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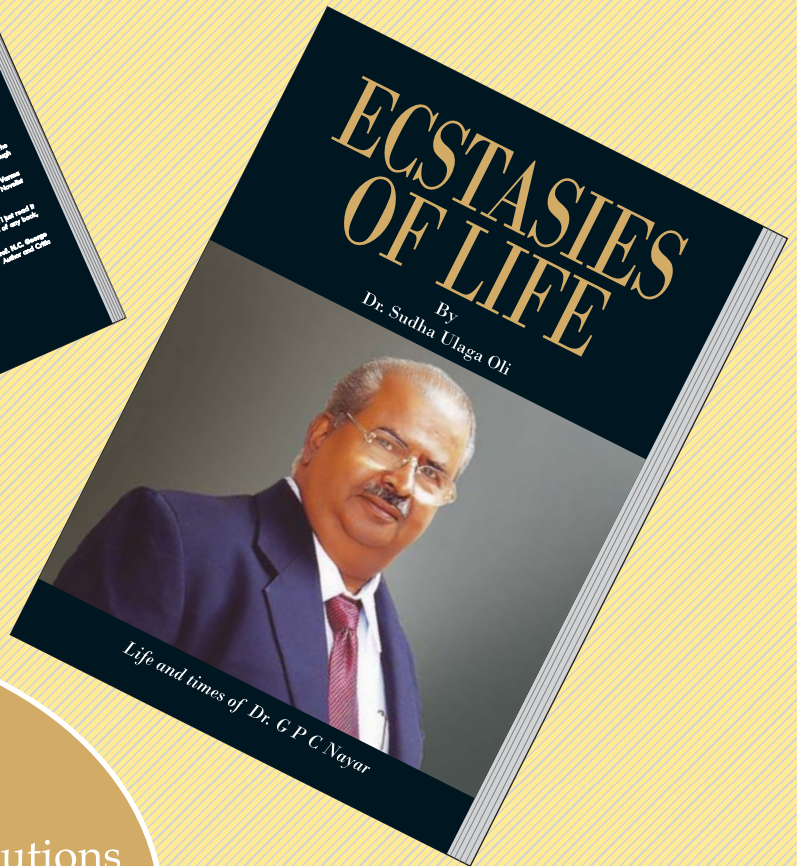
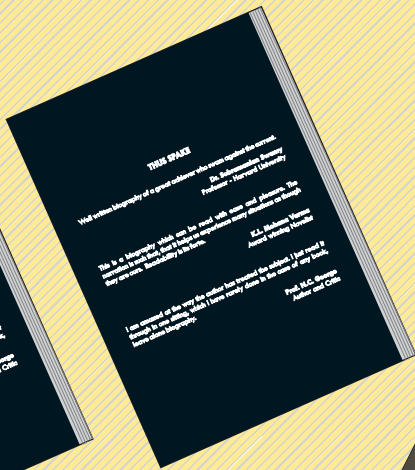
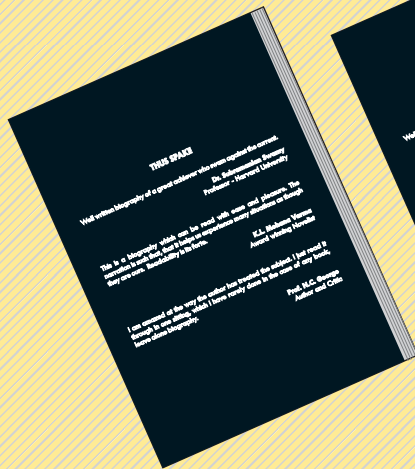
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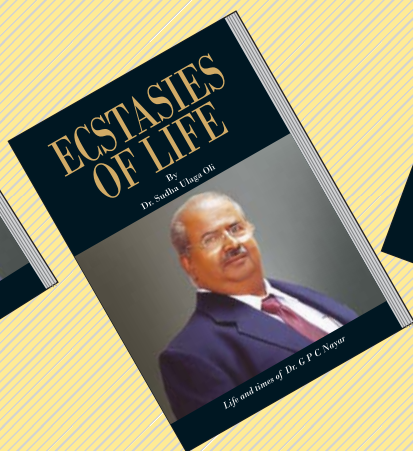
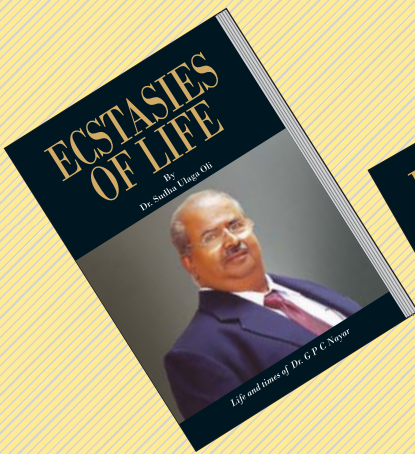
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Here's an entrepreneur who has created some excellent academic institutions in an unfriendly environment. It is a saga of trials and tribulations in an extremely readable manner by a consummate writer in English.



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## Overview

Estonia was among the first Soviet republics to break away from the former Soviet Union. Since its transition to an independent capitalist economy in 1991, the country has turned out to be one of the fastest growing economies in the world.

The economic growth of this northern-most Baltic republic is more than five times faster than that of the European Union as a whole. As eurozone's fastest growing economy, the remarkable economic resurgence of Estonia is observed by many as quite startling. They even named Estonia as a Baltic Tiger.

Among the Baltic people there is a popular saying that Latvia has the best politicians, Lithuania the best prophets, and Estonia the best economists.

In this background, it will be quite refreshing for our readers to read a well-researched lead article - a study on 'Estonia's Export-led Path to Prosperity since Independence.'

In the present highly competitive world, progressive organisations are all continuously striving for capacity building. That means, they are working on improving their ability to do more things better. They develop the ability to do new things they weren't able to do before and at the same time to do the things they used to do, more effectively and efficiently. So, our second lead article is on 'Institutional Capacity Building.'

We have in this issue, as usual, many more learned articles on a variety of contemporary topics like Consumer Behaviour, Work-Life Balance, Stock Markets, Organisational Health among Employees, Managing Non-financial Risks, Global Competiveness, Cause Related Marketing, and so on.

I am confident that this issue will be truly informative and educative to our readers.

**Dr. G. P. C. NAYAR**  
**Chairman, SCMS Group of Educational Institutions.**

# SCMS Journal of Indian Management

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## Editorial



### Ecology and Culture

The ecological idea of culture has been predicated upon twin convictions: culture is limited to the human species and culture is the product of human creation. But, a closer and deeper study broadens our perception: culture is also concerned with nature, and with the intimate relationship between human beings and the natural environment. This revelation leads to a long leap in the idea of culture and this demands opening the doors to nature; to natural environment; and other species.

The ecological idea of culture springs out from the 'environmental movement' sweeping all over the world spreading the message that the lack of knowledge on environment will ultimately annihilate nature and exterminate the human race from the surface of this globe. We believe that economics and technology have not liberated us from our traditional dependency on the natural environment. They, instead, have increased our dependency.

Now, there is a greater awareness: natural environment provides human beings with the sustenance they need for survival and human beings owe incredible dependency to all forms of plant, animal, and mineral life. Cultures that ignore this intimate relationship between human beings and the natural environment run the risk of over extending themselves, collapsing, and disappearing from the global scene because they are unsustainable. History is full of examples of this.

Culture is also predicated on the conviction that it is the organizational form structures of different species, both human and nonhuman. It is another leap to the idea of culture. They all obey laws of nature: of birth and death, growth and decay, consumption, digestion, and elimination. Therefore we talk about the culture of plants and animals. We use phrases: wolf culture and plant culture, we use terms like horti-culture, agriculture, silvi-culture and perma-culture. The former refers to activities involving other species. The latter refers to activities involving human beings.

Everybody generally agrees with the biological idea of culture. Like human beings they also see and interpret the world. They organize themselves in groups like a flock of geese, communities like a colony of ants, as a pack of wolves, as cats basking in the sun, playing with each other. The life abiding by the well-defined systems of queen, drone, and worker bees, rigid hierarchies and divisions of labour, finely tuned communication net works, and sensing capabilities, highly evolves production, distribution, and consumption mechanisms act to ensure the survival of bees as a species and to their biological and non biological requirements, guaranteeing continuous supply of products: honey, wax, the beehive, and the honey comb; of functional and aesthetic significance. Ecology linked culture is the need of the hour.

Dr. D. Radhakrishnan Nair

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# Estonia's Export-led Path to Prosperity: Since Independence

Kishore G. Kulkarni and Brian Patrick Sara

## Abstract

*The fall of the Soviet Union's constellation of planned economies provides a compelling set of case studies for comparative political economists. Particularly interesting is how each former communist republic, from Uzbekistan to Ukraine, managed the unenviable task of radically transforming themselves into contemporary capitalist states. Estonia stands out as the country with the lowest debt-to-GDP ratio in Europe, and The Economist projected its 2014 GDP growth to outpace the rest of the Eurozone.<sup>1</sup> How this small former Soviet republic skyrocketed from the 85<sup>th</sup>-wealthiest country in the world on a per capita basis in 1995 to the 44<sup>th</sup>-wealthiest is a story of strong fiscal discipline and a commitment to export-led growth.<sup>2</sup> This paper tests the links between Estonia's exports, imports and the strategies it used to expand GDP and boast a trade surplus.*

## Key words:



Kishore G. Kulkarni, PhD, *Distinguished Professor of Economics, and Editor, IJEB CB 77, P. O. Box 173362, Metropolitan State University of Denver, Denver, CO 80217-3362. E-mail: kulkarnk@msudenver.edu*



Brian Patrick Sara, Graduate Student, *Josef Korbel School of International Studies, University of Denver, 2201 South Gaylord Street, Denver, CO 80208.*

The history of Estonia is one of resilience in the face of external dominance. With their homeland having been traded between the Danes, Swedes, Poles, Russians, Germans and the Soviet Union, the Estonians struggled to create and enjoy their own fortune. Only three decades ago, the rigid Soviet system still dictated the specifics of worker collectives and individual compensation in Estonia. After the fall, each former Soviet state managed the transition from communism to capitalism differently. Some, like Turkmenistan, traded one authoritarian regime for another, and their citizens have yet to enjoy significant wealth progress from Soviet-era levels. Others, particularly the Baltic Sea states, jumped into capitalism and can celebrate their fiscal successes and status as mainstream European economies. Since its complete sovereign independence from the USSR in September 1991, Estonia

<sup>1</sup> "European Economy Guide: Taking Europe's Pulse." *Economist.com*. The Economist Newspaper, Ltd., 15 May 2013. Web.

<sup>2</sup> "GDP per Capita (current US\$), 1980-2012" *World Bank Data*. World Bank, 2013. Web.

successfully worked its way out of communism to become a thriving capitalist economy and a beacon of high-tech innovation. In many ways, Estonia stands atop the post-Soviet states in terms of growth not just in personal wealth, but also in health, educational attainment and technical sophistication.

Today, this small Nordic state<sup>3</sup> hosts NATO's Cooperative Cyber Defense Centre of Excellence, is home to the developers of the pioneering telephony software Skype, and serves as a high-tech production center for major firms like ABB and Ericsson. Impressive economic and quality of life indicator numbers tell the story of a country that pursued an economic strategy to propel itself out of the post-communist doldrums and into relative prosperity. Estonia's GDP per capita increased sixfold between 1995 and 2012. Tertiary school enrollment jumped from 25 to 64 percent over the same time period. Having skyrocketed from being the 85<sup>th</sup>-wealthiest country in the world on a per capita basis in 1995 to the 44<sup>th</sup>-wealthiest, Estonia provides a case study in strong fiscal discipline and a commitment to export-led growth.<sup>4</sup>

These gains appear even more impressive when one considers the high degree of restructuring Estonian leaders had little choice but to pursue after independence. The country successfully boosted foreign trade, attracted international investors and distanced itself from what it saw as a negative relationship with Moscow. Much of this came about as a result of early aggressive devaluation of the Estonian kroon, which served as the domestic currency from 1992 until adoption of the euro in January 2011. After the kroon reform, foreign trade increased rapidly.<sup>5</sup> Early data show that the subsequent euro adoption further boosted trade in 2011 and 2012.<sup>6</sup>

Despite its great technological leap forward, its strident gains in wealth and its accession to the European Union in 2004 (or

perhaps because of these), all is not perfect in Estonia. Domestic producers cannot meet the demands of the Estonian consumer base. As a result, the country must trade for goods and services it cannot produce at a competitive price. More important, the country's rapid growth and integration into the European community outpaced its ability to structure trade in a way that would make Estonian exports competitive in the high value-added EU marketplace. While Estonia's export market sat at a whopping 90 percent of GDP in 2011, it lacks diversity in both the variety of goods and services produced and in its portfolio of trading partners.<sup>7</sup> Though in many respects Estonia's economy does outshine Latvia's and Lithuania's, it does not have the same level of maturity as the neighboring Nordic economies and thus cannot protect itself against severe external shocks. This stands out as one of Estonia's most pressing concerns. It then comes as no surprise that the global financial crisis of the late 2000s hit Estonia harder than nearly any other European state. In 2009, only neighboring Latvia, Lithuania and Ukraine had more severe recessions; Estonia's 14.1 percent drop in nominal GDP was fourth-worst in the world, including both developed and developing economies.<sup>8</sup> Even Iceland and Ireland, with their banking system collapses, suffered less of a contraction and lower unemployment than Estonia.<sup>9</sup> When studying the Estonian case, therefore, one must take into account its successes alongside its failures and acknowledge how its eagerness to integrate into the Western marketplace has been both a blessing and a curse.

This paper seeks to chart the course of the Estonian economy from 1991 to 2011, prior to euro adoption, focusing on three major areas of interest ultimately related to the country's current account balance:

1. The many reasons for the rapid rise of Estonian GDP during the two-decade period, especially in relation to its post-independence monetary policy;

<sup>3</sup> Estonia, though typically grouped together with the former Soviet Baltic states of Lithuania and Latvia, is closer culturally, linguistically and historically with Finland and the other Nordic nations. In this paper, I use the terms "Baltic" and "Nordic" interchangeably.

<sup>4</sup> "GDP per Capita (current US\$), 1980-2012."

<sup>5</sup> Reiljan, Janno, and Anneli Ivanov. "Estonian Foreign Trade on the Threshold of Joining the EU." *Intereconomics* 35.6 (2000): 274-81. Print.

<sup>6</sup> "Last Year Exports of Goods Grew Moderately." *Statistics Estonia (Statistikaamet)*. Government of Estonia, 11 Feb. 2013. Web.

<sup>7</sup> "Exports of Goods and Services (% of GDP)." *World Bank Data*. World Bank, 2013. Web.; also, "Last Year Exports of Goods Grew Moderately."

<sup>8</sup> "GDP growth (annual %)." *World Bank Data*. World Bank, 2013. Web.

<sup>9</sup> Thorhallsson, Baldur, and Peadar Kirby. "Financial Crises in Iceland and Ireland: Does European Union and Euro Membership Matter?" *Journal of Common Market Studies* 50.5 (2012): 801-18. Print.



2. The relationship between Estonia's exchange rate and exports;
3. Estonia's export levels and GDP, which are correlated (though not causally) in part because of the degree to which Estonia's economy is dependent upon export revenue as a portion of GDP.

Ultimately, Estonia restructured its economy remarkably well given its dire situation in the early years following Soviet disintegration. Given its ups and downs, it provides a compelling and vivid case study for the relationship between GDP, trade, investment and the perils of interconnectedness in the world marketplace.

We obviously acknowledge the wide variety of crucial factors that have an impact on imports, export and GDP growth, including domestic savings rates, spikes or sudden decreases in consumption, political concerns and competition. In noting these, we choose not to ignore them but simply to focus on the particular links between Estonia's post-independence currency devaluation. More important, this paper offers a compelling case study for GDP's effect on imports and the autonomy of exports vis-à-vis GDP. We have also chosen to highlight and discuss explanations for Estonia's post-Soviet success available in the existing literature, which may include some other factors as the determinants of Exports and GDP. In the next section we shall review some such theories and draw some insight from them.

## SECTION II: THEORIES IN QUESTION

### *Theory Part I: Devaluation and its Effects on the Current Account Balance*

Economic theory asserts that while GDP largely determines imports, exports follow the "domestic currency's real exchange rate against foreign currency" in addition to changes in foreign disposable income.<sup>10</sup> Any increase in the real exchange rate – that is, any decrease in the value of the domestic currency – will precipitate a trend toward surplus figures in the current account. Conversely, a decrease in the real exchange rate pushes the current account toward deficit. In simplest terms, a falling domestic currency value should attract foreign buyers given the now relatively cheaper goods and services. For example, let us say that Estonia could harvest, process and ship timber to Finland in 2005 for 10 Estonian kroons per board foot. Let us also assume that 10 kroons equal 1 euro in 2005. One year later in 2006, assuming

production and shipping costs remain flat in Estonia, but the exchange rate changes to 15 kroons per 1 euro, a Finnish buyer could purchase more Estonian timber for fewer euros, even if that buyer's income level remained unchanged. It is this principle that drives the assumption that exchange rates help set export numbers. This paper tests that principle with Estonia's exchange rate and export relationship over the past two decades.

In addition to simply recounting the phases of Estonian development after 1991, this paper offers a concrete example of the effects of real currency devaluation on exports and foreign direct investment. Estonian monetary policy decisions, particularly in the early 1990s and then again in the early 2000s, led to systematic change in Estonian foreign trade. This paper will discuss those changes in detail, and then it will show how tightly linked the exchange rate and exports of goods and services are in Estonia's case. By extension, the exchange rate fluctuations have an effect on the Estonian current account balance, given the aforementioned relationship between exchange rates and exports. Since Estonia's export revenues equal between 60 and 90 percent of GDP, the current account balance swings wildly depending upon export fluctuations, and therefore examining this first theory is crucial to understanding the second theory question.<sup>11</sup>

### *Theory Part II: GDP as a Determinant of Imports and the Autonomy of Exports*

This paper also seeks to test the macroeconomic hypothesis that a nation's GDP determines its import levels. Estonia's near continuous rise in gross domestic product between 1995 and 2011 shows a direct relationship to imports of goods and services produced abroad. Similarly, the few years in which GDP fell for Estonia, the country saw a correlated decrease in imports. Estonia's national wealth and its new interconnectedness through trade with the West both contributed to the rise in imports, as expected. Quantitative analysis will confirm this hypothesis.

Economic theory also states that exports remain autonomous to changes in domestic wealth. GDP has little to no effect upon export levels, as exports are autonomous to GDP. It is

<sup>10</sup> Krugman, Paul R., and Maurice Obstfeld. *International Economics: Theory and Policy*. 7th ed. Boston, Mass. Pearson/Addison Wesley, 2006. Print.: pp409

<sup>11</sup> "Exports of Goods and Services (% of GDP)."

demonstrated that, in the Estonian context, there is, instead, a direct linear relationship between GDP and exports of goods and services from 1995 onward.<sup>12</sup> Unlike the first theory, in which monetary devaluation had a clear causal effect upon import levels, it is not argued that GDP growth is causing export growth; rather, the opposite is true. Given that exports comprise such a massive proportion of Estonia's GDP, it is unsurprising that any rise or fall in exports will directly affect GDP.

### Literature Survey

Several economists offer their take on the trends in Estonian GDP, exchange rates and the current account balance. In a December 2000 article in *Intereconomics*, Estonian economists Janno Reiljan and Anneli Ivanov deconstruct their country's fiscal and trade situation from 1991 through the end of the first decade of Estonia's independence. Citing an historical emphasis upon trade by the state (Estonia was independent for several decades between World Wars I and II), the authors argue that Estonia's trade deficit is of primary concern to policymakers in Tallinn. The deficit, they claim, is largely a result of wealth outpacing export competitiveness as the government fully restructured the economy. Reiljan and Ivanov posit that the 1990s Estonian situation was an "emergency situation in which investment goods are mainly imported," and that this process would likely improve the country's export potential in the long run.<sup>13</sup> Following the USSR's dissolution, nearly every former Soviet republic experienced severe economic contraction, with GDP losses of up to 40 percent. Estonia, along with other former Soviet states, received emergency loans that helped artificially boost wealth while industrial producers struggled to catch up with new Western competitors. Even during the height of the USSR, Estonia and the "satellite" republics all reported deficits, largely because of the "core-periphery" nature of their relationship with the Central Planning Committee.<sup>14</sup> And thus, coming out of a situation in which the economy was administratively restricted by Moscow, Estonia lacked diversification both in trading relationships and in the goods and services it could theoretically trade.

The country took full control of its finances by issuing a currency, the kroon, in 1992. Estonia began a controlled monetary devaluation process shortly thereafter. This process had two goals. First, Estonian lawmakers wanted to combat hyperinflation that was occurring due to the issuance of the kroon, the privatization of industry and, mostly, the Russian

influence on the Estonian market.<sup>15</sup> Nonetheless, the government still sought some devaluation, albeit in a controlled manner. Second, they hoped that a rising exchange rate against the falling value of the kroon would make its goods cheap enough in the global markets. The devaluation proved successful, and trade did rise in nominal terms, slowly chipping away at the surplus between 1992 and 1998.<sup>16</sup> Unfortunately a massive devaluation by Russia on their ruble in 1998 had the effect of negating positive gains among Estonian exports, especially minerals.<sup>17</sup>

Despite the difficulty Estonia faced early on, in terms of diversification and export competitiveness, Reiljan and Ivanov note the various positive steps Estonia took to consistently cut their current account deficit. They argue that a smaller share of overall Estonian exports head to the same ten to twelve markets, the kroon devaluation did help Estonia catch up, and the increasing sophistication of domestic producers, all signal a brighter future for its current account. Plus, the prospect of joining the European Union should boost competitiveness by breaking down the various tariffs and trade barriers that have forced Estonian products out of many of the otherwise protected EU member states' markets.<sup>18</sup> In short, Reiljan and Ivanov's prescriptions for the Estonian economy (increased diversification, a decrease in barriers to entry into foreign markets) and their prediction that the EU accession would help flip the current account deficit proved correct at face value. Complicating the accuracy of their causal mechanism, however, is the global recession of the late-2000s. The current Estonian trade surplus is likely more a result of severe GDP contraction, and thus one would need several "normal" years of data to test the accuracy of the authors' suggestions.

What Reiljan and Ivanov cannot discuss is the rapid shift from deficit to surplus in 2008, and therefore any assertion they might have made about exchange rates is left untested. Writing in *Intereconomics* a decade after Reiljan and Ivanov,

<sup>12</sup> 1995 is the first year that the World Bank published figures for imports, exports and GDP for Estonia.

<sup>13</sup> Reiljan and Ivanov, 276

<sup>14</sup> Reiljan and Ivanov, 275

<sup>15</sup> Lindner, Axel. "Macroeconomic Adjustment: The Baltic States versus Euro Area Crisis Countries." *Intereconomics* 46.6 (2011): 340-45. Print.

<sup>16</sup> Reiljan and Ivanov, 275

<sup>17</sup> Reiljan and Ivanov, 277

<sup>18</sup> Reiljan and Ivanov, 281; This article was written prior to accession, hence the discussion of a potential accession to the EU.

Axel Lindner contends that, at least in the case of EU member states (which Estonia has since become), “current account imbalances can vanish very quickly...even if exchange rates are kept constant.”<sup>19</sup> Lindner searches for the reasons behind the abrupt swing in the current account balances of the Baltic states by comparing them to the situation of Southern European countries like Greece and Portugal. During the global recession that began in 2008, the Baltic states’ GDP levels plummeted, with contractions three to five times as deep as the Greek and Portuguese domestic recessions. Today, Greece and Portugal’s current account deficits continue to hover around 10 to 15 percent of GDP, while Estonia’s current account went into surplus after 2008.<sup>20</sup> Furthermore, Estonia largely recovered from a GDP standpoint from the recession, while Spain and Portugal languish at recession-level GDPs.

Lindner wonders what separates Estonia and its Baltic neighbours from the floundering Southern economies, despite the fact that both felt the brunt of the financial crisis. He finds that a combination of factors, specifically the reaction of private citizens and the larger financial markets, differed greatly between the Baltic states, Greece and Portugal. As a result, Lindner believes the differences in reactions by private citizens explain the varied shift in current account balances between north and south.<sup>21</sup> First, while imports collapsed across Europe during the recession, Estonia’s demand fell 32 percent, compared to Greece’s 25 percent and Portugal’s 18 percent.<sup>22</sup> The differences in the demand levels begin to explain why Estonia’s trade deficit began to sharply trend toward surplus.

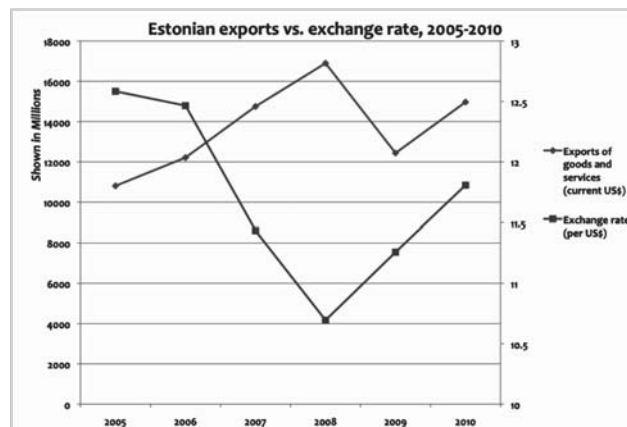
Next, Lindner notes that financial markets lost confidence in Greece and Portugal, while faith in Estonia’s fiscal situation still remained high both home and abroad. What Lindner declines to mention is the sharp difference in debt-to-GDP ratios between Estonia and Southern Europe. During the crisis, Estonia’s public debt level never rose above 7.5 percent of GDP, while Portugal and Greece’s soared to 84 percent and

129 percent, respectively, by 2009. Debt levels have continued to climb for Portugal and Greece since then while Estonia’s remains exceedingly low.<sup>23</sup>

Nevertheless, Lindner argues that the private actors in the economy were the true point of contrast between Estonia and the Southern European states’ current account movements. Immediately after the recession hit, private actors drastically reduced spending, with Estonia’s financial account plummeting 25 percent while Greece and Portugal’s spending dropped by single digits. That dramatic change in spending habits among Estonian households and firms is mirrored in their decreased demand for imports.<sup>24</sup> It is no wonder that the relatively high savings rate of Baltic citizens in reaction to the recession left them with a current account surplus, while the free-spending Southern economies could not pull off a substantial shift away from a balance of payments deficit. Crucially, Lindner argues that this all happens in spite of exchange rate fluctuations. His argument, however, fails to adequately explain why the major shifts in Estonia’s exchange rate had no measurable effect on its current account. Portugal’s and Spain’s exchange rate did not change considerably during the crisis, and their economies languished. Estonia’s kroon rose dramatically and fell shortly after the recession, and the current account appears to have an inverse relationship (*Table 1*).<sup>25</sup>

For this reason, we doubt the full explanatory power of Lindner’s comparative model, because the current account and exchange rate relationship, via export levels especially, are too closely linked to ignore. Nonetheless, both Reiljan and Ivanov and Lindner’s articles give important and relevant observations that are helpful for understanding Estonia’s current account balance behaviour.

**Table 1**



<sup>19</sup> Lindner, 340

<sup>20</sup> Lindner, 341; “Net trade in goods and services (BoP, current US\$).” *World Bank Data*. World Bank, 2013. Web.

<sup>21</sup> Lindner, 342-3

<sup>22</sup> Lindner, 341

<sup>23</sup> “General Government Gross Debt.” *Statistics Estonia (Statistikaamet)*. Government of Estonia, 2013. Web.

<sup>24</sup> Lindner, 343

<sup>25</sup> “Exports of good and services (current US\$).” *World Bank Data*. World Bank, 2013. Web.; “Official exchange rate (LCU per US\$, period average).” *World Bank Data*. World Bank, 2013. Web.

**SECTION III: APPLICATION OF THE THEORIES IN ESTONIA’S CASE**

**Theory Application I: Devaluation and its Effects on the Current Account Balance**

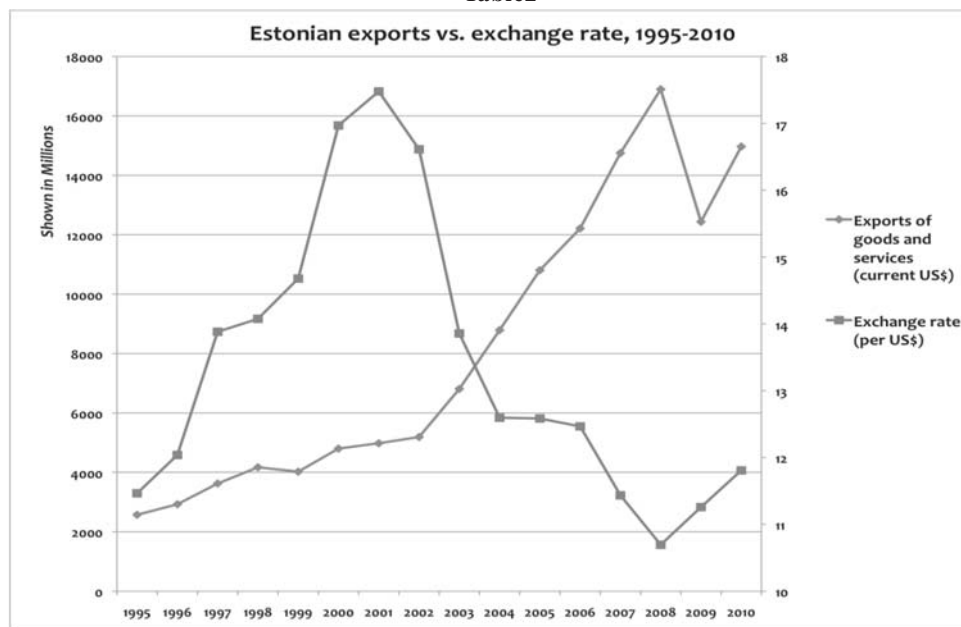
Prior to its adoption of the euro in 2011, Estonia’s currency, the kroon, was pegged to the Russian ruble, then the German mark and finally the euro. In the first two years after breaking from Moscow, Estonia saw rampant inflation of the kroon, partly because of retaliatory price-fixing of minerals and oil by Russia against the Baltic states.<sup>26</sup> By pegging the fixed-rate kroon to the German deutschmark and backing the currency with at least 100 percent foreign reserves, the Estonian government quickly quelled fears of any chance for long-term runaway hyperinflation.<sup>27</sup> It was perhaps because of this early exchange rate scare that Estonia practises such tight fiscal discipline. After Germany dropped its deutschmark, the Estonian government subsequently re-pegged the kroon to the euro. By the late 1990s, domestic price levels in Estonia remained steady, as did inflation.<sup>28</sup>

Testing the hypothesis that currency devaluation and subsequent rises in the exchange rate will increase export

power by using the first few years of Estonian data, is problematic. Given the massive restructuring of the Estonian economy, its early exchange rate battle with Russia and the dearth of data before 1995 make it difficult, if not impossible, to trust any attempt at relating exchange rates and exports.

After 1995, however, the complicating factors begin to fall away. Hyperinflation ceased. The currency peg restored investor confidence. Still, Estonia kept its markets, especially its money market, quite liberalized, and inflation continued at high rates thanks to “an increase in taxes ensuing from the currency reform and further price liberalization.”<sup>29</sup> Plus, the country would not enjoy equal trading terms with the European Union until its bilateral free trade agreement with the bloc went into effect after 1999, and Estonians cite this as a major win for their export competitiveness.<sup>30</sup> Additionally, Estonia joined the World Trade Organization in 1999, furthering equalizing terms of trade between the Baltic state and its far more powerful trading partners on the continent and abroad.<sup>31</sup> After 2001, the exchange rate and exports from Estonia move almost without exception in opposite direction, as would be expected (Table 2).<sup>32</sup>

**Table 2**



<sup>26</sup> Fifka, Matthias S. “The Baltics: Continuing Boom or Bursting Bubble?” *Business Economics* 43.4 (2008): 25-35. Print.

<sup>27</sup> Sörg, Mart, and Vello Vensel. “Development of the Banking System under the Estonian Currency Board.” *International Advances in Economic Research* 8.1 (2002): 35-48. Print.

<sup>28</sup> Sörg and Vensel, 37

<sup>29</sup> Sörg and Vensel, 38

<sup>30</sup> Reiljan and Ivanov, 281

<sup>31</sup> Fifka, 27-8

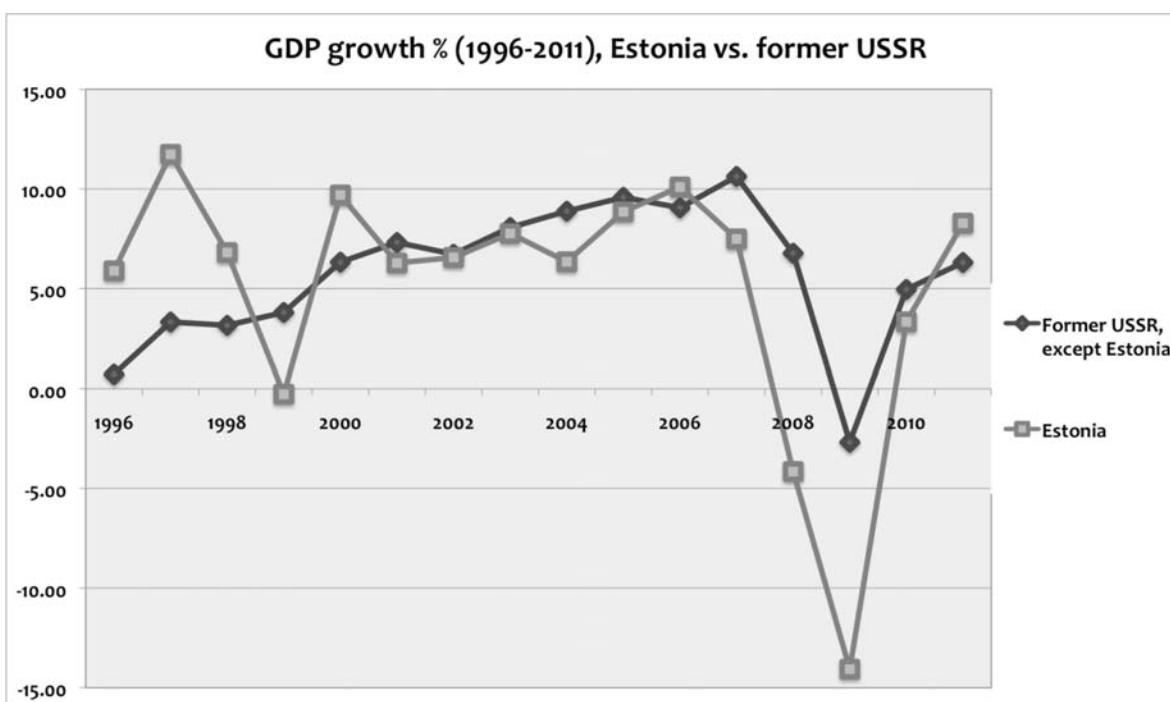
<sup>32</sup> “Exports of good and services (current US\$).”; “Official exchange rate (LCU per US\$, period average).”

A critical observer might note that the two lines do not perfectly interact. The period in which the export-exchange rate relationship appears entirely disconnected, is the full period before 2001 – note the significant exchange rate jump compared to a small increase in exports. After 2001, however, with trade barriers removed between Estonia and its largest trading partners (thanks to free trade agreements and its accession to the WTO), the exchange rate and export lines move in a more expected trajectory against each other.

**Theory Application II: GDP as a Determinant of Imports; the Autonomy of Exports**

The USSR’s dissolution left Estonia and the rest of the Baltic states in economic shambles. In the years following independence, Estonia’s GDP charted a similar course as its fellow post-Soviet states. The modernization and liberalization of its markets and the move toward European integration were tough on the Baltic states, though the restructuring would prove fruitful in the long run. The average GDP growth among the post-Soviet states remained negative until 1996. After 1996, though, the former USSR begins to see a slow gain in GDP. Estonia’s fortunes tend to track along with the average GDP growth in the rest of the former USSR, albeit with more volatility (Table 3).<sup>33</sup>

Table 3



The first hypothesis in question suggests that imports will parallel GDP, so that any gains in GDP will be matched by an increase of imports in goods and services, while losses in

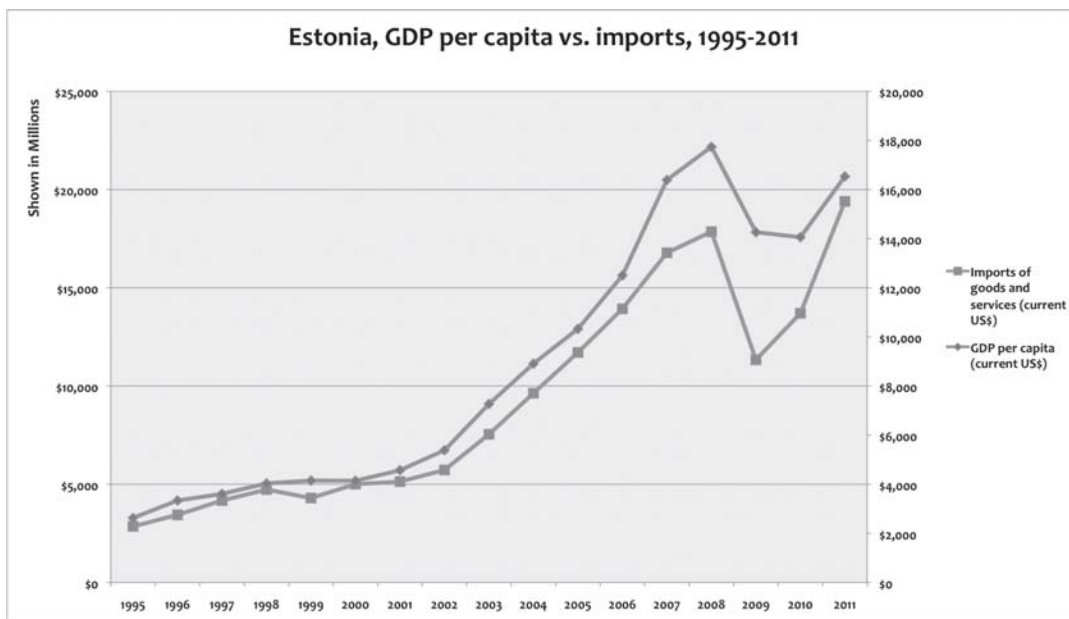
GDP will result in fewer imports. In Estonia’s case, import movement correlates very strongly with GDP movement (Table 4).<sup>34</sup>

<sup>33</sup> “GDP growth (annual %).”

<sup>34</sup> “GDP per Capita (current US\$), 1980-2012.”; “Imports of good and services (current US\$).” World Bank Data. World Bank, 2013. Web.



Table 4

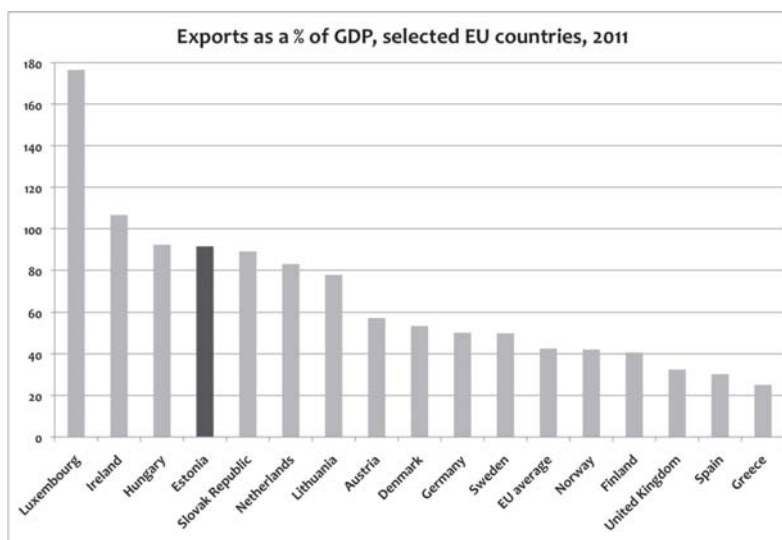


Here, rising GDP per capita results in rising imports. Only in 2010 do the two indicators contradict, though this occurs in the waning years of the recession. Imports rise accordingly again in 2011 with a jump in GDP, though Estonia’s adoption of the euro in January 2011 likely facilitates the sharp increase in imports as well.

Unlike imports, however, exports are assumed to be autonomous to GDP in that they are largely responsive to

changes in exchange rates (and thus relative price levels between trading partners). In fact, Estonia is somewhat unique in that its economy is so heavily export-driven. In comparison to other EU economies, exports comprise a higher proportion of Estonia’s GDP than nearly any other, except Hungary, Ireland and Luxembourg (Table 5).<sup>35</sup> The other 22 member states have smaller figures.

Table 5

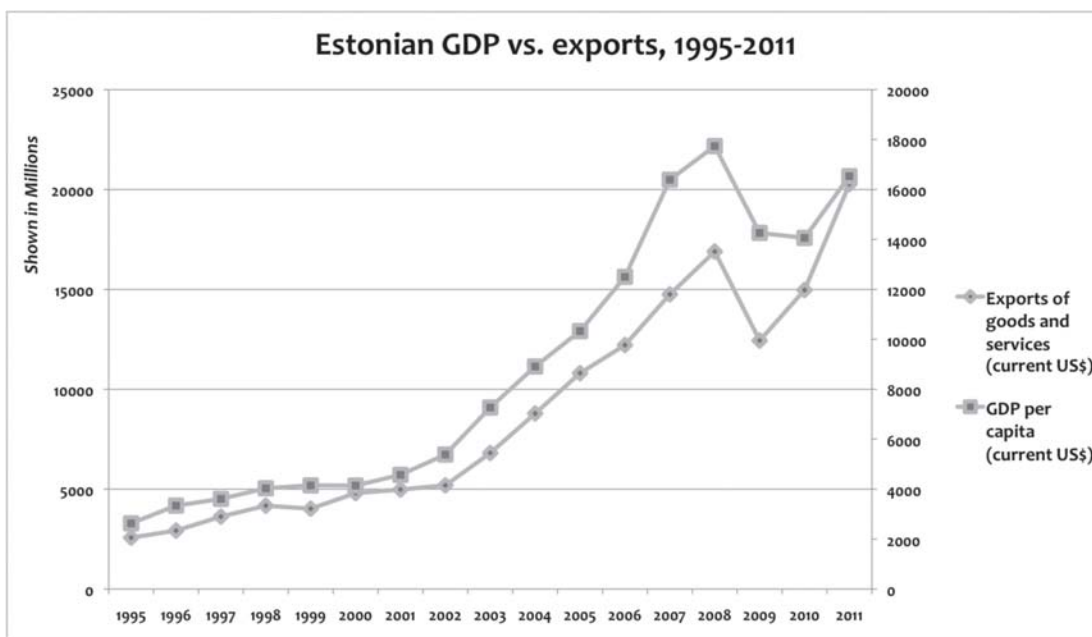


<sup>35</sup> “Exports of Goods and Services (% of GDP).”

In any country, its GDP is an aggregate of consumption, investment, government expenditures, plus the difference between exports and imports.<sup>36</sup> When there is a trade or current account surplus – that is, when exports outpace imports – the result is a gain in GDP. Conversely, any deficit will cause a drop in overall GDP, though economies can still grow by increasing any of the other GDP factors. Though current account deficits do not necessarily signal economic destitution, leaders everywhere are concerned about their national trade balance. Much of the reason for this is that, to finance a current account deficit, governments must borrow.<sup>37</sup>

Therefore, it remains a priority of governments, especially small but growing ones like Estonia, to prioritize the growth of exports to boost national wealth. Estonia has done so through trade agreements, accession to the EU and sound monetary policy, as we have seen. While major powers like the United States can afford to be less concerned about such imbalances and debt given the longstanding solvency of their financial systems and subsequent investor faith, Estonia’s short sovereign history does not afford it such a luxury. For this reason, Estonia’s leaders see export strength as a top priority.<sup>38</sup>

Table 6



With exports at such a high percentage compared to GDP, it therefore comes as no surprise that GDP and exports are very tightly linked for Estonia. Even during the rise and fall of Estonian GDP between 2005 and 2011, the data show a relatively linked pattern with the movement of exports (Table6).<sup>39</sup>

There is a great deal of focus in various articles about Baltic economies during the 1990s and 2000s and their dismal trade deficit levels, as has been discussed. Indeed, at Estonia’s pre-recession peak GDP in 2007 and 2008, the current account reached its deepest deficit of the decade, but it then quickly rocketed into surplus levels as GDP plummeted in 2009 (Table7).<sup>40</sup>

<sup>36</sup> Krugman and Obstfeld, 284

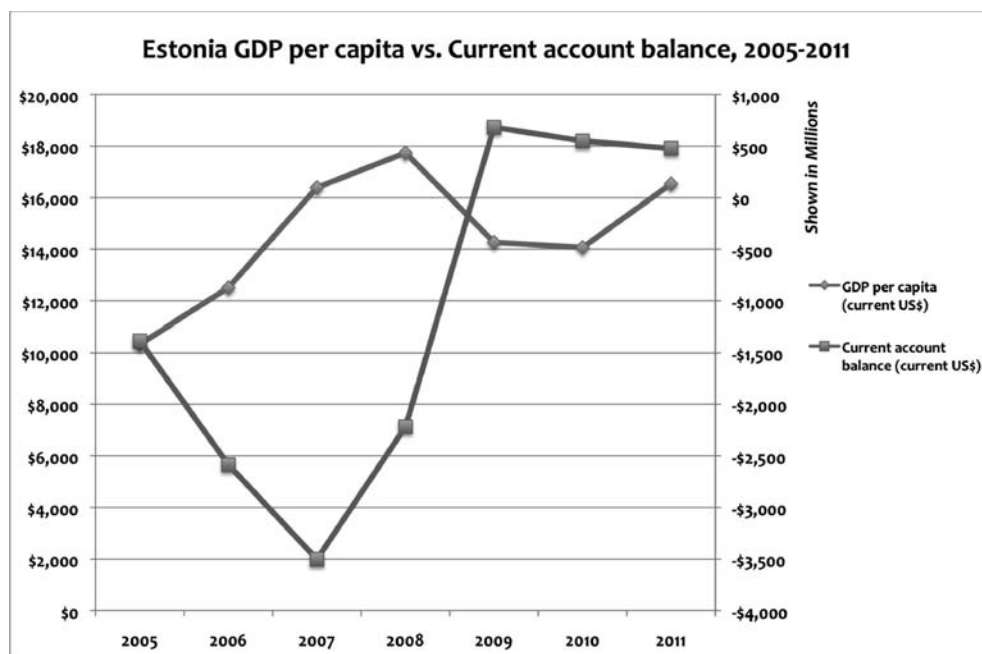
<sup>37</sup> Krugman and Obstfeld, 286-7

<sup>38</sup> Reiljan and Ivanov, 281

<sup>39</sup> “GDP per Capita (current US\$), 1980-2012.”; “Exports of good and services (current US\$).”

<sup>40</sup> “GDP per Capita (current US\$), 1980-2012.”; “Current account balance (BoP, current US\$).” *World Bank Data*. World Bank, 2013. Web.

Table 7



Not until the Baltic states took a major hit on their GDP growth in 2008 and 2009 did their trade imbalances “self-correct.”<sup>41</sup> Estonia achieved a trade surplus (and thus a positive current account balance) in 2009, right after the global recession took hold in the region. Only for a brief time in 1999 did the country see its current account turn positive, but that achievement lasted only one quarter.<sup>42</sup> It was not until 2009 onwards that Estonia boasted a surplus, and it seems somewhat likely to do so into the future, thanks to the leverage it has as a relatively low-wage member of the EU. Already, manufacturing for other European firms has relocated to Estonia to take advantage of its comparative advantage in human capital, but this is a question of foreign direct investment and a topic for another discussion.<sup>43</sup>

**SECTION IV: CONCLUSIONS**

*Summary and Conclusion*

Ultimately, Estonia appears to provide a clean and solid case study for testing the theories of currency devaluation’s effect

on exports as well as GDP’s relationship to imports and exports. After 2001, the inverse relationship between the exchange rate and exports is clear and convincing. Prior to 2001, the complications presented by total economic restructuring and the uneven tariffs Estonia had to pay to its European trading partners (who themselves enjoyed relatively free trade through the EU) make it too complex to trust any assertion that exports and the exchange rate are strongly correlated, much less causally related.

Movements in Estonia’s GDP certainly cause a responsive reaction in imports. When GDP rises throughout the 1990s and early 2000s, so too do imports. When GDP contracts during 2008 and 2009, imports also slow dramatically. Even the degree to which GDP rises has an effect on imports; small percentage increases in GDP beget small percentage increases for imports of goods and services while large GDP shifts create large import shifts. While there are of course intervening variables—EU accession, euro adoption, global crises—the correlation is remarkably tight between GDP and imports.

<sup>41</sup> “Current Account Transactions. Exports, Imports and Balance.” *Statistics Estonia (Statistikaamet)*. Government of Estonia, 2013. Web.

<sup>42</sup> Reiljan and Ivanov, 277

<sup>43</sup> Reiljan and Ivanov

### Lessons Learned

Given Estonia's unique recent past, an even more useful and trustworthy case study would arise years from now, when there are more years of data to test statistically. A follow-up to this paper would seek to understand the link between exchange rates and exports from a statistical standpoint, particularly by running a regression on the data to understand the significance of the relationship. Estonia's adoption of the euro brought the country into a new era, one where it cannot fix its exchange rate or even have considerable control over euro valuation. As a result, one would expect prices and wages in Estonia to converge with the rest of Europe, and the effects of that on trade and GDP have yet to be seen.<sup>44</sup>

Estonia's government would do well to continue its strong tradition of fiscal discipline, which served the purpose of bringing the country out of communism and into the ranks of the European Union in just over a decade's time.<sup>45</sup> Still, its accession into the EU causes one to wonder if the gains it will receive by joining the common monetary union and market outweigh the loss of sovereignty it must accept. Given its already high dependence upon the European market for exports, it continues to run the risk of exposure to volatility in the regional economy. Furthermore, its policy of maintaining such exceptionally low debt levels means that unemployment will likely remain high. Critics assert that Estonia's ability to recover from the punishing recession is reduced by its "cheap" fiscal habits.<sup>46</sup> Clearly, given the wide swings in GDP, Estonia's domestic economy needs a greater buffer against European fiscal swings. Leaders must seek trading relationships outside the EU to hedge against future shocks. The trading surplus that arose out of Estonia's falling GDP was certainly a positive consequence, but it may not have been worth the costs everyday Estonians had to pay in terms of lost wealth and rising unemployment.

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<sup>44</sup> Reiljan and Ivanov, 281

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<sup>46</sup> Krugman, Paul. "Estonian Rhapsody." Editorial. *The Opinion Pages - Conscience of a Liberal*. The New York Times, 6 June 2012. Web.

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# Institutional Capacity Building: A Systematic Approach

R.Krishnaveni and R.Sujatha

## Abstract

Capacity is the ability of individuals, organizations or institutions to carry out their tasks with their fullest potential. Capacity building concept is gaining popularity these days and is extensively used by non-profit organizations, government and non-government organizations, UNDP community development agencies etc. Macro level capacity building focuses on building the capacity of Institutions like governments, non-governmental groups and communities to strengthen their ability to serve their citizens. Extensive review of literature indicates that even though Institutional capacity building is an occurring phenomenon in many countries, there is no systematic methodology for the capacity building efforts. This paper addresses the research gap by developing a six step-by-step approach for Institutional capacity building process. The systematic approach helps institutions to build capacity to promote better governance and improves the structures of economic policy making to strengthen their civil society.

**Key words:** Capacity Building, Institutions, Systematic Approach, Assessment, Demand-driven Strategies



Dr.R.Krishnaveni, Professor, PSG Institute of Management  
Coimbatore – 641 004, India



R.Sujatha, Assistant Professor, PSG Institute of Management,  
Coimbatore – 641 004, India, sujatha@psgim.ac.in

The business world is highly turbulent with competition and uncertainty. To face the challenges and opportunities brought by globalization and knowledge-based economy, organizations need to be more productive and effective. Developing human resources in both public and private sector organizations, is a critical issue in an increasingly knowledge-based and global economy. To increase effectiveness, organizations need to build the capacities of human resources and maximize their potential. Capacity is the ability to perform appropriate tasks i.e., to achieve what is required effectively and efficiently, and sustainable at an individual, group, community, organization or government (Antwi and Analoui, 2008). Zafarullah and Rahman (2008) define capacity as attaining or carrying out stated objectives. Capacity represents the potential for using resources effectively and maintaining gains in performance with gradually reduced levels of external support. It may be understood as the inherent endowment possessed by individuals or organizations to achieve their fullest potential (Jay D.Jurie, 2000).

## Capacity Building

Capacity building is a popular and expansive term these days and it has its roots from the concepts of institutional building and organizational development. It means much to individuals making specific decisions about programs and grant strategies. UNDP defines Capacity Building as “the creation of an enabling environment with appropriate policy and legal frameworks, institutional development, including community participation, human resources development and strengthening of managerial systems.” UNCED recognizes that fundamental goal of capacity building is to enhance the abilities of stakeholders to evaluate and address crucial questions related to policy choices and different options for development. **Straussman** (2007) examines the concept of capacity building as a phrase used by development specialists, international donors and foundations to describe myriad efforts to assist developing and transitional countries that seek to improve their governance processes. It is an ongoing process through which individuals, groups, organizations and societies enhance their abilities to identify and meet development challenges. But there is no universally accepted definition for Capacity Building. The concept has been used by researchers in different contexts based on their research dimension. Review of literature identifies that Capacity Building is carried out at three levels – individual, organizational, and institutional/government level.

### Organizational and Individual Capacity Building

Organizational capacity refers to the ability of organizations to implement and manage projects, to exercise financial and product accountability, to employ and train staff competent to undertake specific tasks, and to report on their work in ways which are acceptable to their donors and management. Improving organizational capacity might aim to: strengthen internal management, review resource allocation, address knowledge management, develop leadership qualities, or build partnerships. Allan Kaplan (1995), a leading NGO scholar argues that organizations concentrate on developing robust capability, rather than relying on the setting up of organizational structures and procedures, the securing of material resources, or the specific skills of staff. Organizational capacity building finds its significance in various sectors like health services (Azariah, 1999; Aherne and Pereira, 2005), educational institutions (Bruceking and Newmann, 2001; Sackney and Walker, 2006; Hua 2007; Collinson 2008; Davis 2009), managing water resources (Pres, 2008), large manufacturing firms (Jurie, 2000); Jung-Erceg et al, 2007), technical institutions (Meyer, 2008), small and medium enterprises (Braun and Hollick, 2006; Bhaskaran and Gligorovska 2009) and so on.

Individual capacity building enables all individuals of an organization to carry out their tasks to the best of their ability. Individual capacity building as process is practised for varied purposes in different sectors like capacity building of managers in small and medium enterprises (Pansiri and Temtime, 2008), ICT regulatory staff (Goulden, 2005), capacity building in decentralization activities in government (Pick, et al, 2007), educator sector (Lozano–Garcia et al, 2008), strategic cash management (Agundu, 2008), research of scientists (Melkers and Wu, 2009), volunteers in health services (Coady, 2009), women empowerment (Shibanda and Seru, 2002), leadership development (Weiss and Molinaro, 2006) etc.

### Institutional Capacity Building

Institutional Capacity Building has become the key component and is considered as one of the main types of capacity building efforts. It is the process of improving the ability of an institution to carry out its mandate in an effective manner, by using its resources in the most efficient manner possible (Tadele, 2009). Institutional Capacity Building addresses capacity building beyond the provision of education and training of professionals. An institution’s capacity covers political, technical, fiscal and administrative and may overlap and complement one another. A government should have the capacity to formulate coherent, plausible, and broadly responsive policy guidelines to attain its goals (Zafarullah and Rahman, 2008).

Institutional Capacity Building aims to enhance the capacity of governments, non-governmental groups and communities to strengthen their ability to serve their citizens, communities, and constituents and to plan and manage efficiently and effectively. This implies addressing Capacity Building on a long-term, strategic level. Concepts such as leadership, awareness, and constituency building are part and parcel of institution building. Capacity-building efforts focus on institutional strengthening, including the design of new organizational structures to improve the “goodness of fit” between the policy contexts for sustainable development and enacting institutions in both the public and private sectors. These institutions include education and training institutions as well as extension agencies, research institutions, NGOs, and community organizations among others. A multiplier effect can be achieved if strong linkages among education institutions, NGOs, research organizations, public and private extension services and others are fostered. This approach recognizes that integrated institutional network capacity building is required (Crowder, 1996).

### An Occurring Phenomenon

Institutional Capacity Building is carried out in many developing and under-developed countries like United Kingdom, India, Brazil, Asia Pacific region, Africa, Ethiopia, Ghana etc. to enhance the knowledge, expertise, experience and competence of the regions, communities and their citizens. The purpose and nature of capacity building varies from country to country and some listed in the literature are disaster management (Tadele, 2009), community capacity building for regeneration (O'Hare, 2010), e-records management (Wamukoya and Mutula, 2005), government decentralization (Antwi and Analoui, 2008), information and communication technology in governments (Samarajiva and Gamage, 2007), environmental capacity building (Kirchoff, 2006) and innovation capacity building (Rodriguez and Marti, 2006; Schiuma and Antonio, 2008). Institutional capacity building involves massive efforts of evaluating the existing capacity and then undertaking measures to build capacity of governments, communities or regions. Governments and other non-governmental institutions at a larger scale build capacity to tackle poverty, environmental disasters, women empowerment etc, but no attempt has been made to develop step-by-step approach for the capacity building process. Reviewing the concept of capacity building initiatives in institutional development, literature reveals that there is a lack of systematic capacity building framework at macro level. This paper attempts to develop a systematic step-by-step approach towards macro level capacity building.

### The Two Perspectives

Institutional capacity building has two perspectives – macro perspective and micro perspective. Macro dimensions of capacity are strategies to produce good governance and strong civil societies. The building of capacity from this perspective includes major market oriented economic reforms and governmental changes to support them. Micro dimension of capacity is fundamentally about human resource management, specifically improving the skills and quality of government personnel. Micro perspective of capacity building focuses on the recruitment, training and retention of skilled personnel for strategically placed organizations, if performance is to be improved (Straussman, 2007). Samarajiva and Gamage (2007) conceptualizes capacity building narrowly or broadly. In narrow conception, capacity is improved in government by training officials or hiring qualified persons. In the broad conception, capacity is built among all stakeholders in addition to government. Institutions should focus on the magnitude and scope of the capacity building strategies for its benefits.

### Systematic Approach to Capacity Building

A comprehensive search and evaluation of literature provided insights into institutional capacity building efforts that led to the development of a systematic approach consisting of six steps as shown in the figure 1 given below,

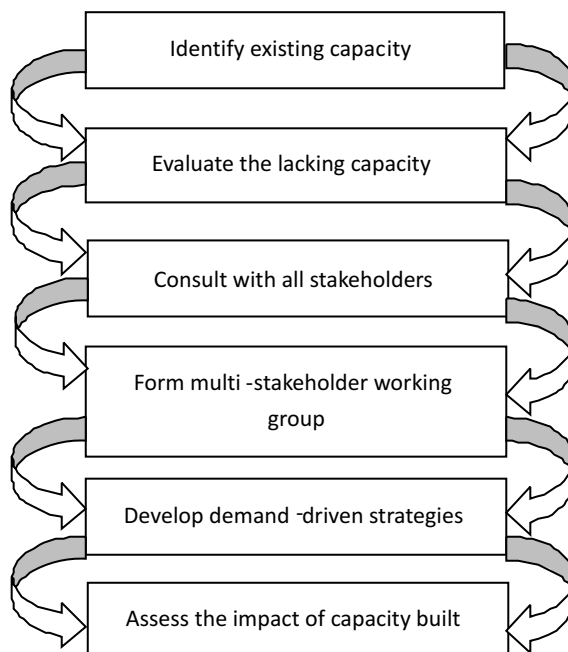


Figure 1 – Systematic Capacity Building Approach

### ***Identifying Existing Capacity***

The absence of capacity necessitates capacity building; hence, effective capacity building must be preceded by an assessment of existing capacity (Antwi and Analoui, 2008). Hamadu and Okafor (2009) stress that institutional capacity building efforts should start from the grassroots level to identify the capacity inherent within the institutions. Wamukoya and Mutula (2005) indicate that understanding the problems of the institutions is essential for capacity building. The numerous challenges and problems posed by institutions include lack of skills and competencies, inadequate resources, and lack of awareness among government authorities. Rodriguez and Marti (2006) argue that because of the complexities and uncertainties inherent to capacity building, policy makers must use comprehensive metrics and management systems to effectively help the economy gain a more competitive knowledge edge. Strategic benchmarking plays a fundamental role, choosing an appropriate benchmark against which to assess the present capacity helps policy makers focus on what core resources, competencies and features of the general environment ought to be developed to attain competitiveness. Benchmarking can contribute significantly to grounding the analysis and allocating resources more effectively. This first task helps institutions to build on the existing capacity and set benchmark for future development.

### ***Assess the lacking capacity***

Of special concern to development planning and to situations where there are limited resources is the need to build on what exists. World Bank's definition states that "Capacity Assessment is a structured and analytical process whereby the various dimensions of capacity are measured and evaluated within the broader environmental or systems context as well as specific entities and individuals within the system." So special emphasis must be given to assess existing and future capacities. Hamadu and Okafor (2009) state that the countries should assess the capacity which it lacks and then develop strategies to build them. UNDP states that "A capacity assessment is an analysis of desired future capacities against current capacities; this assessment generates an understanding of capacity assets and needs, which in turn leads to the formulation of capacity development response strategies." Capacity assessments provide a systematic analysis of what key capacities exist, and a point of dialogue and negotiation on what additional capacities may be required to reach a desired development outcome.

### ***Consult with stakeholders and form multi-stakeholder working group***

Capacity has to be developed among all the stakeholders (Samarajiva and Gamage, 2007) and unless all partners are willing to participate, integrated capacity building will struggle to make a lasting influence (Tadele, 2009). Consultations with concerned stakeholders are important for inclusive growth of the Institutions (Kwiatkowski, et al, 2009). The engagement of local people in the capacity building efforts that target their development is considered to be incontestable and hence gear up their capacity building activities (O'Hare, 2010). Capacity building strategies are undoubtedly complex and bring with them a schedule of activities or partners operating alien structures and process. The stakeholders want to be involved in the development, implementation, and interpretation of the impact assessment which affects their community. A multi-stakeholder working group has to be formed to advice on the implementation of the capacity building strategies (Kwiatkowski, et al, 2009). Stakeholder participation would enable effective participation by many players in the regulatory process (Samarajiva and Gamage, 2007).

### ***Develop demand-driven strategies to build capacity***

As capacity building concept is gaining importance, there is growing interest in dynamics and efficacy of different capacity building interventions (Hailey and James, 2003). Effective capacity building strategies need to be developed that brings together institutions with the core responsibility for bridging the lacking capacity (Wamukoya and Mutula, 2005). The strategies for capacity building mean different things and they are different when applied to concrete cases (Straussman, 2007). They should be based on the needs of the institutions for future. Tadele (2009) states that the institutional capacity building programs should be demand-driven and beneficiary based rather than supply-driven and should be holistic and integrated with co-ordination. These interventions can be physical, technical/managerial, and human resource based with an overall integrated effect of improving institutional performance. Institutional capacity programs should be based on the needs of the government which include policy familiarization, human resources development, physical capacity development and testing the policy. Literature gives a list of strategies adopted by institutions for capacity building. They are listed in table 1.

**Table 1 – Strategies to Build Capacity**

Authors	Strategies to build capacity
Wamukoya and Mutula (2005)	Collaboration and partnerships, continuing professional development and establishment of centers of excellence.
Kirchoff (2006)	Training and education, organizations and management, network linkages among organizations, public policy and institutional arrangements, overall context regarding economic, social and political environment in which organizations operate
Rodriguez and Marti (2006)	Formation of micro-clusters to build capacity of regions and create wealth
Kevany (2007)	Proactive education, individual stewardship, transformative learning and experiential learning
Straussman (2007)	Workshops with participants, pilot projects as learning cases and train-the-trainer's program
White (2007)	Establishing and strengthening independent and competent ethical review process/committees strengthening research capacity, developing technologies appropriate, training, educating the community
Samarajiva and Gamage (2007)	Different approaches like developing in-situ expertise, especially just-in-time learning and open-source research
Hamadu and Okafor (2009)	Regular in-house training programs, instituting well-designed staff development programs and seeking technical assistance from international donors
Kwiatkowski, Tikhonov, Peace and Bourassa (2009)	Training, conducting workshops, indigenous community engagement through research, a multi-stakeholder working group
O'Hare (2010)	Methodical approaches to the micro-relationships between governance actors and "community-led" partnerships

### ***Assessment of Impact of Capacity Building***

As capacity building has been increasingly prioritized at the core of many development strategies there is a necessity to assess their long term impact. Resource constraints and availability of funds have necessitated for increased accountability of usage of funds and the long-term impact of capacity building strategies on the society (Hailey and James, 2003). Impact assessment is concerned with assessing the long term and sustainable changes resulting from specific capacity building interventions. To effectively assess capacity building impact, it is first necessary to come to consensus about what the capacity building impact is and how it occurs. Also the question of who will assess the impact

raises another considerable challenge. There is a growing awareness that externally led evaluation is often inappropriate or counterproductive (Hailey and James, 2003). The challenges in assessing the impact lie in being multi-dimensional and user-friendly, demonstrating attribution and measuring intangible changes in relationship (Hailey and James, 2003).

It becomes necessary to determine performance measurement indicators (Templeton, 2009) and techniques to assess the impact of capacity building. The indicators and key evaluation questions if answered will result in assessing the impact. The indicators could be capacity inputs, capacity outputs and capacity outcomes. Key evaluation questions could include measuring the knowledge



and skills acquired from training applied regularly in the society (Templeton, 2009). Gordon and Chadwick (2007) suggest quantitative approaches for measuring the impacts and benefits. A benefit-cost analysis aims to measure the direct and indirect impacts of investment in quantitative terms but these need not be translated into monetary value. Another quantitative measure is indicator analysis in which the indicators reflect real values. Modeling is building a model or relationships identified along the pathway from investment impacts to estimate impacts and net benefits. Scoring models used in capacity measurements assess the achievements against a set of objectives. Qualitative approaches like multi-criteria analysis report on achievements against a set of criteria. Contribution analysis provides a credible performance story to substantiate the claim that a project has made a significant contribution to an observed change (Gordon and Chadwick, 2007). A combination and balance of qualitative indicators and quantitative measures can be used to assess the impact of capacity building in institutions (Hailey and James, 2003; Templeton, 2009).

### Conclusion

Capacity Building is the long-term, voluntary process of increasing the ability of a country to identify and solve its own problems and risks and to maximize opportunities. It encompasses the country's human specific, technological, organizational, and institutional and resource capabilities. In conclusion, Institutional Capacity Building is to promote democratic governance, to improve the structures and institutions of economic policymaking, to stimulate the strength of civil society to contribute to national development, and to create an environment of social empowerment for the people where they can meaningfully contribute to decisions that affect their life and the development process. This entails the availability of the human, material and financial resources essential for efficiently managing the institution and the identification and recruitment of personnel with the required knowledge, expertise, experience, competence and leadership to manage the institution. Essentially, it is about unbundling the creative energies of the people, improving those energies and providing the legal, institutional and material context in which those energies will flourish.

From a research perspective, given the significance of capacity building and in particular institutional capacity building, this paper attempted to develop a systematic approach, and address the gap in literature of capacity building. This six step process will provide guidance to any institution willing to undertake capacity building efforts for its benefits.

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# Consumer Behaviour: Kitchen Durables

Anilkumar N. and Jelsy Joseph

## Abstract

Consumer behaviour (CB) has been the most researched area in marketing and market segmentation studies in history. Consumer attitude is antecedent to behaviour and it is a relatively global and enduring evaluation of an object of consumption, issue, person or an act. It is well known that attitudes guide one's thoughts, influence feelings and affect behaviours. Changes in behavioural patterns of consumers over the years have been due to several factors and best described by the consumer acculturation. A study of current Consumer purchase behaviour-attitude towards most popular modern kitchen durables (Mixers/Grinders) nexus conditioned by the consumer related personal factors, social factors and the market factors as per TPB blended with TAM, are discussed herein based on a study conducted in Kochi based on random sampling with HH sample size of 200 & retailer sample size of 40. The Consumer attitude has gained larger importance in the modern market segmentation, targeting and product positioning, and is discernable /imperative in the new acculturated consumerist Kerala society, at a commercial urban center, Kochi.

**Key words:** Consumer Attitude, BI, Behaviour, Grinders, SN, PBC, Motive, Family dynamics, TPB, TAM.



Anilkumar N., Sai Kripa, Lotus Garden, Hidayat Nagar,  
HMT Colony P.O, Kalamassery, Ernakulam, Kerala.  
09447986364 (Cell);  
E-mail : aniln@factltd.com, aniln@factltd.com,



Dr. Jelsy Joseph, Research Scholar & Chief Manager, Dean,  
Department of Commerce & Business Management,  
Karpagam University, Coimbatore, Tamil Nadu  
E-mail : jels\_joseph@rediffmail.com,

In the ultra modern current lifestyle adopted by an increasing number of working women in dual earner families in Kerala, the household cooking chores and related activities are largely assisted by the kitchen durables tailored to meet the exact needs of cooking. We know that food is an essential item for sustaining life and hence cooking is inevitable in any household. Thus the biogenic importance of cooking and its facilitation through modern cooking ware products have profound influence in daily life. The onset of mixer grinder-juicer-food processor and table top wet grinders in customized design in varying sizes etc have revolutionized the traditional labor by innovative use of kitchen durables. The introduction of modern compact mixer grinders and table top wet grinders have virtually resolved many of the teething problems of preparations for cooking by way of convenience, saving of labour/ time/fuel and cleaning efficiency. Further, the latest shift has been due to induction cooker and MWO suitable for use to match diverse dietary lifestyles. The monopolistic scenario has changed now with the Market

leaders like Sumeet, Maharaja, Philips, Preethi for Mixer grinders and brands like Ultra, Butterfly, Prestige for Table top wet grinders, competing fiercely with host of new brands wooing the MC consumer segments in a big way in Urban Kochi. The key search attributes and salient search attributes of product shape the consumer's quest.

### 1.3 Literature Review

#### 1.3.1 Consumer Behaviour:

Consumer behaviour traditionally blends various disciplines like Psychology, Sociology, Learning theories, Cognitive theories, Gestalt & Field theories and motivational theories culminating in social humanism today. The decision making of the consumer is determined by the pre purchase behaviour, which is preceded by the intention to buy/consume and a host of other antecedent factors. Some of these factors are intrinsic to the consumer like the personal aspects –beliefs/evaluation based attitude towards the act(purchase), while the extrinsic variables like social aspects- subjective norms and the perceived /actual behavioural control etc conditioned within the situational construct, influence the consumer's behavioural intention. Attitude-behaviour consistency has been of great interest to researchers since the 1930s. In the early 1970s, a number of researchers (e.g. Acock & Defleur 1972; Ajzen & Fishbein 1975; Triandis 1977) developed attitude-behaviour models that focused on the causal relationship between attitudes and behaviours. According to Ajzen and Fishbein (1975), behaviour is a function of behavioural intentions, which are themselves a function of attitudes and subjective norms. The Theory of Reasoned Action stipulates that beliefs underlie a person's attitudes and subjective norms, which ultimately determine intentions and behaviour (Fishbein and Ajzen, 1980). Researchers have drawn on attitude-behaviour relationship, namely the theory of planned behaviour (TPB; Ajzen, 1985), to explain consumer behaviour. The extrinsic aspects also condition the attitude dimension, and the attitude functions (consumption motive) thus influencing the final purchase decision of the consumer. The purchasing decision of the consumer is an individual one (Du Plessis and Rousseau, 2003) and the complexity of the decision depends on the consumer's degree of information search, the evaluation of alternatives and the choice of products (Du Preez, 2003). The consumer decision-making process is a sequential and repetitive series of psychological and physical activities ranging from problem recognition to post-purchase behaviour (Brijball, 2003). Market-dominated variables (environment and advertising) and consumer-dominated variables (such as needs, motives, personality and

perception) simultaneously interact to influence the consumer's purchasing decision (Brijball, 2003; Du Preez and Visser, 2003).

**1.3.2 Consumer Attitude :** Attitude is an inclination to react to stimuli (Mellott, 1983). Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favour/disfavour (Eagly & Chaiken, 1993). Research studies have shown that customer's behavioural intention is influenced by their attitude toward that behaviour (Ajzen 1991, Ajzen and Fishbein 1980). Attitude is a vector with strength and valence among other features. Attitude is defined as an 'affective evaluation,' which is made up of beliefs about the consequences of behaviour. Subjective norms are normative beliefs about the behavioural expectations of significant others: the person's evaluations of how most people important to him/her would feel he or she should behave (Liska 1984). According to the TPB model, attitudes and subjective norms affect behavioural intentions, which in turn affect the final behaviour. Belief that performance of a behaviour will result in a positive outcome leads to favourable attitudes toward that behaviour. Similarly, if an individual believes that the behaviour will lead to a negative outcome, the attitude toward that behaviour will be negative (Ajzen & Fishbein, 1975; Mykytyn & Harrison, 1993). Subjective norms are determined by an individual's belief about how people whom he/she cares about will view the behaviour in question (Eagly & Chaiken, 1993). Subjective norms are influenced by normative beliefs and the motivation to comply. Normative belief is the perception about how family and friends will perceive the outcome of the behaviour. The motivation to comply is the degree to which perception of an outcome influences whether the behaviour is carried out. Finally, intention is the likelihood of performing an act or behaviour toward a product or service. Schiffman and Kanuk (2004) state that attitude could be regarded as permanent if consumer behaviour matches up with consumer attitude. Attitudes are antecedent to behavioural intention and certain salient beliefs are antecedent to these attitudes (Allen et al, 1992, Dabhilkar 1994, Taylor & Todd, 1995, Curran & Meuter 2005). Attitudes perceived as being important are more likely to be used when processing information, forming intentions, and taking action (Boninger, Krosnick, & Berent, 1995; Fishbein & Ajzen, 1975). The original TAM of Fred Davis (1989) and the modified TAM2 of Venkatesh & Davis (2000) pertain to the perceived usefulness and ease of use/application of technology products/ equipments after purchase. The Attitude as per TPB (Ajzen & Madden, 1986) has background factors of the consumer like personal-



demographics-psychological motive aspects, psychographics, the social factors like Family/Ref groups/ sub-cultural aspects and intervening factors like Situational aspects and Environmental-Market aspects. These drive the interacting behavioural beliefs, normative beliefs and control beliefs which in turn lead to the ATB, SN and PBC respectively, which sum up to form the behavioural intention to culminate in the consumer behaviour. Attributes projected by the product's image which lead to the choice of that product (Alpert, 1971). The consumer considers each product through a bundle of salient attributes. Also consumers develops a set of brand beliefs about where each brand stands on each attribute/brand image. A consumer is assumed to have a utility for each attribute. The utility function describes how the consumer expects product satisfaction to vary with different levels of each attribute. The consumer arrives at attributes (Judgments/preferences) towards the brand alternatives through some evaluation procedure. Petty and Cacioppo's (1986) elaboration likelihood model of persuasion (ELM) provides the theoretical foundation for the relationship between attitude toward the ad and attitude toward the brand; their direct relationship may result from message processing that occurs in the peripheral route of the ELM (Miniard, Bhatla, and Rose 1990). Attitude toward the Ad may affect processing in the central ELM route by influencing brand cognitions, which in turn affect attitude toward the brand (Miniard, Bhatla, and Rose 1990). Previous research further explicates the relationship between attitude toward the ad and attitude toward the brand in terms of general paths.

### 1.3.3 Consumption motive (Attitude Function) at Driving End:

Consumer motivation relates to a wide spectrum of wants and needs. Consumer motivation is an internal state that drives people to identify and buy products or services that fulfill conscious and unconscious needs or desires. The fulfillment of those needs can then motivate them to make a repeat purchase or to find different goods and services to better fulfill those needs. Motivation is an activated internal state arousing /directing & leading to behaviour. Kim and Jin (2001) argue that consumer motives are known to be the drivers of behaviour that bring consumers to the retail store. Based on past research, consumer motives can be categorized from four perspectives. Firstly, the social influences on consumer motives such as the culture, sub-culture, social class, reference groups and families (Peter & Donnell, 2007). Secondly, the situational influences on consumer motives such as physical features, social features, time, task features and current

conditions (Belk, 1975). Thirdly, psychological influences on consumer motives include product knowledge and product involvement (Peter & Olson, 2005). Finally, the marketing mix influences on consumer motives such as product, price, promotion and place (Peter & Donnell, 2007). Buying motives could be product oriented or patronage oriented, of rational/emotional type. The motive theory on Attitude of Katz (1960) stated four major functions that attitude can serve: The utilitarian and instrumental, the ego-defensive, the value-expressive, and the knowledge function. Consumers purchase in response to a recognized need (Solomon, 2004). Consumers would often reject cook ware with mass appeal and prefer products that are tailored to reflect their specific needs (Elsasser, 2004). The various functions of attitude lead to the consumer's overall attitude toward engaging in the given purchase decision, thus influencing behavioural intention (Hawkins et al., 2001). Behavioural intention reflects the consumer's plan of action or a proposition associating one's self with a future consumption action or behaviour (Peter & Olson, 1999). Price is main motive in buying as per Gitomer J. (2005).

**1.3.4 Societal Influence/Compliance as Norm:** Social influence has been an important area of study for researchers in consumer behaviour, including effects of reference groups (e.g. Bearden and Etzel 1982; Escalas and Bettman 2005), group membership (e.g., Briley and Wyer 2002), group decision making (e.g., Aribarg, Arora, and Bodur 2002), and public versus private consumption (e.g., Ratner and Kahn 2002). In addition, researchers have examined the impact of the social environment on consumers in domains such as variety seeking (Ariely and Levav 2000), levels of food consumption (Herman, Roth, and Polivy 2003), and product evaluations (Burnkrant and Cousineau 1975). The social influences affecting the attitude of a consumer are largely due to the family and the social reference groups. The consumer's choices and preferences can be altered by the input provided by other individuals and by the desire to present oneself favourably to others. Choices and preferences might be influenced by information provided by others. Burnkrant and Cousineau (1975) found that people's evaluations were influenced by viewing the evaluations of others. Group influences on consumer attitudes and behaviours can activate consumers' need to cope, particularly when group opinions are different than consumers' personal views (Duhachek 2005). Not only does direct face-to-face communication with others affect individual attitudes, but recent research suggests that even indirect means, such as online communication, can produce group influence effects (Schlosser 2005). In fact,

merely anticipating group interaction has been shown to exert a strong impact on attitudes (Schlosser and Shavitt 1999, 2002). The social influence on attitude and behaviour has been a focal research area for decades (Festinger 1957; Heider 1958). Research into these phenomena has shown that social context influences individual attitude by shifting attitude in the direction of salient others with whom individuals share ties, operating through both social comparison (Festinger 1950) and normative mechanisms (Boster and Cruz 2002). Although consumers may frequently rely on social cues in forming attitudes, situational characteristics may amplify the effect of social context.

### **1.3.5 Family dynamics/Subjective norms(Normative dimensions) as Default mode**

Family core values influence attitudes. Consumers buy key benefits of the products and are based on beliefs leading to attitude formation. For a large size family, the priority would be on more efficient use of disposable income, perceived risk reduction, higher information search; while for a higher income family time is the most valuable resource with less information search and lower brand loyalty. Past research in this area has found that the roles played by family members differ with regard to the product being purchased, the stage in decision-making process, and characteristics of families and spouses (Belch and Ceresino, 1985; Davis, 1976; Piron, 2002; Webster, 1995). These roles may change over the period due to changes in the environment such as economic development, which consequently may lead to adjustments in the role structure of the decision-making process. Changes are occurring in perception of role of women. These changes in education, the advent of career women, and the growing number of dual-income families have challenged earlier beliefs on the role structure and purchase influence (Webster, 1995). Changes in the economic environment have led to changes in the roles of husbands and wives (Cherlin, 1992; McConocho and Tully, 1993). The family decision making involves decision roles/relative influence/influence strategies & decision stages (Commuri & Gentry, 2000). When making consumer decisions, husbands and wives commonly attempt to influence each other to arrive at what they feel to be the best outcome. Family decision making involves the play of family deliberations between Husband -Wife, Parents-Kids, Family values, roles, WFC and Conflict resolution mechanisms and social lifestyle. Modernization causes shift in cultural norms, such as sex role norms, creates more opportunities for women to work outside the house, delays in marriages, and shifts societal standards (Lee and Beatty, 2002; Qualls, 1987). The

social reference group is the benchmark for the consumer in comparing with others, which apart from family could be friends, relatives, peers etc.

### **1.3.6 Personal /Psycho-socioeconomic demographics/PBC Dimensions as Baseline**

Research by Brunner and Wänke (2006) indicates that consumers are likely to evaluate one brand against the other when they are placed in the same context, illustrating the importance of consumers' perception of brands. Du Preez (2003) illustrated that the complexity of the purchase decision depends on the extent of the consumer's information search, which according to Du Plessis and Rousseau (2003) depends more on the individual's personality than on product characteristics itself. The demographic characteristics of the consumer may influence the attitude towards purchase of cookware like the family size, FLC stages, Educational and professional status, Income and others. An added dimension herein is the psychographic variable like self image (based on personality-internal) and the manifested lifestyle (external Activity-Interest-Opinions) not proposed to be explored in this study. Further, the situational and environmental factors have an extraneous influence on consumer attitude and decision making, which is beyond the study as elaborate.

### **1.3.7 TAM application in Use of Mixers/Grinders in modular Kitchens**

Technology acceptance model of Davis (1986) is the theoretical framework for user acceptance of technology based products applicable to durables as well. The use of the durable is decided by the BI to use and the antecedent of which are the Attitude and PU. The Attitude and PU are moderated by PEOU.

### **1.3.8 TPB application in explaining Consumer behaviour on Kitchen appliances**

This landmark theory indicates that BI determines the behaviour for which the antecedents are Attitude, SN and PBC (Ajzen, 1985, 1991, 2002) and is the foundation in consumer behaviour.

### **1.3.9 Past Behaviour/Memory recall/Cognitive dissonance as modulators of Behaviour:**

Past experience and memory moderates the consumer's future purchase behaviour. Cognitive dissonance and actual experience on the brand/product increases knowledge on the product and guides future purchase decisions. Cognitive



dissonance (Festinger L., 1957) is the feeling of uncomfortable tension which comes from holding two conflicting thoughts in the mind at the same time. Dissonance increases with

- The importance of the subject to us
- How strongly the dissonant thoughts conflict
- Our inability to rationalize and explain away the conflict

Dissonance is often strong when we believe something about ourselves and then do something against that belief. If I believe I am good but do something bad, then the discomfort I feel as a result is cognitive dissonance. Cognitive dissonance is a very powerful motivator which will often lead us to change one or other of the conflicting belief or action. The discomfort often feels like a tension between the two opposing thoughts. To release the tension we can take one of three actions:

- Change our behaviour
- Justify our behaviour by changing the conflicting cognition
- Justify our behaviour by adding new cognitions

Dissonance is most powerful when it is about our self-image. Feelings of foolishness, immorality and so on (including internal projections during decision-making) are dissonance in action. If an action has been completed and cannot be undone, then the after-the-fact dissonance compels us to change our beliefs. If beliefs are moved, then the dissonance appears during decision-making, forcing us to take actions we would not have taken before. Cognitive dissonance appears in virtually all evaluations and decisions and is the central mechanism by which we experience new differences in the world. When we see other people behave differently to our images of them, when we hold any conflicting thoughts, we experience dissonance. Dissonance increases with the importance and impact of the decision, along with the difficulty of reversing it.

Sutton (1994) stated that with repeated performance, behaviours become determined by one's past behaviour rather than by cognitions. Self-reported past behaviour is an addition to TPB (Norman & Conner, 2006; Conner & Armitage, 1998; Cheng et al 2005, Astrom, 2004).

**1.4 Statement of the Research Problem:** The purpose and significance of the study is to identify the current preference/purchase behaviour of consumers towards modern Kitchen durable products in Kochi.

**1.5 Scope of the study:** The study is limited to Kochi city and urban suburbs and is aimed at the limited segment of middleclass domestic Consumer HHs (single entity) to study their purchase behaviour being the largest consumer segment. Institutional/Commercial consumers are excluded from this study. The attitude object is table top Mixer Grinder Juicer and table top wet grinders, as the durables. The study is based on the most popular household item used by women in family and most sold in Kerala market, especially at the commercial hub of the state of Kerala, the fastest growing urban metro of Kochi.

**1.6 Objectives of study:** The key objectives of this market research study is on consumer purchase behaviour with relevance to following specific objectives -

1. To identify the product attributes, quality influencing the kitchen durables and brand preference,
2. To explore aspects like socio demographic profile which influence the attitude- preference of consumers towards kitchen durables,
3. To assess the consumers perception-awareness on varied durables brands/loyalty,
4. To identify buying motives for branded durables consumption,
5. To gauge the consumer satisfaction level with respect to various attributes of durables, and
6. Evolve a simple Regression model as per TAM+TPB, Past behavioural usage aspects influencing BI.

**1.7 Null Hypothesis formulation (H0) Elaboration:**

1. There is no significant association between the quality of kitchen durables and brand preference /loyalty for the consumer.
2. There exist high degree of positive association between the general satisfaction level of consumers and incidence of low level of complaints / defects on kitchen durables in post purchase scenario.
3. There is no significant association between the income group and Brand Loyalty for durables.
4. There is no strong association between income group of consumers and frequency of purchase of durables for actual rational use.
5. There is no association between income group of consumers and the frequency of purchase of durables for presentation/gifting purpose.

6. There is significant positive correlation between consumer's purchase behaviour at the retailer showroom and direct feedback with regard to the durable products.
7. The personal aspects of the consumer does not significantly influence the favorable attitude towards purchase behaviour towards durables.
8. The social (other's influence) aspect of the consumer does not significantly influence the favorable attitude towards the purchase behaviour of durables.

**1.8 Research methodology:** Descriptive exploratory Research on consumer attitude/preference on qualitative variables is undertaken herein. (1) Sampling Design: The Consumer Survey was conducted on a sample of 200 HHs drawn from a population of over 5 lakh HHs in Kochi. Also 40 retail outlets were sampled from over 200 sales /retail outlets for kitchen durables in Kochi; (2) Sampling Method: The sample size of 200 Households (HHs) was chosen from a population of 5 lakh HHs in Kochi. Random sampling applied to select the sample households of the Urban areas; (3) Method of Data Collection: Survey method of primary data collection using Combined Interview and questionnaire adopted for collection of primary data through field survey was undertaken in Kochi city limits in 2012.

**1.9 Discussion / Findings;** The Primary survey results on HHs are detailed below in descriptive form. The demographics are: the maximum age range of husbands were 40-50 yrs while the same for housewives were 30-40 yrs. 80% of households had only 2-4 members. The education level of husbands were maximum in the Professional level (35 percent) and among Housewives, Graduation level (50 percent). Almost 90 percent and 82.67 percent of the husbands & housewives respectively of the sample population were employed in Govt. / Pvt. Sector. The average monthly income of 40 percent of households were in the range of Rs. 10,000/- Rs. 20,000/- and 30.33 percent of the households belonged to the income range of Rs.20,000/- to Rs.30,000/-, falling in the income group classification M, for analysis. The lower levels of Income (below Rs. 10,000/- per household) accounted for 13 percent and the higher levels of income (above Rs. 33,000/- per household) was found in 16.66 percent of the sample population of households. In 79.67 percent households, wives made the decisions on purchase of kitchen durables and self help (no servant) has been practised in the kitchens of 61 percent of households, usually working housewives. The

fuel used in kitchen was predominantly LPG (88.67 percent households), wood (7.33 percent) and Kerosene (4 percent) have also been used. In 89.33 percent cases, the need prompted purchase of kitchen durables. The average age of person handling cooking ranges between 30-50 yrs (82.67 percent) with mostly twice a day cooking schedule (71 percent). The surveyed sample population covered mostly Keralites/south Indians residing in and around Kochi city in the urban/town areas and hence the figures applicable mostly to urban population - 82.67 percent were Kerala residents and 12.67 percent were south Indian (non-Keralite) with 4.67 percent accounting for North Indians residing in Kochi. On an average one number each of Mixer grinder and wet grinders were currently used per household. Almost 96 percent of the sample population used mixer grinders and wet grinders. The maximum average useful life of durables is 5-10 yrs (39.33 percent). The major problems faced in use were parts failure (39.33 percent), subsequent wear & Tear (29.67 percent) and handling damage/breakages (24 percent). 60 percent of the sample population opined that time saving was the striking advantage while 44.67 percent indicated labour saving and 19.33 percent opted for ease of use/cleaning/operation. Regarding factors influencing new purchase of kitchen durables based on product attributes, several salient attributes were identified as relevant of which the most prominent ones are Product quality, Convenience of handling & use, Price Tag, Brand specific choice, Affordability, Safety of operation, Utility, Past experience etc. in the high→low ranking. The cooking quantity of food was assessed and found to be as follows on daily basis-80 percent used less than 1Kg and 16 percent used 1-2Kg of cereals, almost 95 percent used less than 1Kg of pulses and about 78.67 percent opted for use of less than 1Kg and 17.33 percent opted for use of 1-2kg of meat/fish – Non vegetarian food needing deep fry using nonstick ware, etc. The consumption of fish, eggs, meat (Chicken, beef, mutton and pork) is currently soaring as also their cost in the market in view of high demand in the state and abroad. Most of the meat related products, vegetables and cereals/pulses are imported from neighboring southern states like T. Nadu, Karnataka and A.P.

The average time spent on cooking at a time was 30 minutes-one hour for 40.33 percent households, 1-2 hours for 30.67 percent households and more than 2 hours for 12.67 percent households. The sample households bought modern kitchen durables for actual use as once in 5-10 yrs (41.33 percent) &

more than 10yrs (39.67percent). Further, 6.33 percent households, bought modern kitchen durables once in 3-4 years period. Among the households, 42.67 percent bought grinders in a period of more than one year for presentation/gift purpose while 30.33 percent bought the same once in 6 months (emotional motive) for the social functions like marriage, House warming, wedding/Birth Anniversary etc; choosing it as a gift item. Hence the purchase is not fully rational in motive, as imitation/ gift value/ affinity relationships, affordability on price front etc; act as influences with opinions leaders/ social sub class ratings affecting status of householder. Several brands are in the market at various price/size to meet the growing demand for the perennial consumption item like grinders. Eighty-seven percent of the respondents/households indicated that their purchase style is dominated by reason (rational motive) weighing the merits/ demerits and the C-B ratio on cookware products. Clear opinion on retail outlet choice from which consumers preferred to purchase- 50.67 percent preferred authorised retail dealer while 35.67percent opted for the now ubiquitous Shopping Malls & Hyper markets. For 39.01percent of households ,the Others influence was as follows:39.01percent influenced by Family members,17.85percent influenced by friends,15.93percent influenced by close relatives,14.01percent influenced by colleagues/peers, 12.08percent influenced by neighbors and 1.12percent influenced by others like salesmen etc. This shows the normative influence on attitude towards purchase of Grinders. The mass media as a communication source influenced the household attitude as below:32.77percent were influenced through TV Ads-celebrity endorsements, 25.11percent were influenced through newspaper Ads,17.02 percent through Ads/review in popular household magazines,16.17percent through the WWW(Internet)Web sites/E shopping sites,5.1 percent through Retailer/Dealer network exhibitions/pamphlets and 3.83percent through hoardings/LCD TV Ads in street corners & shopping malls.

Interestingly, there is little influence through Radio on the urban households. Regarding the quality of the after sales complaint management-spares services support received on branded Grinders for the households: Only 17.45 percent rated the services as excellent, while 69.78 percent rated the aftercare services as good, and 9.79 percent rated the services as satisfactory and 2.98 percent rated them as bad (complaints).The likelihood of repeat purchase of existing ownership of brands (brand loyalty)in Grinders in households have been :Most likely (46.12 percent), More Likely (17.62 percent), Less likely (12.03 percent), Unlikely (7.28percent) and the Undecided (16.95 percent).With respect to the *final conflict resolver*-decision maker in the family for purchase of cookware: In 56.17percent households, the conflict resolver in the household was jointly by involvement of most members, while in 33.19 percent households the husband resolved the purchase conflicts, in 5.53 percent households only the wife was the conflict resolver, in 2.98 percent cases the kids were the conflict resolver for purchase decision making and only 2.12 percent households were strongly influenced by parents/in laws. On the sales promotion preference front, the household attraction towards the various modes of sales promotion schemes available in the market for the brands/marketers of Grinders has been: majority chose Advertisements (44.32 percent), Celebrity endorsement (22.45 percent), Hoardings/Banners/Posters-Flex boards (19.87 percent) and others like dealer gifts/discounts offer pamphlets (13.36 percent). The purchase behaviour adopted by the households for cookware are broadly : Habit-routine style adopted by 7.87 percent, Limited problem solving style adopted by 19.21 percent, Extensive problem solving style adopted by the majority (38.35 percent) and Variety/choice seeking style by 34.57 percent of the households sampled. The overall purchase attitude towards the act of purchase of modern table top grinders by the households have been a clear majority of favourable (62.14 percent), Unfavourable ( 14.58 percent), Neutral / ambivalent( 13.68 percent) and a minority of Can't tell/ Undecided( 9.67 percent) in the sample.

**Table 1:** Ownership Profile of Durables in Urban Kochi HH:

Ownership of durables in HH	% (Sample:100)
Refrigerator	99.8
Washing machines	98.4
MWO/OTG	88.6
Induction cooker/LPG Hobs & Hoods/Hybrid cookers	99.2

Vacuum cleaner /Water purifier	96.3
LED/LCD/Plasma Color TV with STB/DTH	100
Home theatre/DVD Music systems 5.1 Hi Fi Speaker systems	95.9
Air conditioners/Split AC units	85.6
Mobile phones(Hi tech 3G)/I pod//Digi Camera/Camcorder	100
PC/Laptop with broadband connections/Tablet/Notebook/PS2	98.4
Home Gym –Indoor Health Equipments/ Bi Cycles	76.7
Premium Two wheelers and Petrol/Diesel Cars(Luxury)	98.8
Mixer Grinder-Juicer-Food Processor, Table top Wet Grinders	100

Kitchen grinders are used in almost all HHs sampled, along with other kitchen durables like Refrigerators. Grinders of Mixer-Juicer-Food processor for dry or semi dry or wet processing of food materials in Kitchen and Wet flour grinders for preparation of Dosa, Iddaly, Appam, Pathiri, Idiyappam Vada etc which are ethnic Keralite food are inevitable in any middle class kitchen. All grinding works in wet or dry form

are handled by Grinders and hence they are important in Keralite Kitchens today. Wet grinders which have higher capacity than Mixer Grinders are used in tandem with Refrigerators for storage of Flour materials for upto seven days or more and essential when the family size is relatively larger. From Table 1 above, every modular Kitchen has Mixer-Wet grinders.

**Table No. 2: Key Search Attributes for Table top Kitchen Grinders**

S No.	Salient Product search attributes for Table top Mixer/Wet Grinders	Mean	SD
1	Power rating of Motor(500/500/750W for Mixer and 1/1.5/2KW for Wet Grinder))	4.22	0.71
2	Safety locks & protections; Knob controls	4.12	0.72
3	Speed/rpm of motor/ blades/stone type & design variety (18,000-20000 for Mixer)	3.84	1.24
4	Sound level generated-Low noise design	4.10	0.53
5	SS- body with unbreakable grip handles/lockable unbreakable Polycarbonate top lids	4.18	0.76
6	Efficiency-Performance aspects relating to grinding of food materials in shortest time in custom form desired for use in Stove/MWO	4.66	0.47
7	Capacity-size of Bowl. Vessel & number of jars	4.31	0.66
8	Power consumed-BEE Star rating/Operating Cost involved	4.16	0.91
9	After sales service-spares support/ease of service	4.26	0.95
10	Model, style and physical shape-dimensions/weight, colour choice apart from white	4.11	0.71
11	Pricing and exchange schemes, terms of buy, Warrantee coverage for motor	4.54	0.56
12	Make, Brand Image & maturity	4.46	0.57

Clearly, from Table 2 above, the efficiency or performance is the most dominant attribute chosen by Consumers.

**Table No.3: Brand Preference for top ten brands of Kitchen Grinders in Kochi market**

S. No	Leading Brands for Table top Wet Grinders	Mean	SD	S. No	Leading Brands for Mixer-Juicer-Grinders	Mean	SSD
1	PREMIER	4.23	.92	1	BUTTERFLY	4.30	.91
2	INALSA	4.27	.91	2	KENSTAR	4.28	.92
3	BUTTERFLY	4.61	.70	3	MORPHY RICHARDS	3.89	1.13
44	PIGEON	4.36	.88	4	HAVELLS	3.11	1.40
55	PRESTIGE	4.48	.78	5	PREETHI	4.49	.76
66	VIJAYALAKSHMI	3.69	1.24	6	SUJATA	3.77	1.18
77	ULTRA	4.67	.64	7	PHILIPS	4.10	.98
88	Mr. BUTLER	4.24	.91	8	PRESTIGE	3.68	1.25
99	AVION	4.36	.87	9	MAHARAJA	4.02	1.15
110	AVG	3.01	1.41	10	PANASONIC	2.91	1.35

From Table 3 above, ULTRA brand is most popular among Wet grinders while for Mixer grinder Juicer PREETHI followed by Butterfly and Kenstar have been popular in the Urban HHs of Kochi.

**Hypothesis Testing:**

1)Null Hypothesis H01:There is no significant association between the quality of kitchen durable product(Grinder) and brand preference /loyalty for the consumer.

a)By **Association of Attributes method** : (Test association of quality of product and brand preference/Loyalty) Observed frequency (AB) =23 is >Exp. Frequency of 18.2. Hence there's association between attributes of product Quality & Brand Loyalty. Yules Coefficient, (of degree of Asscn ) Q =0.864

High degree of Association between Quality of Product & Brand Loyalty.

b)By **Proportion method**: (AB) /(B)=0.821 and (Aβ)/ (β) = 0.25;

As  $\frac{(AB)}{(B)} > \frac{(A\beta)}{(\beta)}$ , there's positive association between A and B or product quality & Brand Loyalty

$$B \text{ in } A \& \alpha : \frac{(AB)}{(A)} = 0.88 ; \frac{(\alpha B)}{(\alpha)} = 0.357$$

As (AB) > (αB); positive association between A&B ; (A) (α) ;

i.e , positive association between product Quality & Brand Loyalty. There is high degree of positive association between Brand Loyalty & product Quality.

2)Null Hypothesis H02: There exists high degree of positive association between the general satisfaction level of consumers and incidence of low level of complaints / defects on Grinders in post purchase phase.

a)By **Association of Attributes method**(Test extent of relationship between satisfaction level of consumers and defects/complaints on post purchase by consumers.)Since Observed (AB) =13 > Expected freq=9; since actual or observed (AB) > Expected freq (AB), there's positive Association between attributes A&B.;Yule's Coefficient of Association. Q=0.7843; There's fairly high degree of Association between A&B.

b) **By Proportion method:** A in B &  $\beta$  :

Since  $\frac{(AB)}{(B)} > \frac{(A \beta)}{(\beta)}$ , Viz.,  $0.541 > 0.125$ , there's positive

association between A & B

B in A &  $\alpha$ :

Since  $(AB) / (A) > (\alpha B) / (\alpha)$ , Viz.,  $0.867 > 0.44$ , there's positive Association between A & B; There's high degree of +ve Association between general satisfaction level of consumers and incidence of low level of complaints / defects on Grinders on post purchase phase.

3) Null Hypothesis H03: There is no significant association between the income group and Brand Loyalty for Mixer Grinders. H1: There's significant association between Income group & Brand loyalty Using chi square test, Computed value of  $\chi^2 = \xi (O-E)^2 / E = 38.6292$  with d.f = 4 and for  $\alpha$  of 0.05,  $\chi^2$  value from table = 9.49: Statistical Inference: As computed value of  $\chi^2 >$  table value of  $\chi^2$  above, H0 is rejected. There's significant association between income group and Brand Loyalty for Mixer /Grinders.

4) Null Hypothesis H04: There is no significant association between income group and Brand Loyalty for Wet grinder products. On testing, there's an association between income group & Brand Loyalty .Using chi square test, Computed the Value of  $\chi^2 = 51.9511$ ; d.f =  $(r-1) (c-1) = (4-1) (3-1) = 6$  & for  $\alpha = 0.05$ ,  $\chi^2$  value from table = 12.592; Statistical Inference: As computed value of  $\chi^2 >$  table value of  $\chi^2$ , H0 rejected. There's significant association between income group & Brand Loyalty for Wet grinders.

5) Null Hypothesis H05 : There's no association between income groups and freq. of purchase for actual rational use. On testing, there's association income groups and freq. of purchase for actual rational use. Applying chi square test, Computed value of  $\chi^2 = 13.1936$ ; d.f = 6; for  $\alpha = 0.05$ ,  $\chi^2$  value from table = 12.592; Statistical Inference :As computed value of  $\chi^2$  is greater than table value of  $\chi^2$  above, H0 is rejected. There exist strong association between income group of consumers and freq. of purchase of grinders for actual rational use.

6) Null Hypothesis H06: . There is no association between income group of consumers and the frequency of purchase of grinders for presentation/gifting purpose. Applying  $\chi^2$  test on relationship of income group & freq. of purchase of cookware for gifting /presentation use (emotive motive). Ho: There's no association between income groups and freq. of purchase for gifting/presentation use/purchase ;H1: There's an association between income groups and freq. of purchase for gifting/presentation use/purchase; Computed value of  $\chi^2 = 758.6426$ ; d.f =  $(r-1) (c-1) = (4-1) (3-1) = 6$ ; for  $\alpha = 0.05$ ;  $\chi^2$  from table = 12.592; Statistical Inference - Since computed value of  $\chi^2$  is greater than table value of  $\chi^2$  above, H0 is rejected. There is strong association between income group of consumers and freq. of purchase of grinders for presentation/gifting purpose.

7) Null Hypothesis H07: There is no significant positive correlation between consumer's purchase behaviour at the retailer showroom and direct feedback with regard to the kitchen durable products.

Test the correlation of Retailer view points and consumer's view points w.r.t salient product attributes influencing purchase behaviour of grinders. Using rank Correlation Method

$$\text{Spearman's Rank Correlation } r = 1 - \frac{6\sum D^2}{n(n^2-1)} = 0.82;$$

A high level of relationship exist between X & Y; Now Test the correlation coefficient. r using t test; Hypothesis test on r; H0 : P=0 No correlation between variables of population; H1: P>0 There's positive correlation in the population; Use one tail test on t distribution, Level of significance  $\alpha = 0.05$ , Degree of freedom =  $n-2 = 3$ , Test statistic

$$t = r \times \frac{\sqrt{n-2}}{1-r^2} = 3.849 ;$$

From t distribution. Tables, value of t = 2.353; As computed test statistical value is greater than table value, H0 is rejected. There is significant positive correlation between retailer's(indirect) & consumer's viewpoints(direct) with regard to the Grinder attributes in their actual purchase behaviour.



8) **Table No.4:** H08 & H09 : Impact of background Variables on purchase Intention/Attitude (CHI SQUARE TEST)

Profile of Consumer	Chi-Square Value(Calc)	Table value	S/NS	Decision on Null Hypothesis Ho
Age/FLC Stage	11.616	9.488	S	H0 rejected
Family size	27.753	7.815	S	H0 rejected
Education	11.616	9.488	S	H0 rejected
Occupation	7.967	12.592	NS	H0 Accepted
Monthly Income of Family	1.417	12.592	NS	H0 Accepted
Dietary habits followed in Family-Lifestyle	29.664	16.919	S	H0 rejected
Consumption Motive	25.802	9.488	S	H0 rejected
Past behaviour on usage-Satisfaction	31.9727	9.487	S	H0 rejected
Social (Other's)Influence	24.334	16.919	S	H0 rejected

H08:The personal (demographic)aspects of the consumer does not significantly influence the favourable attitude towards the purchase behaviour of Grinders, is rejected. Also H09: The social(other's influence ) aspect of the consumer does not significantly influence the favorable attitude towards the purchase behaviour of Grinders, is rejected. The Occupation and monthly income of the family does not influence the purchase behaviour on Grinders, while the personal aspects like FLC Stage/Age, Family size, Education, Dietary habits followed and past behaviour (satisfaction) on usage significantly influence the purchase attitude-behaviour. Further, the consumption motive also significantly influence

the Purchase attitude-Behaviour towards Grinders. The Social(Other's influence) aspect significantly influences favorable purchase attitude for Grinders.

The post purchase behaviour/dissonance led satisfaction conditions the BI or attitude is also an important aspect to be assessed. Past experience with a product always moderates future selection/choice in fresh purchase of grinders. The gap between expectation and actual experiential performance determines the satisfaction index, which has been assessed as High, medium and Low and when applied to socio demographic aspects of consumers yielded following results.

**Table No.5 :**Influence of background variables on Past experience-satisfaction level for Grinders influencing BI (@.01)

Profile of Consumer	SOS	df	MS	F Calc	F Calc	S/NS
Age/FLC Stage	37.32/143.80/181.12	4/195/199	9.331/0.737	12.653	0	S
Family size	12.928/301.852/314.780	4/195/199	3.232/1.548	2.088	0.0841	NS
Education	43.37/131.35/174.72	4/195/199	10.843/0.674	16.097	0	S
Occupation	32.32/346.56/378.88	4/195/199	8.080/1.777	4.546	0.002	S
Monthly Income of Family	35.33/216.19/251.52	4/195/199	8.832/1.109	7.966	0	S
Dietary lifestyle -frequency used in Kitchen	50.00/152.88/202.88	4/195/199	12.500/0.784	15.943	0	S
Consumption Motive in Use	24.11/103.89/128.00	4/195/199	6.027/0.533	11.313	0	S
PEOU/PU/Ease of cleaning-Maintenance-Care Services	37.32/143.80/181.12	4/195/199	9.331/0.737	12.653	0	S

Based on ANOVA, except family size all other socio demographics, PEOU/PU and consumption motive are significant in moderating the memory-past experience and consequent satisfaction of Grinders used in Kitchen and

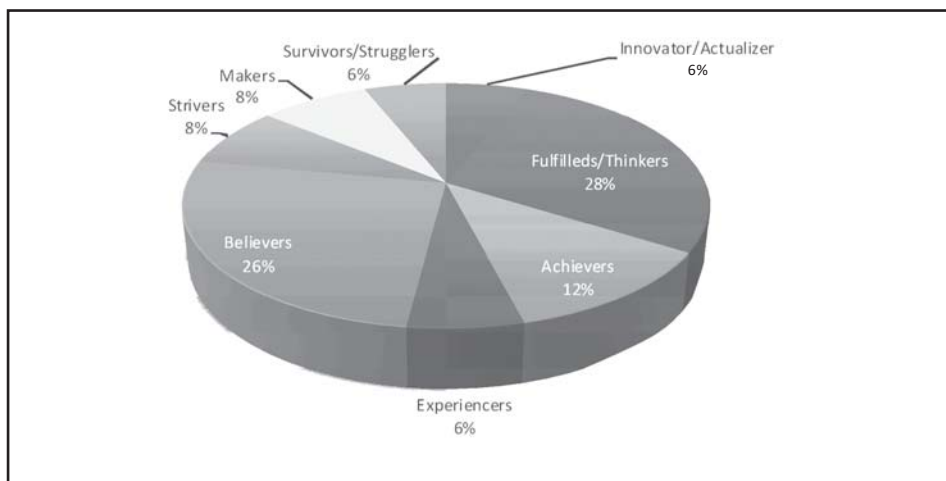
which in turn influences the purchase intention, with the exception of family size. The family lifestyle followed and which has tenable impact on kitchen durables purchase can be clustered .

**Table No.6:** Dietary Lifestyle in Families

No.	Family Lifestyle Pattern (Dietary)	Percent / Sample
11 1	Strivers(Young)	20
22 2	Achiever(Middle aged aspirers)	26
33 3	Pressured(Downtrodden)	18
44 4	Traditional(Conservative, Values)	24
55 5	Adapters(Older flexible)	8
66 6	Others(Mix)	4

From Table 6,The achiever segment and traditional segment are most dominant in the lifestyle patterns.

**Table No.7 :** VALS 2 Segmentation



The Innovators (6 %), Experiencers(6%), Survivors(6%), Strivers(8%) and Makers(8%) form the minority. The prominent are Fulfilleds/Thinkers (28%), Believers (26%) and Achievers (12%).The Fulfilleds look for value and durability, likes educational affairs, not prestige conscious, widely read and have affordable income for purchase of durables. The Believers look for bargains, TV Savvy and slow to change their habits. In contrast, the achievers read business, news and watches TV on an average level and are attracted to premium products. The Actualizers are most receptive to high

technology products, frequent reader of several publications and enjoy finer aspects of products. The Experiencers are attracted by advertisements, socializing and follow fashion, apart from indulging in impulse purchases. The Strivers are image conscious and prefer watching TV to reading habits, but with limited income. The Makers buy for durable value products for comforts, listen to FM Radio and are un attracted by luxuries. The Survivors are brand loyal, heavy TV watchers and trust advertisements. The VALS 2 segmentation is valuable lifestyle evaluation on consumers for durables.

The implication of TAM and TPB in the use of kitchen durables like Mixer/Grinder is as outlined below.

**Table No.8:**Inter construct correlations

Variables	Impact on Attitude	Impact on BI
Attitude	1	0.22
Subjective Norms/Social aspect	0.32	0.28
PBC/Personal aspect	0.25	0.31
PU	0.29	0.29
PEOU	0.27	0.21

The structural model analysis yielded fit index :P value-0.097, GFI-0.98, AGFI-0.92, CFI-0.95, RMR-0.048, RMSEA-0.07 and NFI-0.94. The structural model indicates adequate fit with the observed data. A number of previous studies support the significant effect of PEOU as well as PU on BI (Davis et al., 1989; Jackson et al., 1997; Venkatesh, 1999). SN is most dominant (0.32) in moderating Attitude, while PBC is most dominant in impacting BI (0.31). This closely matches with the outcome of studies of David Njite & HG Parsa (2005) and Amandeep Singh, Anil Chandhok & MS Pabla (2011).

From the retailer sample survey, it was clear that quality, price, brand, service are the most important product attributes that influence consumer decision. The product-quality features, services & warranties, Price-List price (MRP), discounts/exchange, credit facility; promotion- advertising, sales promotion and publicity; place/market – coverage, retail outlet quality, technology application, relationship have to be reviewed and beefed up. The four parameters involved in the cookware marketing in Kochi specifically are competition, market life cycle impact, product life cycle impact and consumer values/needs/expectation/satisfaction/preferences. Sumeet brand on Mixer grinders had been strong with an indelible stamp of quality-durability in the minds of the middle class market segment, but which has now stopped production. Prestige has already launched product oriented approach through their Smart plus/smart modular kitchen concept & products and grinders, cookware product to match western standards/quality of kitchen practices-convenience. The trend now in kitchen ware is on Induction bottom ware, an alternative to LPG Cooktops, hybrid cooktops and MWO, modular kitchen to facilitate faster cooking of new dishes, a marked deviation from traditional & copper bottom cookware. Nonetheless the role of Mixer grinder and wet grinders have not diminished at all and is now inevitable in any Kerala style

kitchen. Preethi is the market leader. Most housewives unemployed preferred Preethi brand while most professionals chose Butterfly and Kenstar. The cost of spares service for Kenstar is the highest. Husbands are more satisfied with grinders than the wives. Also employed wives are more satisfied than housewives/unemployed in use of Grinders. Quality is outlined in Preethi brand while other brands like Butterfly, Kenstar project price competitiveness. The brands like Maharaja, Panasonic and Morphy Richards accord priority for Certifications. Capacity and speed determined the satisfaction in performance of the grinders. PEOU has been significant in Wet grinders and Juicers. Among Food Processor-Juicer, Sujata is the most preferred brand with wider utility for heavy duty models in shops/hotels as well. Sound and Power Consumption as also Bowl-Blade-Stone aspects do influence the consumer's consideration.

**2.0 Limitations and Constraints:** The sample population considered were mainly consumers residing in the urban areas of Kochi (Ernakulam). The elite social groups as also low class/illiterate social groups were not included in the sample survey. The verbal statements of retailers may not actually reflect their actual consumer behaviour. The method of observation, in the collection of data on consumer behaviour /attitude at the retail shops could only be partially carried out due to lack of time. Thus the study is based on the assumptions as per TPB and TAM that consumers undertake reasoned action for Grinder purchase.

**2.1 Suggestions:** Kochi is one of the fastest growing metros of India and a premier test marketing site in India. The Consumers in urban Kochi are well known for their high literacy level, Quality-Price consciousness and metropolitan consumption patterns; higher purchasing power of the population, in the backdrop of the very high level of NRI

remittance from abroad and aiming at decorating kitchen more than the drawing room with latest gadgets. The present scenario demands grinder-cookware companies to be market oriented, problem solving and innovative so as to remain/sustain in business. Innovative technology driven consumer-product orientation, problem solving approach to consumer. This study can be extended to rural areas of Kochi as well and the other districts/ Panchayath /Villages in Kerala(though the urban-rural divide is not wider evidenced in past studies) .

**2.2 Conclusion :** This study of consumer behaviour on the various attributes of modern grinder products has outlined the various facets of consumer likes/ dislikes and attitudes/ brand preference were brought out. Pertinent data on consumer awareness level, decision making and buying motives, satisfaction w.r.t product attributes and the statistical inferences/ association/ correlation tests have brought forth the dynamics of consumer behaviour on the modern wet grinder and mixer grinder products prevalent in Kochi. Appropriate marketing strategy on product positioning, targeting, product improvements, brand enrichment, etc., to generate higher profits/ market share/ Sales volume and to satisfy the dynamic global lifestyle/ consumption patterns of modern middle class consumers / HHs can be evolved by strategic use of marketing mix. Customized Innovative products and services are the solutions to the variegated acculturated consumer behaviour demand patterns of modern consumers. The consumer dissatisfaction with the durable goods on attributes like quality/after sales care have to be addressed by the marketing companies and dissonant behaviour has to be translated to consumer delight for the products/brands. Better awareness and assurance/extended warrantee and support schemes to be mooted to erase the dissatisfaction and complaint prevalent among consumers and adversely reflecting in their new purchase attitudes towards durables for domestic consumption.

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# Work Life Balance: Women Police Constables

S. Padma and Sudhir Reddy

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Societal changes in India have made women to come out from home and participate in all the fields equally with men. In this process, women have participated in various societal activities including demonstration and riots. As the existing strength of Female Police Personnel is inadequate, the need to hire more number of Female Personnel in Police Department is identified. As Women are sensitive and delicate in nature, they face various difficulties in balancing their personal life and Work. Hence the present study is conducted on Women Police Constable with the objectives to find the factors that are affecting their Work Life balance and to study the impact of the demographics like Age, Marital Status, Designation and Education Qualifications of Women Police Constables on their Work Life Balance. Percentages, Factor Analysis, One Sample t-test and ANOVA tests are conducted to meet the objectives.

**Key words:** Balance, Family, Work, Women and Demographics.



*Ms. S. Padma, Research Scholar  
Jawaharlal Nehru Technological University  
Hyderabad.  
Email id: padmasmba@gmail.com*



*Dr. M. Sudhir Reddy, Project Officer  
NTMIS, Jawaharlal Nehru Technological University-  
Hyderabad.  
Email Id: msudhir\_reddy@yahoo.com*

**W**ork Life and Personal Life are the two sides of a coin. These two are often interrelated and inter connected. Balancing them is always a challenging game for the employees. Work Life Balance refers to have the 'right' combination of participation in paid work and other aspects of their lives. This combination may not be the same in all occasions, may change over a time period. The Term Work Life Balance is first used in United Kingdom in late 1970s describing the balance between an individual's work and personal life. In the United States this term is used in 1986.

Women with the changing economic, political and social changes are joining into the workforce for various reasons. Balancing work and household responsibilities is a skillful exercise that they perform every day. The qualified and educated women try to attain work life balance by utilizing various benefits provided by their employer where as women with low education qualifications are often imbalanced because of poor support from family members and employers.



## Literature Review

Various academicians and authors viewed and perceived work life balance differently, hence there is no standard and consistent definition for it. But all the definitions have given a similar meaning to it as giving equal priority to work and non work roles. Greenhaus, Collins and Shaw (2003) have explained three components of work life balance. First is Time Balance- an equal amount of time spent for work and family roles, second is involvement balance- equal amount of involvement for both the roles, and the third is satisfaction balance- equal amount of satisfaction derived from both the roles.

Burke (2000) in his study has observed that both men and women prefer to work in those organizations that have supportive work life balance practices. Rana and Seema (2012) have conducted an empirical study on impact of demographic variables on the critical factors of work life balance and found that gender, level of employment and experience have a significant impact on the critical factors of work life balance.

The studies on Work Life Balance of women have taken high importance in the present day scenario. Women prefer to give first priority to their family and never try to compromise in this. To fulfill their career ambitions, meet the financial needs of the family and to have financial independence, women have joined in the global work force. There are various research studies conducted in India and abroad on Work Life Balance of Women in various sectors.

Buffardi et al (1999) have assessed the impact of child care and gender on work life balance and job satisfaction and have found that elder care responsibility is associated with lower level of satisfaction. Organizational support, pay and leave benefits have positive impact on work life balance. Gersick and Kram (2002) have conducted a study on high achieving women in senior management position and found that maturity is one of the factors that help women leaders to cope up with career barriers.

Sundar et al (2012) have conducted their study on women employees of banks located at Pondicherry Union Territory, India and found that women employees working in banking industry find it difficult to balance home life and work life. It is because of high stress involved in those jobs which is hindering them from climbing the organizational ladder, though they possess sufficient qualification, good communication skills and competencies to handle responsibilities.

Mominul (2011) has made a study on Work Life Balance in service context and found that the variables such as work culture, job satisfaction, employee benefits, work environment, work load, flexible work timings and discrimination influence work life balance of employees.

Narayanan et al (2012) have conducted a study on IT sector in Tamilnadu, India and found that work timings, excess work load, routine timings, work on holidays are strongly influencing work life balance of employees. Murthy et al (2013) have made a study on gender issues of women employees at work place in Indian BPO Sector and found that age, educational qualifications, job position, monthly income are negatively correlated with work life balance of women employees in Indian BPO sector.

Vijaya Lakshmi et al (2012) have studied Work Life Balance Issues of Women Faculty working in educational institutions and found that women faculty have faced a constant struggle between the family obligations and expectations of their institution that cause imbalance in their personal and work life. Santhana Lakshmi and Sujatha Gopinath (2013) have made a study on Work Life Balance of women employees with reference to teaching faculties and found that marital status, working hours, flexibility requirement, additional working hours and overtime are the critical factors that are influencing work life balance of school teachers. Hence from the above studies it is understood the factors that are influencing work life balance are changing as per the job and industry.

## Women Police Personnel

The societal changes in India have made women to come out of their home and work equally along with men in all the fields. In this scenario they are participating in all social activities including demonstration and riots which sometimes lead to violence. These situations have identified the need for women police personnel in order to deal with women demonstrators.

Police life is not so easy. It entails long working hours, hazardous and arduous tasks that cause stress, tiredness and often imbalance their work and personal life. Rakesh Kumar (2007) has conducted a study on Stress management in CRPF and found that most of the Officers and NGOs are under stress and reasons for stress are both job and family related issues. Rekha Rani and Pooja (2010) have conducted a study on burn out and marital adjustment of Police Personnel and

found that there exists a negative correlation between Burnout and Marital adjustment. Samatha and Amulya Khurana (2006) have conducted a study on Organizational Role stress and Job satisfaction on paramilitary Personnel in Kashmir and found that role stagnation (stress to take new roles) is the main cause of job dissatisfaction.

Banerjee(2010), IPS(Retired) and former DGP of Anti Corruption Bureau,Gujarat has conducted a study on analysis of problems of inducting Women Personnel in Central Police Forces (CPF) and found that the strength of female personnel was very less and inadequate to the requirement. Hence he recommended increasing the number of police personnel in CPF. He has highlighted various problems of women police personnel like separate toilet, rough language of their male bosses, lack of female instructors at training programs, uniform at pre-natal and post natal periods and family issues. From the above literature it is understood very few studies have been conducted on female police personnel hence the present study is aimed to study on work life balance issues of Female Police Personnel.

### Research Objectives

The present research study has the following objectives

- To study on various factors those are influencing work life balance of Women Police Constables.
- To measure the association between demographic factors and Work Life Balance.

### Research Hypotheses

The following Research Hypotheses are formulated to test the objectives.

H<sub>01</sub>: There is no significant difference in Work Life Balance with respect to Designation.

H<sub>02</sub>: There is no significant difference between Marital Status and Work Life balance of Female Police Constables.

H<sub>03</sub>: There is no significant difference between Age category and Work Life Balance of Women Constables

H<sub>04</sub>: There is no significant difference between Qualification of the Women Police Constables and their Work Life Balance.

### Methodology and Sample Design

The study is an explorative research to find the various factors that are influencing work life balance of female police constable. A convenience sample of 56 respondents is drawn from 14 districts of Andhra Pradesh.

Data for the study is collected by administering a structured questionnaire. The items in the questionnaire are adopted from the literature. The statements have been modified and reworded according to the organization taken for conducting the study. The questionnaire consists of two parts. The first part consists of demographic and personal information of the respondents and the second part consists of various items to study work life balance. The questionnaire consists of a series of statements where the respondents needed to provide answers in the form of agreement or disagreement to express their attitude towards their work life issues on a 5-point Likert scale (Strongly Agree-5, Agree-4, Neutral-3, Disagree-2, and Strongly Disagree-1). Table 1 shows the descriptive statistics of the respondents.

### Results and Discussions

Data is analyzed using Statistical Package for Social Sciences (20.0) version and Percentage, Factor Analysis, One Sample t-test and One Way ANOVA tests are the various statistical tools are used.

**Table 1: Reliability Statistics**

Cron bach's Alpha	No. of Item
.814	32

The data is analyzed with the help of Statistical Package for Social Sciences (SPSS) 20.0 version. An analysis is conducted for checking the reliability of the questionnaire and the results

are obtained. The Cronbach's alpha (a measure of reliability) is calculated for the questionnaire. This coefficient (0.814) indicates reliability as it meets the minimum accepted level.

**Table 2: Description of the Respondents**

Item	Description	Frequency	Percentage
Age	Below 25 yrs.	12	21.4
	Between 26 to 35 yrs.	8	14.3
	Between 36 to 45 yrs.	26	46.4
	Above 46 yrs.	10	17.9
Designation	Women Police Constable	42	75
	Head Constable	14	25
Marital Status	Married	41	73.2
	Unmarried	25	26.8
Qualification	SSC or 10th Class	15	26.8
	Intermediate	15	26.8
	Graduation	20	35.7
	Post Graduation	6	10.7

Table 2 has explained the demographic profiles of the respondents. From Table 2 it is understood that most Female Police Constable are of age group between 36 to 45 years and 75% of them married and the remaining are unmarried.

75 percent of them are women police constables and the rest are Head Constables. It is found from the table that 53% are having very low educational qualification as X<sup>th</sup> Class and Intermediate.

**Table 3: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.612
Bartlett's Test of Sphericity	Approx. Chi-Square	997.524
	Df	96
	Sig.	.000

As the main objective of this paper is to identify the factors that influence Work Life Balance among women constables, Factor Analysis is conducted to ascertain the relative strength of various factors in this regard. The KMO measure indicates

sample adequacy of 0.612 which is fairly good. The Bartlett's test has confirmed normality of the samples as supported by statistically significant Chi-Square value.

Table 4: Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of variance	Cummulative %	Total	% of variance	Cummulative %	Total	% of variance	Cummulative %
1	5.057	15.804	15.804	5.057	15.804	15.804	4.715	14.734	14.734
2	4.723	14.758	30.562	4.723	14.758	30.562	4.262	13.318	28.052
3	3.401	10.628	41.190	3.401	10.628	41.190	4.204	13.138	41.190
4	2.322	7.255	48.445						
5	2.031	6.348	54.793						
6	1.689	5.278	60.071						
7	1.401	4.377	64.448						
8	1.336	4.175	68.623						
9	1.147	3.584	72.207						
10	1.062	3.320	75.527						
11	1.006	3.143	78.670						
12	.838	2.618	81.288						
13	.734	2.294	83.582						
14	.648	2.026	85.608						
15	.587	1.835	87.443						
16	.527	1.648	89.090						
17	.508	1.586	90.676						
18	.430	1.344	92.021						
19	.375	1.171	93.192						
20	.353	1.104	94.296						
21	.303	.948	95.244						
22	.264	.824	96.068						
23	.229	.717	96.785						
24	.217	.678	97.462						
25	.176	.551	98.013						
26	.142	.445	98.458						
27	.128	.401	98.859						
28	.114	.357	99.216						
29	.078	.245	99.461						
30	.076	.236	99.697						
31	.061	.189	99.886						
32	.036	.114	100.000						
Extraction Method: Principal Component Analysis.									

It can be noted from Table 4, that among various factors included for the factor analysis, the first three components alone explained more than 41% of variance in Work Life

Balance. This means the factors chosen for analysis are relevant.

**Table 5: Rotated Component Matrix<sup>a</sup>**

	Component		
	1	2	3
Spouse Household activities	.705		
Spouse Child care	.745		
Elder Parents Household activities	.488		
Elder Parents Child care	.806		
Friends Household activities			
Neighbors Household activities			
Peer House hold activities			
Time for children	.801		
Time for Spouse	.792		
Time for friends		.625	
Time for hobbies		.550	
Time for Health care		.551	
Time for picnics/outings		.647	
Time for Shopping Malls		.726	
Time for movies in theatre		.555	
Time for social functions		.635	
Reach workplace on time	-.485		
Extra time at work place			.795
Support from superiors			
Support from peer group			
Clear in job roles			.743
Aware of organizational policies			.663
No mental harassment at work place			.578
Leaves not lapsed			.601
No physical harassment at workplace			.510
Ready for urgent works			.541
Time to organize functions		.622	
Can opt for flexible work timings		.499	
'Time off' for emergencies			
Easy sanction of leaves			
Neighbors Child care	.736		
Career growth			.715
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			



By analyzing the Rotated Component Matrix from Table 5, it is clear that first component has seven factors with heavy loading, viz. support from spouse, elder parents and neighbors in child care and support from spouse and elder parents for household activities, sufficient time available to spend with children and spouse. This is very clear from the table the first component discusses about family responsibilities. Most of the women professionals feel that female spouse is expected to take care of the family responsibilities in Indian Society and it has significant impact on career decisions and they could not utilize their potential because of their family responsibilities (Sanghamitra, 2009, Deepak Chawla et al , 2011)

The Second Component consists of nine factors that explain about the time she categorized for her personal care and for non work related activities like time for her healthcare, hobbies and friends for her satisfaction. She tries to adjust her time for Shopping for entire family, spend her time with family members in picnics/outings and watching movies for recreation, fun and entertainment. She also spares some time for attending

social functions to maintain societal relationship and categorizes some time for organizing functions for her children’s birthdays, marriages etc. She tries to opt for flexible work timings if available so that she can balance personal and work life (Pattu Meenakshi, 2012).

The third component consists of eight factors that explain her work responsibilities. She can give her best performance when she is clear about her job roles, completely aware of her organizational policies and objectives. Being a career motive woman, she prefers to work hard and spend extra time at work place when the job provides good career growth opportunities. Women perform well when they work in a safety place where there are no physical and mental harassment. She shows her readiness to perform urgent works by consuming less number of leave (Divya et al, 2010, Vanishree, 2012, Varathraj et al, 2012).

In order to meet the second objective of the study the following statistical tests like one sample t-test and ANOVA have been conducted to test the hypotheses.

**Table 6: T-test Results**

Demographics	T-test value	Sig	Result
H <sub>01</sub> : Designation Vs.WLB	1.063	0.292	Accept H <sub>01</sub>
H <sub>02</sub> :Marital Status Vs.WLB	-4.131	0.000	Reject H <sub>02</sub>

The above Table 6 describes the t- test results of the first two hypotheses. One Sample t-test is conducted to compare the means of two categories of designations (Women Police Constable & Head Constable) and Work Life Balance of Women Police Personnel. As significant value (0.292) is more than 0.05, the Null hypothesis (H<sub>01</sub>) was accepted. It means there is no significant difference between Women Police Constable and Head Constable with respect to their work life

balance. Similarly One sample t-test was conducted to test the second hypothesis between Marital Status and Work Life balance. As the significant value (0.000) is less than 0.05, rejected Null Hypothesis (H<sub>02</sub>). That means there is a significant difference between Married and Unmarried Women Police Constable and the past research results of Pattu Meenakshi (2012) are in accordance with the research result.

**Table 7: ANOVA test Results**

Demographics	T-test value	Sig	Result
H <sub>03</sub> : Age Category Vs.WLB	3.020	0.038	Reject H <sub>03</sub>
H <sub>04</sub> :Qualifications Vs.WLB	1.042	0.382	Accept H <sub>04</sub>

Table 7 depicts the results of ANOVA table. The age is classified into four categories like less than 25 years, between 26 to 35 Yrs, between 36 to 45 Yrs and above 45 years. The f-value is 3.020 and the significant value is 0.038 which is

less than 0.05. Hence the Null hypothesis is rejected (H<sub>03</sub>). That means there is a significant difference between various age groups of Women Police Constables and their Work Life Balance. These results are in accordance with the results of

Smith et al (2007) and Kumari et al (2012). The Women constables have various educational qualifications like SSC, Intermediate, Degree and Post graduation. The f-value was 1.042 and the significant value is 0.382 which is more than 0.05. Hence accept Null hypothesis ( $H_{04}$ ). That means that various qualified women police constables perceived about their work life balance in a similar manner. The result is in accordance with the study of Santhana, (2012) conducted on Work Life Balance of Women Teachers.

### Conclusion

The factor analysis has classified the factors that are influencing work life balance of Female Police Personnel into three components like Family issues, Personal care issues and Work issues. Women need more support from her family members i.e from Spouse and Elder Parents to relieve stress in balancing their work and personal life. The study has found that Age Category and Marital Status of Women Police Constable have significant impact on Work Life Balance. Elder age group women and high designated women can easily manage their work life balance. The above study is very useful to the Police Department in planning various Work Life Balance practices like crèche and create harmonious work environment to enable Women Police Personnel rightly balance their work and personal life that improve their performance levels.

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# Linkages Among Stock Markets: Asia-Pacific Region

M.S.Ramaratnam , R.Jayaraman and G. Vasanthi

## A b s t r a c t

*This paper has made an attempt to examine the relationship between the Indian stock market and rest of the selected international markets. The study is tested with cross correlation, Unit root test, Granger causality test and Johansen cointegration test to seek the relationship, stationarity, directional causality and either short or long run equilibrium between the Sensex and the selected indices of various stock markets. The result obtained by the econometric tools shows that the correlation between the sensex and the other selected indices is high and significant, the data are stationary in the first difference, both unidirectional and bidirectional causality occurs and the long term relationship is found between sensex and other selected indices.*

**Key words:** Cross Correlation, Unit root test, Granger causality test and Johansen cointegration test



M.S.Ramaratnam, Assistant Professor (Senior Grade),  
Faculty of Management Studies, SCSVMV  
University, Kanchipuram, Tamil Nadu –  
631561. Cell: (0)9842754984E-  
Mail: hellomsraman@gmail.com

R.Jayaraman, Assistant Professor of Management Studies,  
SCSVMV University, Kanchipuram, Tamil Nadu – 631561  
Cell: (0)9942125400E- Mail: jayarawman@gmail.com

Dr. G. Vasanthi, Professor of Commerce, Annamalai  
University, Annamalai Nagar, Tamil Nadu -608 002.  
Cell: (0)9994220202E- mail: vasanthi30@yahoo.co.in

Prior to the globalization, investor community and academicians were not much interested in analyzing the indices of the stock market since the markets did not show any remarkable sign for the analysis. But in the era of liberalization and globalization, Indian stock market plays a vital role for the investors' community in taking their investment decision and the movement of indices of stock market helps the investor to take advantage of price fluctuations from one exchange to another exchange. The process of making gain by selling the script from one exchange to another exchange is known as arbitrage. Normally integrated mechanism among the stock exchanges within the country restricts the investor to get abnormal gain due to the difference in the price of the same script in different exchanges. Though the stock exchanges within the country are well connected, it remains unanswered whether the Indian stock market is integrated with international market. This paper has made an attempt to find if any relationship exists and further the said relationship is in long term.

## Literature Review

**Bailey & Stulz (1990)** applied simple correlation technique to find interrelationship among US and Pacific basin stock market and found that the correlation differed in terms of daily, weekly and monthly time series data.

**Arshanapalli & Doukas (1996)** applied Johansen cointegration technique on daily data belonging to different Asian markets and found that there was no long term relationship among the Asian stock market.

**Ghosh (1999)** in contrary to **Arshanapalli & Doukas (1996)** found that some of the Asian market showed a long run equilibrium relationship with the world's major stock market.

**Floros (2005)** found a long term relationship among the stock prices of US, Japan and UK. He also observed that through Granger causality test some of the stock indices have shown bidirectional effect and some other showed unidirectional effect.

**Amanulla & Kamaiah (1995)** examined the long run equilibrium between the RBI stock price indices of Bombay, Calcutta, Madras, Delhi and Ahmedbad. They found that there existed long run equilibrium.

**Nath & Verma (2003)** tested the cointegration between India and other selected countries with daily price indices and found that no cointegration existed among India, Taiwan and Singapore for the period January 1994 to November 2002.

**Jayanthi & Pandiyan (2008)** tested the cointegration between the stock price indices of India, Malaysia, Taiwan, china, South Korea, US, UK, Germany, Singapore, Hong Kong and Japan. The study period was from April 2000 to March 2007 and they found that no correlation and cointegration among the selected stock price indices.

**Anindya Chakravarty & Dr. Bidyut Kumar Ghosh (2011)** made an attempt to find the relationship among the indices of Sensex 30, S&P 100 and FTSE 100 through Granger causality test and found that unidirectional causality occurred for S&P 100 and FTSE 100 from Sensex.

**Som Sankar Sen (2011)** made an attempt to investigate the relationship between Sensex and some selected Stock Price Indices of the Asia Pacific region and found that the correlation among the selected Stock Price Indices were highly correlated and significant. Granger causality test revealed the

unidirectional effect from the Asian tigers to Sensex and Johansen cointegration test clearly showed that there existed a long run relationship between sensex and stock indices of the major Asian Pacific countries.

It is worth mentioning that the present study is carried out as an extension of the study of **Som Sankar Sen (2011)** with the time interval from January 2000 to June 2013 to find out the relationship among the selected market indices in amidst recent recessionary trends.

## Objectives of the study

1. To test the stationarity of the selected Stock Market Indices
2. To examine directional effect among the selected share indices
3. To understand the effect of Long term relationship among the selected market.

## Data & Methodology

Monthly closing price indices of selected stock markets were taken from the period of 2000 to 2013. The above data was collected from yahoofinance.com. The monthly data was collected as against the daily data to avoid representation bias. The returns of the respective stock indices were collected using the formula

$$\ln(I_t / I_{t-1})$$

$I_t$  → Index value at time t

$I_{t-1}$  → Index value at time t - 1

## Methodology

Following econometric models were used for further analysis

- Cross Correlation,
- Unit root test,
- Granger causality test, and
- Johansen cointegration test.

## Cross Correlation

In order to find the co movement of selected indices and the lag relationship between them, pairwise cross correlation was used between Sensex and other price indices.

$$CCF(K) = \frac{\sum_{t=1}^{T-K} (x_t - \bar{x})(y_{t+k} - \bar{y})}{[\sum_{t=1}^T (x_t - \bar{x})^2 (y_{t+k} - \bar{y})^2]^{1/2}}$$

Where K is greater than, equal or less than zero

**Unit root test**

Normally time series data are tested for stationarity. As and when the data are non stationary the application of regression on the data would be spurious. To test the stationarity, the unit root test has been applied on time series data. In this regard this study is applied with both ADF and Phillips – Perron tests to find whether the data are stationary.

**The Augmented Dickey-Fuller (ADF) Test**

The standard DF test is carried out by estimating the following Equation after subtracting  $y_{t-1}$  from both sides of the equation:

$$\Delta y_t = a y_t - 1 + x_t \phi d + e_t,$$

where  $a = r - 1$ . The null and alternative hypotheses may be written as,

$$H_0: a = 0$$

$$H_1: a < 0$$

Empirical Results  
Descriptive Statistics

**Table 1 showing the Descriptive Statistics of Sample Stock Indices data**

Statistic	HSI	JKSE	KISE	KOSPI	NIKKEI	Sensex	STI
Mean	9.703059	7.199588	6.930852	7.066629	9.361426	9.095754	7.744146
Median	9.726207	7.202011	6.842277	7.212417	9.308685	9.259454	7.764607
Maximum	10.35305	8.530826	7.480733	7.692734	9.920213	9.928623	8.244255
Minimum	9.063515	5.881175	6.350676	6.173119	8.931740	7.941509	7.145054
Std. Dev.	0.298931	0.842431	0.315598	0.449355	0.242181	0.676020	0.288247
Skewness	-0.272011	-0.083175	0.054338	-0.320624	0.432771	-0.323812	-0.309910
Kurtosis	2.097949	1.598552	1.743495	1.696333	2.098178	1.518472	1.944113
Observations	162	162	162	162	162	162	162

Source: Computed Data

**The Phillips – Perron test**

The Phillips – Perron test is carried out by estimating the following equation

$$\Delta y_t = \alpha + \delta y_{t-1} + \mu_t$$

Where  $y_t$  is the time series data under consideration.

**Granger causality test**

The test was carried out to identify the directional effect of selected indices. To test for Granger causality, the following two equations were estimated

$$y_t = a_0 + a_1 y_{t-1} + a_2 y_{t-2} + \dots + a_m y_{t-m} + \text{residual}_t,$$

and

$$y_t = a_0 + a_1 y_{t-1} + a_2 y_{t-2} + \dots + a_m y_{t-m} + b_1 x_{t-1} + \dots + b_q x_{t-q} + \text{residual}_t.$$

**Johansen cointegration test**

The condition for testing Johansen cointegration test for any time series data is that the data should be non stationary at their level i.e. the natural logarithm of time series data should be non stationary and the first difference in the data should be stationary. If the return indices of different markets are correlated, the value may raise or fall. On the other hand, if the time series data are cointegrated, then the series in the long run will come to equilibrium point.



**Table 2 showing the Descriptive Statistics of Monthly Return of Stock Indices**

Statistic	HSI	JKSE	KISE	KOSPI	NIKKEI	Sensex	STI
Mean	0.001804	0.012497	0.004038	0.004198	-0.002202	0.008120	0.002132
Median	0.010399	0.021752	0.009744	0.009965	0.002450	0.009799	0.011206
Maximum	0.157634	0.183417	0.127032	0.202537	0.120888	0.248851	0.193002
Minimum	-0.254455	-0.377197	-0.165142	-0.263112	-0.272162	-0.272992	-0.273640
Std. Dev.	0.065024	0.071476	0.045635	0.071995	0.059813	0.073573	0.059474
Skewness	-0.605928	-1.144575	-0.534716	-0.436518	-0.727136	-0.461347	-1.068986
Kurtosis	4.128963	7.444398	4.117878	3.779364	4.518948	4.208421	6.941767
Observations	162	162	162	162	162	162	162

Source: Computed Data

Table 1 and Table 2 show the descriptive statistics for sample stock indices and the return of indices. The statistics of sample

stock indices was calculated on the basis of conversion of raw time series data into their natural logarithmic form (ln)

#### Cross Correlation

**Table 3 showing the Cross-correlations between Sensex and other Indices**

lag	HSI	JKSE	KISE	KOSPI	NIKKEI	STI
-5	0.78*	0.91*	0.84*	0.90*	-0.07	0.81*
-4	0.81*	0.93*	0.86*	0.92*	-0.06	0.84*
-3	0.84*	0.94*	0.88*	0.94*	-0.04	0.86*
-2	0.87*	0.96*	0.90*	0.95*	-0.02	0.88*
-1	0.90*	0.97*	0.92*	0.96*	0.00	0.91*
0	0.91*	0.98*	0.94*	0.97*	0.02	0.92*
1	0.91*	0.96*	0.94*	0.96*	0.02	0.92*
2	0.91*	0.95*	0.93*	0.95*	0.03	0.90*
3	0.90*	0.93*	0.92*	0.93*	0.04	0.89*
4	0.89*	0.92*	0.91*	0.92*	0.04	0.88*
5	0.88*	0.90*	0.90*	0.90*	0.03	0.86*

Note: \*significant at 1% level

Source: Computed Data

The pair-wise cross correlation co-efficient between Sensex and other indices are presented in table 3. It is noted from the table 3 that there is very high correlation between the Sensex

and other selected indices at 1% level of significance. NIKKEI alone showed an exception in such a way that the negative correlation existed in some of the lags and the correlation co-efficient for other lags are very low and also insignificant.

## Unit root test

Table 4 showing ADF unit root test results

Index	Level	Ist difference
HSI	-1.269333	-10.84731*
JKSE	-0.242041	-10.07594*
KISE	-0.115159	-11.12041*
KOSPI	-0.810002	-12.22687*
NIKKEI	-2.552524	-10.62531*
Sensex	-0.439428	-11.49042*
STI	-1.328972	-11.00627*

Note: \*significant at 1% level

Source: Computed Data

Table 5 showing Phillips-perron unit root test results

Index	Level	Ist difference
HSI	-1.473174	-10.84360*
JKSE	-0.075601	-10.05815*
KISE	-0.443127	-11.20819*
KOSPI	-0.928099	-12.24494*
NIKKEI	-2.487114	-10.74216*
Sensex	-0.588206	-11.59235*
STI	-1.411922	-11.10704*

Note: \*significant at 1% level

Source: Computed Data

The selected stock market indices are tested with both ADF and PP test and it is shown in the Table 4 and Table 5. The results obtained by both the tests to seek for stationarity revealed that all time series data are non stationary at their

level but attained stationarity after first differencing. Therefore, all time series data have been first differenced to achieve stationarity.

**Granger Causality Test**

**Table 6 showing the Granger causality test results**

Null Hypothesis	F- Statistics				
	Lag 1	Lag 2	Lag 3	Lag 4	Lag 5
HSI does not Granger Cause SENSEX	2.08653	3.44376**	9.60958**	7.08429**	5.80313**
SENSEX does not Granger Cause HSI	5.69262**	4.32105**	3.72508**	2.48751**	3.17193**
JKSE does not Granger Cause SENSEX	0.06761**	0.34792	3.50265**	3.15902**	4.77003**
SENSEX does not Granger Cause JKSE	1.29148	2.47084*	1.53644	0.56482	4.05415**
KISE does not Granger Cause SENSEX	0.26855	0.80478	0.77622	0.92555	0.62739
SENSEX does not Granger Cause KISE	3.47637*	3.56673**	2.24688*	1.51785	1.38117
KOSPI does not Granger Cause SENSEX	1.15546	1.91883	4.06541**	3.35083	2.78359**
SENSEX does not Granger Cause KOSPI	3.69467**	2.39122*	4.12346**	3.72926**	3.47739**
NIKKEI does not Granger Cause SENSEX	0.35595	0.49070	0.36601	0.50385	0.37472
SENSEX does not Granger Cause NIKKEI	0.14483	0.03303	0.10892	0.08583	1.35309
STI does not Granger Cause SENSEX	0.00218	0.20703	3.36160	2.25542	2.04379
SENSEX does not Granger Cause STI	2.43877*	1.33581	2.66720*	2.11816*	2.66453*

Note : \* significant at 5%, \*\* significant at 1%

Source: Computed Data

The pair wise Granger causality test is shown in Table 6. The study has taken the choice of lag length from 1 to 5. The empirical result shows that at lag 1 either unidirectional or bidirectional effect was not seen in most of the cases. In lag 2 Sensex showed unidirectional causality to HSI, JKSE, KISE

and KOSPI. The above result indicates that four out of six monthly index returns have short run relationship with that of the Sensex. In Lag 5 both unidirectional and bidirectional causality effect were seen in most of the selected indices.

**Johansen cointegration test**

**Table 7 showing the Johnsen cointegration test result (lags interval: 1 to 4)**

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.343328	170.3393	125.6154	0.0000
At most 1 *	0.202807	104.3097	95.75366	0.0113
At most 2	0.179836	68.72430	69.81889	0.0609
At most 3	0.118962	37.59885	47.85613	0.3198
At most 4	0.051116	17.71413	29.79707	0.5872
At most 5	0.035301	9.476594	15.49471	0.3231
At most 6	0.024125	3.834071	3.841466	0.0502

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

Source: Computed Data

The result obtained in the table 7 through Johansen cointegration test revealed that trace statistics is significant at 1% level in only two cases and it leads to conclude that there is long run equilibrium between the Sensex and selected indices of the stock market. The Null hypothesis of no cointegration effect is rejected in most cases.

### Conclusion

The study reveals certain facts that there is high correlation between Sensex and other selected indices during the study period. Further it is worth noted that both unidirectional and bidirectional causality effect took place among the selected indices. The result obtained through cointegration test proved exists long run equilibrium between the Sensex and other selected market indices. Due to this cointegration prices in different markets cannot move away far from each other and therefore the investor community cannot get abnormal gain due to the price difference among the markets. The major aspect of the study is in tandem with the earlier work of **Som Sankar Sen (2011)** except in the case of Granger causality test.

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# Organizational Health : Knowledge Based Sectoral Employees

P.Sivapragasam and R.P.Raya

## A b s t r a c t

We live the greater part of our lives spent in organizational settings. But the competitive nature of today's marketplace forces organizations and individuals to focus on trying to beat others rather than do their best and live up to their potential. This phenomenon has a number of implications and is expressed by a new ideal for management to seek- organizational health. At present, limited work has been done to define what a healthy organization is and how to measure it. Therefore, this study is conducted to determine the factors of organizational health among knowledge professionals in the hope that a more analytical approach would offer insights into how to create them. The results suggest that managerial efficiency, HRM practices, employee citizenship, team work orientation and value-based management are critical; otherwise the goal of sustained performance will remain elusive.

**Key words:** Organizational health, healthy workplace, organizational performance, HRM, well-being, superior-subordinate relationships, power relations, team work orientation, etc.



P. Sivapragasam, Department of Management Studies,  
Pondicherry University, R.V.Nagar, Kalapet, Puducherry-  
605014. Mob:098843 48588  
Email:- sivapragasam.pondiuniv@gmail.com



Dr. R.P.Raya, Dean- School of Management, Professor-  
Department of Management Studies, Pondicherry University,  
R.V.Nagar, Kalapet, Puducherry-605014,  
Email:- drrpraya.dms@pondiuniv.edu.in

The greater part of our lives is spent in work and in organizational settings. We not only work for these organizations, we also belong to them. But, over the last 30 years, major changes have taken place in the organizational settings. New technologies, globalization, changing demographics, increased competitiveness and the need for continuous improvement in productivity have all had a profound impact on how, when and where work gets done (DeJoy, & Wilson, 2010). Today, for the organizations, staying in front requires a faster and smarter performance each year enabled by the capability of attracting and retaining a highly skilled workforce. Equally, today's knowledge professionals are gifted with higher level of education, intelligence, and therefore they command very competitive wages.

While work in today's economy offers the potential for satisfaction, repetitive and intensive work, stringent targets and tight supervisory control and monitoring are creating

dissatisfaction (Taylor & Bain, 1999). As a result, most organizations in the knowledge based category are experiencing the highest turnover compared to other sectors (Maudgalya, Wallace, Daraiseh, & Salem, 2006). The reason is quite obvious. The ways in which work is organized—particularly its pace and intensity; control over one’s work process and for realizing a sense of self-efficacy, justice, and employment security all are impacting the health and well-being of the organizational members and performance, thus inviting study from a variety of perspectives (Warr, 1990; Cooper & Cartwright, 1994; Marie McHugh & Chris Brotherton, 2000; Sparks, Faragher & Cooper, 2001; Addley, McQuillan & Ruddle, 2001; Ajay Jain & Arvind Sinha, 2005; Kelloway & Day, 2005; Joan Burton, 2010).

### **The Concept of Organizational Health**

Health is a positive concept emphasizing social and personal resources as well as physical capabilities (Ramnik Ahuja & Debasis Bhattacharya, 2007). It describes our ability to flourish and enjoy life, and to cope and survive in adversity. Ironically, the concern for health and well-being in the organizational context are no means new. From an almost exclusive focus on the physical work environment (the realm of traditional occupational health and safety), the definition has broadened to include health practice factors- lifestyle (Addley, McQuillan & Ruddle, 2001); psychosocial factors (Lowe, Schellenberg, & Shannon, 2003; James Campbell Quick, Marilyn Macik-Frey & Cary L. Cooper, 2007); and a link to the external environment (Ian Saunders & Steve Barkers, 2001); all of which can have a profound effect on employee health and well-being (Brad Gilbreath & Philip Benson, 2004; Grawitch, Gottschalk & Munz, 2006). To say so, we observe a paradigm shift in conceptualizing health from a ‘bio-medical concept’ (health as the absence of disease) to a ‘humanistic health concept’ (health as individual perceived well-being). The evolution of this research paradigm now takes the term “organizational health” which undermines the range of organizational and job related opportunities that are available to an individual person to meet his or her needs of well-being, productivity and positive self-experience (Sauter, Lim & Murphy, 1996; Aaron De Smet, Mark Loch & Bill Schaninger, 2007).

According to Cox (1988), organizational health embeds the notion of health into work organization with an underlying assumption that it should be possible to identify healthy from the unhealthy ones. This means that as a construct, the framework of organizational health helps us in understanding how individual and organizational factors interact and

influence particular employee and organizational outcomes. While these two perspectives are very different, a nexus between them means issues in one affecting the other. Current thinking suggests that individual level well-being leads to a higher level of individual-level performance (Judge, & Bono, 2001), in turn leading to better organizational performance (Bakker, & Schaufeli, 2008), motivates workers, enhances morale, reduces absenteeism, reduces personnel and welfare problems, competitiveness and public image (Chu, Breucker, Harris & Stitzel, 2000; Kramer & Cole 2003; Whitehead 2006). Similarly, the consequences of unhealthy work organization are many and include work-related accidents, high rates of absenteeism, a high turnover, high levels of stress, loss of productivity and a high incidence of health-related litigation (Whitehead 2006).

### **Statement of the problem**

In recent years, management scholars have been increasingly interested in the impact of organizational context on its members (Danna & Griffin, 1999; Dugdill, 2000; Verow & Hargreaves, 2000; Peter Cotton & Peter Hart, 2003; Robert MacIntosh, Donald MacLean & Harry Burns, 2007; Kuenzi, Schminke, 2009). Research has also shown that while the individual health practices of employees influence their overall health, conditions in their physical and social work environments also play an important role. The work and organizational context is also important because it gives the salience and meaningfulness to the employees. In seeking to understand organizational and job factors of health, feedback from internal stakeholders, employees, is of particular importance. Therefore, research on organizational health assumes more relevance in today’s scenario where our economy is thriving and greater majority of the young workforce are spending longer hours at work in a competitive environment. Employees perception of their organization affect their perception of the climate, which impacts the way people relate to their jobs and see their future in their organizations, ultimately impacting their adjustment, productivity and well-being (Wilson, DeJoy, Vandenberg, Richardson, & McGrath, 2004). Although researches on organizational health have been steadily increasing, empirical knowledge as to their use, their determinants remain rather limited. The present investigation is to address these issues.

### **Operational Definition**

At the core of organizational health, are five key concepts, which the authors believe are essential for the health of any organization. Therefore for the purpose of this research,



organizational health is defined as one when its management is efficient, value-driven, team work culture, HR practices are unified so as to bring about desired employee citizenship that drives both employee and organizational performance. To say so means, a healthy organization is one that provides an environment for good performer to join and stay, free of politics, confusion and outperform their counterparts on a regular basis.

### Methods

The purpose of this study is to explore the determinants/factors of organizational health held by knowledge professionals at different levels in Indian organization in which they currently work or have worked, which they perceive as possessing healthy work organizational dimensions/characteristics. The organizations included in this study were the largest IT companies in India as listed by the NASSCOM (2012) with their operations in the city of Chennai. Although questionnaires were distributed to HR managers of 6 different companies, we were only able to obtain complete data from 4 companies.

### Procedures

For the purpose of this study, a 30-statement questionnaire was prepared. The statement in the instrument reflects the extent to which a company is perceived as healthy in terms of various dimensions that are in place to achieve both individual and organizational outcomes. The statements include the signature combination of 'management practices', they will drive throughout the organization to enable high levels of employee engagement and organizational performance. Employees are therefore asked to provide ratings on a 1-5

scale (1 corresponds to "almost always untrue;" and 5 corresponds to "almost always true") for each statement, referring to the company as a whole. The data collected was analyzed and interpreted using SPSS (Statistical Package for Social Sciences) Version 18.0.

### Reliability

Cronbach's Alpha Based on Standardized Items for the 24-item scale is 0.898.

### Results: Sample Characteristics

A total of 212 executives from Indian IT companies completed the organizational health scale and of which 200 were included for analysis. The respondents were primarily male (68.5%). Regarding the age, the mean age of the respondents is 32.23 years respondents were primarily at the age group of 25-34 years (49%), with approximately nearly equal numbers of respondents in the age group of less than 25 years (24%) and 35-44 years (23 %). Majority of the respondents hold University degree-UG (65%) while (29%) of them hold University degree-PG and the rest of them have a diploma from polytechnic college. Greater majority of the respondents are working in the regular shift (74%), permanent job (83.5%). It is significant to note that majority of the respondents (55.5%) are working in the supervisory role and with regard to total job experience, the range was from 3 years to 19 years with the mean at 11.43 with SD of 4.23. The average working hours is at 42.6 with an SD of 5.59. We used data from 4 companies, thus resulting in 200 responses. Further, inspection of the correlation matrix for all items revealed that over 50% of the correlations were significant at the .05-level, which provides an adequate basis for proceeding to an examination of the factors.

**Table 1. Mean, Standard Deviations and Correlations for all Variables**

Variable	Mean	S.d	1	2	3	4	5
Managerial Efficiency	4.12	0.64	1				
HRM Practices	3.89	0.95	0.69*	1			
Organizational Values	3.95	0.51	0.73**	0.62**	1		
Employee Citizenship	3.78	0.77	0.69**	0.74**	0.78**	1	
Team Orientation	4.27	0.89	0.48**	0.63**	0.76**	.55**	1

\* Correlation is significant at  $p < .05$ ; \*\* correlation is significant at  $p < .01$

### Factor Analysis

We conducted a factor analysis to identify dimensions of organizational health as perceived by employees. Specifically, an exploratory factor analysis with principal components and varimax rotation was conducted using all 30 items simultaneously. The KMO and Bartlett's Test of sample adequacy was done and the score was 0.820 which is acceptable to process with the analysis of the factor analysis. A latent root criterion was used to determine the number of factors to be retained. Those factors having eigenvalue greater than 1 is regarded as significant therefore retained for further analysis.

In order to ensure that each item represented the construct underlying each factor, a factor weight of .40 was used as the minimum cutoff. In addition, a .10 difference between the weights for any given item across factors, was maintained so that each item was clearly defined by only one factor. In an initial factor analysis, six factors, which explained 56.69% of the variance, were extracted. However, due to insufficient

loadings and cross-loadings, the number of items was reduced to 24.

A secondary factor analysis was conducted on these 24 items, resulting in the emergence of five factors, which accounted for 54.38% of the variance. The primary factor, which we labeled "Managerial efficiency," had a Cronbach  $\alpha$  of .966 and was shown to explain 37% of the variance. The second factor, "HRM Practices," had a Cronbach  $\alpha$  of .907 and explained 6% of the variance, while the third factor, "Organizational Values," had a Cronbach  $\alpha$  of .878 and explained 5% of the variance. The fourth, "Employee Citizenship" had a Cronbach  $\alpha$  value of .834 and explained 3.3% of the variance and the fifth factor, "Team Orientation", had a Cronbach  $\alpha$  value of .831 and explained 3% of the variance.

#### Factor: Managerial Efficiency

The Managerial Efficiency scale contains items that illustrate the sub-factors of managerial efficiency in terms of their performance as perceived by the employees.

**Table 2. Factor- Managerial Efficiency- items and factor loadings**

Factors	Items	Factor Loading
Managerial Efficiency Cronbach $\alpha$ = .966 (43% of the variance)	Our managers are usually very effective (#1)	
	Managers in this organization keep the employees well informed about important decisions or changes within the organization (#17)	0.894
	Employees in this organization are given more opportunities to serve on committees with their superiors (#12)	0.888
	In this organization, our managers go out of the way to help the employees (#15)	0.881
	In this organization, organizational goals are clearly communicated and understood at individual, group and organizational levels (#14)	0.856
	Managers are good at acknowledging the contribution of employees when organizations goals and objectives are achieved (#28)	0.824
	In this organization, an employee, group, or organizations have the freedom to fulfill their roles and responsibilities. (#22)	0.661
	In this organization, the managers are able to coordinate and maintain inputs, particularly personnel, effectively with a minimal sense of strain (#8)	0.655
		0.597

**Factor: HRM Practices**

HRM practices scale contains items that illustrate HRM practices as the sub-factor of organizational health as perceived by the employees.

**Table 3. Factor- HRM Practices- items and factor loadings**

Factors	Items	Factor Loading
HRM Practices Cronbach $\alpha = .907$ (6% of the variance)	Employees in this organization are given challenging and interesting jobs. (#11)	0.915
	In this organization, significant investment is spent for the continuous training and development of the employee. (#19)	0.889
	This organization is very selective in hiring and is clear about the attributes, competencies, attitudes and values that we want in a new employee. (#20)	0.827
	The organization works (as much as possible) to provide me with opportunities for career growth. (#21)	0.798
	In this organization, performance is assessed based on a set of clearly defined competencies (#7)	0.692

**Factor: Organizational Values**

Organizational Values scale illustrates organizational values as the sub-factor of organizational health as perceived by the employees.

**Table 4. Factor- Organizational Values- items and factor loadings**

Factors	Items	Factor Loading
Organizational Values Cronbach $\alpha = .878$ (5% of the variance)	In this organization, there is a good degree of respect for non-conformity (for example, disagreeing with superiors in the interest of the organization) (#13)	0.845
	Work atmosphere in this organization allows employees to be inventive, diverse, creative, and risk-taking (#16)	0.773
	This organization provides work conditions (e.g., flexible schedules, child care facilities, telecommuting programs) which take into account the emergent needs of employees (#24)	0.742
	Management seeks the involvement of the employees opinion when making important decisions(#27)	0.662

**Factor: Employee Citizenship**

Employee Citizenship scale contains items that illustrate employee work behaviour as the sub-factor of organizational health as perceived by the employees.

**Table 5. Factor- Employee Citizenship - items and factor loadings**

Factors	Items	Factor Loading
Employee Citizenship Cronbach $\alpha$ =.834 (3% of the variance)	Employees are mindful of how their behaviour affects other people's job (#2)	0.773
	This organization has a great deal of personal meaning for its employees (#3)	0.752
	Employees in this organization put a lot of energy into everything they do (#6)	0.745
	Employees in this organization put considerable pressure on one another to live up to the expected code of conduct (#29)	0.743

**Factor: Team Orientation**

Team Orientation scale contains items that illustrate team orientation as the sub-factor of organizational health as perceived by the employees.

**Table 6. Factor- Team Orientation- items and factor loadings**

Factors	Items	Factor Loading
Employee Citizenship Cronbach $\alpha$ =.834 (3% of the variance)	In this organization people sensibly know when they should collaborate and when they should compete. (#23)	0.621
	In this organization, employees or groups have a clear sense of identify, are attracted to membership, want to stay, and are willing to influence and to be influenced. (#25)	0.605
	This organization is characterized to possess equitable distribution of influence between the leader and members of his/her work unit (#5)	0.572

**Discussion**

The major working premise in this study is that an organization is healthy if it could achieve the balance in establishing an active and dynamic interdependence and mutuality in satisfaction between the organizational top management, immediate reporting managers and employees in the business end directly interacting to the customers. An initial item pool of 30 items thought to be factorial dimensions of organizational health was completed by a sample of 200 employees belonging to various organizations in the knowledge based category in the Chennai City. Factor analysis extracted five factors such as managerial efficiency, HRM Practices, Organizational Values, Employee Citizenship and Team Orientation. This means that when employees feel that they

are employed by a good employer with competency in managing the performance cycle, respects the employees for their contribution, provides them with opportunities to have a meaningful and satisfying work life; the employees are more likely to align their values to that of their organization, tend to be more likely to be productive, committed to their work teams and exhibit citizenship behaviour – which are the hallmarks of a healthy organization. Organizational Health thus emerged should be seen as a composite outcome of the way in which identified factors interact with each other. There are several limitations to this study. It must be emphasized that this research is of exploratory in nature to construct dimensions of organizational health, and not testing for the characteristics of a sample population.

## Conclusion

A healthy organization is integral to achieving excellence and the focus is basically on creating the right work environment for employees to actualize their potential and optimally contribute to organizational goals while staying well. For business leaders and managers therefore it is essential to understand the business case for leading in the pursuit of organizational health for long term business success. In today's business environment, organization will only be perceived as healthy if it embraces values and practices in alignment to the nature and well-being of its stakeholders- employees in particular. Becoming aware of the dimensions of health is the first step in confronting the challenge. Otherwise, the goal of sustained performance will likely remain elusive.

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# Managing Non-financial Risks : Business & Growth

Bhavana Raj and Sindhu

## A b s t r a c t

With a view to strengthening the Risk Management in the Banks across the Globe, Basel Frameworks have made concerted efforts to address all the issues relating to Financial Risks like Credit and Market Risks and some Non-Financial Risks as well. The impact of the non-Financial Risks is all pervasive and can be severe enough that they can lead to total collapse of the Banks. As assessment of the impact of Non-Financial Risks is rather ticklish, Basel II has introduced a new Capital Charge for Operational Risk based on the Gross Income. Despite the controversies surrounding the rationale underlying the computation of Capital Charge for Operational Risk (arguably due to the severe impact on the Capital position of the Banks), it is a welcome step. Basel Committee in its wisdom did not attempt to address certain of the Non-Financial Risks like Strategic Risk, Reputation Risk and Political Risk and envisaged that the Banks concerned evolve the respective policies depending upon the socio-economic compulsions and geo-physical conditions.

**Key words:** Risk Management, Banking, Basel, Credit Risk, Market Risk, Operational Risk  
JEL Classification : F 22, F 21, G21, G 24, G 32, and G 34



*Bhavana Raj, Senior Research Fellow, School of Management Studies (SMS), JNTUH University (Jawaharlal Nehru Technological University Hyderabad), Kukatpally, Hyderabad-500085, & Faculty Member at IBS (ICFAI Business School), Hyderabad-501203, E-mail: bhavana\_raj\_83@yahoo.com*



*Dr. Sindhu, Associate Professor, Ph.D., School of Management Studies (SMS), JNTUH University (Jawaharlal Nehru Technological University Hyderabad), Kukatpally, Hyderabad-500085, & Research Coordinator R & D (Research and Development), JNTUH University (Jawaharlal Nehru Technological University Hyderabad), Kukatpally, Hyderabad-500085, E-mail: sindhu999@yahoo.com*

**R**isk is associated with uncertainty and reflected by way of change in the basic structure. These Risks are inter-dependent and events affecting one area of Risk can have ramifications and penetrations for a range of other categories of Risks. Risk Management may broadly be defined as an Art or Science that facilitates identification and management of the possible deficiencies in any activity that may result in its failure or underperformance. Risk is the possibility of the actual outcome being different from the expected outcome. Banking has been undergoing metamorphic changes, depending upon the economic drivers, geo-physical conditions, social compulsions and practices, throwing up new challenges in Risk Management. The Risk Managers are constantly evolving sound banking practices that could take care of the effective Risk Management, so that both the 'giver' and 'taker' are reasonably protected from the possible adversities and thus safeguard sound economic activity. The core spirit of Risk Management would be 'to be aware of the Risks' and 'find the ways and means to mitigate Risks,' rather than develop the 'tendency of Risk-Averse.' The most effective Risk Management is to assess the impact of the

Risks and attempt to mitigate or manage them, so as to reduce their impact.

**RISK MANAGEMENT**

Risk is all pervasive and is prevalent in every activity, be it manufacturing or trading or service related. Human beings always attempt to manage the Risks faced by them in their day-to-day activities of life. Keeping inflammable material away from fire, saving for possible future needs, creation of a legal protection etc. are some of the attempts at managing the Risks.

While there is no formal documentation of Risk Management in the primitive form of economic activity like ‘barter’ system, it would be reasonable to assume that both sides of the exchange-trade were prudently applying the basics of Risk Management viz. no loss or low loss. The extent of loss, whatever it may be, should have been the dictate of the ‘need.’ Broadly, this dictate of the ‘need’ may be classified as the primitive form of Risk-Return Trade-off.

Managing Risk is nothing but managing the Risk before the Risk manages. Every Industry strives to arrest the Risks

with a view to minimizing its losses and making optimum revenue. Banking Industry, primarily dealing with financial services can be no exception and thus, encounters with many related Risks. It is imperative that Banks have to identify and measure various Risks faced by them and initiate suitable remedial measures to mitigate them.

**RISKS IN THE BANKING INDUSTRY**

The Risks that the Banks face can fundamentally be subdivided into two types: Financial and Non-Financial Risks. Financial Risks involve all those acts which deal mainly with financial aspects of the Bank and can be broadly stratified as Credit Risk and Market Risk. Both Credit and Market Risks may further be subdivided, as per the intensity and nuances of the Risk Management. Non-Financial Risks include all the Risks faced by the Banks in their normal functioning, like Operational Risk, Strategic Risk, Reputational Risk, and Political Risk.

A snapshot of the Risks that the Banking Industry may face is as under:

**Table 1: Table showing Financial Risks and Non-financial Risks**

Financial Risks		Non Financial Risks
Credit Risk	Market Risk	
Counter Party or Borrower Risk	Interest Rate Risk	Operational Risk
Intrinsic or Industry Risk	Liquidity Risk	Strategic Risk
Portfolio or Concentration Risk	Forex Currency Risk	Reputational Risk
		Political Risk
		Cyclical Risk
		Idiosyncratic Risk
		Systemic Risk

**Source:** International Convergence of Capital Measurement and Capital Standards, A Revised Framework, Comprehensive Version, June 2006.

The above list is only indicative, but not exhaustive. The Financial Risks associated with Credit and Market Risks are inter-twined and complimentary. Any adverse affect on either of them may lead to adverse effect on the other. The Non-financial Risks like Operational Risk and Strategic Risk are all pervasive and can fuel the ill-effects of both Credit and Market Risks.

**RISK MANAGEMENT ENVISAGED BY THE BASEL FRAMEWORKS**

**BASEL – I:**

Liquidation of ‘Bank Herstatt’ by the German Regulators in 1974 resulted in huge losses to various Banks who have taken

the exposures on the said German Bank. This Cross-border Settlement Risk was a major trigger point that prompted the Banks across the Globe to think of comprehensive methodologies on Risk evaluation and mitigation. In this direction, as an initiative of G20 Countries, Basel Committee on Banking Supervision (Basel Committee) was formed under the aegis of Bank for International Settlement.

Basel Committee had brought out the first set of guidelines in 1988 (Basel I) for calculation of Capital Charge on Exposures (both fund based and non-fund based) and other Assets, based on the Risk Weights applicable to the counter-party, which primarily were intended to capture the Credit Risk. The Market Risk Amendment was introduced in 1996. Basel I envisages Risk Weights to the counter-party under the premise 'One-Size-Fits-All.' In nutshell, Basel I is less Risk sensitive to the ever-growing and multi-dimensional exposures of the Banking Industry.

#### **BASEL - II:**

Basel Committee, with a view to make computation of Capital Charge on the Exposures and other Assets more Risk-sensitive, had brought out revised guidelines in June, 2004 (Basel II). A Comprehensive version, inter-alia including 1996 Market Risk Amendment and 2005 paper on Trading Activities and Treatment of Double Default Effects, was released in June 2006.

Basel II is not mandatory either on the member Banks or otherwise. However, it is rather surprising that while developing Economies like India and South Africa preferred to migrate to Basel II as per the given time-lines, a developed Economy like USA resisted its introduction. However, over a period of time, the Banks across the Globe, in their own interest, have voluntarily preferred to adopt Basel II, albeit late to suit their local conditions.

Basel II envisages that stability of Financial Markets rests on 3 mutually reinforcing Pillars viz.:

**Table 2: Table showing the Three Basic Pillars of Basel II**

<b>Pillar I</b>	<b>Minimum Capital Requirements</b>	Maintenance of Risk-adequate computation of Capital requirements, which explicitly includes the Operational Risk, in addition to the Credit Risk and the Market Risk
<b>Pillar II</b>	<b>Supervisory Review</b>	Establishment of robust Risk Management practices, which includes compilation of Internal Capital Adequacy Assessment Process (ICAAP) Policy and their review by the Supervisors
<b>Pillar III</b>	<b>Market Discipline</b>	Increased transparency through expanded disclosures in the larger interests of all the Stakeholders.

**Source:** International Convergence of Capital Measurement and Capital Standards, A Revised Framework, Comprehensive Version, June 2006.

**Tree of Basel II Framework – A Diagram**

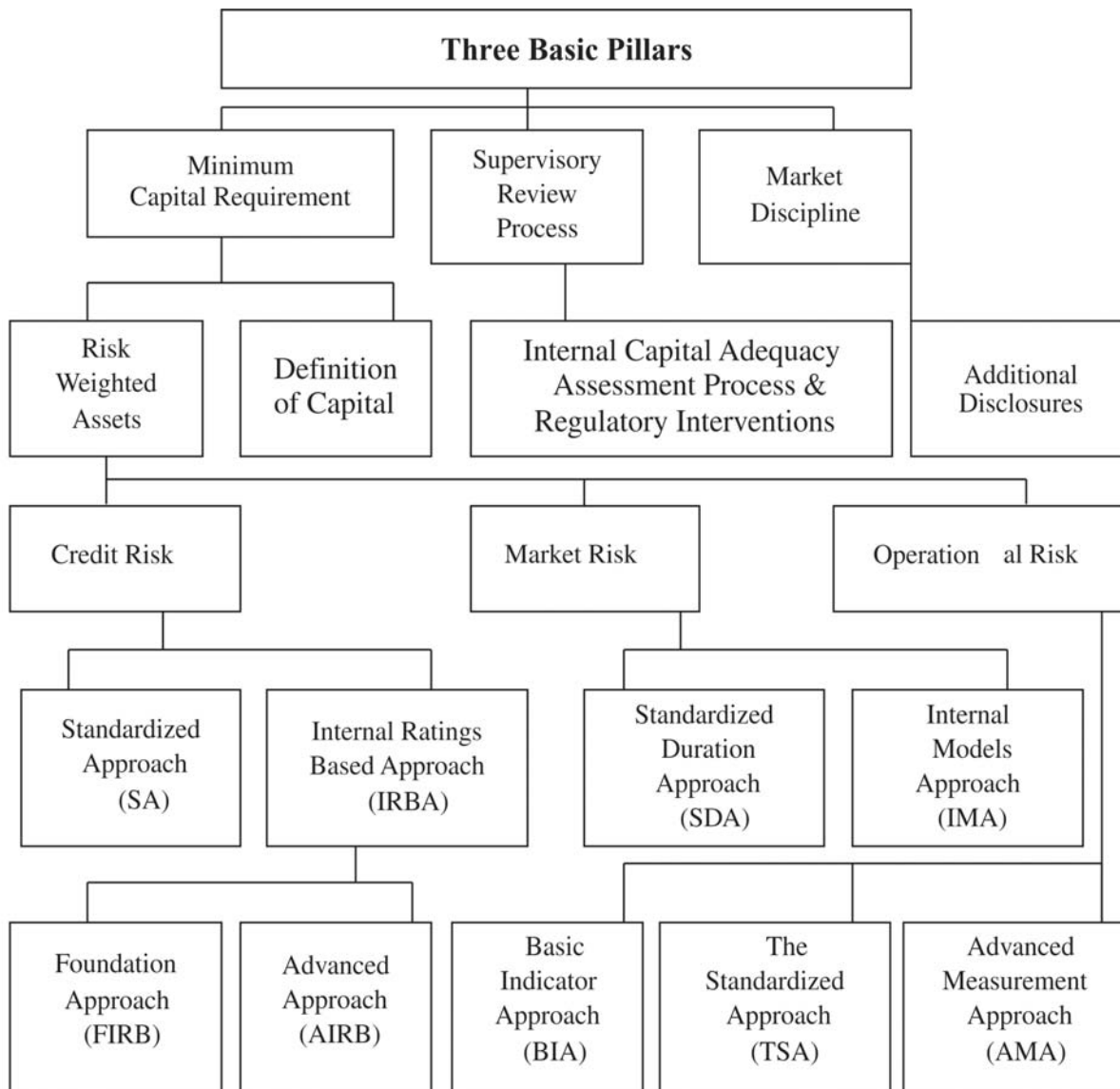


Figure 1: Compiled.

### Pillar I

The Magnum Opus of Basel II Framework is a magnificent effort to document various methodologies to calculate the Capital Charge on various Exposures taken by the Banks. Under Pillar I, Basel II has formulated a 3-tier migration to the Risk Management viz. i) Basic Approaches ii) Middle Approaches and iii) Advanced Approaches. Each of these approaches contained a set of guidelines to capture Capital Charge for Credit, Market, and Operational Risks. Basel II has introduced a new Capital Charge for Operational Risk, based on the Gross Income, which is expected to protect the Banks to some extent, in case of adversities.

### Pillar II

Under Pillar II, Banks are encouraged to formulate the Internal Capital Adequacy Assessment Process (ICAAP) Policy, inter-alia capturing a realistic Risk Profile of the Exposures taken by them and assess the Capital Charge required, which will be subjected to Supervisory Review by the Regulators concerned. Developing a realistic ICAAP Policy is gigantic exercise requiring ingenuity, spirit of truthfulness and robust Risk Management skills.

The ICAAP Policy has to be realistic and robust enough to stand the scrutiny of the Regulators. The Regulators in their wisdom may prescribe additional Capital Charge for the Idiosyncratic Risk of the Bank concerned and the Systematic Risk the Banking Industry per-se. A pragmatic ICAAP Policy is intended to lead to the concept of Economic Capital and reduce the Capital Arbitrage by the Regulators. However, in view of the conflicting interests of the players in the system, evolution of Economic Capital appears to be a distant dream.

The Banks are also encouraged to conduct Risk Controller and Self Assessment (RCSA) exercises across the cross-section of its employees (who are one of the stakeholders). RCSA exercises are intended to equip the employees mainly to address the issues relating to its Systems and Procedures, Risk Monitoring and Corporate Governance. This proved to be non-starter and the Banks are yet to take them seriously.

### Pillar III

Basel Committee observed that the information given by the Banks in the Balance Sheets is barely intelligible for the common Customers and other Stakeholders. Under Pillar III,

Banks are expected to maintain transparency and make additional disclosures with a desired level of integrity, over and above the statements that have already been made in the Balance Sheets (which are made in line with the local Accounting Standards), so as to facilitate the Stakeholders take an informed decision about the Bank concerned. In the absence of the specific guidelines by Basel III on this aspect, the Regulators are expected to formulate appropriate policies, as per the dictates of the banking practices prevalent in the Country concerned. However, 'User Test' is indicated as one of the barometers to decide the level of these additional disclosures.

### BASEL – III:

There are many and varied reasons that led to the financial crises leading to failure or closure of many of the Banks in US and European Union. Evidently, no two Economists agree on a single analysis on such events. However, the main reasons can be traced to lack of Corporate Governance and inadequate Capital base. To address the deficiencies revealed by the late 2000s financial crisis, Basel Committee has come out with Basel III Framework in 2010, scheduled to be introduced from 2013 until 2019. Basel III is designated to be a global regulatory standard on Banks' Capital Adequacy, Stress Testing and Liquidity Risk.

Basel III Framework aims to achieve the following objectives:

- ✿ Strengthening the Risk Management and Corporate Governance
- ✿ Augmenting buffer Capital to address the Cyclical, Idiosyncratic and Systemic Risks
- ✿ Improving the ability to absorb shocks arising from Financial and Economic Stress
- ✿ Enhancing Transparency in Transactions and Disclosures.

The Banks across the Globe are preparing themselves to comply with Basel III Framework and provide the required Capital. However, it is disturbing to note that many a Bank is willing to provide additional Capital (which has a Cost) to meet Basel Norms, rather than strengthen their Risk Management practices and reduce the impact of both Financial and Non-Financial Risks and thus, save the Capital allocated for taking such exposures and the cost thereof.

## MANAGING NON-FINANCIAL RISKS - IMPACT ON BUSINESS & GROWTH

Basel Frameworks, for the Banks, on the face of it, appear to be very difficult to digest [Basel Norms seek to introduce new concepts like Haircut, Probability of Default (PD), Loss Given Default (LGD), Exposure at Default (EAD), Idiosyncratic Risk and Systemic Risk and seem to haunt the traditional mind-set of the Risk Managers with the 'fear of the unknown.'

Banking has been undergoing metamorphic changes, in accordance with the economic drivers, geo-physical conditions and social compulsions. Rapid growth in industrialization and agricultural production has dramatically changed the scope of Banking and expanded its horizons. With the advent of Computers and Information Technology, there has been a paradigm shift in the banking practices giving rise to more complex banking products and services, thus exposing the Banks to various new types of Risks.

Technological advancements in telecommunication and transportation have reduced the geo-physical barriers and the Banks have stretched themselves overseas. These expanded horizons have further increased the Risk profile of the Banks. While new avenues for the Banks have opened up, they have brought with them new Risks as well, which the Banks will have to manage and attempt to mitigate.

Against this backdrop, Basel Committee has made a magnificent effort to map all the possible Financial and non-Financial Risks the Banks are likely to face. It has introduced certain time-tested and some more new Statistical and other Tools, to facilitate measurement of the impact of the Risks. It has made a pragmatic account of the impact of the Financial Risks like Credit and Market Risks, while retaining the method of computation of Capital Charge based on Risk Weighted Assets. As the type of Financial Exposures taken by the Banks is more or less similar, the movement, impact and measurement of the Financial Risks associated with such Financial Exposures can be measured to a reasonable extent with the methodologies envisaged by Basel Frameworks.

Many of such Risks that may not directly relate to the Financial Exposures taken by the Banks, but have an indirect impact on such Financial Exposures, are coined as Non-Financial Risks. It is pertinent to observe that the Non-Financial Risks also have financial impact on the Exposures taken by the Banks and the Services offered by them.

However, it is rather ticklish and difficult to make a fair measurement of the impact of such Non-Financial Risks.

The impact of the non-Financial Risks is all pervasive and can be severe enough that they can lead to a total failure or collapse of the Banks. Hence, Basel II has rightly introduced a new Capital Charge for Operational Risk based on the Gross Income. Despite the controversies surrounding the rationale underlying the compilation of Capital Charge for Operational Risk (arguably due to the severe impact on the Capital position of the Banks), it is a welcome step. If the 2000s Economic Crises and the recent failure of US and European Banks is any indication, the introduction of Capital Charge for Operational Risk by Basel II is well justified.

The impact of Operational Risk is all encompassing and can adversely affect any Exposure of the Banks, but, by itself Operational Risk it is not the end of all Non-Financial Risks. The Banks are also adversely affected by other Non-Financial Risks like:

- Strategic Risk
- Reputational Risk
- Political Risk
- Legal Risk
- Cyclical Risk
- Idiosyncratic Risk
- Systemic Risk

The above broad identification of Non-Financial Risks is made basing on the experience of the Risk Managers, considering the gravity with which they are likely to have an adverse impact on the finances and business of the Banks. The Risk Managers may encounter many more new Non-Financial Risks, which have to be tackled as per the dictates of the situation and need.

While introducing Operational Risk in Basel II (which is expected to provide some cushion to the Banks in case of adversities), Basel Committee in its wisdom did not attempt to address many of the non-Financial Risks like Strategic Risk, Reputation Risk and Political Risk. and envisaged that the Banks concerned evolve the respective policies depending upon the socio-economic conditions and geo-physical barriers.



The Non-Financial Risks contribute their might in adversely affecting the Exposures taken by the Banks and the Services offered by them. Hence, in the larger interests of Business and Growth, it would be prudent for the Banks to study the impact of the Non-Financial Risks and find reasonable ways and means to manage them effectively, so as to reduce their impact, if not mitigate them fully.

### Operational Risk

Operational Risk is defined as the Risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. The Basel II definition includes Legal Risk, but excludes Strategic Risk (due to poor strategic business decision) and Reputational Risk (due to loss of reputation or standing), although a significant but non-catastrophic operational loss could still affect the reputation of the Banks, possibly leading to a further collapse of its business and consequent organizational failure. Though Basel II has reckoned Legal Risk as a part of Operational Risk, for the purpose this study, Legal Risk is analyzed separately.

Operational Risk includes:

- business disruption, system failure and technology failure
- inadequate document retention or record-keeping
- poor management, lack of supervision, accountability and control
- errors in business practices, products, financial models and reports
- deficiency in execution, delivery and process management
- improper employee practices and workplace safety
- attempts to conceal losses or make personal gains (rogue trading)
- third party fraud (internal and external)

### Basel Recommendations:

Historically Banks have accepted Operational Risk as an unavoidable cost of doing business. It is observed that the Risk Managers tend to attribute the losses to the Credit or

Market Risk, (positively due to their selfish reasons), rather than map the adverse affects of Operational Risk. Further, many of the Banks do not have the historical database of the loss events, so as to make a meaningful interpolation of the events and the resultant losses. Knowing this limitation, Basel II preferred to introduce Capital Charge based on Gross Income, given as under:

- i) **The Basic Indicator Approach:** Banks are expected to hold Capital for Operational Risk equal to 15% (alpha) of average Annual Gross Income over the previous three years. Gross income is defined as net interest income plus net non-interest income excluding realized profits/losses from the sale of securities in the banking book and extraordinary or irregular items.
- ii) **The Standardized Approach:** Bank's activities are categorized into 8 Business Lines. The capital charge for each business line is calculated by multiplying Gross Income by a factor (beta) ranging from 12% to 18% assigned to that business line.
- iii) **The Advanced Measurement Approach:** Under this approach, the Operational Risk measure generated by the Bank's internal data using the quantitative and qualitative criteria is expected to be nearer to the regulatory prescriptions.

### Measure of Losses:

There are a large number of events (direct or indirect) that could potentially affect a business. No analysis could ever consider all of them. Hence, one way of measuring the possible losses would be by interpolating the likelihood of events, through the Probability of Distributions of both frequency and impact. The stochastic models like Poisson Process can also be used in frequent events. Making this event structure helps to answer the modalities, prevention and minimization of length of impact as well as the mitigation strategy. However, for any Statistical Interpretation to be nearer to reality warrants database over a longer time horizon (5 to 7 years), which the Banks do not have.

### Preventing Operational Losses

Efficiency is a pre-requisite for operational excellence in business. Inexperienced staffing is the important Risk factor that leads to unexpected losses. Internal Controls aim to safeguard the firm's assets from external and internal threats. The Risk comes from breakdowns in Internal Controls and

Corporate Governance that can lead to financial losses through fraud, error or failure to perform in a timely manner.

Vilfredo Pareto, an Italian economist argued that around 80% of the wealth of society would always be held by around 20% of the population. A similar principle can be applied to Risk and Cost analysis, i.e. 80% of the Risk comes from 20% of the identified Loss Events. On the cost side, handling 20% of all transactions that are exceptions in any process will require 80% of the total process cost. Pareto diagrams can help us

focus on the subset of identified events that cause the bulk of the risk. However, unknown events are not considered in this principle.

One way of addressing this issue is to honestly map the historical database of the Operational Risk events and fit in the same into a simple Operational Risk grid given below. Using Vilfredo Pareto principle, it would suffice, if the Banks take care of the Critical and High areas, both in terms of the likelihood of events and impact thereof.

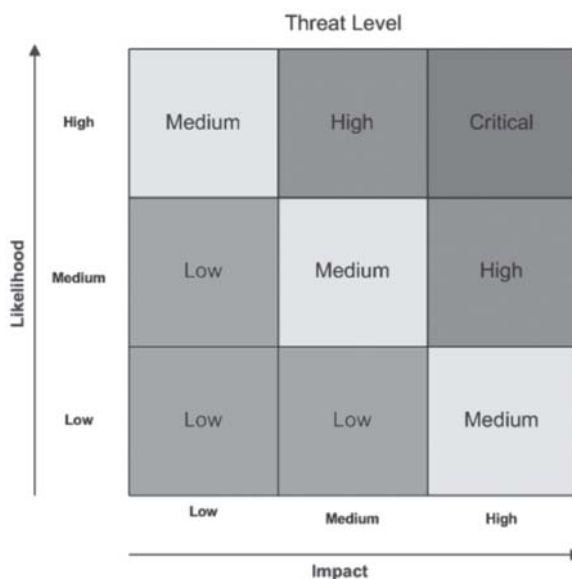


Figure II - Source: BIS Operational Risk (2012)

Here, the most crucial aspect would be the honesty and integrity with which the failures or the losses are mapped to the Operational Risk events. However, the above model is too simplistic and over a period of time, the Banks have to develop the historical database and evaluate the impact of Operational Risk Events and Loss thereof, using advanced Statistical models.

**Managing Operational Risk**

The range of management interventions to predict, measure and mitigate Operational Risk is enormous. The Banks may have to improve in these aspects and facilitate business growth:

- Restructuring the Organization – Restructure the layers/ divisions to handle the Risk
- Operations Management - Reengineering the Systems, Procedures, Processes and Practices
- Product Management – Design, Execution, Delivery and Process Management
- Employee Management - Selection, Training, Placement, Incentive and Promotion
- Culture Management - Shared System of Beliefs, Values and Norms
- Organizational Management - Accountability, Reporting, Monitoring and Control Structure

- Relationship Management - Shareholders, Investors, Staff, Customers, Competitors, Regulators and Media .
- Total Quality Management - Quality Control, Assurance and Management
- Document Management – Correct Documentation and Document Retention and Retrieval
- Audit Management - Risk Based Internal Audit, Inspection, Internal Control and Compliance
- Identifying Potential Risk - abandon High Risk Exposures and Contingency Planning
- Boundary Systems – Setting Risk Limits for Discretion and Sanction
- Security Management – Personnel, Computers, Systems, Technology and Other Assets
- Changing the form of Risk - Use of Margin and Collateral Third Party Guarantees
- Hedging - Sales, Transfer, Insurance, Forward Contracts/Futures/Swaps/Options
- Pareto Analysis, Fault Tree analysis, Fish Bone Diagrams and Process Maps

### Strategic Risk

A Strategic Risk is borne out of inadequate understanding of the perceptions of the consumers, market and market makers. Generally, the new products do not take off on the expected lines not because they are bad, but mainly because the Organizational Structure and Operating Staff are not fully equipped to meet the new challenges. The following would help ignite business growth:

- i) **Strategy Formulation:** Conducting scan of key external opportunities and threats, an internal audit of the strengths/weaknesses, formulation of vision statement and long-term objectives.
- ii) **Strategy Implementation:** Modification of organizational structures and processes to achieve planned results. Establishment of annual goals/policies, the allocation of resources to obtain objectives and adjusting motivation and reward systems to better match new strategic thrusts.
- iii) **Strategy Evaluation:** Control Processes, which include review and feedback to determine if plans, strategies and objectives are being achieved, to facilitate corrective action.

The Banks may have to address the following issues to reduce the impact of Strategic Risk and help business growth of the Banks:

- Knowledge of the perceptions of the consumers, market and market makers.
- Recognizing and avoiding the Risks from undesirable employee behaviour
- Maintaining the creative tension between High Innovation and Risk Management
- Integrating Risk Management into strategy formulation and execution processes
- Managing the Risks from external and non-controllable events
- Responding to reputational and brand Risks
- Corporate Governance and Organizational Development

### Reputational Risk

For service organizations like Banks, reputation is the basic foundation of business. As Warren Buffett rightly puts, 'it takes 20 years to build a reputation and 5 minutes to ruin it.' Customer Delight is the key for building a Bank's reputation. It has been a well established norm that it is 4 times costlier to attract a new customer, as compared to retaining the existing customer. Reputation Risk has a cost which is difficult to measure immediately, but its impact is seen over a period of time. While there is no cardinal method to measure the impact of Reputation Risk, the following remedial actions could reduce its impact and help business growth of the Banks:

- i) **Vision Expansion:** Banks have to draw upon the best practices followed by other risk-heavy businesses like consumer goods or automotive sector, which have large supply chains.
- ii) **Employee Belief:** The quality of work of employees, both on the Bank's payroll or outsourcing partners has a direct bearing on its reputation. Banks should sensitize the employees to the fact that any slip-up on their part could adversely affect their goodwill.
- iii) **Employee Satisfaction:** Banks have to follow transparent policies which are sensitive to the needs of the workforce and treat them as partners in the organization development.

- iv) **Knowledge Banks:** The staff be made aware, through training or otherwise, of the historical cases/precedents that had or would have jeopardized the reputation of the Bank.
- v) **Enterprise-wide Solution:** Enterprise-wide solutions have to be drawn giving a holistic view of organizational risks, early distress signals, enabling timely problem resolution.
- vi) **Analytics:** Banks have to use analytics to sift through the mounds of information for managing Reputation Risk. Despite adequate data, not much has been done in this direction.
- vii) **Social Media:** Banks have to leverage the social media platform to initiate customer engagement programs as part of their reputation building measure.

### Political Risk

The Political Risk refers to the possibility that Banks may lose or makes less money than expected due to political decisions, conditions or events occurring in the countries on which they have taken the exposures. The main problems areas could be government instability, political interference, legal impediments, regulatory prescriptions, nationalization, level of convertibility of the currency and socio-cultural conditions & compulsions.

The Political Risk is country specific and subjectively different depending upon the country's socio-economic conditions and sovereign policies. Historical mapping of the country, economic policies, social compulsions and balance of payments etc. would be very useful in assessing the health of the country and severity of the Political Risk. Sovereign Ratings made by International Credit Assessment Institutions like Standard and Poor's, Moody's and Fitch-IBCA can also be benchmarked for this purpose. Despite the best of information, it is rather difficult to correctly assess the impact of the Political Risk, which is more of an unsystemic risk. Hence, Banks are content with setting the relative Risk Limits, which appears to be a practical solution as of now.

### Legal Risk

Banking transactions primarily rest on a concept known as 'Banker's Faith,' where the customer conducts his transactions with the Bank, simply because he/she believes that the Banker has no malafide or other intentions. We need to appreciate that not everything can be done purely on the

basis of faith, more so in the light of complex and multi-dimensional banking activities giving rise to the aspect of legal protection in case of a future dispute. Legal Risk is borne out of improper or inadequate documentation, which may not stand the scrutiny of law of the land.

Hence, it is imperative that the Banks review the legality of the documents being exchanged by them with the customers, in consonance with the law of the land. Banks may revise the documents, if considered necessary. This one-time exercise (which is very cost-effective) would go a long way in protecting the interests of the Bank, in case of failure of the exposures or a future dispute.

The main crux of the problem is not in the 'quality' of the documents, but in the ability of the operating personnel who execute the documents on behalf of the Bank. In a study of the legal cases being handled by the Banks it is observed that, in many a case, the Banks have lost the cases in the Courts of Law on account of execution of improper or inadequate documents. Hence, Banks have to keep their operating personnel abreast of the developments and changes in the law of the land and also update the documentation process on an on-going basis. Risk Based Internal Audit would also be of immense help in preventing such future disasters. These measures would help Banks in avoiding the possible and potent Legal Risk and facilitate a healthy business growth.

### Cyclical Risk

Every economic activity is affected by business cycles leading to Cyclical Risk and Banking can be no exception. Banking is invariably affected by the peak and trough of a business or other economic cycle. Cyclical Risk does not typically have a tangible measure, but instead is reflected in the prices or valuations of assets that are deemed to have higher or lower Cyclical Risks than the market. Inflation and Deflation also have a cascading adverse affect on this. Basel III, sensing the difficulty in mapping this intangible risk, has suggested adequate buffer capital to meet the adversities arising out of Cyclical Risks. Apart from this, Banks have to draw up the business plans in tandem with business cycles, so as to capture the right business at the right time and thus ensure continuity of business growth.

### Idiosyncratic Risk

Idiosyncratic Risk in banking parlance is defined as the Risk inherent in a particular Bank. Every Bank suffers from

Idiosyncratic Risk, due the ill effects of the legacy or practices and not-so-robust Risk Management Framework. Since Idiosyncratic Risk generally is unpredictable, the Banks should seek to minimize its negative impact on a portfolio by diversification or hedging. Idiosyncratic Risk is imbibed into the Bank. Bank can rarely come out of it in a shorter horizon and no amount of diversification or hedging would protect it from its adverse impact.

Basel III, aware of this reality has suggested adequate Buffer capital to meet the adversities arising out of Idiosyncratic Risk. Banks, in their own interest, have to evaluate their inadequacies and maintain sufficient buffer capital over and above Basel definition. An honest ICAAP Policy would facilitate a realistic picture of the inadequacies the Bank is suffering from. One way to address this issue would be to reengineer the systems, procedures and processes and educate & motivate the employees, so as to reduce its impact and thus ensure stability in business growth.

### Systemic Risk

Systemic Risk in banking industry is referred to as the sum total of the risks the particular banking industry is facing and can be generated by a variety of sources. It is also known as Aggregate Risk, which is generally borne out of the fiscal, monetary and regulatory policies of the Country. In some cases, shocks from phenomena like weather and natural disasters have their impact on this. Basel III, accepting this as a necessary evil of the Banking Industry has suggested adequate buffer capital to meet the adversities arising out of Systemic Risk.

### Conclusions & Recommendations

The Banks have to put in place the following to reduce the impact of non-financial risks, which would go a long way in improving the Business and Growth of the Banks and also make them globally competitive.

- Update the Skill Levels of the Employees
- Strengthen the value system of the Employees
- Map the perceptions of the Market and Market Makers
- Reengineer the Systems & Procedures
- Strengthen the MIS and Data capturing capabilities
- Augment adequate good quality Capital

- Improve Corporate Governance, Monitoring and Oversight
- Map a realistic Internal Capital Adequacy Assessment Process Policy
- Increase integrity in mapping the Risks
- Develop mechanisms to quantify the impact of the Risks and
- Initiate suitable remedial measures to mitigate the Risks

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# Global Competitiveness: World Passenger Car Industry

Atul Mittal, Paroma Mitra Mukherjee, and Dilip Roy

## A b s t r a c t

The degree of competition helps to examine the present status and future prospects of an industry. In view of the growing demand for quantification of competitive factor prevailing in a product field, a measure for the degree of competition based on the market shares of the existing player in passenger car has been studied in this article. Time series analysis has been carried out on degree of competition to indicate the past trend and future direction for this industry. The position of India has also been indicated along with those of a few leading nations. We have used statistical techniques to analyze the situation of various Passenger Car production countries.

**Key words:** Global competitiveness, Passenger Car, market share.



Atul Mittal, MBA student, Asia-Pacific Institute of Management, New Delhi-25., E-mail: [alovej84@gmail.com](mailto:alovej84@gmail.com), Mob.: 09716573967

Dr. Paroma Mitra Mukherjee, Assistant Professor, Asia-Pacific Institute of Management, New Delhi- 25.

E-mail: [paromamitra@rediffmail.com](mailto:paromamitra@rediffmail.com), Mob.: 09871910557

Dr. Dilip Roy, Ex- Director, Center for Management Studies, University of Burdwan, Golapbag, Burdwan, West Bengal. Mob. : 09832157221, E-mail: [dr.diliproy@gmail.com](mailto:dr.diliproy@gmail.com)

Globalization and trade liberalization along with easy flow of information and advancement in communications technology have resulted in an increase of market competition worldwide. With this background, **Porter (1998)** stressed upon the urgency of strengthening competence of nations, countries and firms to handle the resultant threats. According to **Haider (2007)**, meaning, implication, adaptation and achievement of competitiveness may vary from firm to firm, industry to industry and nation to nation across the world. The World Economic Forum since 2005, has based its competitiveness analysis on the Global Competitiveness Index (GCI), a comprehensive tool that measures the microeconomic and macroeconomic foundations of national competitiveness. They define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. According to **Global Competition Report 2012-13**, Switzerland is the leading country and is followed by

Singapore, Finland, Sweden, Netherland, Germany, and United States in the stated order. India ranks 59<sup>th</sup> amongst 144 economies in the Global Competitiveness Index for 2012-13, as against 56<sup>th</sup> position out of 142 economies covered in 2011-12. GCI is constructed based on 12 pillars of competitiveness. These pillars are institution, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market sophistication, technological readiness, market size, business sophistication and innovation.

The twelve pillars may be grouped into three parts:

- a) **Basic requirement sub index** where the pillars institution, infrastructure, macroeconomic stability, health and primary education, are measured. The weight for India is 60%.
- b) **Efficiency enhancer sub index** where higher education and training, goods market efficiency, labour market efficiency, financial market sophistication, technological readiness, market size are the pillars. The weight for India is 35%.
- c) **Innovation and sophistication factors sub index** where business sophistication and innovation are the pillars. The weight for India is 5%.

India's performance with a GCI score of 4.32 (on a scale of 1-7) in the year 2012-13 is an improvement over last year score of 4.30. India has also improved its performance in respect of each individual component of the index.

Based on due end result one may make an attempt to measure the degree of competition. Roy D (2006) proposed the formula for degree of competition as where  $m_i$  is the market share the  $i^{\text{th}}$  nation /industry. Data requirement being less, it is easy to carry out industry analysis based on market share based measure.

### Why automotive industry?

The automotive industry is an important global driver of growth, income, employment, and innovation. This industry enables a degree of flexibility and mobility that was undreamed of even a century ago. Though the size of this industry is small compared to the overall activity of the economy yet because of its strong linkages with other parts of the economy it has a significant impact on the economy. For developed countries, the automobile is the primary mode of

transportation. For many decades, the automobile production was led by United States. Before the Great Depression in 1929, the world had 32,028,500 automobiles in use, and the US automobile industry produced over 90% of them. At that time, the US had one car per 4.87 persons. After World War II the US covered 3/4 of world's auto production. In 1980, the US was overtaken by Japan and became world's leader again in 1994. In 2006, Japan narrowly overtook US in car production and held the first rank until 2008. In 2009 China took the lead with a difference of around 6 million units with Japan. In 2012, in the total production of vehicle China produced 19.3 million units which were nearly twice the number of automobiles made by USA with second position (10.3million units), followed by Japan in third place with 9.9 million units. Germany was in fourth place with 5.6 million units and S.Korea in fifth rank by 4.6 million units. India was in sixth rank by 4.1 million units.

Motor vehicle productions can be grouped into passenger production of car, light commercial vehicles, heavy trucks, buses and coaches. Cars make up approximately **74% of the total motor vehicle** annual production in the world. The remaining **26%** is for others. In this paper, we are going to study only the global passenger car production and its competitiveness along with the position of India and the overall trend of this industry.

### THE OBJECTIVE OF THE STUDY

The global production figures of passenger car industry can help us to indicate the position of Indian companies with respect to its global competitors. The objective of this paper is therefore to measure the global competitiveness among the passenger car producing countries for the period 1999 to 2012. We want to analyze whether it maintains the same trend or not.

### LITERATURE REVIEW

**Porter (1990, 1998)** claimed that nations have their own competitive advantages in the modern competitive marketplace. A nation's competitiveness depends on the capacity of its industry to innovate and upgrade. Companies gain edge over the world's best competitors only under pressure and challenge. They also gain advantage from having strong domestic rivals, aggressive home-based suppliers, and demanding local customers. Since the basis for global competition has shifted more and more towards the creation and assimilation of knowledge, the role of the nation has come

in the front position. Competitive advantage can be created and maintained through a highly localized process. Differences in national values, culture, economic structures, institutions, and histories all contribute to competitive success. Ultimately, a nation succeeds in a particular industry only if its home environment is the most forward-looking, dynamic, and challenging. According to (Abdel-Latif, 1993; and Sachwald, 1994) “product quality, innovativeness, design, distribution network, after sales service, transaction costs, institutional factor relating to the bureaucracy of export procedures and other non price factors are factors for measuring the competitiveness of a manufacturing firm or an industry”. According to Lall (2001), developing countries’ policy makers worry about national competitiveness and closely watch indices ranking international competitive performance. According to some researchers, one may examine labour costs, unit cost, exchange rate, interest rate, prices of inputs and other quantitative factors for measuring the competitiveness of a firm or an industry (Edwards and Schoer, 2002, Edwards and Golub, 2004, Fukunishi, 2004). Porter and Toming (2006) stated that competitiveness can be defined as a country’s share in world market for its products which makes it a zero-sum game because one country’s gain comes at the cost of other countries. Prahalad and Ramaswamy (2004), explored why, despite unbounded opportunities for innovation, companies still can not satisfy customers and sustain profitable growth. They believed that, India will become a leader of the world in future. As Easterly (2005) points out, there are strong indications that differences in institutions greatly explain the differential in growth between countries. Institution effects go beyond the effect of getting inflation right or correcting other macroeconomic weaknesses. Nayak (2007) in his paper presented a comprehensive overview of the results in the world Economic Forum’s new Global Competitiveness Index.

Using **Herfindahl–Hirschman Index**, or **HHI** one can measure the size of firms in relation to the industry and an indicator of the amount of competition among them.

$$H = \sum_{i=1}^N m_i^2$$

where  $m_i$  is the market share of firm  $i$  in the market, and  $N$  is the number of firms. Thus, in a market with two firms that each has 50 percent market share, the Herfindahl index equals  $0.50^2 + 0.50^2 = 1/2$ .

The Herfindahl Index ( $H$ ) ranges from  $1/N$  to one, where  $N$  is the number of firms in the market. Equivalently, if percentages are used as whole numbers, as in 75 instead of 0.75, the index can range up to 100<sup>2</sup>. If a HHI index is below 0.01 (or 100) it indicates a highly competitive index. If the index is below 0.15 (or 1,500) indicates an un-concentrated index.

If it ranges between 0.15 to 0.25 (or 1,500 to 2,500) indicates moderate concentration and if HHI index is above 0.25 (above 2,500) indicates high concentration.

A small index indicates a competitive industry with no dominant players. If all firms have an equal share the reciprocal of the index shows the number of firms in the industry. When firms have unequal shares, the reciprocal of the index indicates the “equivalent” number of firms in the industry.

According to Young, Philip K. Y., and McAuley, John J. one should be aware that HHI index measures are influenced by the definition of the relevant market. For example, the automotive industry is not the same as the market for sport utility vehicles. One also must consider the geographic scope of the market, for example, national markets versus local markets.

The Herfindahl-Hirschman Index of the automobile industry in the U.S. is in between 1,800 and 10,000. This is because of the fact that the industry has a lot of large players with significant market shares.

The literature which is applied in this study was proposed by Roy D. (2006) i.e.  $\sqrt{\sum m_i^2}$ , where  $m_i$  is the market share of each individual nation in global passenger car production,  $i$  ranging from 1 to  $n$ . In order to find out the degree of competition, the market shares of nations competing in global Passenger Car production should be collected. For each year we can calculate one such measure, generating there by a time series data. One can next carryout trend analysis. The  $t$ -statistic is used to test hypothesis about an unknown population mean where the value of standard deviation is unknown.

## METHODOLOGY OF THE STUDY

The methodology adopted for carrying out the present study elaborately can be divided into the broad heading like type of Data, period of study, scope of study, and techniques used for analysis.

**Types of Data**

In this paper, the data type we have used is secondary data. The data collected from website of International Organization of Motor Vehicle Manufacture (IOMVM), World Automobile Organization.

**Period of Study**

The period from 1999- 2012 has been selected depending on the availability of secondary data.

**Scope of study**

This study will help researchers, economists, and company planners and others to measure the degree of global competitiveness in their respective studies.

**Techniques used for analysis**

The analysis deals with descriptive analysis and statistical analysis. The statistical analysis is to find out the trend in degree of competition among the global competing countries in passenger car manufacturing. The corresponding hypothesis follows the null hypothesis Ho that there is no increase in the global competition in the passenger car manufacturing against the alternative hypothesis Ha that there is increase or decrease in the same.

Test statistic: The under lying statistic for testing for significance of regression coefficient is t- statistic. The t- statistic is used to test hypothesis about an unknown population mean where the value of standard deviation is unknown. The formula for the t- statistic is

$$t = \frac{\hat{\beta}}{\left[ \hat{\sigma} \sqrt{\frac{1}{\sum(x_i - \bar{x})^2}} \right]} \text{ where, } \hat{\sigma} = \sqrt{\left\{ \frac{\sum(y_i - \hat{\alpha} - \hat{\beta}x_i)^2}{(n-2)} \right\}}$$

where,

$y_i$  is the  $i$ th observation on the  $\alpha$  dependent variable.

$x_i$  is the  $i$ th observation on the independent variable.

$\hat{\alpha}$  is the estimated intercept

$\hat{\beta}$  is the estimated regression coefficient or slope.

$n$  is the number of observation.

For our study  $y$  represents the degree of competition and  $x$  represents the time.

Sequence of our analysis: While trying to measure the degree and nature of global competition among the passenger car producing countries, we first started with taking the major passenger car producing countries. We have collected time series data of production of major passenger car producing countries from 2001 to 2011. For simplicity, we have presented only the production data of top eleven major passenger car producing countries in the world. Rank-wise we have selected eleven countries viz. China, Japan, United States, Russia, South Korea, Germany, India, France, Mexico, Spain and Brazil. Then we have calculated their market shares. We have next calculated squares of these individual market shares for a particular year and then added those squares to get  $\sum m_i^2$  for that year. The entire process can be repeated for obtaining  $\sum m_i^2$  for all the years. Next, we have calculated the value of  $(1 - \sqrt{\sum m_i^2})$  to obtain the degree of competition for all the years. All those  $(1 - \sqrt{\sum m_i^2})$  values calculated for the period under study have given rise to a time series data on the degree of competition. We have next plotted these values against time to get an idea about the trend equation to find out if the competition is stable, increasing or decreasing.

**DESCRIPTIVE ANALYSIS**

The following data represents the production figure of world passenger car from 1999 to 2012, followed by their respective market shares and their squares.

**Table 1: The production of world passenger car from 1999 to 2012**

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
China	565366	604677	703,521	1,101,696	2,018,875	2,480,231	3,078,153	5,233,132	6,381,116	6,737,745	10,383,831	13,897,083	14,485,326	15,523,658
Japan	8100169	8359434	8,117,563	8,618,354	8,478,328	8,720,385	9,016,735	9,756,515	9,944,637	9,928,143	6,862,161	8,310,362	7,158,525	8,554,219
Germany	5309524	5131918	5,301,189	5,123,238	5,145,403	5,192,101	5,350,187	5,398,508	5,709,139	5,532,030	4,964,523	5,552,409	5,871,918	5,388,456
S. Korea	2361735	2602008	2,471,444	2,651,273	2,767,716	3,122,600	3,357,094	3,489,136	3,723,482	3,450,478	3,158,417	3,866,206	4,221,617	4,167,089
USA	5637949	5542217	4,879,119	5,018,777	4,510,469	4,229,625	4,321,272	4,366,220	3,924,268	3,776,641	2,195,588	2,731,105	2,966,133	4,105,853
India	533149	517957	654,557	703,948	907,968	1,178,354	1,264,000	1,473,000	1,713,479	1,846,051	2,175,220	2,831,542	3,038,332	3,285,496
Brazil	1107751	1351998	1,501,586	1,520,285	1,505,139	1,862,780	2,009,494	2,092,029	2,391,354	2,545,729	2,575,418	2,584,690	2,534,534	2,623,704
Russia	943732	969235	1,021,682	980,061	1,010,436	1,110,079	1,068,145	1,177,918	1,288,652	1,469,429	599,265	1,208,362	1,738,163	1,968,789
Mexico	993772	1279089	1,000,715	960,097	774,048	903,313	989,840	1,097,619	1,209,097	1,217,458	942,876	1,386,148	1,657,080	1,810,007
France	2784469	2879810	3,181,549	3,292,797	3,220,329	3,227,416	3,112,961	2,723,196	2,550,869	2,145,935	1,189,497	1,924,171	1,931,030	1,682,814
Spain	2281617	2366359	2,211,172	2,266,902	2,399,374	2,402,501	2,098,168	2,078,639	2,195,780	1,943,049	1,812,688	1,913,513	1,819,453	1,539,680
Other	9140614	9610951	8,781,791	9,120,966	9,230,581	10,124,883	11,196,929	11,032,666	12,169,473	12,133,429	10,913,114	12,136,112	12,448,727	12,419,776
<b>Total</b>	<b>39759847</b>	<b>41215653</b>	<b>39,825,888</b>	<b>41,358,394</b>	<b>41,968,666</b>	<b>44,554,268</b>	<b>46,862,978</b>	<b>49,918,578</b>	<b>53,201,346</b>	<b>52,726,117</b>	<b>47,772,598</b>	<b>58,341,703</b>	<b>59,870,838</b>	<b>63,069,541</b>

Source: International Organization of Motor Vehicle Manufacture (<http://oica.net/category/production-statistics/>)

**Table 2: The market share for top producing countries year wise.**

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
China	0.014	0.015	0.018	0.027	0.048	0.056	0.066	0.105	0.120	0.128	0.217	0.238	0.242	0.246
Japan	0.204	0.203	0.204	0.208	0.202	0.196	0.192	0.195	0.187	0.188	0.144	0.142	0.120	0.136
Germany	0.134	0.125	0.133	0.124	0.123	0.117	0.114	0.108	0.107	0.105	0.104	0.095	0.098	0.085
S. Korea	0.059	0.063	0.062	0.064	0.066	0.070	0.072	0.070	0.070	0.065	0.066	0.066	0.071	0.066
USA	0.142	0.134	0.123	0.121	0.107	0.095	0.092	0.087	0.074	0.072	0.046	0.047	0.050	0.065
India	0.013	0.013	0.016	0.017	0.022	0.026	0.027	0.030	0.032	0.035	0.046	0.049	0.051	0.052
Brazil	0.028	0.033	0.038	0.037	0.036	0.042	0.043	0.042	0.045	0.048	0.054	0.044	0.042	0.042
Russia	0.024	0.024	0.026	0.024	0.024	0.025	0.023	0.024	0.024	0.028	0.013	0.021	0.029	0.031
Mexico	0.025	0.031	0.025	0.023	0.018	0.020	0.021	0.022	0.023	0.023	0.020	0.024	0.028	0.029
France	0.07	0.07	0.080	0.080	0.077	0.072	0.066	0.055	0.048	0.041	0.025	0.033	0.032	0.027
Spain	0.057	0.057	0.056	0.055	0.057	0.054	0.045	0.042	0.041	0.037	0.038	0.033	0.030	0.024
Other	0.23	0.233	0.221	0.221	0.220	0.227	0.239	0.221	0.229	0.230	0.228	0.208	0.208	0.197
<b>Total</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>

Source: Derived from Table No. 1



**Table 3: The Square of market share year wise**

Country	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
China	565366	604677	703,521	1,101,696	2,018,875	2,480,231	3,078,153	5,233,132	6,381,116	6,737,745	10,383,831	13,897,083	14,485,326	15,523,658
China	0.000196	0.000225	0.000324	0.000729	0.002304	0.003136	0.004356	0.011025	0.014400	0.016384	0.047089	0.056644	0.058564	0.060516
Japan	0.041616	0.041209	0.041616	0.043264	0.040804	0.038416	0.036864	0.038025	0.034969	0.035344	0.020736	0.020164	0.014400	0.018496
Germany	0.017956	0.015625	0.017689	0.015376	0.015129	0.013689	0.012996	0.011664	0.011449	0.011025	0.010816	0.009025	0.009604	0.007225
S.Korea	0.003481	0.003969	0.003844	0.004096	0.004356	0.004900	0.005184	0.004900	0.004900	0.004225	0.004356	0.004356	0.005041	0.004356
USA	0.020164	0.017956	0.015129	0.014641	0.011449	0.009025	0.008464	0.007569	0.005476	0.005184	0.002116	0.002209	0.002500	0.004225
India	0.000169	0.000169	0.000256	0.000289	0.000484	0.000676	0.000729	0.000900	0.001024	0.001225	0.002116	0.002401	0.051000	0.002704
Brazil	0.000784	0.001089	0.001444	0.001369	0.001296	0.001764	0.001849	0.001764	0.002025	0.002304	0.002916	0.001936	0.001764	0.001764
France	0.004900	0.004900	0.006400	0.006400	0.005929	0.005184	0.004356	0.055000	0.002304	0.001681	0.000625	0.001089	0.001024	0.000729
Russia	0.000576	0.000576	0.000676	0.000576	0.000576	0.000625	0.000529	0.000576	0.000576	0.000784	0.000169	0.000441	0.000841	0.000961
Mexico	0.000625	0.000961	0.000625	0.000529	0.000324	0.000400	0.000441	0.000484	0.000529	0.000529	0.000400	0.000576	0.000784	0.000841
Spain	0.003249	0.003249	0.003136	0.003025	0.003249	0.002916	0.002025	0.001764	0.001681	0.001369	0.038000	0.001089	0.000900	0.000576
Other	0.052900	0.054289	0.048841	0.048841	0.048400	0.051529	0.057121	0.048841	0.052441	0.000529	0.051984	0.043264	0.043264	0.038809
Total	0.146616	0.144217	0.139980	0.139135	0.134300	0.132260	0.077793	0.182512	0.131774	0.080583	0.181323	0.143194	0.189686	0.141202

Source: Derived from table no. 2

According to 2012 data of passenger car production figure the countries ranking from 1 to 11th are: China, followed by Japan, Germany, South Korea, USA, India, Brazil, Russia, Mexico, France, and Spain.

China's rank was first from 2009 in passenger car production beating Japan which was the leading country over the past years. In 1999 the position of China was 10th followed by India on 11th position. In that year the first three countries were Japan, USA and Germany. But from the year 2002 the market share of Japan, Germany and USA went on decreasing. Japan's performance was very good during 1970 to 2008 in respect of both domestic use and worldwide export. In 80's and 90's it overtook the US as the production leader with up to 13 million cars per year manufactured. After massive production by China in the 2000s and fluctuating US output, Japan production fell down from 9 million to 6 million cars per year. Japan is now the second passenger car producer in

the world with an annual production of 8 million units to 10 million units automobiles.

The market shares of China, India, South Korea and Brazil are in positive trend. China grows 17% from 1999 to 2012. Since 2009 annual production of automobiles in China has exceeded that of the European Union or that of the United States and Japan combined. In 19th century China was the second biggest export country of Japan after US in passenger car. But the scenario gets changed in the late 90's by limiting imports. China encourages increasing the local production by boosting the various existing joint-venture passenger car production agreements, as well as adding new ones. In 1983, American Motors Corporation (AMC, later acquired by Chrysler Corporation) signed a 20-year contract to produce their Jeep-model vehicles in Beijing. In the following year, for 25-year contract Germany's Volkswagen signed to make passenger cars in Shanghai. France's Peugeot agreed to another



passenger car project to make vehicles in the prosperous southern city of Guangzhou. These early joint ventures did not allow the Chinese to borrow much foreign technology, as knock-down-kit (a kit containing the parts needed to assemble a product) may not have been allowed to slip past borders. Few more big and small joint-ventures turned the passenger car production in China in a positive way.

India overtook Brazil and became the sixth largest passenger vehicle producer in the world (beating such old and new auto makers as Belgium, United Kingdom, Italy, Canada, Mexico, Russia, Spain, France, Brazil), grew from 16% to 18% to sell around three million units in the course of 2011-12. In 2009, India emerged as Asia’s fourth largest exporter of passenger cars, and is behind Japan, South Korea, and Thailand. In 2010, India beat Thailand to become Asia’s third largest exporter of passenger cars. The market share of India rose from 1.3% to 5.2 %.

Japan, USA and Germany are having a negative trend in market share in the said period, though Japanese manufacturers produced very affordable, reliable, and popular cars throughout the 1990s. Japan who was the leader for many years in passenger car industry from 2009 its market share

fell down particularly due to old and new competition from South Korea, China and India. Nevertheless, Japan’s car industry continues to flourish, its market share has risen again, and in the first quarter of 2008 Toyota surpassed American General Motors to become the world’s largest car manufacturer. The United States is also the home to three large vehicle manufacturers: General Motors, Ford Motor Company and Chrysler, which have historically been referred to as the “Big Three.”

Russia and Mexico are having constant market share trends.

**STATISTICAL STUDY OF WORLD PASSENGER CAR PRODUCTION**

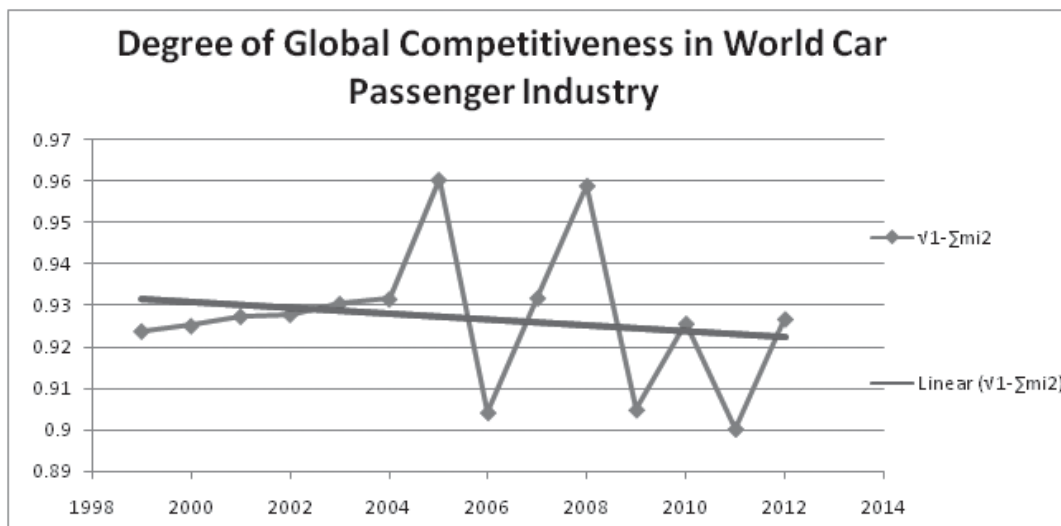
The original time series data set on global passenger car production have been used to study the trend in competition from 2001 to 2011. The formula to be used for measuring the degree of competition is  $(1-\sqrt{\sum m_i^2})$ , where  $m_i$  is the market share of the  $i$ th country. In Table 3 we have calculated the  $m_i^2$  derived from Table 2 for each country for each year. To examine the trend of competition over the years for detecting any change in the degree of competition in global Passenger Car production, we would like to plot the values of  $(1-\sqrt{\sum m_i^2})$  over the years, which can be observed in Table 4.

**Table 4: The degree of global competition  $\sqrt{1-\sum m_i^2}$  in global passenger car production plotted against time over the years.**

Year	$\sum m_i^2$	$1-\sum m_i^2$	$\sqrt{1-\sum m_i^2}$
1999	0.146616	0.853384	0.92378785
2000	0.144217	0.855783	0.9250854
2001	0.139980	0.860020	0.92737263
2002	0.139135	0.860865	0.92782811
2003	0.134300	0.865700	0.93043001
2004	0.132260	0.867740	0.93152563
2005	0.077793	0.922207	0.96031609
2006	0.182512	0.817488	0.90415043
2007	0.131774	0.868226	0.93178646
2008	0.080583	0.919417	0.95886235
2009	0.181323	0.818677	0.90480771
2010	0.143194	0.856806	0.92563816
2011	0.189686	0.810314	0.90017443
2012	0.141202	0.858798	0.92671355

Source: Derived from Table No. 3

Figure 1: Graph for the degree of global competitiveness in world car passenger industry along with the trend line.



In view of Figure 1, we propose to go for linear regression analysis. But as the time series generated is having lots of variation and to get rid of the variation we have plotted the data accordingly. We could find out the different periods describing the inherent variation of degree of competition. The periods are:

- i) From 1999-2005,
- ii) From 2006-2008 and
- iii) From 2008-2012.

We shall consider the hypothesis H0 as null hypothesis that there is no change in the degree of global competition in passenger car production over the years against Ha as

alternative hypothesis, that there is an increase or decrease in the same over the years.

Let the linear trend equation of Global Competitiveness of passenger car producing countries for the period 1999-2005 is represented by

$$PC_{it} = x_1 + y_1 t + \epsilon_{it}, \tag{1}$$

where  $PC_{it}$  is the global competitiveness of passenger car production during the period  $t$ ,  $x$  and  $y$  are the regression parameters,  $t$  is the time variable, and  $\epsilon_t$  is the error term. Using the least square method one can estimate  $x$  and  $y$  using time series data from Table 4.

The corresponding analysis is presented below

LINEAR (1999-2005)					
Multiple R	.766		R Square	.588	
Adjusted R Square	.505		Standard Error	.009	
ANOVA					
	DF	Sum of Squares	Mean Square		
Regression	1	.001	.001		
Residuals	5	.000	.000		
Total	6	.001			
F =	7.122	Signif F =	.044		
----- Variables in the Equation -----					
Variable	B	SE B	Beta	t	Sig t
Time	.004	.002	.766	2.669	.044
(Constant)	.914	.008		121.718	.000

The estimated value of  $x_1$  and  $y_1$  are  $\hat{x}_1$  and  $\hat{y}_1$ . Here  $\hat{x}_1$  is .9143 and  $\hat{y}_1$  is -.0149. To examine the significance of  $y_1$  value, the regression coefficient of this linear regression curve, we like to test the null hypothesis,  $H_0: y_1 = 0$  against the alternative hypothesis that  $y$  is greater or lesser than zero, i.e.  $H_a: y_1 > 0$  or  $H_a: y_1 < 0$ . The observed value of  $t$  is 2.669, with a tail probability of .044, which is less than .05. Hence, rejecting the null hypothesis at 5% level of significance i.e. the global competitiveness of world passenger car production is “significantly increasing over the year” as the coefficient of time is positive. The multiple correlation, i.e. R value, is 0.766 which is also on the higher side. The corresponding analysis of variance table provides with F ratio as 7.122 for which the upper tail probability is 0.044, which is less than

5% level of significance. So, we conclude that, the linearly increasing trend equation is a good fit for the said problem.

Let the linear trend equation of Global Competitiveness of passenger car producing countries for the period 2006-2008 is represented by

$$PC_{2t} = x_2 + y_2 t + \epsilon_{2t} , \tag{2}$$

where  $PC_{2t}$  is the global competitiveness of passenger car during the period  $t$ ,  $x_2$  and  $y_2$  are the regression parameters,  $t$  is the time variable, and  $\epsilon_{2t}$  is the error term.

The corresponding analysis is presented below

LINEAR (2006-2008)					
Multiple R	1.000		R Square	1.000	
Adjusted R Square	1.000		Standard Error	1.000	
ANOVA					
	DF	Sum of Squares	Mean Square		
Regression	1	.001	.001		
Residuals	1	.000	.000		
Total	2	.001			
F =	28621.474	Signif F =	.004		
----- Variables in the Equation -----					
Variable	B	SE B	Beta	t	Sig t
Time	.027	.000	1.000	169.179	.004
(Constant)	.877	.000		2510.352	.000

The estimated value of  $x_2$  and  $y_2$  are  $\hat{x}_2$  and  $\hat{y}_2$ . Here  $\hat{x}_2$  is .877 and  $\hat{y}_2$  is .027. To examine the significance of  $y_2$  value, the regression coefficient of this linear regression curve, we like to test the null hypothesis,  $H_0: y_2 = 0$  against the alternative hypothesis that  $y$  is greater or lesser than zero, i.e.  $H_a: y_2 > 0$  or  $H_a: y_2 < 0$ . The observed value of  $t$  is 169.179, with a tail probability of .004, which is less than .05. Hence, rejecting the null hypothesis at 5% level of significance we can say, the global competitiveness of world passenger car production is “significantly increasing over time”. The multiple correlation, i.e. R value, is 1.000 which is also on the higher side. The corresponding analysis of variance table provides with F ratio as 28621.474 for which the upper tail probability is 0.004, which is less than 5% level of significance. So, we conclude that, the linearly increasing trend equation is a good fit for the said problem.

For the third period extend of variation is beyond any modeling as the fluctuation is ascertain. In 2009, the production of passenger car dropped due to the effect of 2008’s global financial crisis.

Though, the first two periods show increase in trend but from the figure 1 it is clear that the trend line for the overall period is negative to the origin.

**CONCLUSION**

Thus, from the above study it is clear that the opportunities for Indian car passenger companies are growing over the years. We have noticed from the output table for degree of competitiveness among the global car passenger production countries that the global competition is decreasing over the years. So, decreasing global competition coupled with

increasing market share of India indicates a positive sign for Indian car passenger industry.

Porter's (1980) generic strategy of overall cost leadership may be the ideal choice, to remain afloat in the global market. Reduction of manufacturing cost can ensure the competitive edge in the global market and can also accelerate the rate of growth within the country, largely with the cost of labour and energy.

Among the top producing countries of global car passenger production the market shares of China, India, Brazil, Russia, Mexico and S. Korea are increasing. Scenario is reverse for Japan, United States, Germany, France and Spain.

The position of India in the passenger car market size can be comparable to some of the developed economies of the world, now. As, the degree of completion is also decreasing over the years along with better performance of its own, India is in a better position. A floating economic growth, growing middle class population, young population, steadily improving dependency ratio, growing urbanization and trend towards smaller, nuclear families, rising disposable income levels, relatively low penetration of cars and adequate availability of financing - these all trends in turn result in higher savings and increased ability to purchase vehicles, as well as explaining the preference for smaller cars. With most major markets facing excess capacity and demand saturation, the Indian market is likely to remain a key destination for global majors over the medium term. With global demand shifting to smaller cars, global players are likely to focus on strategies of producing cars of the same platforms in low-cost countries like India, Thailand and Mexico. In terms of cost competitiveness, India has built up the scale and significant competencies and cost advantages in the production of small cars. It benefits from lower development and labour costs, and improving auto component manufacturing base. Maruti Suzuki and Hyundai have already establish meaningful presence in exports out of India, and now many other global players including Renault-Nissan, VW, Ford have either adopted strategy or are in the process of exploring opportunities to develop India as part of their global manufacturing hub. Interestingly, China despite being known for its low-cost manufacturing capabilities and large automotive market supported by presence of international players is yet to establish a meaningful presence in exporting cars, though the situation may change over the medium term, especially considering rising capabilities and aspirations of its large local players.

Additionally, auto ancillaries will have to ramp-up their capital investment to develop new platforms and increase their localization contents. Besides localization of components, key challenges facing new entrants would be establishing a strong service/ distribution network, which has become increasingly prohibitive due to rising real estate costs in many markets. Going forward sharing and co-operation on distribution network and service facilities could play a significant role in rationalizing cost structures. In terms of product launch, while most global majors are likely to choose from their existing portfolio for launch in India, key to success would be the ability to incorporate changes necessary to meet Indian preferences and market conditions.

After India's liberalization, the government of India also has taken several measures like relaxation of the foreign exchange and equity regulations, reduction of tariffs on imports, and banking liberalization that has fueled financing-driven purchases.

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# Enablers and Disablers: Academic and Job Performance

Apurva Lagwankar, Anamika Sinha, and Tripura Sundari Joshi

## Abstract

*This study measures the student's perception of what they consider as enabling or disabling in their environment for learning. The cause-effect relationship between organisational environment studied as enabling/disabling and academic learning is studied through regression analysis. The extent of influence of learning on job performance is also tested to understand the learning transference on the job. A questionnaire was designed to record data. For this purpose, a sample of alumni who had completed at least one appraisal cycle was taken. Out of the 200 respondents contacted, 67 responded. None of the respondents perceived the learning environment as disabling at an aggregate level. Hypothesis provided significant evidence to prove that enablers influenced metacognitive and affective learning. There was no evidence to comment on cause effect relationship between enablers and cognitive learning. All the three types of learning significantly impacted job performance. Though many other factors like peers, attitude, age, etc affect learning transference, this study focuses only a few factors and their influence (in isolation). The study concludes by describing the role of organizational environment in learning and its ultimate impact on job performance.*

**Key words:** Learning, organisational environment, enablers and disablers, cognition, metacognition and affective learning, job performance.



Apurva Lagwankar, Management Trainee, FINO Pay Tech Ltd.  
Shree Saawan Knowledge Park, MIDC, Junagar,  
Navi Mumbai- 400705 Ph- 08452003020  
Email : apurva.imnu@gmail.com

Dr. Anamika Sinha, Asst Prof. ( HR & OB Area) Institute of  
Management, Nirma University, SG Highway, Ahmedabad-  
382481. Ph- 02712-241900-04 Ext 643  
Ph-9909963360, Email -121withanamika@gmail.com

Prof. Tripura Sundari Joshi, Asst Prof. (Marketing Area)  
IMNU, Ahmedabad, 30 D Sulay Deluxe row houses, Bakeri  
city, Makaraba road, Ahmedabad-51.

In recent years, there has been a sustained debate about the relevance, value and purpose of Masters in Business Administration courses. To cater to the market demand for management trainees, B schools have been actively considering their identity and mission and, in some cases, reviewing the focus of their research, education and engagement activities. B Schools today struggle to provide the best learning opportunity to students, and create research aided theories relevant to manage corporate functions.

Constant innovative processes are built with an aim to get better job performance in the students. Since the nature of management education is vocational, practical, and specific to a context, no standard theory is relevant and management education systems have to constantly relook their own structures and systems to identify areas for improvement.

Management education is interplay of attitude development and knowledge creation. Thus, an equal emphasis is needed



for learning transference, as cognitive, contextual, attitude formation and developing skills for application.

The present paper explores the organisational enablers and disablers in the light of learning transference theory to identify what factors the alumnus body considered as critical in their alma mater that enabled academic and job performance.

### Literature review

The Output of a training or education related intervention can be measured in terms of learning; which in turn can be measured in terms of cognitive, affective and metacognitive learning outcomes. We define *Cognitive learning* as structural knowledge which enables people to learn by using their reason, intuition, and perception. *Affective learning* is defined as subjective states that are either positive or pleasant (cheerful, confident, attentive), or negative and unpleasant (nervous, distressed, irritable) (Gray & Watson, 2001). Affective outcomes also comprise for interest, attitude and motivation towards the training programme (Brown 2005). When learners find the content appealing, they tend to experience “*positive affect*” and vice versa. Further, *Metacognitive learning* refers to the declarative, procedural and conditional knowledge associated with learning, for example learning to read (Pressley, 2002).

Integrating the three definitions it is suggested that metacognitive and cognitive knowledge act as moderating variables between affective learning and actual performance. (Kraayenoord et al, 1999).

Thus while affective learning was important to build an attitude, metacognitive and cognitive learning was important in bringing about a behavioural change. The three together constitute the components of learning outcome of an MBA Program. The researchers thus make an attempt to understand what organizational factors enable and or disable the three learning components.

While studies have been conducted on enabling environments for learning in child development psychology, similar work in management education is not available.

### Perceived barriers and enablers and academic learning

Lent, Brown, & Hackett (2000) mentioned that perceived barriers and enablers are environmental events or conditions that are believed to exist or be encountered and thought to impede (barriers) or facilitate (enablers) progress.

Mathieu, Tannenbaum, & Salas, (1992) debated that when the participants perceive disablers, it leads to frustration, their motivation to learn decreases, and they lower their effort as they no longer believe that effort would improve performance. They are more likely to put efforts if they believe, their attempt would be encouraged and vice versa.

Based on Brown and Ford’s (2002) IPO model (input-process-output) of learning, Colquitt, LePine, and Noe (2000) also suggested that learner characteristics, organizational enablers and disablers, and instructor’s capability together create a motivation to learn which in turn facilitates cognitive, meta cognitive and affective learning.

Biggs (1989) in 3P model suggested learning as an interplay of three variables : learning process, learning environment or presage, and learning outcome or product. The three together contributed to a manager’s effectiveness.

Lizzio, Wilson and Simon (2002), Entwistle and Tait (1990), Wilson (1996) also found that the students’ perception of learning environment affected their learning outcomes and achievements at school.

Thus the first set of hypothesis was arrived at

*H1 Organizational enablers have an influence on cognitive learning*

*H2 Organizational enablers have an influence on metacognitive learning*

*H3 Organizational enablers have an influence on affective learning*

### Academic learning and Job Performance

According to the causal model of job performance proposed by Schmidt and Hunter (1986) cognitive ability is the most significant cause of job performance. Kuncel, Hezlet, & Ones(2004) again supported that cognitive learning does influence job performance. One of the seminal papers by Wise (1975) has argued that cognitive scores do lead to better job performance. Some researchers have studied the role of affective learning and its impact on job performance as well. Gintis (1971) found that affective learning imparted through education also enhances job performance. The researchers could not find any study on the impact of metacognitive learning on job performance. However, since metacognitive learning inputs are important for a business management

course, the same was decided to be studied. Thus the second set of hypothesis was arrived at as follows:

H4 Cognitive learning influences job performance.

H5 Metacognitive learning influences job performance.

H6 Affective learning influences job performances.

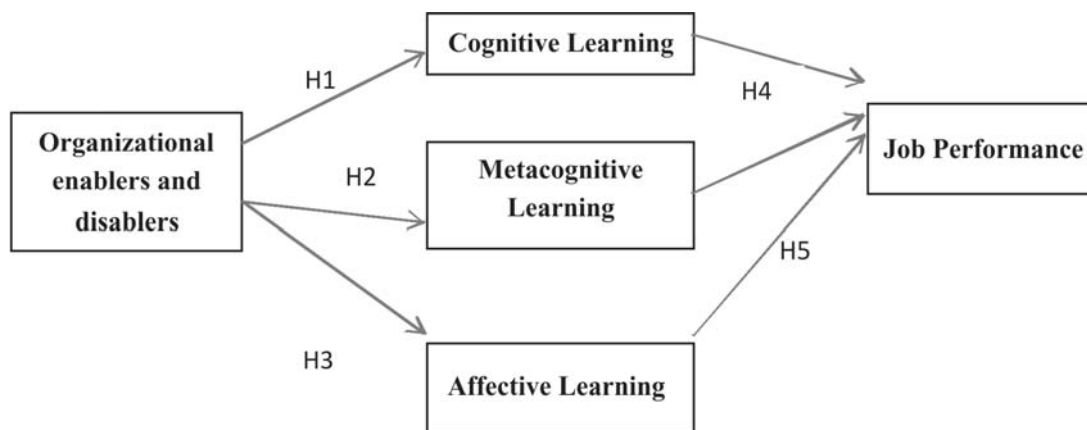


Figure 1. Theoretically hypothesized model

The present study is descriptive in nature since certain relationships among the key constructs derived out of a review of relevant literature are hypothesized for their validity.

The study used purposive snowball sampling through the medium of social network (Browne 2005). Alumni of leading Gujarat based management institutes; who had undergone atleast one performance appraisal cycle post their campus placements were identified through Facebook. Alumni thus identified were sent an online questionnaire with a request to participate in the survey. Of the 200 respondents contacted 67 responded to the questionnaire, thus a response rate of 34% was achieved.

### Measurement

The cognitive learning was measured using the composite grade point average of the sampled students at the end of two years of study. Job performance was measured using a self-reported score on a single question. For measuring the perceived enablers and disablers as well as the affective and metacognitive learning components, separate questions were designed and administered. A preliminary face and content validity was done by sending the questionnaire to seven experts and to

check for constructs identified and semantics of the tool. Some language modification was made based on their suggestions. Further, the tool was initially introduced to 10 alumni for pilot study. Some alumni students visiting college were asked to read the items carefully and mark their response. Some items which were ambiguous, or not very clear were then modified based on their feedback.

To establish the internal consistency of the item within the tool used in the study and test for the reliability of the newly derived items for measurement of affective and metacognitive learning and organizational enablers, and disablers' Cronbach alpha was calculated with a resulting value of 0.73. Inter item correlation was also found to be consistent and above 0.5 for all items. Therefore all items were retained.

### STRUCTURE OF THE QUESTIONNAIRE

**1. Perceived Enablers and Disablers:**Based on literature review, several key interventions of the institutes, which were perceived by students as enabling/disabling in their learning, were used in the study. These items were marked on a 7 point Likert scale to measure extent of enabling or disabling effect.

**Table 1. The broad constructs of organizational environment.**

ENABLERS AND DISABLERS	
Library	Faculty quality
Location	Peer pressure for performance
Campus	Administrative procedures
Hostel facility	Discipline and evaluation
Internet facility	Friendly and encouraging environment
Reading material	Institutional culture and values.

**Table 2 Scores of enablers/disablers**

Responses	Strongly Disabling	Disabling	Neutral	Enabling	Strongly Enabling
Scores assigned	1	2	3	4	5

The total score of all the 12 factors was considered to decide the overall influence of the learning environment as enabling or disabling (i.e. respondents scoring less than or equal to 30 were considered to be perceiving the environment as disabling while those scoring above 30 were considered to be perceiving the environment as enabling.)

**2. (a) Metacognitive Learning:** The metacognitive learning component was measured through three questions using the Likert scale. The scores of 1 to 5 were assigned from “highly disagree” to “highly agree” options. The questions included are as follows:

I could relate the discussion in class with my past experiences (*This question measured the application of the concept at the time of learning*).

Looking at an issue, I knew I would be able to solve it (*This question covered the declarative knowledge of the respondent*).

While working at office, I am reminded of previous classroom discussions (*This question attempts to measure the current level of metacognitive learning*).

**2. (b) Affective Learning:** This dimension focused on capturing the emotions of the respondent about the learning experience. The scores were assigned on the basis of positivity or negativity of emotions. The first two questions

measured the emotions about the learning content. The third question measured the overall effect of the candidate during the learning process. The questions for measuring affective learning are as follows:

The MBA programme added value to my learning.

I am satisfied with the learning derived from the course.

I enjoyed the 2 years of MBA.

## RESULTS

The mean score on each of the variables studied are shown below:

**Table 3 Mean average of organizational enablers and disablers**

#	Question	Strongly Enabling	Enabling	Neutral	Disabling	Strongly Disabling	Responses	Mean
1	Environment (in terms of friendliness)	16	38	5	7	1	67	3.91
2	Discipline and Evaluation system (Weightage assigned to components)	8	40	11	7	1	67	3.7
3	Institutional culture and values	13	25	19	6	4	67	3.55
4	Library	18	33	15	0	1	67	4
5	Location	13	29	15	8	2	67	3.64
6	Campus	34	29	4	0	0	67	4.45
7	Hostel facility	26	31	7	2	1	67	4.18
8	Internet facility	22	30	9	3	3	67	3.97
9	Peer pressure for performance	9	35	18	3	2	67	3.69
10	Quality of faculty	5	27	23	7	5	67	3.3
11	Administrative Process	6	17	29	11	4	67	3.15
12	Reading material	11	36	18	1	1	67	3.82

From the above table it is evident that students perceived that educational environment of the institute was enabling. Of the 12 items studied, all items scored more than 2.5; highest enablers identified from hard areas of enablers namely campus, hostel, library and internet services. Factors scoring low, even though found to be enabling were administrative processes,

quality of faculty, institutional culture, discipline, and evaluation system.

The data collected was statistically evaluated through regression analysis to test for the causal effect of identified variables on learning and on job performance.

**Table 4 Findings**

Responses	P value at 0.05 % significance	R square value	Hypothesis accepted or rejected
Organisational enablers have an influence on cognitive learning	0.631	0.04	rejected, organizational enablers do not influence cognitive learning.
Organisational enablers have an influence on metacognitive learning	0.00	0.388	Accepted, organizational enablers do influence metacognitive learning

Responses	P value at 0.05 % significance	R square value	Hypothesis accepted or rejected
Organisational enablers have an influence on affective learning	0.000	0.492	Accepted, there is affective learning in presence of organizational enablers
Cognitive learning influences job performance	0.047	0.06	Accepted, there is a significant influence in job performance because of cognitive learning
Metacognitive learning influences job performance	0.002	0.136	Accepted, Metacognitive learning does influence job performance.
Affective learning influences job performances	0.004	0.121	Accepted, Affective learning does influence job performance.

Table 5 Summary of Hypothesis tests

	$\hat{\alpha}$	F	R <sup>2</sup>	Adj R <sup>2</sup>	P-value	t-value
Influence of enablers on:						
Cognitive	0.060	0.233	0.004	-0.012	0.631	0.482
Metacognitive	0.537	26.276	0.288	0.277	0.000	5.126
Affective	7.939	63.029	0.492	0.484	0.000	7.939
Job performance influenced by						
Cognitive	0.245	4.093	0.06	0.045	0.047	2.023
Metacognitive	0.143	10.229	0.136	0.123	0.002	3.198
Affective	0.348	8.965	0.121	0.108	0.004	2.994

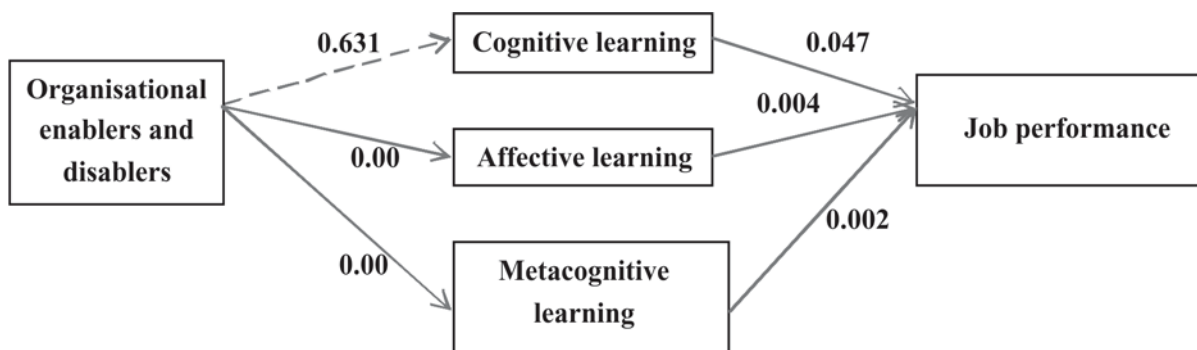


Figure 2 Statistically validated model

## DISCUSSION

1) There was no conclusive evidence to prove that there was cognitive learning because of organizational enablers. In this case, the perception about library, hostel facility, course material and other factors (in aggregation) do not significantly affect the CGPA of student. There could be other factors affecting cognitive learning. The S-S learning theory (Cognitive learning theory SS Learning) could be referred to support this finding. The two main types of cognitive learning are **Latent learning** and **Insight learning**. Latent learning (also known as incidental learning) occurs without reinforcement and is not immediately demonstrated when it occurs. Here, the student may perceive library, course material, faculty guidance as enabling but he does not use the learning immediately. Hence, it is difficult to establish a direct link. Even in the case of insight, where an individual finds a new way of solving problem, it is difficult to establish the link. The emphasis in this case is more on the internal learning process rather than the external learning environment. During the two years of MBA program, the student has no way of testing this except for the scores in exam. Also, most students tend to be goal focused, so the cognitive part is taken by them only to the extent that it would help them in their immediate job. This may also be explained by way of information processing theory. Though the input may be uniform for all the students, the output may be different. The main reason is every student processes the information differently. The learning styles can also be different.

2) It could be conclusively established that organizational enablers influenced metacognitive learning. Here the two main factors coming into play are gaining more knowledge and application of previously gained (cognitive) knowledge. Students perceive that organizational enablers have a larger role in influencing the application of the knowledge which comes handy as a professional. This finding to an extent defies the argument against the state of MBA schools in India; where it has been argued that Indian MBA Schools have become just a teaching shop and placement agency (Guptoo 2013). The alumnus of the sample represented does feel the institute's environment enabling and helping in metacognitive learning which is an important skill set for managers.

3) There was sufficient evidence to support that there was affective learning because of organizational enablers. The respondent's perception about the hard and soft enablers (hostel, campus, library, and friends) affects his emotions

during the learning process (MBA course). Though explained more by hygiene theories of motivation, this finding also gets support from goal setting theories. In presence of hygiene factors and motivators, students set higher goals for themselves and are able to achieve the same. Being adult learners, it may be presumed that the students set self-directed learning goals and they perceive role of active engagement with faculty to be lesser than their own learnt or developed concepts through readings or group discussions. This is also supplemented by the larger enabling score of reading material that the faculty provides for them.

4) It could be conclusively established that cognitive learning influences job performance. A higher job performance rating was observed for students scoring better in CGPA. Good academic score develops a sense of accomplishment and therefore a better esteem. Academic rigour, establishes a routine for further diligence, which also translates in job performance. Further, even if it is not at the ready recall, understanding of the basic concepts of theory enable students to enter the double loop of learning and find better solutions when encountered with challenges in job.

5) The Metacognitive learning does influence job performance according to the study. The ability of an individual to relate the learning to past experiences or the external environment helps him in applying the knowledge in the job environment also. The declarative knowledge increases probability to measure his own potential. This helps him/her in doing work more efficiently.

6) There was sufficient evidence to establish a cause-effect relationship between affective learning and job performance. The more positive an individual felt about his learning experience, more likely was he to perform better at his job. The affective learning may include the motivation to learn during the course and level of satisfaction after the course. The importance of positive attitude during learning transference is reinforced through this finding.

## CONCLUSION

The research provided an insight that the environment was perceived to be enabling. The top three factors rated favourably on this scale were campus, hostel facility and library. The factors scoring the least were administrative processes, quality of faculty and discipline. Interestingly, all the factors in the top three were hard in nature while all the three at the bottom were soft factors of the learning



environment. The research provided a direct link between organizational enablers and metacognitive learning as well as organizational enablers and affective learning. The enablers could not be directly linked with cognitive learning. The learning environment in an organization should provide adequate support to different styles of learners for enabling cognitive learning. The enablers or disablers are determined by the perception of the learner. The organization should maintain a balance between the available factors for learning. The three types of learning measured for their relevance at the workplace were found to be important for creating a better job performance. Most evaluation systems in MBA Schools cater to measurement of cognitive learning; since metacognitive and affective learning is also important influencer for job performance, efforts must be made by faculty to integrate this in delivery as well as evaluation.

#### CONTRIBUTION OF THE RESEARCH


The research provided a perspective on role of organization environment on learning with respect to management education. It further links this learning at three levels and tries to explore its impact on job performance, a most important deliverable for any management institute. The research brings out, which component of learning have an influence on the job performance of a manager. This research adds to the literature an enabling environment in higher education and its impact on job and academic performance.

#### LIMITATIONS OF THE STUDY

The sample was collected from one college/institute and therefore may be a unique phenomenon of the institute in question. In terms of organizational enablers and disablers there could be more variables that may play a role, but have not been considered as relevant in the context studied. The sampling technique used is through social media, where there is a possibility of over reporting. According to Daniel Kahneman 1999 the peak/end rule suggests that when the students are on the campus, their response to some disablers would be much stronger, as compared to when they are already placed. As time passes by, the hurt or disablers perceived and their impact tends to diminish. This study could ideally be done over a longitudinal period, where perception of enablers and disablers may be studied while the students are on campus and subsequently after a certain length of time in job roles.

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# Cause - brand alliance: Purchase Intention

Kota Neel Mani Kanta, D.V. Ramana and P. Srivalli

## A b s t r a c t

Cause related marketing has become a meaningful part of a marketing plan. For the success of the cause marketing campaign, the charity programme selected to support by the organization and the product/brand associated should be compatible, in this study we state it as Cause Brand alliance. The study tries to understand the effect of Cause brand alliance on relationship between the attitude towards company and purchase intention. The study has been conducted in Indian context. The research design of the study is to test the causal relationship among the variables considered in the study. The study is conducted through online survey. The study contributes important insights on cause-brand alliance and its influence on attitude and purchase intention helpful at the design stage of cause marketing.

**Key words:** Cause Related Marketing, Cause Brand Alliance, Purchase Intention



Kota Neel Mani Kanta, Asst Professor, KSRM College of Management Studies, Kadapa, AP.  
Email: kotamani2003@yahoo.co.in. Ph:09848071295

Prof D.V Ramana, School of Business Management,  
SV University, Tirupathi., Ph:9393608039

P. Srivalli, Asst Professor, KSRM College of Management Studies, Kadapa, AP., Email: puttasrivalli@yahoo.co.in  
Ph:09885292244

After the recent 2004 tsunami in Asia, the Washington Post profiled a number of companies who donated money to the relief effort. For example, Starbucks chose to donate two dollars to disaster relief in Indonesia for each pound of Sumatran coffee purchased, while Avon agreed to donate three dollars to reconstruction efforts for each "Heart of Asia" pin purchased by its customers (Cooperman, 2005). This type of corporate charitable donation is an example of cause related marketing: a program designed to create a partnership between a sponsoring firm and a non-profit cause to raise money through product sales (Varadarajan and Menon, 1988).

The increasing strategic importance and consumer relevance of such socially responsible marketing initiatives is evidenced in the results of a Cone and Roper consumer survey (Cone Inc., 2004). Approximately 80 percent of consumers surveyed stated corporations who support a cause generate greater trust, 86 percent said they would switch brands to a cause-

supporting product when faced with a choice of equal product price and quality, and 85 percent said the company's commitment to a social cause was important when deciding whom to do business with in their local community.

These results suggest that while marketing in general is focused on the process of selling, influencing and persuading the end user to purchase a product, companies feel compelled to serve and satisfy the human needs of their customers (Kotler and Levy, 1969) and of their other internal and external publics (Kotler, 1972), both out of obligation to society, and to achieve positive consumer rewards. Cause related marketing allows the marketer to reach these publics by tying a company's "economic activity to a higher social purpose" (Kotler and Levy, 1969, 15).

But how do companies ensure the success of such corporate social responsibility (CSR) initiatives, specifically in the case of using cause-related marketing campaigns? Research in marketing addressing this question generally falls into two categories:

- The effect of positive attitude on purchase intent and
- The degree of congruence between the brand and cause as perceived by the customer and its influence on attitude and purchase intent.

### Conceptual Frame work

In a seminal paper on cause-related marketing, Varadarajan and Menon (1988, 60) offer the most comprehensive cause-related marketing conceptualization, defining it as: . . . the process of formulating and implementing marketing activities that are characterized by an offer from the firm to contribute a specified amount to a designated cause when customers engage in revenue-providing exchanges that satisfy organizational and individual objectives.

Among other benefits to the sponsoring company, cause related marketing programs can generate favourable purchase intent or product choice among the sponsoring firm's customers (Shell, 1989; Lawrence, 1993; Mohr et al, 2001) and favorable customer attitudes towards the sponsoring firm (Ross et al, 1990-1991, 1992; Brown and Dacin, 1997). For the participating cause, cause-related marketing programs accrue rewards such as new sources of much-needed funds, and heightened public awareness (Caesar, 1986; Varadarajan and Menon, 1988). And consumers benefit by gaining a sense of additional perceived value to their purchase (Webb and

Mohr, 1998) and satisfying their altruistic needs of the self by helping society (Polonsky and Wood, 2001).

It is proposed that to maximize these benefits, sponsoring companies should carefully consider several important variables:

- The degree of company – cause fit in the minds of the consumer;
- The level of customer attitude with the company; and
- The level of customer intent to purchase.

According to Assael (2004) a positive attitude towards a brand leads to a higher purchase intention of the brand. Consumers who have prior experience with CRM already made a CRM purchase before and for that reason they are likely to have favorable attitudes towards CRM products, as well, as otherwise they would not have bought a CRM product in the first place. As a result, consumers with prior CRM experience may still have elevated attitudes towards CRM and higher purchase intentions of CRM endorsed products. A positive relationship between assigned public serving motives and consumers' attitudes towards companies actively engaged in CRM and purchase intentions of CRM products is expected in this study that investigates CRM from a general perspective. It is important to note that what consumers say when asked for a reaction to a hypothetical situation may not be an accurate reflection of their ultimate market behaviour. However, we can presume that the success of CRM campaigns reflects, at least in part, the favourability of consumer responses to a company's support of a cause, culminating in the choices of that company's products or service (Barone et al, 2000). Hence, we hypothesize:

**H1:** *Positive attitude on the firm/ product will lead the customer for purchase intention when the company/brand is associated to a charity programme.*

The Study argues for the importance of fit between the company and the sponsored cause in a cause related marketing alliance. Fit is defined as the perceived link between the company's image, positioning and target market and the cause's image and constituency (Varadarajan and Menon, 1988; Ellen et al, 2000). Sponsorship researchers have highlighted the importance of fit between the sponsor and the event (Speed and Thompson, 2000), while results from the popular press suggest that to maximize cause related marketing results,

the sponsoring firm should select a cause that is compatible with its identity and is compelling to the firm's target market (e.g. Higgins, 1986; Shell, 1989; Larson, 1994).

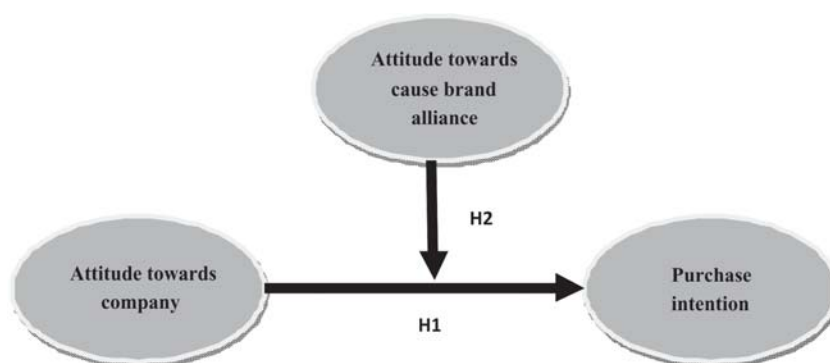
Attitude towards cause brand alliance (CBA-Moderating variable) will positively influence the relationship between attitudes towards company leading to purchase intention, cause instead of brand induce the objective of a company in establishing a relationship with nonprofit organization is to generate sales and connate to the cause. The CRM campaign is designed to give consumers the incentive to buy the brand based on altruistic motivations. Some preliminary research suggests that the alliance does influence purchase intent Hajjat 2003; Olsen, Pracejus & Brown 2003). The strong association between the cause and the brand that was formed by the alliance and the fact that the donation will be made to the cause based on purchasing the brand, it is anticipated that attitude towards the alliance will affect the purchase intent (however, because purchase intention are directly linked to buying the advertised product and not the cause)

The intent of the cause – brand alliance is for consumers to formulate new evaluations and associations for both the cause and the brand. This in turn can affect attitudes toward the cause and the brand following the alliance. As suggested by information integration theory, as new information is received and evaluated, attitudes are modified and then this information is integrated with prior attitudes. Thus potentially altering those prior attitudes in the brand extension literature, there is evidence that poor brand extensions present some risk by possibly diluting consumer evaluations of the core brand (Loken and Roedder- John 1993; Sullivan 1990). For example,

Walt Disney Co. found that consumers would not accept Disney movies for adults so they launched Touchstone Films (Wilkie 1994) the core brand could be considered the anchor brand according to Yadav (1994) in the bundling literature. The author found it was easier to hurt an anchor with a poor tie-in than it was to help an anchor with a moderate tie-in suggesting a dilution effect as well. On the flip side Loken and Roedder – John (1993) found brand enhancement can be the positive cause brand alliance and prior attitudes towards the company are essential to profit organization to stimulate favourable purchase intention (Roedder – John 1993) occur if the extensions are perceived positively. In addition, if a prior extension was successful, (Keller and Aaker (1992) found that evaluations increased not only for the proposed extension but for the core brand itself.

In a brand alliance context, a similar potential exists for an alliance to influence the partner brands. Attitudes toward each participating brand were found to change when consumers were exposed to a brand alliance (Simonin and Ruth 1998). In other words, more favourably evaluated alliances tended to produce more favourable subsequent evaluations on the two partners. This effect would seem to be similar for a cause-brand alliance. Since an alliance represents a new type of association, it is expected that post exposure attitudes will be affected. Hence it is hypothesized as:

**H2:** Cause-brand alliance has positive moderating effect on relationship between attitude towards company and purchase intention.



**Research methodology**

The study is conducted among the selected respondents; the respondents are selected through predetermined members, these members administer the questionnaire to their known

people. The study has collected response from a structured questionnaire among 846 respondents of India. The respondents were reached through selected members (research scholars, faculty members, working students), the questionnaires were sent to these members and after collecting



the opinions of the respondents, the questionnaires were sent back to the researcher for further analysis. The study included three measured variables: attitude towards company, purchase intention and attitude towards cause-brand alliance.

*The study considered experimental design of after only without control group. The study has designed with five experimental groups. The experimental groups are named as “V-ray Corp,” “Indian Electronics,” “db drive,” “Bread India,” and “Horse Breweries,” these names are given after the company names adopted in the advertisement. The experimental group consists of different contexts, highlighting the brief outline of company performance in the industry and the cause attributes supported by the company. An advertisement is designed for each experimental group, highlighting the cause campaign associated by the company. The advertisement also gives the details of the nonprofit organization associated by the company.*

The attitude toward cause brand alliance is a measure of favourable/unfavourableness of respondents towards the alliance between cause and brand. It is understood from study favourableness can be achieved by a good fit between the cause supported by the company and the brand. Study considers attitude towards cause brand alliance as a moderating variable on the relationship between the attitude toward the company and purchase intention. To measure the attitude a four schematic items were adopted (Mitchell & Olson 1981). The items are “Bad”/“Good,” “Dislike”/“Like,” “Unfavourable”/“Favourable,” and “Negative”/“Positive” on seven point scale.

Attitude towards the company is the degree of favourableness towards the company/product. It is significant since once the

attitudes are formed, they are relatively stable and enduring (Fishbein and Ajzen 1975). To measure the attitude a four schematic items were adopted (Mitchell & Olson 1981). The items are “Bad”/“Good,” “Dislike”/“Like,” “Unfavourable”/“Favorable,” and “Negative”/“Positive” on seven point scale.

Customer willingness to purchase a product of a company is known as purchase intention. Purchase intention is significant factor in customer purchase decision process, it is important to understand the antecedents in making cause related marketing a successful campaign. In this study purchase intention is dependent variable. The variable is measured by following items “I think this Campaign is a good idea,” “I would be willing to participate in this campaign by purchasing a product of the company,” “I would consider purchasing “db Drive Solutions Ltd” in order to provide help to the cause,” “It is likely that I would contribute to this cause by getting involved in this campaign” rated on 7 point Likert scale from “strongly agree” to “strongly disagree.”

The study adopted Correlation and Regression analysis for hypothesis testing. The data collected is organized and tabulated. SPSS package tool is used for analysis. The next section explains the results arrived by the study.

### Analysis

The respondents participated in the study are 846 members of different regions of India, among the respondents 294(34.8%) are between 20-30 years, 368(43.5%) are between 31-40 years, 109(13.0%) are between 51-60 years, and 36(4.3%) are between 61 and above. In the study 476 respondents are male and 370 respondents are female.

**Table:1 Demographic profile of Respondents**

		Column N %	Count
AGE GROUP	20-30	34.8%	294
	31-40	43.5%	368
	41-50	13.0%	109
	51-60	4.3%	36
	61 AND ABOVE	4.6%	39
GENDER	MALE	56.5%	476
	FEMALE	43.5%	370



The following **Table:2** details the means and skewness results, the means are observed to be above the average. The respondents have relatively positive attitude towards company with a weighted mean of 4.69. The study has

revealed a positive opinion on cause brand alliance with a weighted mean of 4.76. The respondents stated they have intention to purchase the product associated in supporting a charity (wt mean= 5.02).

**Table: 2 Descriptive Statistics**

	N	Mean	Std. Deviation	Std. Deviation	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Purchase Intention	846	5.0298	1.75213	-.839	.350
Attitude towards Product/Company	846	4.6957	1.83932	-.195	.350
Attitude towards Cause Brand Alliance	846	4.7611	2.00139	-.500	.354

The skewness states the normality of data, mandatory for further analysis. The skewness is a measure of the extent to which a probability distribution of a real-valued random variable "leans" to one side of the mean. The skewness value can be positive or negative, or even undefined. The results state that data is within the standard norms of -1 to 1. The Table: 3 details about the internal coherence of the variables. Cronbach's alpha is a measure of internal consistency, the

value of alpha should be greater than 0.6 according to research standards to state there is internal consistency between the items measuring the variable. Attitude towards company has four items with a Cronbach's alpha .776, attitude towards cause brand alliance has four items with internal consistency of .887 and purchase intention has four items with Cronbach's alpha of .965.

**Table: 3 Cronbach's Alpha**

N	Variable	Number of Items	Cronbach's Alpha
1	Attitude towards Cause Brand Alliance	4	.887
2	Attitude towards Company	4	.776
3	Purchase Intention	4	.965

H1 states Attitude towards company has positive influence on purchase intention. To test hypothesis, correlation analysis is performed between attitude towards company and purchase

intention. To understand the magnitude of variance explained in the dependent variable by the independent variable, regression analysis is performed.

**Table: 4 Correlations between Attitude towards company and purchase intention**

		Purchase Intention
Attitude towards company	Pearson Correlation	.303**
	Sig. (2-tailed)	.024
	N	846

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table: 5 Regression of Attitude towards Company on Purchase Intention**

Model	R <sup>2</sup>	F Change	Sig F change
1	0.091	85.621	.000

The above results in Table: 4 & 5 indicate attitude towards company have positive relationship (.303, p- value = 0.24) with purchase intention. The independent variable attitude towards company is able to explain significant variance (9.2%, p-value =0.00) in purchase intention, thus supporting H1. However, it is observed that relationship between attitudes towards company is having moderate relationship and relatively less in explaining variance in purchase intention.

H2 stated that there would be positive moderating effect of

attitude towards cause brand alliance (CBA) on the relationship of attitude towards company (ACo) and purchase intention (PI). To test the hypothesis, regression was run with purchase intention as dependent variable, attitude towards product/company as independent variable and attitude towards cause brand alliance as a moderating variable. To test the moderating effect, the individual means of attitude towards company and cause-brand alliance are multiplied into a separate variable (ACo X CBA). See Table: 6 for test results

**Table: 6 Regression of Cause Brand alliance on the relationship between Attitude towards company and purchase intention**

Model	R <sup>2</sup>	F Change	Sig F change
ACo	0.091	84.637	.000
ACo X CBA	0.113	20.407	.000

- Predictors: (Constant), A Co
- Predictors: (Constant), ACo, ACo X CBA
- Dependent Variable: PI

The above table reveals H2 is supported, there is significant relationship between attitude towards product/company ( $R^2 = .091$ , F- 84.63, p-Value = .000) and purchase intention can be understood from model 1 of regression analysis.

The moderating effect of attitude towards cause brand alliance ( $R^2 = .113$ , F- 84.63, p-Value = .000) on Purchase intention can be observed from model 2 of regression analysis. The regression model explains 11.3% of variance in the dependent variable, indicating there are other variables influencing Purchase intention.

## Discussion

The study has revealed from analysis that attitude towards cause brand alliance influences the relationship between the attitude towards company and purchase intention positively. The trade and academic literature is vast in explaining that consumers usually have positive evaluations and attitude towards company sponsoring social causes (Adkins, 1999, Barnes, 1992; Berger, Cunningham & Kozinets, 1996). We know that consumer with positive attitude on company will have intention to purchase the product (Lutz, 1985). Einwiller et al (2006) found that when respondents were presented with negative information about the company, the attitudes

formed due to the consequences of the information affected the intention. Given the relationship between the attitude and purchase intention in the literature, it is likely that the attitude towards company will have direct relationship with purchase intention in cause brand alliance context also. This study is one of the first to take attitude towards cause brand alliance as moderating variable and analyze its effect on the relationship between the attitude on company and purchase intention.

A common marketing strategy has been to associate a product with an object possessing positive attributes. For instance, in event sponsorship, a product is often associate with an event that is well liked by the public. Celebrity endorsement, on the other hand, typically pairs a product with well-regarded public figure. The increasingly popular brand extension strategy ties a new product with an existing reputable brand. In a similar view, in CRM context, a product is paired with a nonprofit organization/ cause, toward which people generally hold positive attitudes. For all these marketing strategies, the matching, or fit between the product and the object it is associated with has been regarded as a critical issue (Aaker and Keller 1990; Drumwright 1996; Kamins and Gupta 1994)

This study assumes good fit between Cause and brand as an important factor to consider. Sponsorship linkages have been characterized as either logical or strategic (Cornwell, 1995). Logical links are those where the connection between brand and cause are obvious, where as strategic links are connections

between brand and cause whose target markets share characteristic. While achieving a match in these areas is important, it is necessary to recognize that brand and cause can also have rooted in similarities of values between sponsor and cause. A sponsorship of a cause that is based strongly on shared values between mission of the cause and the sponsoring firm potentially enables to persuasively communicate the importance of supporting the cause to its target market.

Furthermore, understanding the characteristics of nonprofit organization is also critical during the formation of partnership. The values and beliefs of the nonprofit organization with which the company considers partnership must be known before committing resources. Meeting with nonprofit organization, learn more about their values as well as examination of other sponsors aligned with the cause and their values are ways to gain this insight. This research serves to highlight the importance of choosing congruent partners, something that is always not addressed in the market place. Donation structure, time limits, and amount of the donation may also play a key role in consumer's attitude and intentions

Several studies investigate the degree of fit between company's brand and the cause. Lafferty et al (2004) found that the degree of fit between the cause and brand is important in CRM campaign, and the alliance will transfer attitudes to both the cause and the brand. When the cause brand alliance seems reasonable, consumer attribute authenticity to the efforts and respond more favourably. Till and Nowak. (2000) has found that cause brand partnerships have been effective in creating positive associations when the cause and the brand are seen by consumers as an innate and probable fit. Such results reinforce the importance of cause brand alliance.

Ultimately, the goal of a CRM campaign is to generate sales for the brand in order to donate to the cause. This marketing strategy is designed to give consumers the incentive to buy that brand based on the altruistic motivations. Given the strong affective association between the cause and the brand that is formed by the alliance and the fact that the donation will be made to the cause based on purchasing the brand, it is anticipated that attitude toward the alliance will affect the purchase intent.

Consistent with the above discussion, the study reflects the same, that there is significant favourable moderating effect of attitude towards cause brand alliance on the relationship between the attitude towards company and purchase intention. So, the marketers should be rigid in forming

association with cause and nonprofit organizations. CRM generally appeals only to those who are sympathetic towards cause, or to whom the cause is relevant. In a heterogeneous society it is difficult to find causes that appeal to all the section of the market. Having said that a society characterized by a strong social desirability bias toward specific cause-affection for a company that supports the cause does not spill over the market segment. So, the cause chosen should be congruent with the product/ brand to elicit more positive attitudes towards company and influence purchasing the product. The associating organization should be familiar and have good image in the market place.

### **Managerial implication**

The study highlights the issues that managers need to consider while choosing partners in cause related marketing campaign. This research highlights the importance of choosing congruent partners, something that is not always discussed in the market place. This research emphasize, on congruency between the partners. The marketer has to form partnership with the cause agents who are credible, and also increase the company image. The partner should be compatible with the company image. The partner should not pose any risks and threats to the company image in the future.

The cause selected for the campaign need to be compatible to the brand image and the characteristics of the product. The cause should be felt important by the target customers of the product. In this regard the company need to consider the above factors in designing the successful CRM campaign.

### **Limitation**

The limitation of the study is incorporating a print advertisement in exclusion of other effective media vehicles. The print advertisement was adopted due to the limitation of the researcher. The other tools like press release or visuals can be more effective.

The study is done through an online survey and selected the respondents well versed English language. These are the possible limitation of the study. The study hasn't considered the respondents who do not have email ids and not well versed in English language. The online survey method with its inherent limitations is also included in the study.

The final limitation of the study is the model itself, while the model fit the data reasonably well, that does not mean it is the only model or the best one to assess the relationships

inherent in a CRM programme context. The determinants in the study provide some indication of what influences the endogenous variables; clearly there is unexplained variance in the model. Therefore, while there may be other models with greater explanatory power, this model does present a reasonably good conceptualization.

### Future Research

Future research needs to examine the different types of congruency like cause - company product, consumer, brand image and target group to determine, if these react in the same manner. In addition, many issues such as donation structures could be examined in the light of differing types of congruency. Likewise, this research has examined only monetary gifts. An important area of research regarding congruency would be the donations of some other assets such as product in the place of money.

The future research needs to concentrate on the Skepticism of consumer in participating in these kinds of campaigns. Generally, the public have some level of skepticism toward companies participating in social initiatives. The future research needs to explore the factors influencing the skepticism.

### Conclusion

Cause related marketing is essentially maintaining economic success and commercial advantage by building good relationship and trust. The customer wants a reliable supplier of product with good reputation and quality in market, the society and stakeholders have expectations at doing good to the community by the organization. Cause related marketing is a strategic tool to satisfy the commercial advantage and societal expectations.

The present study has explored the relationship of very important factor. Cause-brand alliance with purchase intention. The entire study highlights one important thing to be remembered by the organizations participating in CRM campaigns is the image of product/Brand should be compatible to the charity/ cause selected for association. The more congruency between the brand and the charity, the higher will be the positive attitude. The enhanced attitude will increase the intention to purchase the product. Thus cause related marketing is an innovative mix of promotion and philanthropy designed by the marketers, to enhance the sales objective of the organization.

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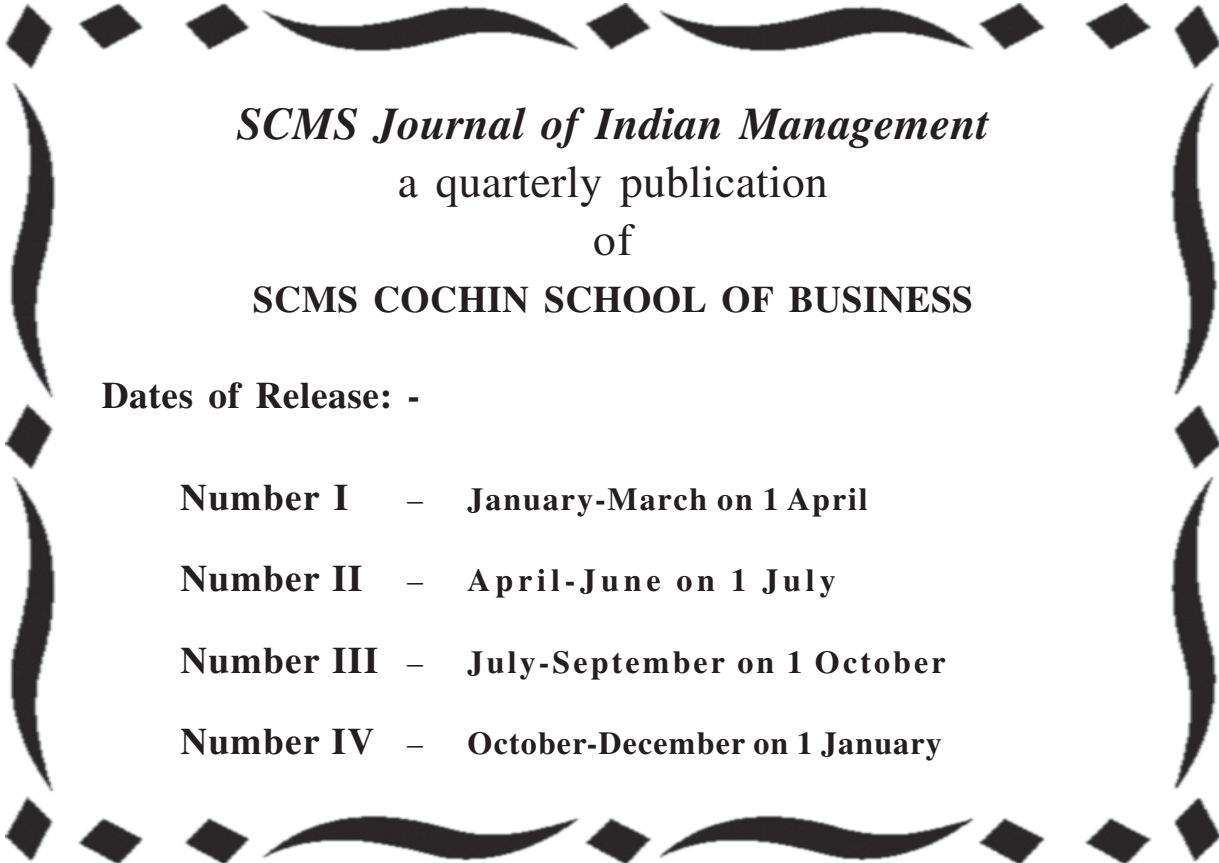
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