

“Accounting Information for Decision-Making in Palestine:
An Empirical Evidence”

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Abstract

This work aims at making a theoretical contribution about the way businesses adapt product costing to enhance resilience in challenging operational conditions in implementing strategic management planning. This study argues that Traditional Cost Accounting (- TCA) is gradually becoming less relevant in the present climate of global competitive business. TCA under-costs product, because indirect costs involved in production are not allocated fairly and the price of a finished product becomes inherently noncompetitive. Also, financial and non-financial information become not reliable for management planning. Such problems become a more urgent priority when the external environment is exceptionally restrictive as the case is under Israeli army occupation in Palestine. Activity-Based Costing (-ABC) that is a newer system that enables managers to cost more accurately, is the system without a business has hindered its commercial viability. This study analyses the concept of cost accounting in manufacturing industry, where Israeli army erected 648 check points that restrict Palestinians interlinks for the movement of their goods. Palestinian economy was therefore in recession and businesses were feeling the pinch of reduced revenues. This empirical study draws upon a survey of 32 ISO 9000 certified manufacturing enterprises that aspire to modernity in Palestine. The executives were asked for an interview and to complete a questionnaire of 74 questions. The research question was how do enterprises produce effective costing practices under challenging operational environment in Palestine? The findings of this study have showed that enterprises in Palestine were able to improvise and to produce their own version of bespoke ABC, termed “pseudo-ABC”. The enterprises were of small size that had demonstrated greater commitment to the principles of ABC product costing accuracy, and reporting both financial and non-financial information. “Pseudo-ABC” system in Palestine tended to display less complexity than the typical ABC systems in UK. There were no cost centres nor drivers as in typical ABC. A strong correlation was found in different applications of “pseudo-ABC” by industry in Palestine, whereas a contrasting perception is persistent on the success and importance of typical ABC applications worldwide.

Keywords: Palestine, activity-based costing (-ABC); traditional cost accounting)-TCA), management accounting; financial information; non-financial information; pseudo-ABC.

Introduction

Luca Pacioli (c1447-1517) is considered “the father of accounting and bookkeeping” and he was the first person to publish a work on the double-entry system of book-keeping (Needles et al., 2013); accounting has often been referred to as “the language of business”. Accounting is therefore the means by which enterprises communicate their financial positions. The accounting standards that differ from country to country, make comparability of financial reports difficult and it is more difficult for investors, creditors and governments to evaluate the usefulness of accounting information of an enterprise (Weygandt et al., 2010a). The International Accounting Standards Board (IASB) has made some attempts to establish common rules for preparing financial statements (accounting standards) and to specify the rules for performing an audit (auditing standards) across nation-states (Wallace et al., 1991). So, although there have been efforts to harmonize accounting practices across countries, significant differences remain (Barker, 2003). Accounting therefore is shaped by the environment in which it is applied, utilized or practiced (see Fig.1.).

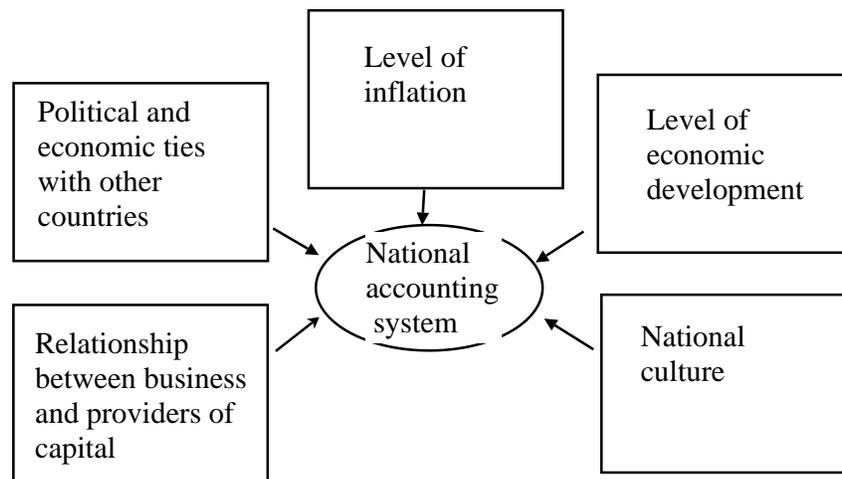


Fig.1: Country differences in accounting standards.

Source: Hill, C.W. (2013) *International Business: Competing in the Global Marketplace*, 9th edn., p.645. New York: McGraw- Hill Irwin.

As different countries have different political systems, economic systems and cultures, they have also different accounting systems historically (Wallace et al, 1991). Fig.1 illustrates what Wallace

and Walsh (1995) tried in their study to quantify the extent of differences between national accounting systems among 22 developed nations. The study found 76 differences in the way that the cost of goods sold was assessed, 65 differences in the assessment of return of assets, 54 differences in the measurement of research and development expenses as a percentage of sales, and 20 differences in the calculation of net profit margin. Hence, these differences make it very difficult to compare the financial performance of enterprises based in different countries.

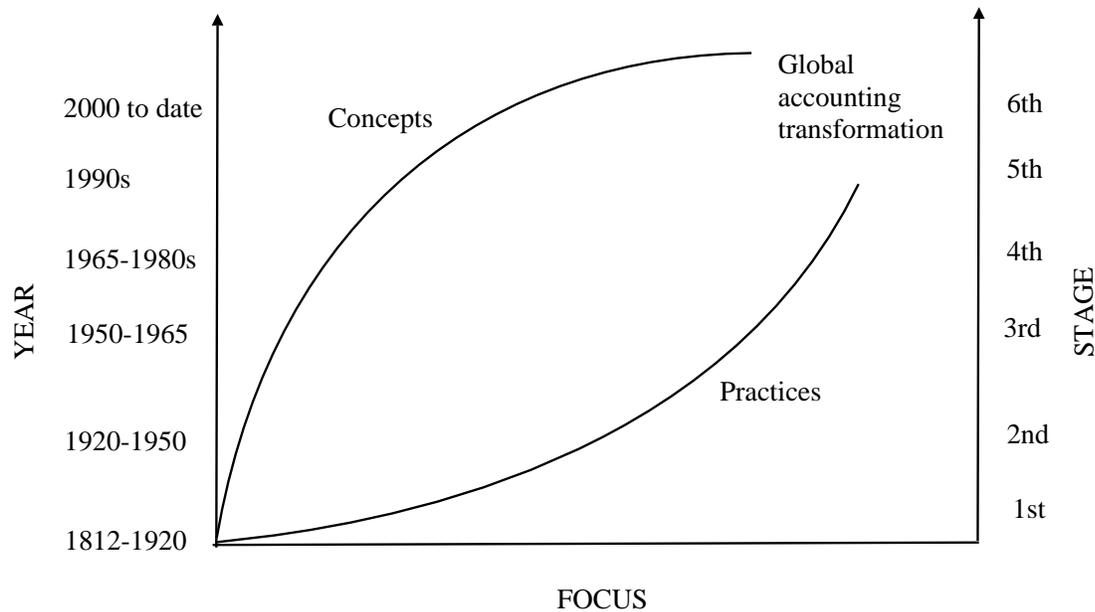
Management accounting that forms an integral part of the management functions in organizing, planning, directing, and controlling, provides essential information to the business in its decision making process. The scope of management accounting is also called internal accounting which is a field of accounting work that provides economic and financial information for internal interested users to assist them in making effective and efficient decisions. It relates to applying basic accounting process to business events data, which includes identifying, measuring, accumulating, classifying, recording, analyzing, preparing, summarizing, interpreting and communicating information gathered specially from cost accounting and used by management to plan, evaluate and control within an entity and to assure effective use of resources in order to meet business strategic objectives (Atkinson, et al., 2007).

The Anglo-American or Western approach has revolutionized the cost determination, financial control, accounting information for effective policy and strategy making, efficient use of resources in business processes and product quality improvement (Foster, 2010).

Garrison et al. (2011) have identified activities that are part of management accounting, such as: (1) Explaining manufacturing and nonmanufacturing costs and how they are reported in the financial statement, (2) Computing the cost of manufacturing a product or providing a service, (3) Determining the behavior of costs and expenses as activity level change, (4) Forecasting profit planning and budgeting, (5) Controlling costs by comparing actual results with planned objectives and standard costs, and (6) Compiling and presenting data for management decision-making. Management accounting is applicable to all types of businesses and to all forms of business organizations. It is also applicable to both profit-oriented enterprises and as well as not-for-profit entities.

Therefore, management by facts enhances higher value-added to decision-making that is inherently predictive, but it is based on sound collection and analysis of data. A major consideration in business performance improvement dictates the creation and use of performance

measures or indicators (Feigenbaum, 2008). Hence, this field of organizational activity encompassed by management has developed through evolutionary changes yet recognized as stages from Western perspective (Fig.2).



FOCUS:

1. Book keeping process. Lean accounting golden age.
2. Cost accounting, Grenzplankostenrechnung (GPK).
3. Managerial planning control. Traditional cost accounting.
4. Lean product manufacturing. Activity-based costing. Six Sigma. Kaizen.
5. Value based management. Just-in-time. Stake holders' value.
6. Demand driven planning. Time-driven activity-based costing. Resource consumption accounting. Simulation.

Fig.2: Change of the focus of management accounting.

Source: Hajjawi, O. (2012a) "Management accounting Practice in Palestine: an empirical evidence", European Journal of Economics, Finance and Administrative Sciences, vol.49, p.29.

The nature of management-oriented accounting information alters in line with changes in the business environment. Bhimani et al. (2008) and Horngren et al. (2009) have argued that some of the developments which are key influences on Fig.1.2 changes in management accounting include:

(1) An increased pace of change in the business world, (2) Shorter product life cycles and competitive advantages, (3) A requirement for more strategic action by management, (4) The emergence of new enterprises, new industries and new business models, (5) The outsourcing of non-value-added but necessary services, (6) Increased uncertainty and explicit recognition of risk, (7) Novel forms of reward structures, (8) Increased regulatory activity and altered financial reporting requirements, (9) More complex business transactions, (10) Increased focus on customer satisfaction, (11) New ethics of enterprise governance, (12) The need to recognize intellectual capital, and (13) Enhancing knowledge management processes.

Consistent with the scorekeeping function, the balanced scorecard translates an enterprise's mission and strategy into a comprehensive set of performance measures that provides the framework for implementing its strategy (Kaplan and Norton, 2001). The balanced scorecard does not focus solely on achieving financial objectives; it also highlights the non-financial objectives. The balanced scorecard measures an enterprise's performance from key perspectives as follows: (1) financial, (2) customers, (internal business process, and learning and growth. Hence, an enterprise's strategy would influence the measures used in each of these perspectives from attempting to balance financial and non-financial performance measures for both short and long-run performances in a single report (Atkinson, 2006).

Although Norreklit and Mitchell (2007, p.193) stated that empirical research as set precludes drawing firm decisions on the practical worth of balanced scorecard; the pitfalls that must be avoided when implementing a balanced scorecard, would include the following: (1) the cause-and-effect linkages should not be assumed to be precise, (2) improvements across all of the measures all of the time should not be sought,(3) objective measures should be used among others in the scorecard, (4) both costs and benefits of initiatives should be considered before including these objectives in the scorecard and (5) non-financial measures should not be ignored when evaluating managers and employees (Horngren et al., 2009, p.498).

ABC that utilizes unit cost rather than total cost, would be a facilitator for benchmarking criteria. Thus, a better understanding of overhead costs could enable Palestinian managers to scrutinize more effectively processes within the supply chain, i.e. (1) improving the quality and management activities, and (2) increasing product competitiveness against cost effective Israeli products for business strategic planning. Consequently, Palestinian enterprises could stand a better chance to

survive the nationwide current economic crisis and they may also have a great effect on future prosperity of the enterprises. They will be able to make use of both financial and non-financial information to aid management taking the right decision on the following: (1) Pricing and product-mix decisions, (2) Cost reduction and process improvement decisions, (3) Planning and management activities decisions, (4) Modes of enquiry and techniques decisions, and (5) Others. Refining a Palestinian costing system like activity-based management that utilizes ABC accurate and precise information to satisfy customers and improve business profit, can assist management to take the right decisions concerning pricing, product mix, costs reductions, process improvement, product redesign, and planning or managing business activities.

Therefore, the aim of this study has been to make a theoretical contribution about the way businesses adapt product costing to enhance resilience in challenging operational conditions in strategic management planning. Hence, the research question is as follows: “How do enterprises produce effective costing practices under challenging operational environment in Palestine?”

So, refining a Palestinian costing system like activity-based management that utilizes ABC accurate and precise information to satisfy customers and improve business profit, can assist management to take the right decisions concerning pricing, product mix, costs reductions, process improvement, product redesign, and planning or managing business activities.

In pursuing the research question, the questionnaire survey will effectively clarify strategic management decision making avenues (1) to relevant forms of learning (if any) that would enhance the competency of executing business strategy , and (2) to relevant evolved practices (if any) that would sustain efficient product costing ergonomically.

Methodology

The ABC method (Table 1) appeared to be an appropriate answer to the problems of traditional (volume-based) costing (Bjørnenak and Falconer, 2002), and the distinct advantages reported by those using the method are as follows: (1) ABC creates reliable data that managers at all levels of an enterprise are prepared to use for decision making and performance evaluation (Cagwin and Bouman ,2002), (2) ABC transfer prices between marketing and production departments can be instituted in a decentralized enterprise (Kaplan et al.,1997), (3) ABC reveals the complexity this method arises from first assigning indirect costs to activities and then assigns the costs to products

based on the products' usage of the activities (Chung et al., 1997), (4) The traditional costing does not address the problem of non-production costs such as those associated with marketing and distribution, because according to accepted accounting principles they are not part of the product cost (Atkinson et al., 2004) and (5) ABC and activity-based management are relevant not only to industrial enterprises, but also to a broad range of service organizations (Emblemsvag, 2001).

Table 1: Traditional Cost Accounting (TCA) versus Activity-Based Costing (ABC)

Literature source: Bhimani, A., Horngren, C.T., Datar, S.M. and Foster, G. (2008) Management and Cost Accounting, 4th edn., p.366. Upper Saddle River, NJ: Prentice-Hall, Inc.; Drury, C. (2007) Management and Cost Accounting, 7th edn., p.372. Stamford, CO: Cengage Learning Business Press.

No.	Matrix	Traditional cost accounting	Activity-based costing
1	Purpose	It utilizes a single, volume-based cost driver, distorts the cost of products.	It uses drivers at various levels. More accurate product costs for management decision making process.
2	Focus on	The structure-oriented, products cause cost but the assumption does not work for activities that are not performed directly on the product units.	Activities-oriented, cost objects create the demand for activities.
3	Spend analysis	What is spent?	Why is it spent?
4	Cost approach	Costs of the objects are allocated randomly based upon the labor or machine hours etc.	Cost/cause relationship, activity and cost.
5	Variability	It causes variation.	Perspective, but it recognizes that diversity creates variation in cost. Analyze and justify manufacturing cycle-time improvements.

6	Encompass of	Inventory valuation and overall profit. It is not prepared to actively manage costs, which has led to the development of cost management techniques.	Activity-based management, budgeting, activity reporting, performance measurement, benchmarking, and continuous improvement.
7	Performance measurements	Mainly financial measurements, i.e. variances, net income and return on investment.	Product costs, service activity costs and customer costs all related to profitability.

Research methodology is a discussion within the body of a research report in terms of design, data collection methods, sampling techniques, fieldwork procedures and data analysis efforts (see Fig.3). The questionnaire survey which is the most common method of generating primary data, is a research technique in which information is gathered from a sample of people by the use of a questionnaire or interview; a method of data collection based on communication with a

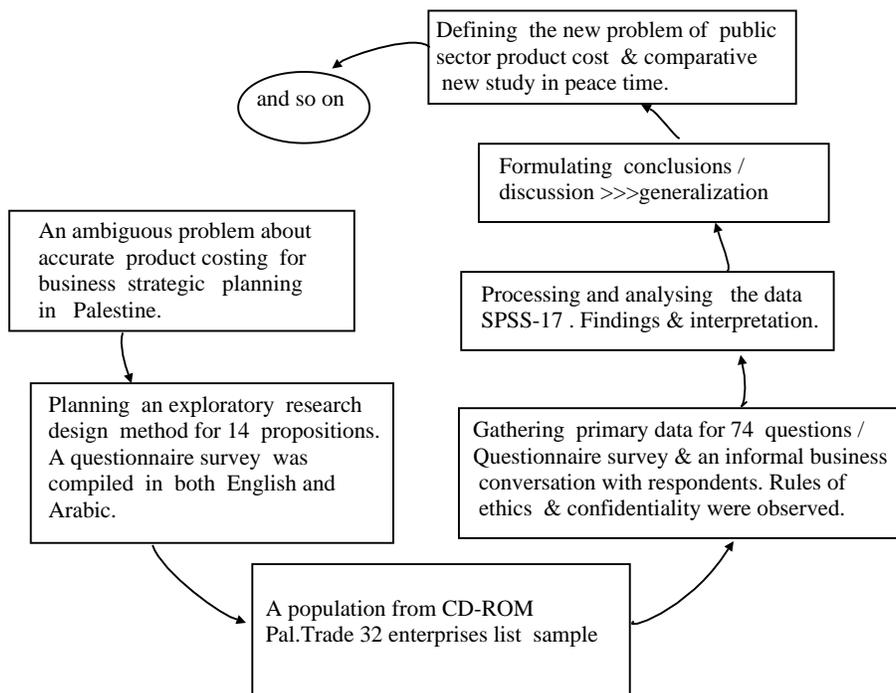


Fig.3: Phases of the research process.

Adapted from: McMillan, J.H. and Schumacher (2014) *Research in Education:*

Evidence-Based Inquiry, 7th edn., p.19. Boston, MA: Pearson Education, Inc.

representative sample of individuals (Cohen and Manion, 1996). The task of writing a list of questions and designing the exact format of the printed questionnaire is an essential aspect of the development of a survey research design. In practice, the stages overlap chronologically and are functionally interrelated, in which early stages of the research process will influence the design of the later stages and vice versa for forward and backward linkage, respectively (Warwick and Lininger, 1975, pp.20-21). This research has therefore begun with a thorough UK search of pertinent literature for the reason that numerous studies have investigated the implementation of ABC in various aspects and in several industries.

Anthony (1989) commented, information about management accounting practices was "abysmally poor" and almost all were anecdotal (p.18). He argued that there was a need for survey-based research to identify management accounting techniques used in product costing practice and he criticized the assumption often made in the literature that a particular technique was used by most enterprises, when no statistical evidence was available relating to its use. This view was re-enforced by Holzer and Norreklit (1991, p.7) who stated that cost accounting practices in the industry were 'difficult to verify since no reliable survey data is available'. A further feature of the criticism was made by Kaplan (1984), and it was written with the USA in mind. However, a specific interest in management accounting has developed in recent years in Europe (Macintosh, 1998; Shields, 1998). On the other hand, Bromwich and Bhimani (1994) and Bromwich and Hong (1999) argued that management accounting practice in the UK is not perceived as being in crisis. Developments are taking place, for example as a result of technological changes, but talk of crisis and revolution may reflect purely USA problems and concerns. The UK and Europe in general may have a rather different agenda, and it is important not to presume that the management accounting experience in USA is necessarily replicated in a European context (Bhimani, 1996; Catturi and Riccaboni, 1996; Birkett, 1998; Macintosh, 1998; Shields, 1998). Thus, it is important not only to conduct research into practice, but also to ensure that it covers all European countries. Drury and Tayles (2000) and Horngren et al. (2009) have adopted a more European focus in their recent textbooks. There is a common ground in management accounting practices across Europe

due to many factors such as: European economic integration, decreasing national barriers, internationalization of firms, increasing harmonization of financial accounting practices and advances in information technology (Pistoni and Zoni, 2000). Also, there is a more general interest of whether management accounting in Europe is becoming part of global management accounting practices and whether the same management accounting systems are being applied in a variety of countries (Granlund and Lukka, 1998; Shields, 1998; Harrison and McKinnon, 1999). Hence, these differences make it very difficult to compare the financial performance of firms based in different nation-states. Table 2.shows that research of product costing practices has been mostly undertaken in Europe during the last two decades or so. The research has been country specific; looking primarily into issue addressed the studies, such as: the number of cost systems a firm uses,

Table 2: Studies of product costing practice in Europe.

The issues addressed by the studies are denoted as: 1. the number of cost systems firms use. 2. Corporate cost structure.3. Use of blanket overhead rates.4. Bases used to calculate overhead rates.5. Use of product costs in decision-making. 6. Use of product costs in pricing decisions. 7. Application of activity-based costing. 8. Management accounting.

Author(s)	Research Location	Research Method	Sample characteristics	Issues addressed by the studies
Ask and Ax (1992)	Sweden	Questionnaire	152 Engineering companies (Response rate 67.3%)	1,2,3,4,5, 6,7
Bailey (1991)	UK	Interviews	10 Companies (9 Manufacturing and 1 service company)	1
Bjørnenak (1997)	Norway	Questionnaire	75 companies	3,4,5,7

Friedman and Lyne (1995)	UK	Interview	manufacturing Industry (Response rate 30.1%) (Including 127 manufacturing units) 2 People interviewed in each of the 11 companies visited, and management consultants from 3 companies	1,6,7
Granlund and Lukka (1998)	Finland	Interview	6 Firms	1
Hajjawi (2011; 2012a)	Palestine	Questionnaire	32 Managerial/director-level of Manufacturing companies (Response rate 100%)	1,2,3,4,5, 6,7, 8
Hopper et al.,1992	UK	Interview	Accounting staff in 6 large public companies	1
Innes et al., 2000	UK	Questionnaire	139 Companies	7
Joseph et al.,1996	UK	Questionnaire	308 Qualified management accountants (Response rate 36.6%)	1

O'Dea and Clarke (1994)	Ireland	Interview	Financial controllers in 16 multinational companies	1,2,4,7
Scapens et al.,1996	UK	Questionnaire	308 Chartered Institute of Management Accountants -CIMA members employed in industrial and commercial firms.	1,5
		Interview	15 Managerial/director-level accounting staff in 14 manufacturing and 1 financial services firms	
Theunisse (1992)	Belgium	Questionnaire	135 Companies	2,4,5,7
		Case study		
de With and van der Woerd (1994)	Netherlands	Questionnaire	52 Large manufacturing companies, trading firms, and service organizations	5
Yoshikawa et al.,1989	UK	Questionnaire	67 Scottish companies	4,5

Where qualitative research is seeking to generalize about general issues, representative or 'naturalistic' sampling is desirable. The design can be likened to an abstract drawing. It has taken

shape without particular individuals, groups, organizations, or sites in mind. The research design requires understanding and consideration to the unique characteristics of specific research subject. In essence, the research design has to be more concrete by developing a sampling frame capable of answering the research question(s), identifying specific subject, and securing sample participation in the study (Mason, 2002). Choosing a study sample is an important step in any research project since it is rarely practical, efficient or ethical to study whole populations. The aim of the sampling approaches is to draw a frame sample from the whole population, so that the results of studying the sample can then be generalized back to the population (Ritchie and Lewis, 2003). A population of ISO certified Palestinian enterprises was selected from manufacturing cross section. Since a phenomenological or interpretive approach has been used in this research, Palestinian business lieutenants would be the right personnel to describe things and experience things through their senses (Patton, 2002).

Questionnaires surveys encompass a variety of instruments in which the subject responds to a written question to elicit reactions, beliefs and attitudes. Most survey research on ABC used mainly structured questionnaire and to a lesser extent interviews in Europe (see Table 2); for behavioural, organizational and technical variables. The purpose of this questionnaire survey is to identify many heuristic variables (see Table 1) for categories that would provide knowledge on both product costing practices in Palestine, and on the ABC implementation, especially the aftermath of the second uprising economic crisis in 2004 to contest a theoretical research model (see Fig.4). So, the concept of ABC is innovative management accounting systems that would be ambitious reforms of the costing methods for Palestinian manufacturing enterprises that are no longer produce a narrow range of products as decades ago when traditional costing system was designed. Palestinian enterprises would be therefore reflecting the true product cost in order to fight competition, and they would utilize the system for more purposes: stock valuation, planning, control and decision-making. In general, adoption and implementation of management innovations are usually affected by financial resources of the enterprise and its capacity to teach (Porter, 1996). It was also expected that if an enterprise introduces ABC, it will subsequently utilizes the cost reduction as a function of quality management improvement (Foster, 2010).

Also, it soon claimed ABC major advantages that overcame the limitations of TCA despite of rising number of questions concerned with adoption and implementation (Byrne et al.,

2009). However, Ittner et al. (2002) stated that ABC would only have indirect effect on financial efficiency. Hence, the success of ABC would have an impact on management decisions-making, personnel performance evaluation, production and operation, other relevant organizational

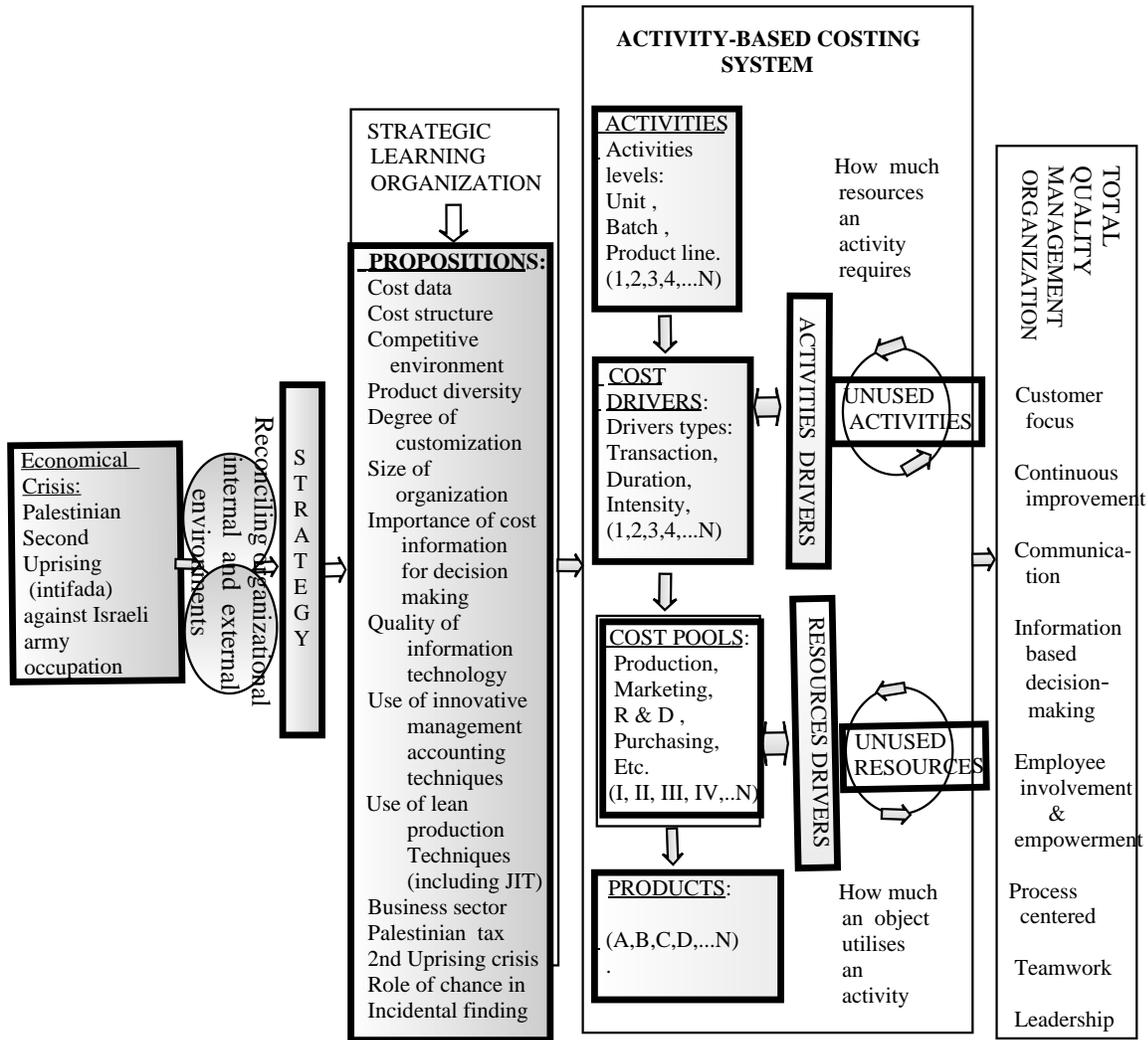


Fig.4: Conceptual framework.

Source: Foster, S.T. (2010) *Managing Quality: Integrating the supply Chain*, 4th edn.p.142. Upper Saddle River, NJ: Pearson Education, Inc.; Heizer, J. and Render, B. (2008) *Operations and Management*, 9th edn., p.39. Upper Saddle River, NJ: Pearson Education, Inc.

matching factors to its own environment. The conceptual framework (Fig.4) illustrates the relationship between such interactive parameters. The types of cost drivers are as follows: (1) transaction drivers, such as the number of customer orders, the number of purchase orders, the number of facility inspection performed, and other, (2) duration drivers, such as set-up machine hours, labor hours, production hours, inspection hours, loading hours and others and (3) intensity drivers, such as each over-time hours will be charged at double the normal wage per hour, each overseas order is one and half times of local purchase order.

So, cost drivers are such as: (a) the number of units, (b) the number of electricity units consumed, (c) the number of sales orders, (d) the number of research projects, (e) the number of service calls, (f) the number of machine set-ups, (g) the number of customers, and (h) not applicable. The cost pools are the normal functional departments at an enterprise like: production, marketing, research & development, customer service, purchasing, material handling, and other. The outcome of reforming the costing systems will facilitate in proactive and reactive implementation the attributes of total quality management listed in the conceptual framework such as customer focus, leadership, teamwork, empowerment, process centered, and communication, information-based decision-making and continuous improvement (Fig.4).

The notion of ABC adoption in Palestine would be founded on the back of 'organizational learning' for strategic decision making process (Schermerhorn, 2002; Ebert and Griffin, 2005). Palestinian Trade Center-Pal Trade (2009) is one of the most active trade organizations that were established to focus on private sector development. Pal trade which is a national, non-profit, fully private sector, and membership - based organization, was later merged with the Palestinian Trade Promotion Organization to expand efforts in promoting trade and export (Palestinian Investment Promotion Agency, 2010).

Pal trade plays an essential role in policy analysis, trade development and gathering relevant market data for its total affiliated members of 339 enterprises which include 49 manufacturing enterprises. The principal products of the Palestinian industrial sector are textiles, food and beverage, stone and marble, pharmaceuticals, footwear and leather products Random sample selection is an assumption of probability theory and the ability to draw inferences from samples to population (Patton, 2002). All units in the population have an equal and independent chance of being selected in the sampling frame (Mason, 2002). Hence, a population sample of 32 mixed

manufacturing enterprises from a list of 49 that were certified by Palestinian Standards Institution (PSI) with ISO accreditation, were selected for the presumptuous of high benchmark quality business operation. The sample size is more than 31 sampling frame (Crouch and McKenzie, 2006; Mason, 2010). The sampling process excluded 17 manufacturing enterprises which were not ISO certified, i.e. a population of manufacturing enterprises (~65%) was the sampling frame of mixed business sectors.

In terms of minimum sample size of a population, Snedecor and Cochran (1989) argued that X_{n+1} falls between the sample maximum and sample minimum of $\{X_1, \dots, X_n\}$, where n denotes sample size. Since the recommended minimum sample size is 30, it gives a prediction interval of $(n-1)/(n+1)$ of the time, i.e. $29/31=93.5\%$; whereas the prediction interval of this study is $31/33=93.9\%$ of the time. The statistical data analysis seeks to tests the hypotheses that the relationship between 2 or more variables may or may not be correlated (statistically significant). Researchers therefore use sample sizes as large as possible because sample size is directly proportional with inferences accuracy. One might argue that squaring and cubing the sample size will result in doubling and tripling the accuracy, respectively. Furthermore, Dell et al. (2002) offered mathematical calculation for minimum sample size determination for testing of pathogen presence and they concluded that testing a sample of 30 will have a 95% chance of detecting an infection.

In a statistically valid questionnaire survey, the sample is objectively chosen so that each member of the population will have a known non-zero chance of selection (Zikmund, 2003). Only then can the results be reliably projected from the sample to the population for generalization (Groves et al., 2009). This research population was not selected haphazardly or only from those who volunteer to participate.

The sample frame of this study was selected to be manufacturing enterprises that were listed on the PSI register and they feature the following : (1) they are large-sized firms in local terms, (2) they have greater resources available for investment in new systems, (3) there is a great deal of information available about them, (4) they are often well reputed enterprises, (5) they would provide breadth of information for wider external validity, and (6) the implications are the practical ways this research will assist the field of business at large in comparable situations. These are underlying rationales for the importance of this study in the Israeli Occupied Territories of Palestine to seek illumination, understanding, and extrapolation to similar situations.

Statistics is concerned with the collection, analysis, interpretation, presentation, and organization of data (Fig.3). The data will be collected from people. In this study, questionnaire survey provides a means of measuring a population's characteristics, observed behaviour, awareness of phenomenon, opinions, needs and others. The main techniques used to analyze surveys are frequencies, crosstabs, means, and graphs (Zikmund, 2003), though frequencies are the ones mainly used in this study, because frequency or one-way tables represent the simplest method for analyzing categorical Likert-type (items) data. They are often used as one of the exploratory procedures to review how different categories of values are distributed in the sample. It involves making a count of the number of instances of the categories for each variable and finding the percentages for each category selected based on the total number of people in the survey or of those answering that question, if the missing responses are eliminated. Frequencies can be used for individual or multiple variables and for both descriptive and evaluative research. The advantages of using frequencies is that it is a simple way to provide an overview of responses to a questionnaire. Also, the frequencies for the categories for a variable can be combined to create a cumulative per cent for certain types of variables, where the categories can be grouped together. A disadvantage of this approach is that if there are multiple choices for different categories for a variable, the percentages will add up to more than 100% which might make it difficult to compare responses to that variable across samples. Also, when there are multiple questions since there will be multiple frequency and percentage and cumulative percentage charts. The frequency procedure doesn't work well when there are numerous categories for ordinal or Likert-type (items) variables (Andres, 2012). A Likert-type is simply a statement which the respondent is asked to evaluate according to any kind of subjective or objective criteria; generally the level of agreement or disagreement is measured. Whether individual Likert items can be considered as interval-level data, or whether they should be considered merely ordered-categorical data is the subject of disagreement. Many regard such items only as ordinal data, because, especially when using only five levels, one cannot assume that respondents perceive all pairs of adjacent levels as equidistant. On the other hand, often the wording of response levels clearly implies a symmetry of response levels about a middle category; at the very least, such an item would fall between ordinal- and interval-level measurements; to treat it as merely ordinal would lose information.

Cross-tabulation is another statistical tool where a combination of two (or more) frequency tables arranged such that each cell in the resulting table represents a unique combination of specific

values of cross-tabulated variables (Zikmund, 2003). Thus, cross-tabulation allows us to examine frequencies of observations that belong to specific categories on more than one variable. By examining these frequencies, we can identify relations between cross-tabulated variables. Only categorical (*nominal*) variables or variables with a relatively small number of different meaningful values should be cross-tabulated. This generally means that tabulation of subgroups will be conducted for purpose of comparison. These are used in explanatory and evaluative research, whereas this research is exploratory (Malhotra, 2010).

Findings and Interpretations

The chi-square (χ^2) test determines the significance in analysis of frequency distribution; thus categorical data of the variables may be analysed statistically (Yates, 1934). The chi-square measures are looking at the differences in question responses from a uniform distribution of answers. Calculation of the chi-square statistics allows us to determine if the difference between the observed frequency distribution and the expected frequency distribution in one or more categories can be attributed to sampling variation. A frequency count of data that categorically rank groups is acceptable for the chi-square test for contingency tables (Corder and Foreman, 2014). Contingency table or data matrix shows the results of cross-tabulation of two variables, such as answers to two survey questions. The variables in the contingency table will be categorical variables (Table 3). The objective here is to identify a relationship between the answers to questions (variables) as the base for comparison (Zikmund, 2003).

The levels for all the variables are significant for a relationship with the fact of not adopting ABC. Yet, higher priorities of other changes or projects ($\chi^2 = 0.149$), have relative small proportion of overheads in total manufacturing service cost ($\chi^2 = 0.149$), and less complexity in products services and processes ($\chi^2 = 0.124$) are not significant but interesting as they show ability to manage overhead costs. A learning organization is an organization that has developed the capacity to continuously learn, adapt, and change (Senge, 2006). Also, Kloot (1997) argued that organizational learning usually occurs when organizations are in a changed and competitive environment. Table 3 shows that organizational learning had resulted from understanding the changes taking place in the external environment. Thus, the results here indicate that the crisis had brought about organizational learning in Palestinian enterprises and the Palestinian businesses were learning for survival.

The results of cross-tabulation shows that values of Chi-square are statistical significant (the Asymp. Sig. value is equal or less than 0.05, 5%); Table 3 shows that all cross-tabulated variables have produced values of significance (0.000).

Table 3: Descriptive statistics for enterprise adjusting to the changed conditions since the Palestinian economic crisis. Cross-tabulation and Chi-square.

Results (Chi-square = X, df = Y , Asymp.Sig = Z and “critically important” value = P) from cross-tabulation and Chi-square (unpublished cross-tabulation tables).

Chi-square, df, Asymp. Sig.,
“Critically important”

The variables addressed in this table are denoted as: (A) “Policies changed”, (B) “Understanding external environment”, (C) “Enterprise restructured”, (D) Problem analyzed”, (E) “Solutions generated”, (F) “Training received”, (G) “Behaviours altered”, and (H) “Performance improved”.

	A	B	C	D
A	N/A	43.043 , 4 ,0.000, 17	59.966,4,0.000, 16	42.856,4,0.000, 17
B	43.043, 4, 0.000, 16	N/A	46.933, 4, 0.000, 16	60.162,6, 0.000, 15
C	46.933, 4, 0.000, 16	46.933, 4,0.000, 16	N/A	39.502, 4,0.000, 16
D	42.856, 4, 0.000, 17	56.652,4, 0.000, 16	39.502,4,0.000, 16	N/A
E	47.323, 6, 0.000, 15	60.162, 6, 0.000, 15	50.878,6,0.000, 16	50.007,6, 0.000, 15
F	56.471,6, 0.000 15	60.142,6, 0.000, 15	60.000,6,0.000, 16	53.826,6, 0.000, 15
G	39.304, 4,0.000,	53.558, 4,0.000,	36.411, 4,0.000,	59.984,4,0.000,

	17	16	16	18
H	51.589, 8,0.000, 13	54.257, 4,0.000, 13	53.898, 8,0.000, 13	50.374,8, 0.000, 13

	E	F	G	H
A	47.323, 6, 0.000, 15	56.471, 6, 0.000, 15	39.304, 4, 0.000, 17	51.589, 8, 0.000, 13
B	60.162, 6, 0.000, 15	60.142, 6, 0.000, 15	53.558, 4, 0.000, 16	54.257, 8, 0.000, 13
C	50.878,6, 0.000, 16	60.000, 6, 0.000, 16	36.411, 4, 0.000, 16	53.898, 8,0.000, 13
D	50.007, 6, 0.000, 15	53.826, 6, 0.000, 15	59.094, 4, 0.000, 18	50.374,8,0.000, 13
E	N/A	78.933,9,0.000, 15	51.569, 6, 0.000, 15	76.234,12,0.000, 13
F	78.933,9,0.000, 15	N/A	51.237,6,0.000, 15	88.680,12,0.000, 13
G	51.569, 6,0.000, 15	51.237,6,0.000, 15	N/A	49.083,8,0.000, 13
H	76.234,12,0.000, 13	88.686,2,0.000, 13	49.083, 8,0.000, 13	N/A

Note: Data were drawn from Question 66 (adjusting to Palestinian economic crisis).

The cross-tabulation table shows that the highest value is for the survey questions “performance improved” * “training received” at (Chi-square:36.411, df:4, Sig.: 0.000), whereas the lowest value is for the survey question “behaviours altered” * “enterprise restructured” at (Chi-square:88.686, df:12,Sig.:0.000). The “critically important” values for all the variables are ranging between minimum 13 and maximum 17. Therefore, all the variables are significantly associated and they have low chance of being independent.

The summary of descriptive statistics (Table 4.34D) shows the mean variables of survey questions.

Table 4: Summary of descriptive statistics for enterprise adjusting to the changed conditions since the Palestinian economic crisis.

Variable	N	Minimum	Maximum	Mean	Std. Deviation
(1) Behaviours altered	32	3.00	5.00	4.5625	0.56440
(2) Problem analyzed	32	3.00	5.00	4.5313	0.56707
(3) Understanding external environment	32	3.00	5.00	4.4688	0.56707
(3) Policies changed	32	3.00	5.00	4.4688	0.62136
(4) Enterprise restructured	32	3.00	5.00	4.4375	0.61892
(5) Training received	32	2.00	5.00	4.3750	0.70711
(6) Solutions generated	32	2.00	5.00	4.3437	0.74528
(7) Performance improved	32	1.00	5.00	4.1563	0.95409
Total	32	2.50	5.00	4.4180	0.63390
Valid N (listwise)	32				

Note: Data were drawn from Question 66 (adjusting to Palestinian economic crisis).

The “mean values” are listed in descending order with minimum value 4.1563 for the research question “performance improved” and maximum value 4.5625 for the research question “behaviours altered”. The descriptive statistics table shows the descending order of mean values for survey questions: “behaviours altered” (mean value = 4.5625), “problem analyzed” (mean value = 4.5313), “policies changed” (mean value = 4.4688), “understanding external environment” (mean value = 4.4688), “enterprise restructured” (mean value = 4.4375), “training received” (mean value = 4.3750), “solutions generated” (4.3437), and “performance improved” (mean value = 4.1563).

Hence, the “mean values” show that the behaviour has ranked highest and the listing order of the “mean values” may reflect the process prioritization that Palestinian organization went through in order to improve performance.

Also, Table 5 shows the terms of descriptive statistics were significance for "behaviour altered" (percentage score = 38.0%, valid percent =59.4%), "problems analyzed" (percentage score = 6.0%; valid percent =56.3%), "policies changed" (percentage score = 34.0%; valid percent

=53.1%), "external environment understood" (percentage score = 32.0%; valid percent = 50.0%), "training received" (percentage score = 30.0%; valid percent = 46.9%), "enterprise restructured" (percentage score = 28.0%; valid percent = 43.8%), "solutions generated" (percentage score = 28.0%; valid percent = 43.8%), and "performance improved" (percentage score = 28.0%; valid percent = 43.8%).

Table 5: Descriptive statistics for enterprise adjusting to the changed conditions since the Palestinian economic crisis.

Features	Frequency	Percent	Valid percent	Cumulative percent
Policies changed:				
not important	0	0.0%		
little important	0	0.0%		
moderately important	2	4.0%	6.3%	6.3%
very important	13	26.0%	40.6%	46.9%
critically important	17	34.0%	53.1%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Understanding external environment :				
not important	0	0.0%		
little important	0	0.0%		
moderately important	1	2.0%	3.1%	3.1%
very important	15	30.0%	46.9%	50.0%
critically important	16	32.0%	50.0%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Enterprise restructured:				
not important	0	0.0%		

little important	0	0.0%		
moderately important	2	4.0%	6.2%	6.2%
very important	14	28.0%	43.8%	50.0%
critically important	16	32.0%	50.0%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Problem analyzed:				
not important	0	0.0%		
little important	0	0.0%		
moderately important	1	2.0%	3.1%	3.1%
very important	13	26.0%	40.6%	43.7%
critically important	18	36.0%	56.3%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Solutions generated:				
not important	0	0.0%		
little important	1	2.0%	3.1%	3.1%
moderately important	2	4.0%	6.2%	9.3%
very important	14	28.0%	43.8%	53.1%
critically important	15	30.0%	46.9%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Training received:				
not important	0	0.0%		
little important	1	2.0%	3.1%	3.1%

moderately important	1	2.0%	3.1%	6.2%
very important	15	30.0%	46.9%	53.1%
critically important	15	30.0%	46.9%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Behaviours altered:				
not important	0	0.0%		
little important	0	0.0%		
moderately important	1	2.0%	3.1%	3.1%
very important	12	24.0%	37.5%	40.6%
critically important	19	38.0%	59.4%	100.0%
Total	32	64.0%	100.0%	
Missing system	18	36.0%		
Total	50	100.0%		
Performance improved:				
not important	1	2.0%	3.1%	3.1%
little important	1	2.0%	3.1%	6.2%
moderately important	3	6.0%	9.4%	15.6%
very important	14	28.0%	43.8%	15.6%
critically important	13	26.0%	40.6%	59.4%
Total	32	64.0%	100.0%	100.0%
Missing system	18	36.0%		
Total	50	100.0%		

Note: Data were drawn from Question 66 (adjusting to Palestinian economic crisis).

The most cited reasons for not adopting ABC were 'ABC consultants very costly' (27.062), 'diversity of product lines' (24.875), 'lack of management policies' (22.063), 'lack of expertise to implement ABC' (20.813), 'difficulties in finding appropriate Arabic software package' (19.250), 'lack of top management support' (14.875), 'satisfied with the current system' (14.563), 'costly to switch to ABC' (14.563), 'lack of internal resources to install and operate' (14.563), 'resistance from employees and other management' (14.562), 'lack of awareness of ABC development' (14.250), 'ambiguity of ABC benefits in literature' (13.750), 'difficulties in selecting cost drivers' (10.500), 'difficulties in selecting appropriate English software package' (9.250), 'no intensity of competition' (9.250), 'difficulties in collecting data on the cost drivers' (8,500), 'no significant problems with current costing system' (3.813), 'higher priorities of other changes or projects' (3.813), and 'have relative small proportion of overheads in total manufacturing /service costs' (3.813).

“Pseudo-ABC” Implementation in Palestine

On the basis of the analysis of internal and external critical factors for strategic decision taking and action, business is so complex and difficult in Palestine (Arnon and Kanafani, 2004). An enterprise needs to realize a strategic choice of its stabilization, growth, shrinking and/or turnaround, subject to marketing myopia (Levitt, 1960). The survival enterprises in nationwide economic crisis depend on the day-to-day mobilization of every ounce of intelligence and trust (James and Roberts, 2009). Hence, accurate costing information is crucial for Palestinian manufacturing business in an Israeli competitive environment (Halwani and Kapitan, 2007). Traditional cost accounting practices may provide misleading performance measures for manufacturing business that is no longer involved in mass production of a single product (Pike et al., 2011); whereas the broad publicity of ABC systems over the world has attracted the attention of business managers and researchers alike as one of the strategic tools to aid managers for better decision making in researched developed countries (Lana and Fei, 2007); very little research has been done in developing countries, especially in Asian culture context. However, prior research concentrated mainly on behavioural, organizational and technical variables (see Table 1; Table 2) as the main of ABC studies, but very little research has been done to examine the roles of organizational culture and structure (Baird et al., 2007, Fei and Isa, 2010). This study has investigated the impact of these variables on ABC implementation into different stages: initiation,

adoption, adaption, acceptance, routinization and infusion. So, the information provided would be positively utilized to aid management in decision-making. Pike et al. (2011) have reported that 181 users of 16 different ABC systems within the organization to produce five performance constructs of cost accuracy, cost-benefit trade-off, ABC impact, information use, and decision action. Palestinians did not implement ABC because respondents stated lack of Arabic software, high cost and other pertinent factors. On the other hand, current TCA is already satisfying the needs of management because it has been modified to incorporate cause-and effect costing. It is termed a “pseudo-ABC” that practitioners in Palestine utilized own system to accomplish more accurate constructs at a lower cost. It is much better to be “reasonably right” rather than “precisely wrong” (Cooper and Kaplan, 1991).

Palestinians have adapted their own contingency theory and organizational theory to develop their own system of advanced cost accounting to offer what an expensive ABC may offer though ABC has not actually fulfilled its expectations (Cotton et al., 2003; Kaplan and Anderson, 2004; Pierce and Brown, 2004; Flanagan, 2008).

This exploratory research was conducted in Palestine to clarify the use and implementation of ABC/M in order to control business financial resources efficiently and effectively throughout the current economic crisis of the second uprising (September 2000- November 2004) in Palestine. Yet, this study took a holistic look to gather data as much as possible on the problems matters under study (Hajjawi, 2011; 2012a). As a result the significant findings of the core ABC study, the enquiry was extended to cover several related problems such as organizational learning, organizational culture and self-determination theory (Hajjawi,2012b; 2013). In light of the research question and of the research problem statement, the “pseudo-ABC” helped Palestinian enterprises to (a) identify and eliminate those products that were found unprofitable and reduce the prices of those that were overpriced; and (b) to identify and eliminate production that were ineffective and allocated processing concepts that had led to the very same product at a better yield. This study confirms that implementing “pseudo-ABC” in Palestine is associated with segregating different types of business costs that have enabled local enterprises formulating, implementing and evaluating cross-functional decisions in an ongoing process in order to achieve its strategic management objectives in conformance with Dess et al. (2009). Therefore, the current study concludes a bespoke utilization of “pseudo-ABC” good performance to enhance business

strategic management in Palestinian (Table 6). By using “pseudo-ABC”, enterprises are now better suited to rely on cost figures for strategy planning to pursue the maximization of shareholder’s wealth. The resources should not be wasted on non-value added activities, because enterprise will be prevented from spending its resources on projects that have a positive return for the enterprise. Value-added will obviously increase profits for the enterprise.

Table 6: Matrices of major elements of strategic management parameters versus “pseudo-ABC” in Palestine.

Literature theory source for major elements of strategic management parameters: Dess, G.G, Lumpkin, G.T. and Eisner, A.B. (2009) Strategic Management: Text and Cases, 4th edn. New York, NY: McGraw- Hill Companies, Inc.

No.	Major elements of strategic management	“Pseudo-ABC” in Palestine
1	Cost	<p>(a) It calculates costs more accurately. A computer-based accounting system has been a fundamental component of Palestinian enterprise that transforms data into useful information for management; 46.9% of respondents claim that their computer-based system consists of three separate system that perform necessary parts of cost accounting in terms of reporting financial statements, simulating what-if questions, and supporting the process of decision-making. Also, 71.9% of respondents are satisfied with their product costing systems.</p> <p>(b) It evaluates and justifies investments. The environment in which the Palestinian enterprises operate had changed dramatically as a result of current economic crisis. Unpublished results explore the real options for strategic planning. Investment in training is significant because it creates the innovation process of business</p>

		<p>opportunity. Palestinian enterprise survival is achieved by seizing opportunities that was encouraged to arise (Tables 3, 4 and 5).</p> <p>(c) It responds to any increases in overheads. Palestinian respondents forecasted a slight increase in the overhead costs though it is not always easy to measure, because excessive overhead diminishes capacity and it increases cost without increasing productivity. A significant high respondents (93.8%) allocate overhead costs on the basis of units produced, so the allocation of overhead is relatively consistent with the management planning.</p>
2	Differentiation	<p>(a) It ensures product profitability. Palestinian management appreciated that cost is a set of tools, processes, methods and culture used by its enterprise that develops and manufacture products to ensure that a product meets its profit target. Respondents (62.5%) thought of periodic profitability reporting is very important for key decision-making.</p> <p>(b) It improves product quality. Palestinian enterprises (71.9%) thought that quality is “critically important”, because when an enterprise improves product reliability and quality management system, customer satisfaction will directly increase.</p> <p>(c) It supports other management innovations to uphold ISO 9000 and total quality management. Palestinian enterprises responded that new products are developed “fairly and very often”</p>

		(62.5%). It is often advocated total quality management provides the necessary platform for innovation in a changing conditions of business environment. Palestinian enterprises (71.9%) are very much concerned with total quality management to serve as basis for innovation.
3	Focus	<p>(a) It provides performance-based budgeting. A real meaningful indications of how Palestinian “pounds” are expected to turn into results in an approximate sense by conducting a ‘participative’ exercise to set chain of cause and effects processes for management planning.</p> <p>(b) It offers managing costs, controlling product cost early in the product lifecycle is a critical aspect of business success. Palestinian respondents understood that the most effective product cost management lies at the interaction of proactively managing product cost through enterprise resource planning and customer relationship with 43.6% of products are customized. Palestinian enterprises know that lack of appropriate profit margin means that products will ultimately fail and they could suffer in business and financial performance.</p>
4	People (personnel)	(a) It aids for a better management. An inclination is for “formalized” internal control management that has an inherent purpose of ensuring enterprise survival in “functional” structure. Palestinian owners expect the enterprise to achieve its targets and objectives. This formal structure coordinates activities for success, it can perform better at cost-

		<p>saving purchasing, inventory management, and creating a new vision that can be communicated effectively.</p> <p>(b) It increases competitiveness. Palestinian respondents (81.3%) believe that competitiveness is “significant” which is essential for an enterprise to strive to improve product competitive advantage over competitors. Also, competitors’ significance is in determining product price for generating profitable business growth.</p>
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A broad overview of Activity-Based Costing (ABC) was provided in both Table 1 and Fig.4, and the design of typical ABC systems (Drury, 2007) involves the following steps:

1. Identifying and classifying activities,
2. Estimating and assigning costs to activity cost centres,
3. Selecting appropriate cost drivers for assigning the cost of activities to cost objects, and
4. Applying the cost of activities to products.

Cooper and Kaplan (1999) reported that most important theoretical advance in ABC system is the measuring the cost of using resources and not the cost of supplying resources and the critical role played by unused capacity. The relationship between resources supplied and activity resources used for each activity is formalized in the following equation:

$$\text{Cost of resources supplies} = \text{Cost of resources used} + \text{Cost of unused capacity}$$

So, a sophisticated ABC system (Öker and Adigüzel, 2010) of the above design may be optimal for enterprises having the following characteristics:

1. Intensive product marketing mix competition,
2. The non-volume related indirect costs that constitute a high proportion of total indirect costs, and
3. A diverse range of products that all consume enterprise resources in significantly different proportion.

ABC is therefore useful because of the following : (1) Margins are shrinking due to increasing competition, and enterprises ought to know their accurate margins for their products, (2) Increasing business complexity has diversified products and even customers, whereby consumption of resources varies accordingly too, (3) Introduction of new technologies are increasing the share of indirect costs, i.e. automated machines are replacing direct labour, and (4) Life cycles of products are shortened by changing technology, and it has become difficult for enterprises to spare time for making price or cost adjustments once errors are found. Since, activity-based costing aggregates traceable resource-to-traceable activity information by activities and finally to products, “pseudo-ABC” appears to be a more robust system than traditional cost accounting and more convenient than sophisticated ABC systems to comply with the ethos of ABC, because of the following features: (1) activities are traceable to products, and (2) both resources and activities are traceable to activities and products, respectively, i.e. setting prices that affect particular decisions. Hence, the use of heuristically designed product costing systems affects the accuracy of reported product costs that in turn affects decisions making (Balakrishnan et al. ,2012), will be congruent to the purpose of “pseudo-ABC”.

Although Palestinian enterprises (84.4%) are well aware of calculating cost on the basis of cause and effect, i.e. the translation of resources into activities, this research found no evidence of running a typical ABC system with the above recognizable characteristics, i.e. a full implementation of ABC system (Anderson and Young, 1999). Hence, a simplistic costing system in Palestine may report reasonably accurate product costs that do not conform to sophisticated ABC systems (Anderson and Sedatole, 2013). These Palestinian enterprises that although do not implement fully ABC systems, they are consistent with the merit of ABC system purpose, i.e. bespoke “pseudo-ABC” (Table 6). Accordingly, these Palestinian enterprises comply with typical ABC system requirements in terms of the following characteristics (unpublished results:

1. Low level of marketing mix competition ,
2. Non-volume related indirect costs that constitute a low proportion of total indirect costs, and
3. A fairly standardized product range that all consume enterprise resources in similar proportion.

Table 6: Activity-Based Costing (ABC) versus “Pseudo-ABC” in Palestine.
Literature theory source for ABC: Drury, C. (2007) Management and Cost Accounting, 7th edn. Stamford, CO: Cengage Learning Business Press.

Features	ABC	“Pseudo-ABC”
Costing methodology	Yes	Yes
Cause –and- effect relationship in product costing	Yes	Yes
Allocating overhead	By specialized centres (More accuracy and precision)	By estimate allocation (Accuracy and precision)
Working production environment	Complex	Streamlined
Distinction between fixed cost and variable cost	Yes	Yes
Primary and secondary cost pools	Yes	No
Activity drivers	Yes	No
Cost objects	Yes	No
Formulating management reports	Yes	Yes
Uses better information about the following issues: Activity cost, Customer profitability, Margins, Distribution costs, Make or buy, Minimum price, Production facility cost.	More accuracy, More precision	Accuracy, Precision
Disuse costing system for reasons as follows: Cost pool volume, Installation time, Project basis, Targeted usage, Multi-department data sources,	Yes	No

Reporting of unused time, Separate data set.		
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Table 6 does not feature comparative analogy with traditional cost accounting system that is characterized as follows (Innes and Mitchell, 1995; Anderson and Young, 1999):

1. Identification of indirect cost,
2. Estimation of indirect cost,
3. Using single overhead pool,
4. Choosing cost drivers,
5. Estimation of value for cost drivers,
6. Computation of overhead rates, and
7. Application of overhead rate.

So, there is a certain amount of estimation in cost allocation, through this system doesn't focus on why or where cost occurred.

Although ABC was a more accurate product-costing system than TCA volume-based especially when organizations were facing higher product diversity (Charles and Hansen, 2008). So, the question that lingers in minds is why organizations do not implement ABC? It is because ABC has its pros and cons (Charles and Hansen, 2008).

The disadvantage of ABC is that it increases the frequency of errors in product cost management through increasing the number of cost pools and improvement in specifications of cost bases. Another disadvantage is that ABC implementation provides beneficial results only under specific conditions, whereas others raised concerns on performance (McGowan and Klammer, 1997).

Hence, "pseudo-ABC" guidelines were kept in mind for making cost allocation:

1. Fair allocation,
2. Verifiable and rational allocation, and
3. The impact it has on staff using or working with it.

"Pseudo-ABC" is a suitable accounting system that provides satisfying financial information and non-financial information which is beyond the capacity of TCA; it is ABC advantage as a useful guide to management action for higher profits.

Dickinson and Lere (2003) have reported that one of the most significant weaknesses of TCA is that the cost of a sales representative's engaging in non-standard selling activities is frequently excluded from employee's performance review. This is not a serious predicament, because "pseudo-ABC" would persuade sales representatives to maximize whatever standards that were established as a performance standard.

Furthermore, organizations that implement a typical ABC run the risk of the following potential pitfalls (Singer and Donoso, 2008; Goldberg and Kosinski, 2011):

1. Spending too much time, effort and even money on gathering and revising data,
2. Involving exceptionally too many details,
3. Short fall of detailed records can lead to insufficient data,
4. Organization's accounting system needs revamping to keep up with ABC,
5. Requiring exactness that is difficult to attain and time-consuming,
6. Managers overlook some activities and their associated costs, and
7. ABC software can be expensive to buy, install and to maintain efficiently.

These findings conclude that "pseudo-ABC" proved to be beneficial for Palestinian enterprises as follows:

1. Recalculating selling price,
2. Calculating selling prices of different products bids,
3. Deciding the viability of making or buying a product,
4. Calculating taxes, and
5. Calculating profits.

Considering the cost involved in the implementation of ABC system is so high that is beyond the reach of small enterprises (Özbayrak et al., 2004), "pseudo-ABC in Palestine offers the crucial benefits that big enterprises cannot manage without them but they are at a far lower cost.

Conclusions:

Contrary to expectations, the results of this study did not find that Palestinians' second uprising had triggered Palestinian enterprises to pursue typical ABC as a means of providing the financial information necessary for business strategic planning in the current economic crisis. A core finding was a contingent "pseudo-ABC that was locally improvised in lieu of the typical ABC. A plausible

explanation for this might be that although accountants knew about typical ABC, prohibitive costs (Innes and Mitchell, 1995; Shields, 1995) and other language retardants were a heavy burden for an enterprise in crisis to bear.

Cavusgil et al. (2012) advocated that integrating responsiveness framework for a planned set of actions to make best use of enterprise resources and core competencies, managers' plans should positively prescribe to the breadth of strategic versus tactical, long time frame versus short time frame, definite direction versus indefinite direction, and of single use frequency versus standing use frequency. These types of internal environment actions are influenced by the external environment, and they stem from understanding of enterprise's strengths, weaknesses, opportunities and threats to configure and coordinate the enterprise' activities (Coman and Ronen, 2009).

The Palestinian enterprises' performances showed that they were in stage 3 of Hurst's model (see Fig.5), the 'maturity / conservation' stage. The vital role of an enterprise governance and stakeholder management is how "symbiosis" , pertaining to a relationship that benefits everyone involved, can be achieved among enterprise's stakeholders (Dess et al., 2009). Palestinian enterprises have attempted to change themselves to cope with the changing environment, by recognizing (layoffs, transformation of operating system and so on) or adopting innovations (ISO 9000-Quality management, ISO 14000-Environment management, ISO 26000-Social responsibility, ISO 31000-Risk management, or ABC system and so on). Such internal developments were the result of strategy analysis, formulation and implementation, and they have shown that Palestinian enterprises have been learning to revive themselves for survival, stage 4 of Hurst's model (see Fig.5). It is a learning loop of 'creative destruction' that stems from unique acquirement of strategic management process, where "pseudo-ABC" is the provider of financial and non-financial information needed for effective planning.

Strategic management involves the recognition of effectiveness and efficiency, and this recognition implies awareness of the need for enterprises to strike action effectively, "doing the right thing", and efficiently, "doing things right". While Palestinian managers must allocate and use resources wisely, they still continued to direct their efforts towards the attainment of overall enterprise objectives. Managers, who are not totally focused on meeting short-term budgets and targets, may succeed to attain the broader goals of their enterprises (David, 2010). Palestinian

enterprises have evidently made a major effort to effect transformational change that involves extensive communication, incentives, training and development to strengthen a strategic perspective resolute throughout the rank and file enterprise. Employees and managers strive toward common goals and objectives. By specifying desired results in improved business performance (see Fig. 4), it had become much easier to be responsive to marketing myopia for moving forward. Otherwise, if no one knows what the enterprise is striving to accomplish, they have no idea of what to work toward, "no wind favours the ship that has no charted course". The employees changed their behavior (see Table 4) to express priorities best through their own stated goals and objectives that form a hierarchy of goals in terms of vision, mission and strategic objectives. What vision may lack in specificity, enterprises make up for in their ability to evoke powerful and compelling mental images (See Table 4). On the other hand, strategic objectives tend to be more specific and provide a more direct means of determining if the enterprise is moving toward broader, overall goals (Lipton,1996).Visions also have longer time horizons than either mission statements or strategic objectives.

Palestinian employees had understood the macro economic recession and its effects on the external environment. The need to change was a priority, where they adapted organizational learning as the means to change policies to cope with financial conditions caused by the crisis.

In this study, the aim was to make theoretical contribution about the way business adapt product costing to enhance resilience in challenging conditions in implementing strategic management planning. Also, the research question was **“How do enterprises produce effective costing practices under challenging operational environment in Palestine?”**

This research argues that the bespoke “pseudo-ABC” in Palestine has provided management with the necessary financial and non-financial information. So, management has been aided to take the right strategic planning decisions and to keep the enterprise on track for commercial viability under challenging conditions. The application of “pseudo-ABC” is consistent with the literature. Pike et al. (2011) have reported that 181 users of 16 different ABC systems within the organization produce five performance constructs of cost accuracy, cost-benefit trade-off, ABC impact, information use, and decision action. So, “pseudo-ABC” could be analogous or compatible to any one of those 16 different versions of ABC system. Yet, Wegman (2009) has attributed the application of traditional costing for control purposes to such ABC pitfalls. So, ccultural

differences play an important role in ABC implementation strategies, and the approach to implementing ABC should be tailored to specific cultural context (Velmurugan, 2010).

The ABC system was assumed to be an eligible innovation for Palestinian enterprises in this crisis since ABC is claimed to be able to provide more accurate cost information than the traditional cost systems and useful information for measurement of both efficiency "doing things right" and effectiveness "doing the right things" for cost control and strategic decisions, and to increase the competitive capability and profitability (Peters and Waterman, 2006). In addition, Baird et al. (2004; 2007) claim that the implementation of an innovation of ABC initiative is affected by an organization's capacity "to learn". It was expected that successful Palestinian enterprises had been contingent on autonomous motivation (Koestner et al., 2008; Hajjawi, 2012b). Sheldon (2002, p.69) has shown that pursuing personal goals are based on four reasons as follows: (1) intrinsic where the goal provides enjoyment and fun, (2) identified in which it is an important goal to have, (3) introjected where lack of goal brings shame and guilt, and (4) external where someone else dictates a goal. So, autonomous motivation (intrinsic + identified) was shown to be associated with goal progress far more than controlled motivation (external + introjections). Hence, autonomous motivation which goal self-concordance is significantly positively related to goal progress (Koestner et al., 2006). Such goals are assumed to represent the "best" of people, proactively shaping themselves and their environments to permit further growth and expansion. This study that was designed to explore the effects of current economic crisis in Palestine on the shortcomings of TCA practice to pursue information utilization of ABC advantages for efficient cost accounting and decision-making process, shows that the goals of the Palestinian enterprise were integrated with staff personal goals that were self-determined.

On the whole, the exploratory questionnaire survey and field interactive dialogue showed that when a business had been in economic recession, organizational management came to the understanding of a changed environment and realization of the major change necessity (Lewin, 1951); a Palestinian enterprise is of no exception. According to Hurst (1995), Kotter (1996), Thiry (2002), Crossan and Hurst (2006), Kloot and Martin (2007), Ulmer et al. (2007), and Pina and Rego (2010) when an enterprise faces an economic crises, the crises would force the enterprise to revive

itself through various means such as: layoffs, closure of 'non-core' operations or examination of innovations, for its survival.

Thus, the key finding of “pseudo-ABC” shows that it has a bearing on Palestinian enterprises that were learning to be inevitably creative (stage 4) for regeneration in 'crisis and to renew themselves in eco cycle model' (see Fig.5).

Also, clan organizational culture had a significant role in the process of rational action of business management invigoration during current economic crisis in Palestine (Hajjawi, 2013).

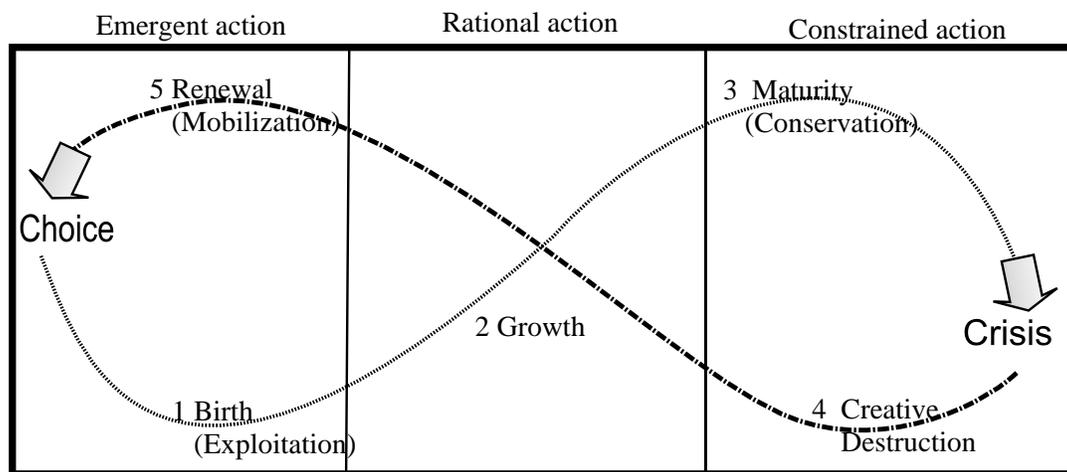


Fig. 5: Crisis and renewal eco cycle model.

Note: '---', the performance loop of conventional life cycle.

'- - -', the learning loop of a renewal cycle.

Source: Schumpeter, J.A. (1934) A Theory of Economic Development, pp.212-255. New York: Oxford University press; Day G.S. (1981) "The product life cycle: analysis and application", Journal of Marketing Research, vol.45, pp.60-67; Hurst, D.K. (1995) Crisis & Renewal: Meeting the Challenge of Organizational Change, p.72. Boston, MA: Harvard Business School Press.

The generalizability of much of these conclusions is problematic. Carter (2006; 2009) made the analogy of Palestine with South Africa though knowledge of risk perception of economic crisis in other countries might be universal. The consequence of Israeli army occupation of Palestinian

territories is unique, yet Palestinians' autonomous motivation through self-determination is inherently universal and the findings could be applicable to wider afield.

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