

Creating Synergy through Balanced Score Card (BSC) for Organizational Strategic Objectives: A Study of Pakistan Defense Services

Muhammad Arif¹ and Mustaghis-ur-Rahman²

Abstract

This study explores the ability of a Balanced Score Card (BSC) to create synergy for an organization to achieve its ultimate strategic aims and objectives. The study is focused at the management perspectives for the BSC of Pakistan Defence Services as underlying foundation stone on the basis of which, BSC for respective force i.e. Army, Navy and Air force can be developed. Based on sound reasoning embedded in Resource Based Theory, In the light of basic conceptual model, various hypotheses were formulated for the verification of model using quantitative approach. The fitness of conceptual model and confirmation of hypothesis was carried out using quantitative techniques i.e employing simple and multiple regression modeling using computer based SPSS software. In the wake of quantitative analysis, it emerged that, 'National Purpose', 'Resources', 'Enabling Processes' and 'Building for Future' are the predictors of Achievement of National Defence Objectives, while operating as constituents of BSC create synergetic effect which ensures realization of National Defence Objectives.

Keywords: Synergy, Resource Based Theory, Strategic Objective BSC Perspectives, Enabling Processes, National Defense Objectives

1. Introduction

Synergy means 'Collective Action' and has its roots in the Greek word 'synergos', which means working together (Merriam – Webster Online Dictionary 2006). Ansoff (1965) introduced the concept of synergy in the strategic management. He used the term synergy to describe the effect that combined return of a whole is greater than the sum of the return from the individual parts. The synergy may be defined as, '*Synergy is the effect that the combined return of the, "whole" is greater than the sum of the returns from the individual parts.* Combining the parts into coherent whole is costly. Or we can say synergy creation needs to be managed and commits resources (c.f Porter 1985; Prahalad & Doz 1987, 1998; Sirower 1997). Therefore, the synergetic potential can never be fully translated into actual synergies.

Recent corporate reports Benecke, G. (2006) suggest that multi business organizations are continuously striving to achieve synergies among their various business units (Muller-Stewens & Knoll 2006). While raising their efficiencies and cutting costs, good corporate companies around the globe are also endeavoring to achieve growth through better inter departmental collaboration (Cooper, 1998) and Shaver, J.M. (2006). Many of these organizations strongly believe that in order to achieve growth in the saturated market, cross business collaboration is the main lever to work (Cooper & Kleinschmidt, 1987; Zirger & Maidique, 1990). For example, Clark and Fujimoto (1991).

Achievement of inter departmental synergy generally remains neglected by the researchers of strategic management. Most of the cross business or interdepartmental research has been indirect in approach focusing on the implications of diversification and mostly remained abstract in nature. Fact remains that little is known about how to achieve synergies among various departments of an organization Waco, M. & Wery, R. (2004, January) especially the organizations of bigger volume as of defense forces (National Science Foundation, 1976).

For many years, the researchers in the domain of strategic management have emphasized the importance of realization of synergy. Around the globe main purpose of various mergers and acquisitions is to achieve more growth through realization of interdepartmental synergies (e.g., Larson & Finkelstein 1999), and for alliances (e.g., Das & Teng 2000; Harrison et al. 2001), and for multi business firms (e.g., Ansoff 1965; Porter 1985; Martin & Eisenhardt 2001; Martin 2002) as well as Donoghue, S. (2007). Amongst the defence history most important example of achievement of synergetic effect among various arms of the defence forces was the Normandy landing by the allies on the French coast. Inter departmental synergies

¹ PhD Scholar SZABIST, Karachi, Pakistan. effiarif@gmail.com

² Professor & Head of Management Science Department, Bahria University, Karachi. hodms.bukc@bahria.edu.pk

can be summarized as, “ *the value that is created and captured, over time, by the some of the departmental efforts relative to what it would be separately by each department*” (Martin & Eisenhardt 2001).

The very purpose of the existence of a defense force is to provide security to a state from external and internal threats. To achieve this national security objective, states/nations provide means in the shape of various resources to the defense services. Perhaps every nation gives almost top priority to this fundamental obligation; negating at times vital national development Spinney (1996) and peoples' welfare projects Olson and Zeckhauser (1966). It is, therefore, mandatory upon the National Defense Leaders to make a judicious, intelligent, proficient and most economic use of state's hard earned resources to derive best possible value by achieving synergy among various constituents of the defence forces exercising best possible management practices to achieve grand national strategic defence objectives (Fontanel & Coulomb, 2007).

Given this importance and vitality of resources, the roots of this study are imbedded in the Resource Based Theory also known as Resource Based View (RBV), which professes that resources and their skillful application by any organization is the ultimate determinant of competitive advantage (Barney 1991) and (Peteraf and Barney 2003).

The question arises what could be an effective management tool to achieve synergy amongst various facets of an organization? This empirical study is being undertaken to address this question within the domain of Pakistan Defence Services, as the achievement of synergy or synergetic effect of all the constituents of a defence force is a deciding factor to effectively counter any external aggression to ensure National Security. In case of defence forces, research particularly lakes that how to achieve cost effective inter departmental synergies within the force and most importantly amongst the sister services at joint operations level Richardson (1960). As the Pakistan Defense services are aspiring to adopt BSC based concept of management, it is but natural that a formal research be undertaken to clearly delineate the key strategic perspectives which would serve as pillars for the BSC of Pakistan Defence Forces and most importantly through a certain empirical model it should be tested whether these perspectives would help in achieving synergy to achieve the strategic National Defence Objectives.

2. Literature Review

In the corporate world for the effectiveness and development of organizations, various management tools are employed for the organizational development especially to avoid dilution of resources and to ensure synergy among different constituents and the defence forces organizations are no exception rather they need it the most. Though Pakistan defence forces also have stringent type of Organization Management systems since independence in 1947, but somehow, these are less inclined towards testing and employing modern methods and management methodologies.

In the corporate world Balanced Score Card (BSC) is one such tool Kaplan, R.S. and Norton, D.P. (2008), which is very aptly being utilized for obtaining inter departmental synergies (Davis, 1996; Feurer, 1995; Smith, 1993; Vantrappen and Metz, 1994). The conclusive effect of BSC is to create inter departmental cohesiveness in order to achieve synergetic effect of all efforts being made individually by various departments of an organization (Bainbridge, 1996).

The BSC system, tries to transpose the vision and the strategy of the organization into such a comprehensive system of indicators which at the same time also defines the strategic framework of performance assessment and management (Bigliardi & Bottani, 2010). It tries to establish a balance between four different perspectives: Financial, Customer, Internal Business Processes, and Learning and Growth. At the same time it also establishes a link between strategy and operative management. It sets forth in a comprehensive report the most important factors for an organization and their synergetic outcome (Kaplan & Norton, 1999). It however, needs to be firmly comprehended that BSC is a concept rather than being an algorithm. BSC, therefore, should not be adopted as a straight jacket Burkert, Davila and Oyon (2010) and needs to be suitably modified keeping in mind the core vision and mission of an organization (Kaplan & Norton, 1996) and Faupel (2012).The foremost responsibility of any organization aspiring to adopt BSC concept is to decide its key perspectives after surgical analysis of its Vision, Mission and Strategy.

According to (Lawton, 2003) the BSC is such an integrated report that shows which dimensions of performance are the most important for an organization. It is balanced, because it sets forth in one single report all the most important objectives and indicators relevant to different dimensions and thus, it provides a multidimensional and comprehensive picture of the organizational performance.

The interests of a nation are underpinned through a secure and resilient National Defence Policy. This means nation should be able to mitigate the risks to her interests both locally and internationally employing various elements or instruments of national power. National interests are secured by carefully articulating and employing national policy and national strategy Sun Tzu (2000 BC) states:

- National Defence Policy statement broadly outlines the various parameters or choices helping to adopt course of actions by the government. In a nut shell National Policy is a statement of intent or commitment to actions.
- National strategy on the other hand is creating and orchestrating the instruments/ elements of national powers in the pursuit of national policy objectives.

Policy and strategy mutually describe what is required to be achieved as a nation i.e. (the achievement of national aims and objectives) or in more precise / technical term, (the ends) (Dandeker & Weibull, 1999, p. 88). How to achieve it (the ways) or the strategy and what resources to be employed. Although policy and strategy are shaped under influence of external factors (Raitasolo & Siplila, 2004, p. 252), but are mutually interdependent. No intelligent or shrewd policy can ever deliver without a well articulated strategy Niven (2014). The protagonists of Balanced Score Card proudly claim that it helps the organizations to deliver strategy outcomes to achieve policy end state (Kaplan & Norton, 1996). That's why BSC is attracting enormous interest of military and defence organizations.

Resources whether human or material are never unlimited (Raitasolo & Siplila, 2004, p. 248) and therefore, carry fundamental importance for the defence forces in the pursuit of National Defence Objectives (Segal & Kramer, 1977). Under mentioned narration of centuries old military thinker and strategist Sun Tzu amply highlight the importance of resources for the maintenance of credible defence forces Kaldor (1981). It is therefore, that the roots of this study are imbedded in the "Resource Based Theory"

"In the operations of war, where there are in the field a thousand swift chariots, as many heavy chariots, and a hundred thousand mail-clad soldiers, with provisions enough to carry them a thousand Li, the expenditure at home and at the front, including entertainment of guests, small items such as glue and paint, and sums spent on chariots and armor, will reach the total of a thousand ounces of silver per day. Such is the cost of raising an army of 100,000 men". Sun Tzu (2000 BC)

Any dynamic defence force of its salt always keeps an eye on the state of preparedness of its existing and possible future enemies as; in this technological age brain power has substituted brawn Segal (1995). As US President Jorge Nixlson said there are no permanent friends and no permanent enemies, because international relations are driven by ever changing National interests which take supreme importance over any alliances. Therefore, threat perceptions for any nation are in fact dynamic in nature (Smith, 2000, pp. 77–91) and keep changing in the wake of:

- Changing regional and international alliances (Haltiner (2003, p. 363).
- Changing economic obligations and compulsions of adversaries.
- Changing defence capabilities of an adversary with changing technologies.

A dynamic defence force always keeps an eye on above mentioned fundamentals and keeps adjusting its responses accordingly by taking timely remedial actions and keeps war gaming its various options (Feaver & Kohn, 2001, p. 467), also inducts new resources and capabilities to maintain superiority or to ensure befitting response. Pakistan Defence Forces keep developing i.e '**Building for Future**' and endeavor to maintain required military capability to deal or confront likely conflicts or crises having potential to threaten national integrity or vital national interests. Emerging/building crises may demand for new

technologies or could render already held as obsolete (Mark Webster, 2017, pp.25-36). Therefore, Pakistan needs to raise and sustain her fighting element according to future threat perceptions.

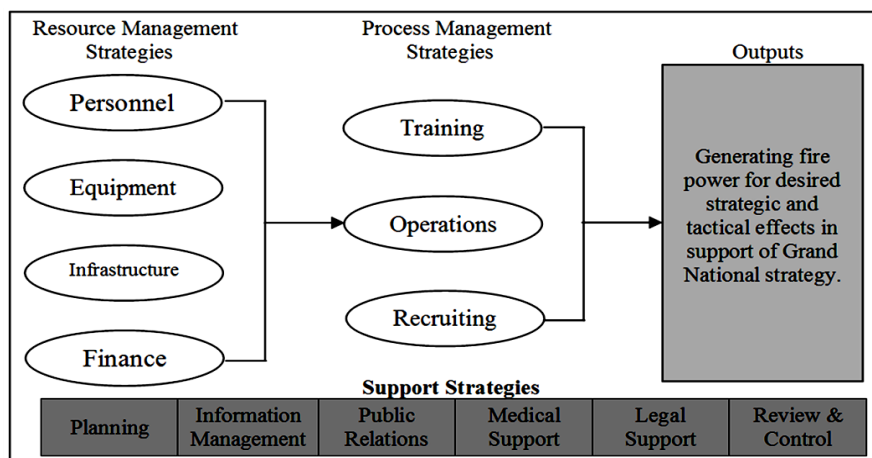
Day to day working methodology defines the DNA of any Defence Organization as the **Enabling Processes** of defence forces have direct effect on the effectiveness of peace time training and future preparedness for war or the ability to create strategic effects deemed important to ward off any external aggression or render a helping hand during national calamities. The quality of following three most important aspects having direct bearing on the potency of any defence force depends squarely on the proficiency and effectiveness of enabling processes (Morgan, 2001, pp. 104–105): Recruitment, Training and Procurement.

The ultimate outcome of various processes of a defence establishment is to generate a fighting power i.e, producing a military force capable of succeeding in operations against a prospective adversary. Generating fighting power through various enabling processes i.e creating synergy among various Arms has two fundamental implications:

- Generating fighting power achieves focus of various nonoperational activities across entire defence establishment.
- Various supporting foundations and units, though not directly contributing to operational fighting capability; play an essential role in sustained provision of fighting capability.

To generate fighting power, defence force pursue various inter related strategies, categorized as 'Core' and 'Support' strategies as shown in the figure: 1

Figure 1: Core Strategies



With the contracting / slowing down international economic environment and shrinking national defence budget, it is becoming imperative to make defense service more efficient, learn and adapt without compromising the competitive edge (Kiraly, 1999). The much desired reduction in defence spending entails introducing more efficient and result oriented management practices to achieve strategic National Defence objectives in a cost effective way (Bodnar et al, 1996).

Ample evidence is available that supports the theory that BSC does provide a medium to deliver and secure a strategic vision by ensuring sound cost effective interdepartmental cohesion and synergy. At the same time provides a comprehensive evaluation system. Furthermore, BSC concept has also been approached by various disciplines of management perspective. The accountancy perspective of BSC has been widely considered. The performance measurement aspect of BSC has received lot of attention and interest (Birchard, 1995, Brown, 1994, Lingle and Schliemann, 1996) usefulness of BSC has also been linked to total quality Management aspect as well. The capability of BSC concept to measure performance has been considered through some valid and unique perspectives (Davis, 1996). Traditionally corporate organizations tend to measure their performance considering financial aspects. However, standalone financial measures do not give the balanced view of critical fundamentals. Furthermore, core success

factors of an organization shall never be understood only through economic measure (MarkWebster, 2017, pp.25-36).

For the corporate world four main corner stones that play a pivotal role in the achievement of organizational strategy generally agreed upon by the corporate community are: the *Financial, Customer, Internal Processes, and Learning and Growth*. However, as defence forces are not a profit making organizations per say and neither have a concept of classical customer relationship imbedded in their operational philosophy, the corporate centered BSC perspectives; therefore, need to be modified to make these compatible to the National Defense Strategy. In the light of preceding literature review, hypothetically following have emerged as key management perspectives for Pakistan Defence Forces and can be classified as independent variables having direct bearing on the, 'Achievement of National Defence aims and objectives' the dependent variable: National Purpose, Resources, Enabling Processes and Building for Future. Following is the hypothetical summary on relationship among independent and the dependent variables:

Table No. 1: Relationship among Independent and Dependent Variables

Variables	Relationship with Dependent variable (Achievement of strategic National Defence Objectives)
<p>National Purpose</p> <p>Resource Management</p>	<p>The National Defence Strategy is always pursued in the light of National purpose. Same was highlighted 2000 years BC by Sun Tzu in following words, "war is one of the most important affairs to the state". As function of the pursuit of National purpose, a positive synergetic force is created; which helps in materializing the achievement of National Aims and objectives. This leads to Hypotheses – 1: Hypothesis-1: <i>The pursuit of National purpose, ensures the achievement of strategic Defence Objective.</i></p> <p>Right maintenance and right application of Human and Material resources is an important aspect of strategic management and has a relationship with the achievement of National defense aims and objectives. This leads to Hypotheses -2: Hypothesis-2: <i>Assured availability of resources; helps the achievement of strategic defence objectives.</i></p>
<p>Enabling Processes</p>	<p>Enabling Processes; means the internal management processes of defense forces adopted to conduct the working of the defense forces during both peace and war. As the time involved in carrying out any process is the major essence of military working, therefore, these should be as unambiguous as possible. This leads to Hypotheses – 3: Hypothesis-3: <i>Enabling processes help in achieving defence strategic aims and objectives</i></p>
<p>Building for Future</p>	<p>The right perception and right interpretation of changes taking place at national, regional and international level lead to correct evaluation about the future national threat perception, which resultantly helps in peeping into the future defence needs of the country helping to build for future. Rapidly changing technology brings every day new changes in the military weaponry and is so dynamic in nature that no army of its salt can stay aloof. This leads to Hypothesis – 4: Hypothesis-4: <i>Building for future helps the achievement of Defense Strategic Aims and objectives.</i></p>
<p>Creation of Positive Synergy</p>	<p>The conclusive effect of BSC is to create inter departmental cohesiveness in order to achieve synergetic effect of all efforts being made individually by various departments of an organization. This synergetic effect culminates in the form of achievement of National Strategic Aims and Objectives. This leads to Hypotheses – 5: Hypothesis-5: <i>The Pursuit of National Purpose, Resources, Enabling Processes and Building for Future collectively create a synergetic effect that helps to achieve National defence objectives.</i></p>

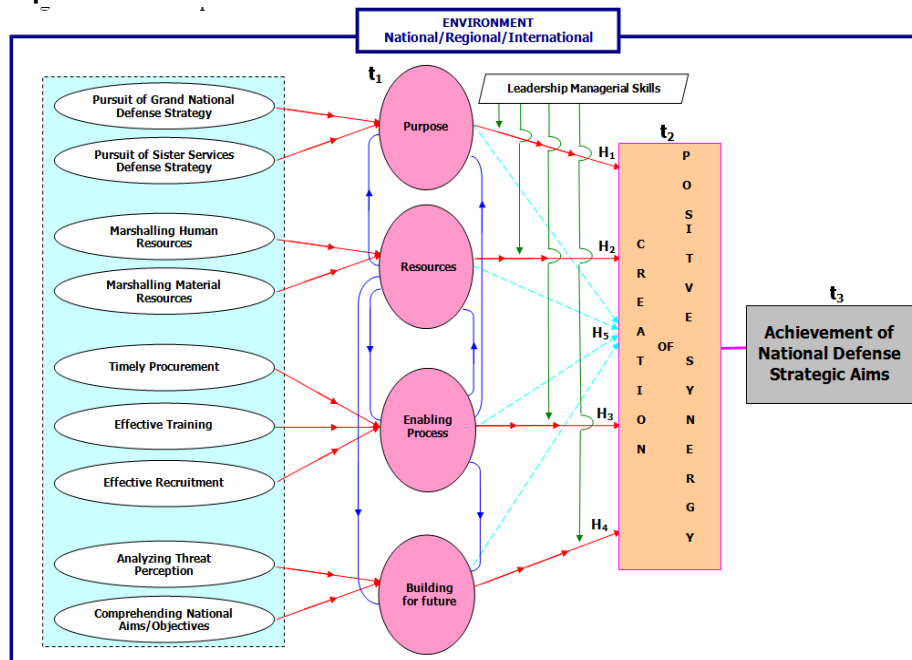
The hypothetical summary on the mutual relationship of above mentioned Independent and dependent variables depicted in the conceptual model in Fig-2 formulated on the lines of a BSC model where all the four independent variables function as the core perspectives; is as follows: The balanced growth of above perspectives as professed by the supporters of BSC (Kaplan and Norton, 1996) should help in creating synergy and achieving the National Defence Strategic Aims, which is the ultimate objective of raising and cultivating defence forces of Pakistan. Whereas, leadership and managerial skills; have a moderating/contingent effect across the spectrum of all independent variables. Persuasion of grand strategy and sister services strategy may affect the pursuit of collective Purpose of National Defence Strategic Aim. The perspective of Resources while in action may be affected by the quality/quantity of human/ material resources respectively.

In the same way, timeliness of procurements, effectiveness of training/ recruitment may affect the outcome of Enabling Processes perspective. Similarly, the quality of appreciation of threat perception, the quality of national industrial infrastructure and selection/comprehension of National aims and objectives; may have a contingent effect on the perspective of, 'Building for Future'. The, "Positive Synergy" is created as function of individual or collective operation of all the four independent variables. Finally the creation of positive synergy helps achieving the dependent variable i.e. the achievement of National Defence Strategic Aims". It also helps to conceptualize the relationship among independent and dependent variables, as to how the independent variable affects the dependent variable. Mutual relationships also exist among all the four independent variables. Resource perspective has its bearing and influence on Purpose, Enabling Process and Building for Future. Whereas, Enabling Processes influence Building for Future, Resources and the perspective of Purpose. The Conceptual Framework has three temporal divisions as depicted in the Fig-2 and elaborated as under:

- t1. Shows the time domain when the independent variables come into action.
- t2. Shows the time when creation of Positive Synergy takes place as a function of operation of independent variables.
- t3. Represents the time domain of achievement of dependent variable as a result of creation of Positive Synergy.

The whole Conceptual Model operates under an overall International/geopolitical situation i.e. the 'Environment'. The environment within itself embodies National, Regional and International environment, which is an uncontrolled variable.

Figure 2: Conceptual Model



3. Methodology

The quantitative techniques have been applied to test the hypothesis and the data was collected through survey same has been further explained under the heading of, "Survey Design" The data was collected and analyzed to identify the relevant key BSC Perspectives of Pakistan Defence Services that could be adopted as Key BSC Perspectives to latter on test their synergetic effect on the dependent variable i.e Achievement of National Defence Objectives.

Officers of all three services form the research population for this study which is approximately 617,000 and is listed. However, for this research target population has been the officers who have exposure of strategy formulation at the management level in the three Armed Forces. Defence Officers are the individual respondents who form the elements of survey sample drawn for this study. However, this study required an input from personnel having at least graduate or Masters level of education, which was deemed necessary to develop an understanding of the strategic management, therefore, officers having a thorough understanding of strategy development and implementation were considered as respondents for this research. These are the officers who have undergone respective staff courses, Armed Forces War Course (AFWC) and the National Defense Course (NDC) form the elements of survey sample conducted for the primary data collection.

Study Sample was drawn in order to collect primary data, quantitative data to address the technical aspects of the study was collected from the rank wise strata of officers' cadre as mentioned above, in the present study population clusters were stratified rank wise. The rank was taken as the basic character of each stratum. The reason for using the stratified sampling during this study is because of the large population but dispersed only Force and rank wise. Stratified sampling also necessitated ordering the sample rank wise and then selecting the same percentage of sample elements using simple random order.

As the purpose of this research is to locate and understand the creation of synergy by the key management perspectives of Pakistan Defence Services while serving as the building blocks of BSC to be adopted by Pakistan Defence Forces, which is expected to bring a paradigm change in the basic strategic management philosophy of Pakistani Defence Services, precision in drawing the sample for this study was therefore, of paramount importance. A due regard has therefore, been given to this overwhelming concern while drawing the sample.

As a rule of thumb the minimum size of any such sample depends upon the number of variables and the formula for the same is (*Number of Variable X 30 = Sample Size*), which is the minimum sample size requirement for analysis on SPSS (Uma Sekaran and Roger Bougie, 2009). The sample size for data to be analyzed using SPSS was drawn keeping in mind 95% of accuracy level. Using on line computer based sample calculator by Raosoft Inc, with confidence interval of 5 i.e confidence level of 95%; comes out to be 304 . However, the sample sizes for respective force on prorata basis is as follows:

a.	Army	62% X 304	= 189
b.	Navy	20.7% X 304	= 63
c.	Air Force	17.2% X 304	= 52
	Total		= 304

For the sake of administering questionnaire the final selected sample size for this study is 300 i.e. $n=300$.

Though lot of literature and secondary data is available on the subject, however, there are only few organizations within Pakistan using BSC as management tool. Resultantly an independent survey has to be conducted by the researcher. This was bit challenging as the survey elements were generally committed officers of the armed forces; data collection and conducting interviews was a demanding activity. The nature of this survey is Cross Sectional; consequently findings of this study can only be generalized for Pakistan Defense Services. The questionnaire was designed on Likert Scale in a manner that allowed clear understanding by the survey elements so that their responses are measured in the best possible way. To assure confidentiality of the respondents there personnel data including names were not made part of the questionnaire.

4. Results

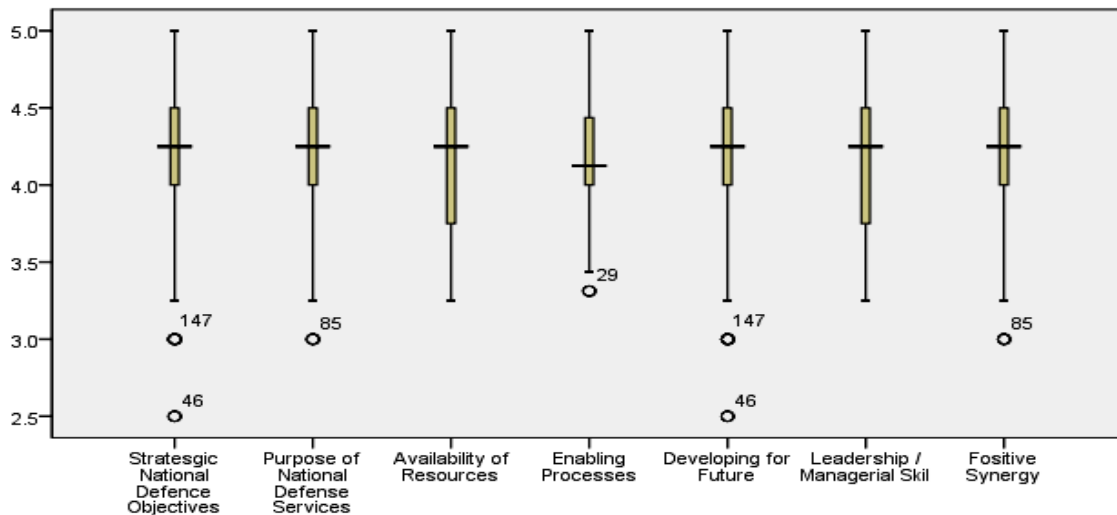
The in depth Literature review led the researcher to chalk out Conceptual Framework that helped formulation of 5 hypotheses to theorize the research propositions. To test these hypotheses, quantitative data were collected through questionnaire prepared on (Likert scale). Questionnaire consisted of five constructs representing four independent, and one Dependent variable. Each construct consisted of three to five items. The reliability of measurement instrument i.e. the questionnaire was checked using pilot survey and measuring the value of Chronbach's Alpha before serving the same to the entire survey size which comes out to be 0.835 and falls in the very good criteria, Hagen (1986) which shows that there is very good inter item consistency among all the five main constructs of the questionnaire.

Table No. 2: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.835	24

The survey response was quite encouraging, though the required survey size was 300; the questionnaire was served to 330 officers out of which 315 responded, 15 responses were discarded due incomplete questionnaires. An excel data sheet was prepared by feeding in all the 300 responses, which was then imported into computer based SPSS software for further result generation and data analysis.

Figure 3: Survey Response



The above computer generated Box Plot shows the overall response of all the respondents in terms of each variable. Generally all the responses fall in the region of *Agreed* and *strongly agreed* (of likert scale measure.) The tables below shows inter variable mutual correlation: which is positive and significant.

Table No.3: Inter Variable Correlation

	Strategic Aims & Objectives	Purpose	Resources	Enabling Processes	Developing for Future	Leadership /Management	Creation of Positive Synergy
Strategic Aims & Objectives	1	.247	.322	.713	.88	.322	.247
Purpose	.247	1	.342	.414	.247	.344	.89
Resources	.322	.342	1	.482	.322	.87	.342

Enabling Processes	.713	.414	.482	1	.86	.482	.414
Developing for Future	.88	.247	.322	.86	1	.322	.247
Leadership /Management	.322	.344	.87	.482	.322	1	.342
Creation of Positive Synergy	.247	.89	.342	.414	.247	.342	1

In order to prove the relationship among Independent and Dependent, variables through statistical analysis, other than proving mutual correlation, Regression testing was carried out using computer based SPSS software. The basic mathematical regression model can be expressed as follows:

$$Y = mX + b$$

Where 'Y' is the dependent variable 'm' is the slope 'X' is the independent variable and 'b' is the constant. The above mentioned basic statistical relationship widely helped in determining whether a particular variable is determinant of the other or not. To prove one on one relationship among variables, Simple regression technique was used. Whereas, in order to prove existence of synergy amongst them i.e whether, all independent variables are mutually also the determinants of dependent variable, multiple regression method was used. The analysis and the results have been compiled in the ensuing paragraphs along with the relevant discussion and deductions.

Hypothesis-1: The pursuit of National purpose, ensures the achievement of strategic Aims and Objective.

The simple regression test was conducted to find whether the pursuit of national purpose is a predictor of Achievement of Strategic Objective or not. The response statistics in terms of Strategic Objectives and purpose of National Defense Services are shown in table 4 below represents the ANOVA output which shows that 4.09 % of variance is predictable by the regression equation operative in this relationship.

Table No. 4: ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.097	1	4.097	19.352	.000 ^a
	Residual	63.086	298	.212		
	Total	67.182	299			
a. Predictors: (Constant), Purpose of National Defense Services						
b. Dependent Variable: Strategic National Defence Objectives						

The table 4 represents the coefficients of regression equation i.e. b1 and b0 being the slope and Y-Intercept, which helps in constructing the regression equation, which may be represented as follows:

Regression Equation

Predicted Achievement of Strategic Defence Objectives = 2.99 + 0.277 (Pursuit of National Purpose)

As both the Coefficients b0 and b1 are significantly different from zero, this shows that the pursuit of National Purpose and the Achievement of National Objectives have a linear positive relationship. Hence H-1 is confirmed and accepted.

Table No. 5: Coefficients

Model		Coefficients			t	Sig.
		Un-standardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.991	.264		11.342	.000
	Purpose of National Defense Services	.277	.063	.247	4.399	.000
a. Dependent Variable: Strategic National Defence Objectives						

Hypothesis-2: Assured availability of resources; helps the achievement of strategic defence aims and objectives.

The simple regression test was conducted to find whether the Availability of Resources is a predictor of Achievement of Strategic Objective or not. The response statistics in terms of Strategic Objectives and Resources are shown in table 6 below representing the ANOVA output which shows that 6.9 % of variance is predictable by the regression equation operative in this relationship.

Table No. 6: ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.968	1	6.968	34.483	.000 ^a
	Residual	60.215	298	.202		
	Total	67.182	299			
a. Predictors: (Constant), Availability of Resources						
b. Dependent Variable: Strategic National Defence Objectives						

The table 6 represents coefficients of regression equation i.e. b1 and b0 being the slope and Y-Intercept, which helps in constructing the regression equation, which may be represented as follows:

Regression Equation
Predicted Achievement of Strategic Defence Objectives = 2.88 + 0.300 (Availability of Resources)

As both the Coefficients of Constant b0 and b1 are significantly different from zero, this shows that the Achievement of Strategic Objectives and the Availability of Resources have a linear positive relationship. Hence H-2 is confirmed and accepted.

Table No. 7: Coefficients

Model		Coefficients			t	Sig.
		Un-standardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.888	.216		13.382	.000
	Availability of Resources	.300	.051	.322	5.872	.000
a. Dependent Variable: Strategic National Defence Objectives						

Hypothesis-3: Enabling processes help in achieving defence strategic aims and objectives.

The simple regression test was conducted to find whether the Enabling Processes is a predictor of Achievement of Strategic Objective or not. The response statistics in terms of Strategic Objectives and Enabling Processes are shown below. The ANOVA output shows that 11.38 % of variance is predictable by the regression equation operative in this relationship. The table 7 represents coefficients of regression equation i.e. b1 and b0 being the slope and Y-Intercept, which helps in constructing the regression equation, which may be represented as follows:

Regression Equation

Predicted Achievement of Strategic Defence Objectives = 2.38 + 0.428 (Enabling Processes)

As both the Coefficients of Constant b0 and b1 are significantly different from zero, this shows that the focus on Enabling Processes and the Achievement of Strategic Objectives have a linear positive relationship. Hence H-3 is confirmed and accepted.

Table No. 8: Coefficients

Model		Coefficients			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	2.385	.227		10.500	.000
	Enabling Processes	.428	.055	.412	7.799	.000

a. Independent Variable: Enabling Processes

b. Dependent Variable: Strategic National Defence Objectives

Hypothesis-4: Building for future helps the achievement of defense strategic aims and objectives.

The simple regression test was conducted to find whether the *Building for Future* is a predictor of *Achievement of Strategic Objectives* or not. The response statistics in terms of Strategic Objectives and Building for Future are shown in table 9 below representing the ANOVA output which shows that 26 % of variance is predictable by the regression equation operative in this relationship.

Table No. 9: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.260	1	.260	1.157	.000 ^a
	Residual	66.922	298	.225		
	Total	67.182	299			
a. Predictors: (Constant), Developing for Future						
b. Dependent Variable: Strategic National Defence Objectives						

The table 10 represents coefficients of regression equation i.e. b1 and b0 being the slope and Y-Intercept, which helps in constructing the regression equation, which may be represented as follows:

Regression Equation

Predicted Achievement of Strategic Defence Objectives = 3.88 + 0.061 (Developing for Future)

As both the Coefficients of Constant b0 and b1 are significantly different from zero, this shows that Focus on Developing for Future and the Availability of Resources have a linear positive relationship. Hence H-4 is confirmed and accepted.

Table No.10: Coefficients

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.880	.249		15.585	.000
	Developing for Future	.061	.056	.062	1.076	.000

a. Dependent Variable: Strategic National Defence Objectives

Hypothesis-5: The Purpose, Resources, Enabling Processes and Building for Future collectively create a synergetic effect that helps to achieve National defence objectives.

The **multiple regression** test was conducted to find whether *the purpose, resources, enabling processes, building for future, create positive synergy for the Achievement of defense strategic aims?* The response statistics in terms of *Achievement of Strategic defense Objective* and four independent variables in table 11 below representing the ANOVA output which shows that 17.33% of variance is predictable by the multiple regression equation operative in this relationship.

Table No.11: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.331	4	4.333	25.640	.000 ^a
	Residual	49.851	295	.169		
	Total	67.182	299			

- a. Predictors: (Constant), Developing for Future, Availability of Resources , Enabling Processes, Purpose of National Defense Services
- b. Dependent Variable: Strategic National Defence Objectives

The table 12 represents coefficients of Multiple regression equation i.e. b1 and b0 being the slope and Y- Intercept, which helps in constructing the regression equation, which may be represented as follows:

Multiple Regression Equation

Predicted Achievement of strategic Objectives = 1.44 + 0.308* (Pursuit of Purpose) + .180 (Availability of Resources) + 0.352* (Enabling Processes) + (.178) * (Developing for Future)

As both the Coefficients of Constant b0 and b1 are significantly different from zero, this shows that **The purpose, resources, enabling processes and building for future** collectively are the predictor of variance of the dependent variable i.e. the Achievement of National Defense Objectives and all these variables have a linear positive relationship. Hence H-5 is confirmed and accepted. This at the same time proves that in the course of operation of all the four BSC perspectives, **Synergy** is created that ultimately helps in achievement of National Defence objectives.

Table No. 12: Coefficients

Model		Un-standardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.444	.344		4.194	.000
	Purpose of National Defense Services	.308	.071	.274	4.361	.000
	Availability of Resources	.180	.052	.193	3.453	.001
	Enabling Processes	.352	.061	.339	5.786	.000
	Developing for Future	.178	.066	.183	2.718	.007

- a. Dependent Variable: Strategic National Defence Objectives

5. Findings

To find solution to research problem and test the 5 hypothesis, after an extensive literature research a conceptual model was developed, Based on sound reasoning embedded in Resource Based Theory. In the light of basic conceptual model, various hypotheses were formulated to confirm the validity of model. To employ the quantitative testing of the model, a cross-sectional data was gathered from target population which consisted of officers of the rank of Colonel and above in all the three armed services of Pakistan i.e. Army, Navy and Air force. The fitness of conceptual model and confirmation of hypothesis was carried out employing simple and multiple regression modeling using computer based SPSS softw7are. In the wake of quantitative analysis, it emerged that, *Purpose of Defence Forces, Resources, Enabling Processes and Building for Future* are the predictors of *Achievement of National Defence Objectives*, the 4 perspectives while in action create positive synergy which in turn helps in realizing the dependent variable i.e the achievement of National defence Objectives. The quantitative testing also brought to light that *Creation of Positive Synergy* is temporal in nature and is a function of time .i.e. synergy takes birth when the four main predictors (Independent Variables) are in action. On the other hand leadership and management qualities of those involved in the various roles i.e. as change sponsor, change agent or any

other person e.g. the head of certain department during development of BSC or its implementation have a contingent effect on the overall performance of BSC in the organization and tends to moderate the performance of BSC and creation of synergy. Such an effect being intangible in nature is generally hidden but the fact remains good or bad leadership qualities will certainly have an effect on the performance of BSC.

Findings of this study have some theoretical and managerial implications. Theoretical development around the globe for and against the utility of BSC as a management tool have given impetus to the need for finding theoretical validation of BSC concept of management both for public sector as well as Defence Forces. The founders of the BSC concept i.e. (Kaplan and Norton, 1996) had themselves cautioned that BSC is a concept rather than a tool and should not be adopted as a straight jacket. Especially the management perspectives, which are to serve as key pillars on which the entire development of BSC concept is to be based, should be adopted after due deliberation. Especially the perspectives of BSC should be the representative of the core concepts/values of any organization aspiring to adopt BSC method of management. The results show that the pursuit of National purpose, Resources, Enabling Process and the Requirement to Build for Future are the important contribution to the Defence Forces literature. The results further imply that all the four recognized key perspectives set a direction of use of these perspectives in a new research setting. All the four perspectives have emerged as predictor of "Achievement of National Defence Objectives" with a varying degree. It may give an additional insight and direction to the already existing body of knowledge on the subject rooted in the Resource Based Theory. All the conceptual arguments for the assumed theoretical perspectives have been empirically validated through this research, which should be of interest to the academic practitioners.

Assimilation / understanding and pursuit of *National Purpose* by all the cadres and ranks of a Defence Force, has registered its unique theoretical importance, which being intangible in nature generally remains un-noticed. The research has also established its clear viability as a predictor of achievement of National Defence Objectives. On the other hand, "Resources" both human and material being tangible in nature are though commonly considered an important management perspective, however, this research has empirically re-established its viability in the literature as a strong predictor of achievement of National Defence Objectives. The perspective of *Enabling Processes* has both tangible and intangible nature. Especially the organizational processes associated with the material resources e.g. the means of mobilization of Forces, Weapons, Ammunition and Rationing etc have been re-established in the theory as predictor, however, most importantly the intangible processes e.g. training and building of morale have also been re-established well in the theory through this research and should be of interest to the military literature and academia.

The perspective of "*Building for Future*" takes its birth from the fact that we are living in a dynamic world with changing technologies and improved scientific knowledge, nations try to surpass their adversaries in protecting themselves by building / acquiring improved arms and equipment while in its wake create new challenges for the would be enemy. Building for future in the light of such threat perceptions is an absolute and vital theoretical addition inviting interest especially of the military academia. Its acceptance as vital predictor of National Defence Objectives through empirical testing during this research, gives it enough credence to be accepted as a worthwhile addition to existing theory and literature.

This research has made a unique contribution to the international literature on Defence Forces management, as defence forces globally have a similarity of mission, i.e. to help the nations to achieve Grand National strategic aims and objectives. Most fundamentally in the statistical research settings drawn from *resource based theory* and extensive literature research satisfies all conditions with a desired level of fit to data. This is the confirmation of contribution in all respects.

Basically this study has used Resource Based theory and its causal framework to gain a better understanding of the predictors of Achievement of National Aims and Objectives and above all their ability to create synergetic effect as result of overall functioning of Defence Services. Major contribution of study is the conceptual framework which shows the relationship between four main predictors: *National Purpose of Defence Forces, Resources, Enabling Processes and Building for Future* and the *Achievement of National Defence objectives*. And it has made a prospective contribution to existing theory about defence

forces management paradigm. These four predictors have been proposed as perspective for developing BSC for defense services as their ability to create synergy have been proven beyond doubt, which is prospective addition to existing theoretical body of knowledge about BSC amongst defense services management.

6. Limitations

This study was undertaken with a specific aim of finding relevance of BSC as management tool for the defense services of Pakistan focusing mainly on exploring BSC Perspective as well as finding their ability to create synergetic effect as corner stone for the development of Scorecard at the latter stage. The findings of this study need to be thought through carefully as this being unique empirical attempt of its nature within Pakistan. However, for other nations or the geographical areas, various factors or exogenous factors might inherently affect the results. This also invites the future researchers as to how the predictors of this research can be incorporated in the conceptual models of other management settings. As this study has been carried out only in the context of Pakistan Defence Services, for any generalization of the same following factors may be kept in mind:

- The findings rely on respondents; self-reported cross-sectional data instead of longitudinal data. This may not represent a dynamic situation. This cross-sectional data may be affected of researcher's prepositioning especially having a defence forces background.
- As the data has been collected only from the single country Pakistan, which limits generalizing its findings globally.
- This data has been collected only from the defence forces personnel any application for the corporate or any civilian management has to be well deliberated even within the country.

7. Conclusion

To answer the basic research questions and achieve research objectives, this study after an extensive literature research developed a conceptual model, Based on sound reasoning embedded in Resource Based Theory. In the light of basic conceptual model, various hypotheses were formulated to confirm the validity of model. To employ the quantitative testing of the model, a cross-sectional data was gathered from target population which consisted of officers of the rank of Colonel and above in all the three armed services of Pakistan. i.e. Army, Navy and Air force. The fitness of conceptual model and confirmation of hypothesis was carried out employing simple and multiple regression modeling using computer based SPSS software. In the wake of quantitative analysis, it emerged that, *Purpose of Defense Forces, Resources, Enabling Processes and Building for Future* are the predictors of *Achievement of National Defence Objectives*, which have been proposed as the perspective of BSC on the basis of which the scorecard for Pakistan Defence Services may be developed. Above all study results prove that the above 4 perspectives while in operation collectively create synergy helping to realize the dependent variable i.e the Achievement National Defiance Objectives.

References

- Ansoff, I. (1965). *Corporate Strategy: an analytic approach to business policy for growth and expansion*. New York, NY: McGraw-Hill.
- Ângelo Sil, Ana Paula Rodrigues, Cláudia Carvalho-Santos, João Pedro Nunes, João Honrado, Joaquim Alonso, Cristina Marta-Pedroso and João C. Azevedo (2016). Trade-offs and Synergies Between Provisioning and Regulating Ecosystem Services in a Mountain Area in Portugal Affected by Landscape Change. *Mountain Research and Development*, Vol. 36, No. 4 (Nov 2016), pp. 452-464
- Barney, Jay, (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, Vol. 17, No.1, 99-120.
- Bainbridge, C. (1996). Balancing Act. *Management Consultancy*, pp. 30-33.
- Bodnár–Császár–Dobák. (1996). A kontroll, mint vezetői funkció. *Vezetéstudomány*. Vol. 3. p. 22-35.
- Benecke, G. (2006). *Synergy in a globally diversified organisation*. Unpublished D Com thesis. Promoter: Prof W Schurink and co-promoter Prof G Roodt. Johannesburg: University of Johannesburg
- Bigliardi B, and Bottani E. (2010). Implementing the balanced scorecard in the mechanical industry: Evidence from a case study. *International Journal of Management and Decision Making*. 11(2): 140-162. DOI 10.1504/ijmdm.2010.035214

- Burkert M, Davila A and Oyon, D (2010) *Performance consequences of balanced scorecard adoptions: Claim for large-scale evidence and propositions for future research*. In Epstein et al. editors. *Performance Measurement and management control: Innovative Concepts and practise*, Emerald Group Publishing Limited. pp. 345-361. DOI 10.1108/s1479- 3512(2010)0000020015
- Cooper, R. G., & Kleinschmidt, E. J. (1987). New products: what separates winners from losers? *Journal of Product Innovation Management*, 4, 169-184.
- Cooper, R. G. (1998). Benchmarking new product performance: results of the best practices study. *European Management Journal*, 16, 1-17.
- Dandeker, C., & Weibull, E. (1999). Facing uncertainty: *Flexible forces for the twenty-first century*. Karlstad: Klaria Tryckeri.
- Davis, T.R.V. (1996). :Developing and employee balanced scorecard: linking frontline performance to corporate objectives. *Management Decision*,34(4),14-18.
- Das. T.; Teng, B. (2000). A Resource-Based Theory of Strategic Alliances. *Journal of Management*, 26: 31-61.
- Donoghue, S. (2007). *Leadership & Strateg*. Marshall, S. (Ed.), *Strategic Leadership of Change in Higher Education: What's New?* Routledge.
- Faupel C. (2012). Value-based performance management. *Advances in Management Accounting*, 20: 187-208. DOI 10.1108/s1474-7871(2012)0000020014
- Feurer, R.C. (1995). Performance management in strategic change. *Benchmarking for Quality Management and Technology*, 2(2), 64-83.
- Fontanel, J., & Coulomb, F. (2007). Les budgets de l'OTAN et ses missions. In: Quel avenir pour l'OTAN sous le direction de Pierre Pascallon, *Collection de fense*. Paris: L'Harmattan.
- Feaver, P. D., & Kohn, R. H. (2001). Conclusion: The gap and what it means for American national security. In: P. D. Feaver & R. H. Kohn (Eds), *Soldiers and civilians: The civil- military gap and American national security* (459-473). Cambridge, MA: MIT Press.
- Haltiner, K. (2003). The decline of the European mass armies. In: G. Caforio (Ed.), *Handbook of the sociology of the military* (pp. 361–384). New York: Kluwer Academic/Plenum Publishers.
- Harrison, J.; Hitt, M.; Hoskisson, R.; Ireland, D. (2001). Resource complementarity in business combinations: Extending the logic to organizational alliances. *Journal of Management*, 27: 679-690.
- Kaplan R.S. and Norton D.P. (1996a). Linking the Balanced Scorecard to Strategy. *California Management Review*, Vol.39.No.1.
- Király László György, (1999): *Teljesítménymérés és -értékelés a közigazgatásban*. *Vezetéstudomány* 7-8. p.2-18.
- Lawton, Robin (2003): Balance your balanced scorecard: Categories of measures should reflect key values of both organizations and costumers.
- Lingle J. H. and Schieman W.A. (1996). From Balanced Scorecard to stratgeic guages: is measurement worth it. *Management Review*, Vol 85.
- Kaplan R – Norton D P (1999): *Balanced Scorecard: Kiegyensúlyozott stratégiai mutatószám-rendszer*. *KJK, Budapest*. p. 301.
- Kaldor, M. (1981). *The Baroque arsenal*. New York: Hill and Wang.
- Kaplan, R.S. and Norton, D.P. (2008). The Execution Premium: Linking Strategy to Operations for Competitive Advantage. *Harvard Business School Press*, Boston, MA
- Larsson, R.; Finkelstein, S. (1999). Integrating strategic, organizational, and human resource perspectives on mergers and acquisitions: A case survey of synergy realization. *Organization Science*, 10:1-26.
- Martin, J.; Eisenhardt, K. (2001). Exploring cross business synergies. *Academy of Management 2001 Best Paper Proceedings*.
- Martin, J. (2002). *Cross-Business Synergies: Recombination, modularity, and the multibusiness team*. *Dissertation*, Stanford University.
- Morgan, M. J. (2001). *Army recruiting and the civil-military gap*. *Parameters*, 31(2), 101–115.
- Müller-Stewens, G.; Knoll, S. (2006). *Smart Linking: Steigerung von Wachstum und Profitabilität durch innovatives geschäftseinheitenübergreifendes Synergien management*. Published Study, University of St. Gallen.
- Mark David Webster (2017). Philosophy of Technology Assumptions in Educational Technology Leadership. *Journal of Educational Technology & Society*, Vol. 20, No. 1 (January 2017), pp. 25-36

- National Science Foundation (1976). National patterns of R&D resources: *funds and manpower in the United States, 1953-1976*. NSF.
- Niven P.R (2014) *Balanced Scorecard Evolution: A Dynamic Approach to Strategy Execution*. Hoboken: John Wiley & Sons. 368p. DOI 10.1002/9781118915011
- Olson, M., & Zeckhauser, R. (1966). An economic theory of alliances. *Review of Economics and Statistics*, 48(3), 266–279.
- Peteraf, Margaret and Barney, Mark. (2003). Scanning dynamic competitive landscapes: a market-based and resource-based framework. *Strategic Management Journal*, Vol. 24, 1027 – 1041.
- Porter, M. (1996). What is strategy? *Harvard Business Review*, 74: 61-78.
- Raitasolo, J., & Siplila, J. (2004). Reconstructing war after the cold war. *Comparative Strategy*, 23(3), 239–261.
- Richardson, L. F. (1960). *Arms and insecurity*. Pittsburg: Boxwood Press.
- Spinney, F. (1996). Defense time bomb: F22/JSF case study. *Hypothetical escape options. Challenge*, 20(July–August), 9–12.
- Smith, P. (2000). Transnational security threats and state survival: *A role for the military. Parameters*, 30(3), 77–91.
- Segal, D. R. (1995). Five phases of United Nations peacekeeping: An evolutionary typology. *Journal of Political and Military Sociology*, 25, 65–79.
- Segal, D. R., & Kramer, R. C. (1977). *Worker democracy in military organization*. In: W. J. Taylor, R. J. Arango & R. S. Lockwood (Eds), *Military unions: U.S. trends and issues* (pp. 28–53). Beverly Hills: Sage Publications
- Shaver, J.M. (2006). A paradox of synergy: contagion and capacity effects in mergers and acquisitions. *Academy of Management Review*, 31(4), 962-976.
- UmaSukran & RogerBougie. (2010). *Research methods for business*, 5th edn, Tj International, Cornwall.
- Vantrappen, H.J. and Metz, P.D. (1994). Measuring the performance of the innovation process. *Prism*, Fourth Quarter, pp. 21-33
- Waco, M. & Wery, R. (2004). *How to integrate international acquisitions to realize lasting synergies*. World Trade, 48-51.