvard Business Review*, 73 (4), 74–84.
- Valle R.S., Valencia J.C.N., Jimenez D.J. and Caballero L.P. (2011) Linking Organizational Learning with Technical Innovation and Organizational Culture, *Journal of Knowledge Management* 15 (6), 997-1015.
- Verdu A.J. and GomezGras J.M. (2009) Measuring the Organizational Responsiveness through Managerial Flexibility, *Journal of Organizational Change Management*, 22 (6), 668-690.

- Vicenzi R. and Adkins G. (2000) A Tool for Assessing Organizational Vitality in an Era of Complexity, *Technological Forecasting and Social Change*, 64 (1), 101-113.
- Volberda H.W. (1997) Building Flexible Organizations for Fast-moving Markets, *Long Range Planning*, 30 (2), 169-183.
- Volberda H.W. (1998) *Building the Flexible Firm-How to Remain Competitive*, Oxford University Press: Oxford.
- Xu J., Houssin R., Ciallaud E. and Gardoni M. (2011) Fostering Continuous Innovation in Design with an Integrated Knowledge Management Approach, *Computer in Industry*, 62 (4), 423-436.
- Zhao F. (2005) Exploring the Synergy between Entrepreneurship and Innovation, *International Journal of Entrepreneurial Behaviour and Research*, 11 (1), 25-41.

Appendix A

Regression Analysis Results

Flexibility Factors as Dependent Variable

1) Strategic Flexibility as Dependent (VPF1)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782[a]	.612	.610	.54360
2	.828[b]	.685	.683	.49043
3	.848[c]	.719	.715	.46453
4	.861[d]	.742	.737	.44639
5	.865[e]	.748	.742	.44219

a. Predictors: (Constant), VPF2
b. Predictors: (Constant), VPF2, VPI2
c. Predictors: (Constant), VPF2, VPI2, VPF3
d. Predictors: (Constant), VPF2, VPI2, VPF3, VPE1
e. Predictors: (Constant), VPF2, VPI2, VPF3, VPE1, VPI3
f. Dependent Variable: VPF1

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.822	1	103.822	351.347	.000[b]
	Residual	65.896	223	.295		
	Total	169.718	224			
2	Regression	116.323	2	58.161	241.817	.000[c]
	Residual	53.395	222	.241		
	Total	169.718	224			
3	Regression	122.030	3	40.677	188.506	.000[d]
	Residual	47.688	221	.216		
	Total	169.718	224			
4	Regression	125.880	4	31.470	157.930	.000[e]
	Residual	43.838	220	.199		
	Total	169.718	224			
5	Regression	126.896	5	25.379	129.796	.000[f]
	Residual	42.822	219	.196		
	Total	169.718	224			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.697	.153		4.552	.000
	VPF2	.777	.041	.782	18.744	.000
2	(Constant)	.177	.156		1.137	.257
	VPF2	.559	.048	.563	11.626	.000
	VPI2	.377	.052	.349	7.209	.000
3	(Constant)	-.024	.153		-.159	.874
	VPF2	.422	.053	.425	8.006	.000
	VPI2	.300	.052	.278	5.812	.000
	VPF3	.273	.053	.264	5.143	.000
4	(Constant)	-.105	.148		-.713	.476
	VPF2	.322	.056	.324	5.798	.000
	VPI2	.229	.052	.212	4.384	.000
	VPF3	.230	.052	.223	4.440	.000
	VPE1	.235	.053	.237	4.396	.000
5	(Constant)	.163	.188		.868	.387
	VPF2	.353	.057	.356	6.230	.000
	VPI2	.213	.052	.197	4.073	.000
	VPF3	.246	.052	.238	4.740	.000
	VPE1	.239	.053	.242	4.524	.000
	VPI3	-.094	.041	-.086	-2.280	.024

Dependent Variable: VPF1

2) Flexible Resource Usage as Dependent (VPF2)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.782[a]	.612	.610	.54743
2	.813[b]	.661	.658	.51273
3	.829[c]	.687	.682	.49403
4	.840[d]	.706	.700	.47998
5	.856[e]	.732	.726	.45886
6	.861[f]	.741	.734	.45217

a. Predictors: (Constant), VPF1

b. Predictors: (Constant), VPF1, VPI1

c. Predictors: (Constant), VPF1, VPI1, VPI3

d. Predictors: (Constant), VPF1, VPI1, VPI3, VPE1

e. Predictors: (Constant), VPF1, VPI1, VPI3, VPE1, VPL2

f. Predictors: (Constant), VPF1, VPI1, VPI3, VPE1, VPL2, VPL3

g. Dependent Variable: VPF2

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	105.290	1	105.290	351.347	.000[b]
	Residual	66.827	223	.300		
	Total	172.117	224			
2	Regression	113.755	2	56.877	216.351	.000[c]
	Residual	58.363	222	.263		
	Total	172.117	224			
3	Regression	118.179	3	39.393	161.404	.000[d]
	Residual	53.938	221	.244		
	Total	172.117	224			
4	Regression	121.434	4	30.358	131.776	.000[e]
	Residual	50.683	220	.230		
	Total	172.117	224			
5	Regression	126.006	5	25.201	119.690	.000[f]
	Residual	46.111	219	.211		
	Total	172.117	224			
6	Regression	127.545	6	21.258	103.970	.000[g]
	Residual	44.572	218	.204		
	Total	172.117	224			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.845	.151		5.598	.000
	VPF1	.788	.042	.782	18.744	.000
2	(Constant)	.343	.167		2.056	.041
	VPF1	.591	.052	.587	11.288	.000
	VPI1	.323	.057	.295	5.674	.000
3	(Constant)	-.190	.204		-.932	.352
	VPF1	.589	.050	.585	11.671	.000
	VPI1	.253	.057	.231	4.414	.000
	VPI3	.191	.045	.173	4.258	.000
4	(Constant)	-.256	.199		-1.291	.198
	VPF1	.455	.061	.452	7.492	.000
	VPI1	.216	.057	.197	3.823	.000
	VPI3	.169	.044	.153	3.846	.000
	VPE1	.214	.057	.215	3.759	.000
5	(Constant)	.032	.200		.161	.872
	VPF1	.451	.058	.448	7.766	.000
	VPI1	.280	.056	.255	5.018	.000
	VPI3	.136	.043	.124	3.206	.002
	VPE1	.309	.058	.310	5.317	.000
	VPL2	-.199	.043	-.207	-4.660	.000
6	(Constant)	-.030	.198		-.149	.881
	VPF1	.422	.058	.419	7.269	.000
	VPI1	.221	.059	.202	3.744	.000
	VPI3	.146	.042	.133	3.473	.001
	VPE1	.286	.058	.287	4.945	.000
	VPL2	-.210	.042	-.218	-4.972	.000
	VPL3	.136	.049	.136	2.744	.007

Dependent Variable: VPF2

3) Adaptive Capacity of Leadership as Dependent (VPF3)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723[a]	.523	.520	.58427
2	.785[b]	.616	.613	.52505
3	.800[c]	.641	.636	.50909
4	.806[d]	.649	.643	.50434

Predictors: (Constant), VPF1

Predictors: (Constant), VPF1, VPL3

Predictors: (Constant), VPF1, VPL3, VPI3

Predictors: (Constant), VPF1, VPL3, VPI3, VPE3

Dependent Variable: VPF3

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.316	1	83.316	244.064	.000[b]
	Residual	76.126	223	.341		
	Total	159.442	224			
2	Regression	98.241	2	49.120	178.178	.000[c]
	Residual	61.201	222	.276		
	Total	159.442	224			
3	Regression	102.164	3	34.055	131.397	.000[d]
	Residual	57.278	221	.259		
	Total	159.442	224			
4	Regression	103.483	4	25.871	101.709	.000[e]
	Residual	55.959	220	.254		
	Total	159.442	224			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.065	.161		6.612	.000
	VPF1	.701	.045	.723	15.623	.000
2	(Constant)	.617	.157		3.928	.000
	VPF1	.467	.051	.482	9.093	.000
	VPL3	.375	.051	.390	7.358	.000
3	(Constant)	.050	.211		.235	.815
	VPF1	.433	.051	.446	8.559	.000
	VPL3	.365	.049	.379	7.371	.000
	VPI3	.172	.044	.163	3.891	.000
4	(Constant)	-.029	.212		-.139	.890
	VPF1	.382	.055	.394	6.986	.000
	VPL3	.335	.051	.348	6.592	.000
	VPI3	.170	.044	.161	3.880	.000
	VPE3	.116	.051	.118	2.277	.024

Dependent Variable: VPF3