



ISBN : 979-545-050-6

**1st INTERNATIONAL CONFERENCE
Indonesian Management Scientist Association
(AIMI)**

**Theme :
Enhancing Indonesian Bussines
Competitive Advantage**

PROCEEDING
1st INTERNATIONAL CONFERENCE
Indonesian Management Scientist Association (AIMI)
April 23 - 25, 2010 Inna Putri Bali Hotel, Nusa - Bali

PREFACE

The 1st International Conference Indonesian Management Scientist Association (AIMI) with the theme “Enhancing Indonesia Business Competitive Advantage”, and the sub theme are globalization at tourism, financial, manufacturing, CSR, good corporate governance, and knowledge management aspects. Through this conference is expected can show many ideas to improve Indonesian business competitive advantage at global market. The guidance book presented papers with sub topics in : Operation Management, Finance Management, Human Resource Management, Marketing Management, Strategic Management, Public Sector Management, Management Information System.

This Proceeding is published to give information about the result of The 1st International Conference Indonesian Management Scientist Association (AIMI) in INNA Putri Bali Hotel, Nusa Dua, Bali at 23- 25 April 2010. We hope the material in this book can give benefit and also recommendation to all of integrated institution in improving Indonesian business competitive advantage in future.

Committee

**Proceeding The 1st International Conference
Indonesian Management Scientist Association - AIMI**

Theme : Enhancing Indonesian Business Competitive Advantage

Peer Review

Prof. Dr. Djumilah Zain, SE

Prof. M.S. Idrus, SE, M, Ec., Ph.D

Prof. Dr. Eka Afnan Troena, SE

Prof. Dr. Ubud Salim, SE, MA

Prof. Armanu Thoyib, SE, M.Sc, P.Hd

Prof. Dr. Surachman, SE, MSIE

Dr. Mientarti Rahayu, SE, MM

Dr. Fatchur Rohman, SE, MSi

Dr. Noermijati, SE, MS

Opening Remark by The Chairman of AIMI
on the First International Conference
"Enhancing Indonesian Business Competitive Advantage"

23 - 25 April 2010

Your Excellency,

Minister of Tourism,

Minister of Trade,

Minister of Industry,

Governor of Bali, and

Governor of East Kalimantan,

Honorable Executive Boards of public and private institutions in Indonesia,

Distinguished speakers from Indonesia and overseas,

Respectable members of AIMI,

Ladies and Gentlemen.

Good morning,

It is my privilege on behalf of the chairman of the Indonesian Management Scientist Association (AIMI), to extend a very warm welcome to all of you. I would like to express my thankfulness to the Lord Alloh for making all of us here and my gratitude goes to all of you, respectable audiences, who have financially and morally supported AIMI in conducting the First AIMI International Conference, entitled: Enhancing Indonesian Business Competitive Advantage.

Ladies and Gentlemen ,

Let me first tell you that AIMI was just founded last year in 2009 through alumni meeting of Doctorate Program in Management, Faculty of Economics of Brawijaya University (FoE-BU), Malang-East Java. It is, therefore, still not very much recognized by many people in Indonesia. Historically, AIMI was

initiated from a tracer study which was held by the Doctorate Program in Management Faculty of Economics of Brawijaya University (FoE-BU). Afterwards, the report of the tracer study was followed-up with a meeting of alumni of Doctorate Program in Management FoE-BU whose members are now about two hundred and thirty one. Finally, in the meeting, AIMI was declared.

A part of AIMI missions is to foster positive contribution of ideas and thoughts from the scientists, academics, and professionals in management towards developing competitive business activities to take part in the global competition. In the long run, it is expected that AIMI can provide positive contribution of high values towards achieving the goals of Indonesian business and public management to improve the prosperity of the Indonesian people.

Ladies and Gentlemen,

The fruitful discussion as a result of this First International Conference will be disseminated among Indonesian decision makers, academics, and professional in business and public management. Furthermore, the result will be followed-up with periodical regional group discussion and annual national meeting, on the basis of rapid environmental, social, and cultural changes and challenges.

We believe that AIMI mission and vision can be successfully achieved with strong foundation in the form of active participation of management scientists, academics and professionals and supports from many parties, including the policy makers in business and public management.

Further, we are very grateful to all of our honorable audience who have participated in the First International Conference of AIMI by providing both material and moral supports, and have been actively involved towards the achievement of the vision of mission of AIMI.

Ladies and Gentlemen,

To conclude, I would like to convey our special appreciation to all our colleagues, professors, faculty members, and students in graduate program in management Faculty of Economics of Brawijaya University (FoE-BU) for their hard work and commitment.

May the Almighty God always help us to accomplish AIMI mission.

Thank you very much.

TABLE OF CONTENTS

PREFACE	i
PEER REVIEW	ii
OPENING REMARK BY THE CHAIRMAN OF AIMI	iii
TABLE OF CONTENTS	v
MAIN PAPER	
MULTISTAKEHOLDER PARTNERSHIP FOR CORPORATE SOCIAL RESPONSIBILITY : A CONCEPTUAL FRAMEWORK (Kartika Dewi Sri Susilowati).....	1
THE EFFECT OF OVERCONFIDENCE AND BAD NEWS ON TRADING ACTIVITY AND RETURN: AN EXPERIMENTAL STUDY (Irwan Trinugroho)	11
THE RELATIONSHIP BETWEEN CORPORATE SOCIAL RESPONSIBILITY AND FIRM'S FINANCIAL PERFORMANCE (Wiwik Lestari & Arie Febrianto).....	22
CORPORATE DIVERSIFICATION STRATEGY TO DESTROY A FIRM VALUE (A STUDY OF COMPANIES REGISTERED IN INDONESIA STOCK EXCHANGE (A STUDY OF COMPANIES REGISTERED IN INDONESIA STOCK EXCHANGE) (Siti Aisjah & Bambang Subroto)	31
THE INFLUENCE OF ENVIRONMENTAL CONDITION, KNOWLEDGE SHARING BEHAVIOR AND STRATEGIC PLANNING PROCESS TOWARD INNOVATION AND PERFORMANCE (A STUDY ON SMEs OF THE LEATHER INDUSTRY CENTER IN EAST JAVA) (Rofiaty)	50
ROLE OF THE BUSINESS ENVIRONMENT AND INTEPRENEURIAL BEHAVIOR AS A BASIS FOR STRATEGY ORIENTATION, AND IMPACT ON BUSINESS PERFORMANCE AND COMPETITIVENESS (STUDY ON EXPORT ORIENTED SMALL AND MEDIUM ENTERPRISE IN BALI) (I Nengah Suardhika & Yansor Djaya)	73

THE INFLUENCE OF PSYCHOLOGICAL EMPOWERMENT FOR JOB SATISFACTION AND PERFORMANCE (STUDY FOR PARAMEDICS AT GENERAL HOSPITAL DR. SUTOMO SURABAYA, INDONESIA) (Sri Mulyani)	108
DETERMINATION OF NAVAL BASED LOCATIONS: STRATEGY TO MAXIMIZE PERFORMANCE MONITORING OF DEFENSE AND SECURITY SYSTEM IN THE SEA (STUDY ON MARITIME SECURITY AND DEFENSE SYSTEMS IN INDONESIA) (Ahmadi)	129
SOUVENIR AUTHENTICITY: A QUEST TOWARD CUSTOMERS' PERSPECTIVE AND PURCHASE INTENTION) (Etsa A. Setiyati Universitas)	148
ENHANCING QUALITY OF HUMAN RESOURCE IN ISLAMIC BANKING THROUGH PSYCHOLOGICAL EMPOWERMENT TO IMPROVE ORGANIZATIONAL COMMITMENT (Siswanto)	161
MANAGEMENT COMMITMENT AND INTERNAL MARKETING IN INFLUENCING HOSPITAL SERVICE QUALITIES IN CENTRAL KALIMANTAN (Lelo Sintani)	176
HUMAN RESOURCES OUTSTANDING: BASED ON VENDOR AND EMPLOYEES PERSPECTIVE (Salamah Wahyuni)	198
FINANCIAL MANAGEMENT	
OPTION PRICING MATHEMATICAL MODELING USING MONTECARLO SIMULATION (Nyoman Sutapa & Gede Riana)	212
FACTORS AFFECTING THE PROFITABILITY RATE OF LEADING FIRMS IN MAKASSAR (Abdul Rakhman)	221
THE COMPARISON OF FINANCIAL AND STOCK PERFORMANCE BEFORE AND AFTER SEASONED EQUITY OFFERINGS AT MANUFACTURING COMPANIES IN INDONESIAN STOCK EXCHANGE (Ni Luh Putu Wiagustini)	231

DETERMINAN FAKTOR FUNDAMENTAL TERHADAP <i>RETURN</i> SAHAM (STUDY PADA PERUSAHAAN YANG MASUK ILQ 45 DI BURSA EFEK INDONESIA) (Hendro Widjanarko & Fachrul Reza Adung)	244
THE INFLUENCE MANAGERIAL OWNERSHIP, CORPORATE GROWTH AND CAPITAL STRUCTURE OF THE COMPANY'S FIRM VALUES OF HOTELS AND TRAVEL SERVICES IN INDONESIA STOCK EXCHANGE (Luh Gede Sri Artini)	260
<i>DIVIDEND DISCOUNT MODEL (DDM)</i> SEBAGAI MODEL PENILAIAN HARGA SAHAM (STUDI EMPIRIS PADA PERUSAHAAN-PERUSAHAAN BUMN YANG <i>LISTING</i> DI BEI (C.Ambar Pujiharjanto Nilmawati)	273
OBLIGASI DAERAH : SUMBER DANA ALTERNATIF PEMERINTAHAN DAERAH (I Gusti Bagus Wiksuana)	287
HUMAN RESOURCE MANAGEMENT	
THE SOCIAL EXCHANGE THEORY IN ORGANIZATION (Suhermin)	295
CAREER ANALYSIS AND BANK MANAGER'S PERFORMANCES (A GENDER STUDY IN MAKASSAR) (Idayanti Nursyamsi)	301
THE EFFECTS OF HUMAN RESOURCES MANAGEMENT (HRM) ROLES, TECHNICAL HRM PRACTICES, AND STRATEGIC HRM PRACTICES ON THE PERFORMANCE OF COOPERATIVES (A CASE STUDY IN VILLAGE COOPERATIVES / KUDs IN YOGYAKARTA) (Arief Subyantoro, Yuni Siswanti & Nink Probosari)	312
EFFECTIVENESS OF ORGANIZATIONAL AND INFORMATION AND COMMUNICATION TECHNOLOGY IN KNOWLEDGE MANAGEMENT SYSTEM (Didi Sundiman)	326
EFFECT OF CAREER DEVELOPMENT ON INTENTIONS TURNOVER MEDIATED TRUST IN ORGANIZATIONS EMPLOYEES IN PT GLOBAL DISPOMEDIKA SURABAYA (Harry Widyantoro & Adhisep Purnama)	339

BUILDING THE CONCEPT OF FLEXIBLE – LEARNING ORGANIZATION FOR TURBULENCE ENVIRONMENT (Anna Triwijayati)	352
THE EFFECTS OF ORGANIZATION CULTURE, INFORMATION SYSTEM APPLIED, AND THE STYLE OF LEADERSHIP ON THE PERFORMANCE OF THE BOARD OF KOPERASI UNIT DESA AT YOGYAKARTA (Arief Subantoro)	364
IDENTIFIKASI FAKTOR-FAKTOR POTENSI BELAJAR INSANI PADA PERUSAHAAN PUBLIK DI INDONESIA (Sitti Raha Agoes Salim).....	376
THE CHALLENGE OF CROSS-CULTURAL LEADERSHIP (Prihatin Lumbanraja)	384
MENELADANI KEPEMIMPINAN NABI MUHAMMAD SAW: KUNCI SUKSES MENGHADAPI PERSAINGAN GLOBAL (Mahyarni)	398
THE EFFECT OF MORTALITY SALIENCE AND SELF IDENTIFICATION ON ATTITUDE TOWARD LOCAL PRODUCT (Putu Saroyeni)	408
PENGARUH <i>ORGANIZATIONAL CHANGE</i> DAN <i>ORGANIZATIOANL RESILIENCE</i> DALAM PENINGKATAN KINERJA ORGANISASI PADA INDUSTRI PERHOTELAN (Boge Triatmanto)	422
THE COMPETENCY REQUIRED BY TEACHER AND LECTURER TO ACCOMPLISH THE TASK GIVEN BY SCHOOL AND UNIVERSITY (Ni Wayan Mujiati)	436
PENGARUH ROTASI PEKERJAAN PADA BURN-OUT DENGAN SPESIALISASI PEKERJAAN SEBAGAI VARIABEL INTERVENING PADA PEGAWAI PT POS INDONESIA (PERSERO) KANTOR POS SURABAYA 60000 (Laila Saleh Marta & Didiet Hidayatullah)	448
 MARKETING MANAGEMENT	
PRODUCT, PURCHASE, CONSUMPTION AND ADVERTISING INVOLVEMENT IN FASHION INDUSTRY IN SURABAYA (Christina Whidya Utami, Astrid Herawaty Soesetio)	461

MODEL OF TRADITIONAL RETAIL DEVELOPMENT BASED ON RELATIONSHIP MARKETING (RM) (Suwitho Prabowo)	473
GLOBAL COMPETITION AND COMPETITIVE ADVANTAGES OF ISLAMIC INSURANCE IN INDONESIA (Novi Puspitasari)	484
COUPON USING AS A STRATEGY TO INCREASE SALES (Riza Firdaus)	496
KEBERLANJUTAN <i>GREEN BUSINESS</i> DITINJAU DARI PERSPEKTIF PERILAKU KONSUMEN TERHADAP <i>GREEN PRODUCT</i> (Titik Desi Harsoyo)	508
PENGARUH BAURAN PEMASARAN TERHADAP KUALITAS JASA DAN KEUNGGULAN BERSAING PERGURUAN TINGGI SWASTA DI KOTA MEDAN (Beby Karina Fawzecca Sembiring)	519
PELAYANAN PUBLIK : MODEL KOLABORASI (KOLABORASI PEMERINTAH – SWASTA – <i>CIVIL SOCIETY</i>) (Elip Heldan)	536
MODERN MARKETING CONCEPT IN RETAIL BUSINESS “OFFLINE HYPERMARKET AND ONLINE MARKET” (Nanis Susanti)	549
THE MEDIATING EFFECT OF SATISFACTION IN RELATIONSHIP SERVICE QUALITY TOWARD CUSTOMER LOYALTY (STUDY ON CUSTOMER OF CELLULER CARD OF INDOSAT AND XL IN BANGKALAN) (Pribanus Wantara)	564
OPERATIONAL MANAGEMENT	
CONTINUOUS IMPROVEMENT AND FLEXIBILITY FOR INNOVATION TO ENHANCE INDONESIAN BUSINESS COMPETITIVE ADVANTAGE: A CASE STUDY AT “PT X” IN EAST KALIMANTAN (Noviaty Kresna Darmasetiawan)	575
EKSISTENSI PENERAPAN SUPPLY CHAIN MANAGEMENT PRACTICES PADA PERUSAHAAN MANUFAKTUR BERSERTIFIKAT ISO 9000 DI INDONESIA (SUATU KAJIAN PERSPEKTIF MANAJEMEN OPERASIONAL) (Magdalena Wullur)	594

STRATEGIC MANAGEMENT

THE ROLE OF CROSS BORDER COOPERATION (CBC) INDONESIA- MALAYSIA ON REGIONAL DEVELOPMENT IN WEST KALIMANTAN REGION CASE OF SOCIO-ECONOMIC MALAYSIA INDONESIA (SOSEK MALINDO) COOPERATION (Nira Hariyatie)	611
THE NATIONAL RENEWABLE ENERGY STRATEGIC PLANNING USING BUFE METHOD (Bambang Sugiyono Agus Purwono, Ubud Salim, Djumahir,& Solimun).....	627
STUDY INTERPRETATIVE FROM MEAT BALLS SMALL AND MEDIUM ENTERPRISES (SMEs) IN MALANG BASED ON INTERNAL AND EXTERNAL ENVIRONMENT ANALYSIS, AND ENTERPRENEUR SECRET IN ORDER TO INCREASE COMPETITIVE ADVANTAGE (Nur Khusniyah Indrawati & Himmiyatul Amanah Juwita)	652
IMPROVE COMPETITIVE ADVANTAGE OF SMALL-TO-MEDIUM ENTERPRISES (SMEs) WITH STRATEGIC MANAGEMENT SYARIAH (Hastin Umi Anisah)	671
DEVELOPING ENTREPRENEURSHIP SPIRIT AS COMPETITIVE ADVANTAGE IN A TECHNOLOGY BASED INSTITUTE (Endang Sudarsih)	681
DEVELOPING ENTREPRENEURSHIP SPIRIT AS COMPETITIVE ADVANTAGE IN A TECHNOLOGY BASED INSTITUTE (Endang Sudarsih)	681
NEW PUBLIC MANAGEMENT IN INDONESIA - ENTHUSIASTIC DINER, CAUTIOUS DINER OR NOT KNOW THE MENU (Izmi Rajiani)	695

CONTINUOUS IMPROVEMENT AND FLEXIBILITY FOR INNOVATION TO ENHANCE INDONESIAN BUSINESS COMPETITIVE ADVANTAGE: A CASE STUDY AT “PT X” IN EAST KALIMANTAN

Noviaty Kresna Darmasetiawan

(Lecturer of Management FBE University of Surabaya)

Abstract

The majority of empirical studies to fully achieve these aims the paper addresses the following specific objectives (1) to derive a working definition of CI; (2) to derive a working definition of innovation.; (3) to conduct a literature review to ascertain if there appears to be a theoretical context within which CI and innovation can be considered as complementary; (4) to derive innovation and flexibility, including innovation and employment flexibility, and (5) to conduct a research survey with SMEs to assess if CI and innovation, and employment flexibility are in some way related and to show how SMEs can progress beneficially and strategically along this road.

The study involved both qualitative and quantitative research methodology. The research involved the collection of two types of data – qualitative data was obtained from the interviews with the Managing Directors and Management Teams. Quantitative measurement with this questioner was done towards all employees through census (total population)

This research findings in this paper have indicated that there appears to be a strong link between CI (Continuous Improvement), innovation and flexibility for SME.

This has particular implications for universities involved in knowledge transfer, as these institutions are often relatively remote compared with other sources of advice within SME networks.

The research adds to our understanding continuous improvement and flexibility for innovation to enhance Indonesian business competitive advantage, especially of the role of SMEs.

Keywords: Continuous improvement, innovation, flexibility, competitive advantage, SMEs

1. Introduction

Small and medium enterprises (SMEs) are considered as the backbone of economic growth in all countries because they account for 80 percent of global economic growth (*Jutla et al., 2002*). SMEs also contribute a substantial share of the manufactured exports of East Asia. In the newly developing or newly industrialized countries (NICs), SMEs generally employ the largest percentage of the workforce and are responsible for income generation opportunities. These enterprises can also be described as one of the main drivers for poverty alleviation. In manufacturing sector, SMEs act as specialist suppliers of components, parts and sub-assemblies to larger companies because these items can be produced at a cheaper price compared to the price large companies must pay for in-house production of the same components. However, the input of poor quality products can adversely affect the competitiveness of these larger organizations.

Vargas and Rangel (2007) observed that business performance is positively related with the development of internal capabilities such as “soft technology” (methods and processes that support the firm) and “hard technology” (externally acquired equipment, in-house development of machinery and innovation in raw materials). A strategy of continuous improvement, innovation and change is also

part of the process. Singh *et al.* (2006) developed a Competitiveness Index Framework for quantifying the level of competitiveness.

2. The status of SMEs in Indonesia

In Indonesia, small and medium enterprises (SMEs) have historically been main player in domestic economic activities, especially as a large provider of employment opportunities, and hence a generator of primary or secondary source of income for many households. For low income or poor farm households in rural areas, SEs, i.e. units of less than 20 workers, in non-farm activities are especially important. These enterprises have also been playing as an important engine for the development of local economies and communities. However, as compared to many other APEC more developed economies, Indonesian SMEs are not yet been proved to have contributed significantly their value added to the country's economy. Instead, they have been more important as the locus of most employment than of gross domestic product (GDP) growth in Indonesia.

In the last few years, the Indonesian government has recognized the importance of having modern SMEs as an important element in creating a sophisticated economy, especially through their role in developing inter-industry linkages, or as supporting industries producing components and parts for large enterprises (LEs) either, via market mechanisms or subcontracting systems or other forms of production linkages. In developed countries, it is the role of SMEs to act as suppliers to industries producing final goods, therefore creating a permanent, vibrant and inter-linked industrial base. Indonesia has suffered from the lack of a sophisticated domestic supplier network, which would have allowed intermediate inputs, components, and parts to being produced locally instead of being imported (Banerjee, 2002).

Also recently, the SMEs as a group in the country has been recognized to have another important role to play, namely as an important engine for development and growth of exports of non-oil and gas, particularly in manufacture.

The importance of SMEs for the Indonesian economy is observable reflected by their relatively huge number of units. Indeed, a significant feature of the Indonesian economy is the domination by this category of enterprises, in particular small enterprises (SEs). Totally, in all sectors of the economy, the number of SMEs is huge and it keeps growing; though there was a decline during the 1997 economic crisis. Their number of units is larger than that of LEs. Especially SEs can be found in all over the country, in urban as well as rural areas. Such entities contribute the bulk of units and employment in sectors such as agriculture, trade, manufacturing industry and transportation (Tambunan, 2006).

SMEs are being increasingly recognised as "the life blood of modern economies" (Ghobadian and Galleary, 1996). These organizations must remain competitive both at the macro level and as suppliers of goods and services to larger organizations. In maintaining and developing this competitiveness it is not enough for SMEs to solely rely on change methods such as Continuous Improvement (CI) or Kaizen (Kinni, 1995), they must revisit assumptions relating to process, people, culture, systems and technology (Gunasekaran *et al.*, 1996). Thus, these SMEs must develop an innovative culture within the organization (Wiele and Brown, 1998). Lefebvre and Lefebvre (1993) show that SMEs which

hold a stronger competitive position, in terms of cost, quality and diversity, generally have a more developed innovative culture. It is important that SMEs begin to move strategically beyond the base of CI towards innovation to achieve increased competitiveness (Wiele and Brown, 1998).

While much has been written about CI and innovation – the ABi Inform database records that 3,650 articles have been written on CI and innovation in the last four years – little has been said about the possibility that CI and innovation, which have both been recognised as change management philosophies and techniques, could in some simple, or complex, way be related.. The primary aim of this paper will be to investigate if SMEs are moving beyond CI to achieve the strategic advantages of incorporating innovation as a change management approach and philosophy. Also, does the development of a CI culture provide a foundation on which an innovative culture can be built or developed.

To fully achieve these aims the paper addresses the following specific objectives.

1. To derive a working definition of CI.
2. To derive a working definition of innovation.
3. To conduct a literature review to ascertain if there appears to be a theoretical context within which CI and innovation can be considered as complementary.
4. To derive innovation and flexibility, including innovation and employment flexibility
5. To conduct a research survey with SMEs to assess if CI and innovation, and employment flexibility are in some way related and to show how SMEs can progress beneficially and strategically along this road.

The firm's capacity to innovate is the ability to adopt or implement new processes or products successfully. This capacity enables the firm to respond more successfully to its environment. In turn, the interaction with the environment is crucial in the firm's innovation process. The environments pressure may force companies to respond en behave proactively in order to remain competitive. Uncertainty and competition are examples of environmental factors that may influence the adoption of innovations in organizations. A topic that has received little attention in the literature of innovation is the relationship between innovation and flexibility, a characteristic of the firm's dynamic capabilities to cope with environmental changes (Teece et al., 1997).

This relationship is an important topic for research and management because flexibility has become a catchword in the discussions about the new organizations of the twenty-first century. Increasing global competition, accelerating technological change and expanding customer expectations are creating a turbulent environment. Flexibility enables firms to cope with this increasing uncertainty because it facilitates a quick response. At the same time, flexibility can also be an active approach to introduce more uncertainty in the marketplace. The development of flexibility capabilities can influence the innovation process: for instance, the flexibility of new product development enables a company to introduce more products and faster than competitors (Malhotra et al., 1996; Tatikonda and Rosenthal, 2000); on the contrary, other

flexibility capabilities may have a negative impact on innovation, like the outsourcing of some complementary assets (Teece, 1986).

The competition in high technology and very dynamic markets require greater combinations of innovation and flexibility capabilities. For instance, the development of hi-tech products cannot be carried out by in-house R&D alone (Miotti and Sachwald, 2003). Global competition and expanding customer expectations for hi-tech products creates the need for faster new product development to stay ahead from competition. The drive for leaner organizations has led to increased use of labour flexibility, downsizing and outsourcing, whilst rewards have become more performance related (Richbell, 2001), all of which may have consequences for innovation. However, we still know very little about the relationships between innovation and flexibility, and the theoretical perspectives that can explain these relationships even propose contradictory explanations.

To attain the level of organizational flexibility that customers' value (i.e. quick delivery of a variety of innovative, high-quality, low-cost products), firms must manage different types of flexibility. An overview of the literature reveals that the taxonomy of flexibility is very extensive, due to the fact that this concept is widely applied to different areas of the organization. This paper focuses the analysis on flexibility dimensions related to human resources and external relations (workplace flexibility) because labour flexibility constitutes a platform to build other levels of flexibility (Karuppan, 2004; Upton, 1995) and because external relations are a source of knowledge that contribute to innovation.

3. Continuous Improvement

Defining the philosophy of CI is problematic as it is closely linked to Total Quality (TQ). The following are however a representative sample from the literature. Collins (1994) believes that "Continuous Improvement describes an approach to quality assurance which stresses the importance of creating a culture in which concern for quality is an integral part of the product/service delivery". In other words there is ownership of responsibility for quality of all levels of the organization and involvement of all staff in the pursuit of clear and explicit quality objectives. Wilkinson *et al.* (1998) give a similar definition "Continuous Improvement includes the application of quality assurance to every company activity and is characterised by the application of good practice the attainment of continuously improving customer satisfaction".

Continuous Improvement conveys notions of nebulous factors which are not readily measurable or can be easily tied down. Is this a strength or a weakness in the Continuous Improvement movement? Davies and West-Burnham (1997) suggest "It is a strength in that the Continuous Improvement movement is catholic in the range of interpretations it permits". However, this can also be interpreted as a weakness in that the multiple definitions have allowed critics to argue that there is a lack of integrity and coherence in the concept of Continuous Improvement. They conclude "There can be no one authoritative definition of Continuous Improvement", a view shared by Wilkinson *et al.* (1998) who claim "Continuous Improvement Management is not an approach or philosophy of management which is self evident".

Many writers have attempted to identify the common principles or characteristics which underlie Continuous Improvement. Hill and Wilkinson (1995) identified three such principles:

1. Customer orientation where quality means meeting both internal and external customers.
2. Process orientation where activities performed within an organization can be broken down into basic tasks.
3. Continuous Improvement which involves the improvement of both products and processes.

Salis and Hingley (1992) believe Continuous Improvement Management has eight major characteristics:

1. CI organizations put their customers and clients above all other considerations.
2. The quality chain needs to be in place.
3. Teamwork is an essential part of CI.
4. CI means continuous quality improvement.
5. CI is management led and driven.
6. CI requires a long-term commitment.
7. A change is needed in the organization culture.
8. Staff participation in the quality improvement process is vital.

Clearly some characteristics and components of Continuous Improvement Management appear to be common to all these descriptions – the importance of customers, the emphasis on Continuous Improvement and the need to manage processes and the quality chain being the three dominant items.

A further part of the Continuous Improvement Management literature examines the Continuous Improvement aspect of Continuous Improvement Management (Carr and Johansson, 1995). Continuous Improvement Management, in their analysis, is perceived as an evolutionary process which leads to a better way to compete, that adds value to existing processes and that encompasses the whole organization.

The term evolutionary is considered to be very important. It implies that change and the building of quality into an organization evolves and that there is a continual process of improvement with time. Wilkinson *et al.* (1998, p. 10) refer to the attainment of continuously improving customer satisfaction by quality while Zairi (1994, p.6) refers to the “continuous process of introducing best practice to ensure sustainability and positive competitiveness”. Hill and Wilkinson (1995) suggest Continuous Improvement involves the Continuous Improvement of both products and processes and is one of the underlying principles of Continuous Improvement.

How then will Continuous Improvement be defined for the purposes of this research? Clearly many definitions could be formulated – one based Carr and Johansson (1995) which reflects the thinking of Wilkinson *et al.* (1998), Zairi (1994), Juran (1989) and Hill and Wilkinson (1995) would seem to be appropriate. Continuous Improvement will therefore be defined “as an evolutionary incremental process which leads to a better way to compete and that adds value to existing processes and encompasses the entire workforce of the organization”.

a. Innovation

Like CI there is a substantial range of opinions and ideas about what constitutes innovation. Zairi (1994) makes reference to this by writing "what makes innovation challenging is the fact that it is very difficult to agree on a common definition, and also to decide which firms are the most innovative and how to quantify innovation activity".

Peters and Waterman (1982) choose a double meaning for the word innovation. They state "innovative companies are especially adroit at continually responding to change of any sort in their environments and are characterised by creative people developing new products and services". Drucker (1985) defines innovation as "the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth". Both of these definitions make reference to the terms change and creativity – they imply that innovation is the harnessing of creative ability within individuals and the workforce in response to change.

Mogee and Schacht (1980) refer to the technological nature of innovation. They state "Technological innovation is the process by which industry generates new and improved products and production processes.

Tushman and Nadler (1986) also refer to product and process innovation. They contend that "Innovation is the creation of any product, service or process which is new to a business unit". They continue by saying "the vast majority of successful innovations are based on the cumulative effect of incremental change in ideas or methods".

Pereira and Aspinwell (1997), quoting heavily from Davenport (1993) who compares CI and BPR, move the discussion on innovation away from the traditional view of product and process innovation to a much narrower definition. Business Process Reengineering is taken to be synonymous with the term innovation. Edwards and Peppard (1994) conducted a survey which showed that BPR often evolves out of a CI initiative: the survey indicated that 84 per cent of all companies involved in BPR were also engaged in CI; only 6 per cent of the companies undertaking BPR did not have any links with CI. While the definition used by Davenport may well prove to be different from that used in this paper, the implication/suggestion is that innovation can involve out of a CI initiative or culture.

Broader definitions of innovation also exist within the literature. Brown (1994) contends that "innovation is about doing things differently or better across products, processes or procedures for added value and/or performance". He defines a concept called Total Innovation Management (TIM) which concerns itself not only with product development but with implementing creativity across all aspects of an organization. It is suggested that TIM works on two dimensions – firstly by doing things better and differently, adopting the best of evolutionary and revolutionary practices, which secondly, impacts on products, processes and procedures to provide a positive influence on profit and performance.

A distinction between "radical and incremental" innovation also exists in the literature (Tidd *et al.*, 1998). "Radical innovations refer to products and processes that result from advances in knowledge whereas incremental innovation refers to the continual process of improvement of techniques" (Mole and Elliot, 1987). They state "Innovation is the process of taking new ideas effectively and

profitably through to satisfied customers". It is a process of continuous renewal involving the whole company and is an essential part of business strategy and every day practice (DTI, CBT and National Manufacturing Council, 1993).

Reflecting the above discussion, effective business innovation will be defined as "the harnessing of creative ability within individuals and the workforce in response to change, by doing things differently or better across products, processes or procedures through the continual process of improvement of techniques and the successful production, assimilation and exploitation of novelty".

b. Beyond CI to innovation

Is it possible for organizations to progress from CI to effective business innovation as defined? To answer this, two separate but related underlying questions need to be addressed.

1. Why would SMEs want to become more innovative?
2. How can SMEs progress from CI to effective business innovation?

c. *Why would SMEs want to become more innovative?*

"Although CI can simplify or streamline a process – it can take a crooked cow path and straighten out the kinks or widen a bottleneck so more cows can travel in less time – it never asks whether the path was the right one to have the cows take in the first place" (Samaha, 1996).

The working definition of CI refers to a better way to compete based on an approach of Continuous Improvement that adds value to existing processes. What if, as Samaha suggests, these processes were not right in the first place? Would there be any point in improving them? Wiele and Brown (1998) contend that SMEs should view CI as the starting point of a journey that will become increasingly innovative and which is closely linked with increased competitiveness.

Reynolds (1994) draws attention to this debate by analysing one of the largest companies in the world – IBM. He records that IBM had been one of the first companies to introduce CI both in the USA and UK by developing departmental purpose audits and introducing quality circles. However in 1993 IBM lost \$9 billion – partly due to redundancy costs, and partly as a result of refocusing the corporation's strategy away from making mainframe computers to microcomputers. He concludes "To oversimplify things somewhat, IBM did a superb job of producing large mainframe computers which were becoming increasingly irrelevant. If the organization is broadly heading in the right direction – in other words it has the right strategy – CI can help to implement that strategy efficiently, but if the direction is wrong, CI is not the best tool to turn the organization around.

Samaha (1996) suggests that by "fostering an environment that encourages innovation, companies can learn not only when to straighten or widen crooked paths, but also when to blaze a new trail".

The idea that companies need to innovate to help maintain the correct strategic direction has been further developed by Samaha (1996) and Brown (1994) who both contend that innovation can help companies maintain or increase competitive advantage. Samaha (1996) states "when a company is an industry leader, quality processes can produce incremental improvements that will help maintain its leadership position – for a time. However to maintain such

competitive advantage over the long term, companies need to push ahead relentlessly always innovating". This idea of continuous innovation was echoed recently for SMEs at the publication of the UK Government's *White Paper on Innovation and Competitiveness* (DTI, 1998).

Brown (1994) reached similar conclusions. He believes that companies must innovate for three main reasons:

- (1) they may seek to gain advantage by taking an offensive stance and an industry lead in the use of new techniques;
- (2) they may have to innovate in response to innovation by competition;
- (3) they may innovate to forestall or pre-empt innovation by others that would harm their own business.

Lefebvre and Lefebvre (1993) show that stronger competitive position, cost and quality are linked to an SME's approach to innovation.

d. Can SMEs progress from CI to effective business innovation?

Kanji (1996) is very specific about the link between innovation and CI. He maintains that there are six main categories of innovation – product, process, application, system, core competence and horizontal transfer. He states "The linkage between innovation and CI can be seen where each type of innovation goes through the CI process for successful innovation. Successful innovation depends on the CI process, the Continuous Improvement strategy of CI and innovation will enable SMEs to develop their management understanding for future growth and competitiveness". Gunasekaran *et al.* (1996) list key elements of this progress as JIT, Zero Inventories, Flexible Manufacturing Systems and Computer-Integrated Manufacture etc.

Kanji, is implying that Continuous Improvement and innovation are actually integrated in an evolutionary process which can turn innovation into successful innovation and business excellence (Kanji, 1996).

Business organizations can progress from CI to effective business innovation, with a substantial body of opinion now expressing the view that CI can actually play a vital role in the process by instilling and developing a culture which encourages innovation. Wiele and Brown (1998) see ISO and CI as suitable building blocks on which to build an innovative organization. Kinni (1995) states that SMEs should not have an exclusive strategy of Kaizen (CI), but should move on to embrace innovation for greater competitiveness. Hale and Cragg (1996) see SMEs' innate flexibility and ability to reorientate rapidly as key elements in their incorporation of innovation.

e. Innovation and Flexibility

Flexibility and innovation are often presented as indispensable to competitiveness where scope rather than scale, customer-orientation and a concern for quality present an image of a company committed to serving its customers and responding to the specific wishes of the market. For Mouritsen (1999), a "flexible firm" is one that orients itself towards customers, new technology, lateral organizational arrangements and innovation.

From the seminal contribution of Atkinson (1984) about the flexible firm, the literature distinguishes between internal and external workplace flexibility (Grenier *et al.*, 1997; Kalleberg, 2001). Internal flexibility involves efforts to increase the firms' ability to adjust to uncertainty by changing the internal labour market or work organization, whereas external flexibility uses changes in the

external labour market. These two strategies can best be illustrated in reference to two distinct areas of workplace flexibility: labour volume and work organization.

Flexibility in the volume of labour can be sought externally by changing the level of employment through layoffs or temporary employees. In contrast, an internal strategy to make the volume of labour more flexible involves a search for adjustment through changes in working time, e.g. by increasing and decreasing the number of working hours. In the literature of flexibility, the former is often referred to as “numerical flexibility” and the latter is typically called “working time flexibility”. Similarly, a more flexible organization of production can be externally pursued through sub-contracting or the creation of informal networks of firms, all of which depend on “externalizing” the organization of production. Internally, a more flexible organization of work can be sought through job rotation or other workplace practices that make the deployment of individual workers to particular tasks more adaptable. This latter form of flexibility is usually referred to as “functional flexibility”.

Achieving fit between the organization and the environment is difficult regardless of the environment, and therefore firms able to do so possess a resource that sustains competitive advantage. Carmeli (2001) finds that the ability to manage changes and environmental fit is among the most important resources that differentiates between high-performance and low-performance firms. Regarding the influence of workplace flexibility dimensions on innovation, each workplace flexibility dimension may have a different impact on the company's innovation process.

According to Atkinson (1984), the firm has two parts: a core, consisting of employees who are most vital to the firm, and the periphery, consisting of those employees of less importance. In the core, functional flexibility is necessary to foster innovation behaviours and organizational commitment of employees. In the periphery, numerical flexibility is useful to accommodate changes in the firm environment throughout temporary employment or outsourcing. Innovation is the result of core value-creation activities that contribute to sustain the firms' competitive advantage. Employees in core areas are responsible for innovation activities, and companies will seek to promote and protect them from adjustments to environmental uncertainties. On the contrary, peripheral activities that do not contribute to innovation are not in need of establishing long-term relations with employees and can use external work arrangements instead.

Thus, Michie and Sheehan's (2003) studied innovation and human resource flexibility in a survey of 242 UK manufacturing organizations, and found that the use of innovative work practices (functional flexibility) was positively correlated with all categories of innovation, especially process innovation. However the use of short-term and temporary contracts was negatively correlated with all categories of innovation. Storey *et al.* (2002) also found that employers rarely used flexible working to achieve innovation in a large-scale survey of 2,700 UK companies.

The resource-based view of the firm (RBV) states that firms which are able to build rare, valuable, non-substitutable and difficult-to imitate resources may achieve sustainable competitive advantages over competitors (Barney, 1991; Barney and Wright, 1998; Wernerfelt, 1984). Knowledge-based resources are the technical, creative, or collaborative skills rooted in the workforce that enhance a

firms' ability to innovate. These knowledge-based resources are crucial because employee capabilities are embedded resources that are difficult for competitors to imitate. Such critical resources –or the strategic core- should be governed internally, while other resources may be governed by market mechanisms (Kogut and Zander, 1996). Thus, it is recommended that external work arrangements are used only outside the core value-creation areas vital for creating competitive advantage. In this manner, firms have incentives to develop firm-specific resources, to minimize leakage of critical knowledge, and to focus on a few selected areas of competence.

Innovative products and processes are the “outgrowths” of underlying resources and capabilities (Prahalad and Hamel, 1990). From the RBV it might be expected that emphasize secure, long-term and high-commitment-based employment policies, would be more conducive to innovation. On the contrary, flexible employment contracts, such as fixed-term contracts or external work arrangements, could damage innovation. However the increasing complexity of markets makes it difficult for firms to have all of the resources necessary to innovate. Outside technology sources are sometimes the only option for firms that wish to keep up-to-date. Barney (1999) has suggested that firms do not need to own all relevant capabilities to innovate, as long as they have sufficient access to them. While the capability to manage resources in the innovation process may be internal to the organization, the resources to be mobilized may be external – they are complementary assets (Teece, 1986).

This line of argument begins to suggest that even quite extensive use of flexible employment contracts and outsourcing may be perfectly compatible with the in-house capabilities of innovation in dynamic and high-technology environments to ensure the presence of knowledge and technological resources that may be beyond existing internal capabilities (Kodama, 1995). Matusik and Hill (1998) argue that contingent work, although so far mainly introduced for cost reasons, can be more positively used for the creation and accumulation of new knowledge and that it can contribute towards competitive advantage through the innovations achieved by applying this knowledge. Externals may bring knowledge and industry best practices into a firm, and they may stimulate exploration of new processes and ideas outside the firms' knowledge stock. Thus, Nesheim (2003) found that firms in dynamic environments often use external personnel deliberately in core value-creation areas. Other scholars find positive relationships between flexible employment contracts and innovation but they suggest a different causal relationship because innovation may sometimes influence flexibility. For instance, Arvanitis (2005) finds a positive correlation between product innovation and temporary work at Swiss firms but he suggests the existence of a demand for specialized services, which is satisfied by hiring high-skilled personnel from specialized firms.

The dimensions of innovation and flexibility analysed are: internal functional flexibility, internal numerical flexibility, outsourcing, external functional flexibility, external numerical flexibility, financial flexibility and strategic flexibility.

Internal workplace flexibility. Two dimensions of internal workplace flexibility are taken into account: internal functional flexibility and internal numerical flexibility. *Internal functional flexibility* means a process through which

firms adjust to changes in the demand for their output by an internal reorganization of workplaces based on multiskilling, teamwork and the involvement of employees in job design and organization. This flexibility may enhance the employee's innovation behaviour through increased organizational commitment because it can improve the quality of working life by reducing monotonous, repetitive work (Lind, 2001). Although functional flexible practices entail higher labour costs, particularly in economic downturns, the benefits are increased loyalty and dedication to the company which can facilitate innovation behaviour (Kelliher and Riley, 2003).

Internal numerical flexibility is related to adjusting work volume to changes in demand through part-time contracts or flexible working hours. This flexibility may also be positively related to innovation because workplace practices like flexitime may increase job satisfaction and organizational commitment of core employees, which in turn will derive in enhanced innovation behaviour. Even part-time employees, especially if they have chosen this form of employment, report a more positive "psychological contract" and a potential higher propensity for innovation (Guest et al., 1999).

External workplace flexibility. Three dimensions are usually included in this group: external numerical flexibility, external functional flexibility, and outsourcing. External numerical flexibility adjusts work volume by contracting and firing temporary employees. Although this flexibility dimension can positively contribute to reduce labour costs, it may also have negative outcomes because new employees need time to learn business skills and because innovation behaviour requires organizational commitment that is less frequent among temporary employees (Michie and Sheehan, 2003; Posthuma et al., 2005).

However, in very dynamic environments, employing contingent workers in combination with internal employees might be advantageous to upgrade the firm's knowledge stock (Dyer and Singh, 1998). Externals may bring knowledge of occupational and industry best practices into a firm. Additionally, the presence of externals may stimulate exploration of new processes and ideas outside the firm's knowledge stock.

Regarding outsourcing, a high R&D intensity may lead to lower levels of outsourcing because there can be an increased risk of opportunism if innovation activities are not performed inside the firm, especially when the R&D concerned is of a proprietary rather than a generic nature (Williamson, 1985). Teece (1986) states that outsourcing is not a means to innovate because outside suppliers lack incentives to innovate for the buying firm as the supplier will seek to use the rents of innovation for a wider range of clients. As a result, firms that outsource are likely to lose gradually touch with new technological breakthroughs that offer opportunities for product and process innovations. In addition, as suppliers gain knowledge of the product being manufactured, they may use that knowledge to begin marketing the product on their own (Prahalad and Hamel, 1990).

Financial flexibility. In the model of the flexible firm, Atkinson (1984) describes financial flexibility as a mechanism whereby employers modify employees' wages as business conditions warrant or link pay to individual, group or firm performance. Financial flexible practices may be considered as antecedents or incentives to adopt internal functional and numerical flexible practices (e.g. link employees' pay to multi-skilled team performance). Therefore,

the implementation of financial flexible practices that make functional flexible practices more attractive for employees to adopt may contribute to enhance innovation performance. As a consequence, we propose a positive relationship between financial flexibility and innovation performance.

Strategic flexibility. Strategic flexibility defines a firm's ability to change strategic decisions in response to alterations in the environment (Verdú-Jover *et al.*, 2005). Given that flexibility is a multidimensional concept, strategic flexibility is included in this set of hypotheses as the firms' broader approach to flexibility that can comprehensively support the previous set of workplace flexibility dimensions. A favourable (proactive) approach to strategic flexibility may contribute to enhance some of the firms' workplace flexibility dimensions. For instance, internal human resources flexibility requires the support of supervisors to implement flexible practices like flexitime. Firms that are more proactive towards strategic flexibility could also be more proactive to support the implementation of practices that contribute to cope with uncertainty and fast-occurring environments.

4. Research Methodology

The research performed on a technology provider company that provides technological and financial solutions in the fields of Fluids Dynamics, Power, Motor, and Environmental needs. This company is an Indonesian based company. The company was set up in 1973, and has been growing steadily since then. The clients' base varies from small farmer to giant oil companies. This company's hope is to continually meet today's and future's challenges, especially in meeting our clients' needs in Indonesia, while cherishing our history. To support clients' needs, the activities that include distribution, rental, EPFC (Engineering, Procurement Fabrication and Commissioning), after sales services, maintenance contracts, and project finance and education. The company organized as a technical and distribution company with the various necessary departments to find the right solution for customers' needs and constraints within the fields we are involved. They also positioned their outlets to provide maximum access and close support for their clients' activities, but maintaining and improving their technical and non technical service standards. Currently, they have outlets in Jakarta, Balikpapan and Samarinda. Their headquarter is located with the same premise in Balikpapan outlet, with different organization structure.

The study involved both qualitative and quantitative research methodology. The research involved the collection of two types of data – qualitative data was obtained from the interviews with the Managing Directors and Management Teams. Secondly, focus groups representing a “diagonal slice” through the organization were asked to complete a questionnaire based on the model. Quantitative measurement with this questioner was done towards all employees through census (total population), by using The Centrim Innovation Model, that was used to measure innovation. It comprises six main sectors which are each sub-divided into three segments (Appendix). This was a method used by Taylor (1995) and Teal (1996) and each point on the creativity wheel is backed up by a series of validation as to their effectiveness as a measurement of innovativeness, drawn from such references.

CI was measured using a series of questions based on the nine categories of the European Business Excellence Model (EFQM, 1999).

Internal functional flexibility. Number of employees who are covered by the following practices divided by the total number of employees: job rotation, multi-skilled teams, total quality management, quality and problem solving teams, employees involvement in job design and planning.

Internal numerical flexibility. Number of employees who are covered by the following practices divided by the total number of employees: sharing week, part-time contracts, flexitime, workload reduction and overtime.

External numerical flexibility. Number of temporary, fixed-term employees, contingent employees, and layoffs, divided by the total number of employees.

External functional flexibility. Number of self-employees who work for the firm divided by the total number of employees.

Financial flexibility. Number of employees who are covered by the following practices divided by the total number of employees: performance-related pay, profit-sharing, employee-based financial incentives, and team-based financial incentives. This measure of financial flexibility and all the previous four measures of internal and external flexibility are based on items used by other scholars to quantify measures of human resource flexibility (e.g. Cappelli and Neumark, 2001; Michie and Sheehan, 2005).

Outsourcing. It is calculated by multiplying the percentage of activities outsourced in the firm and the sum of degree of outsourcing (measured on a seven-point Likert scale) of all outsourced activities. This measure is adapted from Gilley and Rasheed (2000).

Strategic flexibility. Construct of three items (Cronbach's $\alpha=0.865$):

1. "the firm reacts very quickly to new customer demands";
2. "the firm reacts very quickly to increases and decreases of demand"; and
3. "the firm has several options to face changes in the environment".

The items were measured on seven-point Likert scale with endpoints "totally disagree" (=1) and "totally agree" (=7), and adapted from Verdú-Jover et al. (2005).

The organizations had the following criteria:

- High growth SMEs.
- Undergoing substantial change.
- Companies from Indonesian.
- Concern for innovative and flexible people.

The intention was to select SMEs which had shown a high level of growth and which had a commitment to ongoing change. The hope was that many of these companies would exhibit innovative practice.

5. Results and discussion

The qualitative data collected from interview and analysed was primarily based on interviews with the managing directors, management teams, employee focus groups and feedback discussions, find that companies are quite good at attempting to direct a creative business and taking wise decisions but not so good at developing a creative capability, building a creative culture, organising for creativity or managing learning for ideas.

Innovation scores for the companies. Given that a likert type scale was used the maximum innovation score obtainable would be a 6 with a minimum of 1. This gives a theoretical range of 5 – the actual range was 2.1 (maximum 4.92 and minimum 2.82). The mean innovation score for all the 15 companies was 3.57. This mean innovation score says little in itself apart from indicating that the average SME is exhibiting some evidence that they have adopted innovation practices but have still to reach the point where they are exhibiting the full range of characteristics expected from an innovative company.

The SME appears to be quite good at producing business plans, development plans and giving full consideration to ideas before decisions are made, but that in practice the firms' leaders do not actively support new ideas which means that staff do not receive support from the top, nor are they empowered or given encouragement to take on the role of finding new and better ways of doing things. However, this is the general picture – average figures hide the fact that some companies perform better than others. A review of the qualitative data in the next section of this paper helps to address this issue. However in general if innovation is perceived as doing things differently or better by harnessing the creative ability of individuals and the workforce, then many companies are failing to create a culture which allows these essential processes to develop and materialise. But how is the culture created? Kanji (1996) suggests that "the CI process could reinforce incremental innovation with a commitment to CI instilling a culture that was a pre-requisite for adoption of the innovation process". Could a culture of CI, defined in this paper primarily as a process of Continuous Improvement lead to the development of an innovation culture within companies? The next section considers this possibility.

a. *Continuous Improvement and innovation*

If Continuous Improvement is to be analysed to establish its relationship with innovation, and specifically to ascertain if companies can go beyond CI to effective business innovation then it is necessary to calculate/determine a measure for Continuous Improvement.

This analysis would appear to suggest that a culture of Continuous Improvement within a company can act as a solid foundation on which an innovative culture and organization can be built. This statement gives rise to another important question. Is the correlation between Continuous Improvement and innovation strong for all aspects of innovation, or do companies with a strong background of Continuous Improvement do some aspects of innovation better than others? The next section attempts to address this issue.

b. *Continuous Improvement and different aspects of innovation*

The results highlight that not only is there a very strong link between Continuous Improvement and innovation, but that the same strong link exists between CI and the different aspects of innovation as assessed by the Centrim Innovation Model. Given the very strong correlation between CI and innovation discovered in the last section, these results were not necessarily unexpected however. What they indicate is that in addition to a culture of Continuous Improvement within a company acting as a solid foundation on which an innovative culture and organization can be built, the organizations which have adopted a CI culture are much more likely to have successfully adopted all the

different aspects of innovation (as measured by the innovation model) which collectively create that innovation culture.

The qualitative data collected and analysed was primarily based on interviews with the managing directors, management teams, employee focus groups and feedback discussions. The findings revealed a number of consistent factors relating to those organizations which had scored low on both innovation and Continuous Improvement and those organizations which had scored highly. In low scoring SMEs the general approach was very much a top-down, threat based approach in which employees were not expected to contribute beyond their job skills. Employees would be given "directives" to become more innovation conscious with "a them and us" style of language which reflected a managerial view that employees had in practice little to contribute to innovation. Management would perceive innovation in terms of new products and new machines or process innovation "but almost never in terms of employee creativity". Frequently rewards and recognition were restricted to bonus systems for extra production rather than new ideas.

High scoring organizations had a history of Continuous Improvement on which they are now "building larger innovation". Training associated with Continuous Improvement has led in many cases to increased employee knowledge of customers, competition and markets which in turn has led to employee generated innovative product related ideas. Knowledge was not limited to the "capable few". The language was one of openness with increased trust generated by CI approaches. Organizations scoring highly on innovation and CI were found to have established a culture of Continuous Improvement on which increasingly innovative practice could be built, established on people development, openness and trust.

In summary the CI culture allowed ideas to flourish and grow. Employee creativity was valued, encouraged and released by the process of Continuous Improvement – these businesses could much more readily react to change and respond by doing things differently or better across products, processes or procedures, while employee creativity could help with the assimilation and exploitation of novelty. Businesses with a culture of CI (Continuous Improvement) could more readily adopt an innovation culture also.

In general, findings have been confirmed by other writers working in different countries. Peters and Waterman (1982) believe that excellent, innovative companies are characterised by eight attributes, one of which is productivity through people. They state "the excellent companies treat the rank and file as the root source of quality and productivity gain. They do not foster we/they labour attributes or regard capital investment as the fundamental source of efficiency improvement".

The definition of CI developed earlier referred "to an evolutionary incremental process which leads to a better way to compete and that adds value to existing processes and encompasses the entire workforce of the organization". Quite clearly the term evolutionary implies that CI is a process that develops with time. This goes beyond incremental Continuous Improvement whereby business continually improves by making small changes on an on-going basis. If the term evolutionary is accepted, then these small and continual improvements can be

perceived as addressing different aspects of a company's strategic development as the company's CI approach matures and grows.

c. *Flexibility and Innovation*

This research found that internal functional and internal numerical flexibilities are related to product and process innovation in the firms. This research also found that financial flexibility is positively related to innovation performance. The adoption of financial flexible practices may support the adoption of internal functional and numerical flexible practices, which in turn may have positive consequences for innovation performance. Similarly, the positive relationship between strategic flexibility and innovation performance suggests that a favourable (proactive) strategic approach to flexibility may contribute to enhance the firms' innovation performance through internal workplace flexibility dimensions.

The result of this study indicate that the use of internal workplace flexibility is more important than external workplace flexibility in high-innovative firms because external workplace flexibility dimensions are not related to innovation performance. Firm that is more innovative do not adopt work external arrangements and outsourcing more intensively than less innovative firms. The average adoption of functional flexibility practices and the intensity of using these practices by employees are greater in the group of high-innovative firms which may suggest as well that numerical flexibility can be used to support innovation activities by core employees. These results would support those theoretical perspectives which emphasize that innovation should not be carried out through external work arrangements but by employees in core value-creation areas with functional flexibility.

The finding indicate that in some firms the increasing use of external workplace flexibility may be in parallel with the increased emphasis on innovation in dynamic environments. Flexible labour may be used sometimes to support innovative ventures or to access scarce knowledge. The development and effective management of external alliances and human resources are important to maximize innovation performance. Outsourcing key functions such as R&D presents challenges to firms in managing the cross-boundary interfaces to externalize and assimilate external knowledge.

6. Conclusions

This research findings in this paper have indicated that there appears to be a strong link between CI (Continuous Improvement) , innovation and flexibility for SMEs. It can further be contended that companies which have developed a culture of Continuous Improvement have discovered that it can provide a solid foundation on which a culture of effective business innovation can be built. Companies with a proven track record of Continuous Improvement appear not only to be more innovative, but perform better in all the different aspects of innovation as measured.

The second major finding to emerge from the research is that small to medium enterprises adopted a programme of Continuous Improvement and are now experiencing the beneficial effects of becoming more innovative. These businesses have discovered that a culture of Continuous Improvement has helped allow employee creativity and ideas to flourish and grow, with the result that

businesses should be able to more readily react to change and respond by doing things differently, or better, across products, processes or procedures.

The business has not however embraced a culture of continuous improvement, and score quite low on the Centrim Innovation Model's assessment of their innovative character. Suggestions have been presented to help explain their lack of innovativeness.

The result indicates that some workplace flexibility dimensions – internal functional, external functional, external numerical, and strategic flexibility –all dimensions of flexibility are equally important in different competitive settings (Michie and Sheehan, 2003). There are must be owned by every person who works, if the business want to make continuous improvement.

As regards to limitations, the very small sample size is a potential threat to the validity of the study. The use of managerial perceptions to evaluate innovation performance should also be taken as a limitation and a need for further validation of our results in future studies. A number of avenues for future research may be suggested on the results of this study. In order to analyze the degree to which the use of external work arrangements in the core is a general phenomenon among firms in dynamic environments, more across-sector studies should be undertaken. Besides, longitudinal studies should be used to test the relationship between innovation, continuous improvement, and change in flexibility practices since cross-sectional studies made very difficult to test causal relationships.

References

- Banerjee, Shuvojit (2002), "Recovery and Growth in Indonesian Industry", Working Paper No.02/08, September, Jakarta: UNSFIR
- Barney, J. (1999), "How a firms' capabilities affect boundary decisions", *Sloan Management Review*, Vol. 40 No.3, pp.137-45.
- Carmeli, A. (2001), "High- and low-performance firms: do they have different profiles of perceived core intangible resources and business environment?", *Technovation*, Vol. 21 No.10, pp.661-71.
- Carr, D.K, Johansson, H.J. (1995), *Best Practices in Re-engineering*, McGraw-Hill,, New York.
- DTI, CBI and National Manufacturing Council (1993), *Innovation – The Best Practice: The Report*, DTI Publications, London.
- Dyer, J., Singh, H. (1998), "The relational view: cooperative strategy and sources of interorganizational competitive advantage", *Academy of Management Review*, Vol. 23 No.4, pp.660-79.
- EFQM (1999), *The European Business Excellence Model*.
- Ghobadian, A, Gallear, D (1996), "Total quality management in SMEs", *OMEGA*, Vol. 24 No.1, pp.83-100.
- Gilley, K., Rasheed, A. (2000), "Making more by doing less: an analysis of outsourcing and its effects on firm performance", *Journal of Management*, Vol. 26 No.4, pp.763-90.

- Grenier, J., Giles, A., Belanger, J. (1997), "Internal versus external labour flexibility: a two-plant comparison in Canadian manufacturing", *Industrial Relations*, Vol. 52 No.4, pp.683-711.
- Guest, D., Mackenzie-Davey, K., Patch, A. (1999), "Flexible employment contracts, innovation and learning", paper presented at the International Congress on Competence for Europe, Berlin, 21-23 April, .
- Gunasekaran, A., Okko, P., Martikainen, T., Yli-Olli, P (1996), "Improving productivity and quality in small and medium enterprises: cases and analysis", *International Small Business Journal*, Vol. 15 No.1, pp.59-72.
- Juran, J.M. (1989), *Juran on Leadership for Quality*, Free Press, New York, NY.
- Jutla, D., Bodorik, P., Dhaliqal, J. (2002), "Supporting the e-business readiness of small and medium-sized enterprises: approaches and metrics", *Internet Research: Electronic Networking Applications and Policy*, Vol. 12 No.2, pp.139-64.
- Karuppan, C. (2004), "Strategies to foster labor flexibility", *International Journal of Productivity and Performance Management*, Vol. 53 No.6, pp.532-47.
- Kelliher, C., Riley, M. (2003), "Beyond efficiency: some by-products of functional flexibility", *The Service Industries Journal*, Vol. 23 No.4, pp.98-113.
- Kinni, T (1995), "Process improvement, part 2: reengineering and the quest for breakthrough results", *Industry Week*, Vol. 244 No.4, pp.45-8.
- Kodama, F. (1995), *Emerging Patterns of Innovation: Sources of Japan's Technological Edge*, Harvard Business School Press, Boston, MA, pp.MA.
- Kogut, B., Zander, U. (1996), "Knowledge of the firm, combinative capabilities and the replication of technology", *Organization Science*, Vol. 7 No.5, pp.502-18.
- Lind, J. (2001), "Flexibility – myth or reality?", paper presented at the International Industrial Relations Association Congress, June, Oslo, .
- Malhotra, M., Grover, V., Desilvio, M. (1996), "Reengineering the new product development process: a framework for innovation and flexibility in high technology firms", *Omega, International Journal of Management Science*, Vol. 24 No.4, pp.425-41.
- Michie, J., Sheehan, M. (2003), "Labour market deregulation, flexibility and innovation", *Cambridge Journal of Economics*, Vol. 27 No.1, pp.123-43.
- Michie, J., Sheehan, M. (2005), "Business strategy, human resources, labour market flexibility and competitive advantage", *International Journal of Human Resource Management*, Vol. 16 No.3, pp.445-64.
- Miotti, L., Sachwald, F. (2003), "Co-operative R&D: why and with whom? An integrated framework of analysis", *Research Policy*, Vol. 32 No.8, pp.1481-99.

- Mole, V, Elliot, D (1987), *Enterprising Innovation: An Alternative Approach*, Frances Pinter, London,
- Mol, M. (2005), "Does being R&D intensive still discourage outsourcing? Evidence from Dutch manufacturing", *Research Policy*, Vol. 34 No.4, pp.571-82.
- Prahalad, C., Hamel, G. (1990), "The core competence of the corporation", *Harvard Business Review*, Vol. 68 No.3, pp.79-93.
- Richbell, S. (2001), "Trends and emerging values in human resource management – the UK scene", *International Journal of Manpower*, Vol. 22 No.3, pp.261-8.
- Samaha, H.E (1996), "Overcoming the continuous improvement barrier to innovation", *HR Magazine*, Vol. 41 pp.144-9.
- Tatikonda, M., Rosenthal, S. (2000), "Successful execution of product development projects: balancing firmness and flexibility in the innovation process", *Journal of Operations Management*, Vol. 18 No.4, pp.401-25.
- Tambunan, Tulus (2006), *SME Capacity Building in Indonesia*, Kadin Indonesia.
- Teece, D. (1986), "Profiting from technological innovation: implications for integration, collaboration, licensing and public policy", *Research Policy*, Vol. 15 No.6, pp.285-305.
- Teece, D., Pisano, G., Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No.7, pp.509-33.
- Tidd, J., Bessant, J, Pavitt, K (1998), *Managing Innovation, Integrating Technological, Market and Organisational Change*, Wiley, Chichester, .
- Upton, D. (1995), "What really makes factories flexible?", *Harvard Business Review*, Vol. 73 No.4, pp.74-84.
- Verdú-Jover, A., Llorens-Montes, J., Garcia-Morales, V. (2005), "Flexibility, fit and innovative capacity: an empirical examination", *International Journal of Technology Management*, Vol. 30 No.1-2, pp.131-46.
- Wiele, T., Brown, A. (1998), "Venturing down the TQM path for SMEs", *International Small Business Journal*, Vol. 16 No.2, pp.50-69.
- Williamson, O. (1985), *The Economic Institution of Capitalism*, The Free Press, New York, NY, .