

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

‘Sabka saath, abka vikas’¹

September 1, 2015

Introduction

We published our first review of innovation in India in June of 2014, shortly after Mr. Modi's election.

Is innovation in India on the way up or going down? Many studies have been done and much published on the macro-economic policies which India should adopt to become more competitive and innovative. Much less has been published on what should be done at the micro, or SME level, to make enterprises more innovative and productive. We have some insights!

Quick Summary

One of Mr. Modi's admitted challenges is to improve India's manufacturing sector. The micro-level needs attention - SMEs in particular!

According to our on-line survey registrants from India all is not well with the management of innovation in India's manufacturing sector, especially at the SME level. The World Economic Forum rates India as a 'crisis' and ranks India 71st overall in competitiveness and 49th in its 12th pillar; innovation.

While there many improvements which can be made at the national governance level, **much change is also required at the micro level** in order to respond to Mr. Modi's desire to make something of this important sector.

Table of Contents

- Introduction
- Is India's innovation rising? *Still going downhill but under Modi, there could be an opportunity*
- Policies and innovation management practices in India's manufacturing sector need improvement! How do we know?
- Respondents' (from India) concerns and a comparison with the 'Best of Breed'
- SMEs need more attention but where to focus?
- What to do?

Appendices

- A; World Economic Forum Comments on Macro Issues
- B: Chart Showing On-line Survey Results Comparing Respondents 'Ideal' with the Best of Breed
- C: Dun and Bradstreet. "Emerging SMEs of India"

Registrants to our on-line survey who are from India have provided their opinion and insights into the current state of management practices which impact innovativeness in the manufacturing sector.

By analyzing these responses we have concluded that the majority of Indian companies could have in place polices and management practices which are counterproductive to innovation and must change dramatically for the country to become innovative in the manufacturing sector. SMEs need special attention!

According to the latest WEC² report India's challenge is to improve 'competitiveness in order to put growth on a more stable footing should therefore be a priority for the new government. It is a priority but is it happening? We provide background on the rankings and insight into micro-level management practices.

¹ 'to take everybody together and move toward s inclusive growth'

² World Economic Forum Global Competitive Report

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

Is India's innovation rising?

Still going downhill but under Modi, there could be an opportunity

India has the potential to innovate world-class products but in spite of significant economic development, especially in the provision of low-cost satellite based services and low-tech products, the country's innovation lags³. Part of the solution is seen in the investment by western companies and the innovative culture which they bring to business in India; an example being G.E.s⁴ significant investment in R&D in India. But foreign investment is not the whole answer. Since 2010 the innovation situation has deteriorated. India accounts for less than 2% of foreign trade.

While Modi's focus will be on macroeconomic and financial issues, equally as important is the need for innovation in India's manufacturing sector and this is not so much a macro issue but rather a need to change the culture, policies and management practices of India's larger organizations and SMEs in particular.

India had, as of our previous report a population of 1.2 billion⁵, a GDP per capita of \$1,492 and represented a 5.63% share of world total GDP in in 2012. Its population is now 1.243 billion and GDP per capita is \$1504.54 according to the latest WEC report.

The Global Competitiveness Report of 2010-2011⁶, the focus of our earlier and first report, provided an indication of the state of innovation in India at that time. The story was not good. The report stated that India's competitiveness had fallen two positions since the previous review but provided 'good results in more complex areas including... innovation.

The 2013-2014 reported, sadly, a further deterioration in performance in most indicators of innovation; i.e.

the 12th Pillar in this comprehensive report and the one which gets most attention in this review.

Factor reviewed	Last report dated June, 2014		Latest report
	India	China	India 2015
Capacity for innovation	41 st [33 rd]	30 th	48 th
Quality of scientific research institutions	37 th [30 th]	41 st	52 nd
Company spending on R&D	39 th [37 th]	22 nd	30 th
University-industry collaboration	47 th [58 th]	33 rd	50 th
Government procurement	92 nd [76 th]	13 th	61 st
Availability of scientists and engineers	15 th [15 th]	44 th	45 th
Patent (utility) per million population	64 th [59 th]	36 th	61 st

³ The New York Times, February 22, 2010, In India, Anxiety Over the Slow Pace of Innovation.

⁴ See profile of G.E.by White & Partners Ltd. <http://www.corporateinnovationonline.com>

⁵ World Competitiveness Report, 2013-2014, for 2012

⁶ World Economic Forum

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

Of the seven factors reviewed in the 2013-2014 report, there was a decline in five factors and one factor remained the same; i.e. the availability of scientists and engineers. India does not rank high in several areas which contribute directly to the innovative capacity of the country. The most recent WEC report – see the column added in the chart – provides further indications of little improvement in key factors.

India, in comparison to China⁷, presented here for comparative purposes simply because of their relative size, scores ahead of China in its quality of research institutions, and its availability of scientists and engineers. The potential for innovation is prescient. A number of other countries, however, such as Vietnam, Indonesia, Taiwan and Brazil top India's rating in innovation. The ranking for India implies that government needs to rethink its procurement practices and introduce policies which encourage more collaboration between public and private sector research. Company spending on R&D is more of a problem in India than in China, but for this attribute, the major driver is non-governmental; i.e. it is the private sectors in both countries which need to up their spending on R&D.

The World Economic Forum ranked India 41st in our last report and in the most recent report at 49th, both compared to 33rd four years ago in terms of the country's capacity for innovation. In short, there is room for improvement and the change will not result from government policies alone. Support is needed from the private sector. **The form of that support could well be in improving the management practices at the micro (enterprise) level.**

India is identified as a 'Stage One' country in the WEC report, China, by comparison is now at 'Stage Two' and Canada is at the other end of the stages, as an 'Innovation-driven' country along with the other top performers in terms of international competitiveness.

India's economic future may well lie in leap frogging past the China growth model. After all, India is a democracy and China is not. India's 'electorate is increasingly urban, educated, connected and hungry for jobs' (the Economist – May 23, 2015) and democracy in India is well known. India is different.

India's population will exceed that of China's by 2070⁸ by which time China's population will have been on the decline since around 2020, most of this due to the higher fertility rate in India. Modi's challenge is to have the economy engage in productive enterprises in order to provide employment in the private sector. This is the heart of his 'Make in India' policy. India is already on the way to achieving its goal partly due to its low labor cost; China at \$3.52 per hour versus India at \$.92 per hour average in the manufacturing sector⁹ but productivity growth for India is well behind that for China and therein lies the challenge. Innovation leads to productivity growth but only if it can be realized at the micro level.

In terms of political vision, the 'India Shining' of the 1990s has been replaced by the 'Make in India'. In March of 2015 Ms. Lagarde of the I.M.F. referred to India as a "bright spot" on a cloudy global horizon.

⁷ Based on Global Competitiveness Reports

⁸ The Economist, August 15th, 2015; Population forecasts.

⁹ Global Economics; India versus China: The Battle for Global Manufacturing – Bruce Einhorn, November 6, 2014

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

Policies and innovation management practices in India's manufacturing sector need improvement! How do we know?

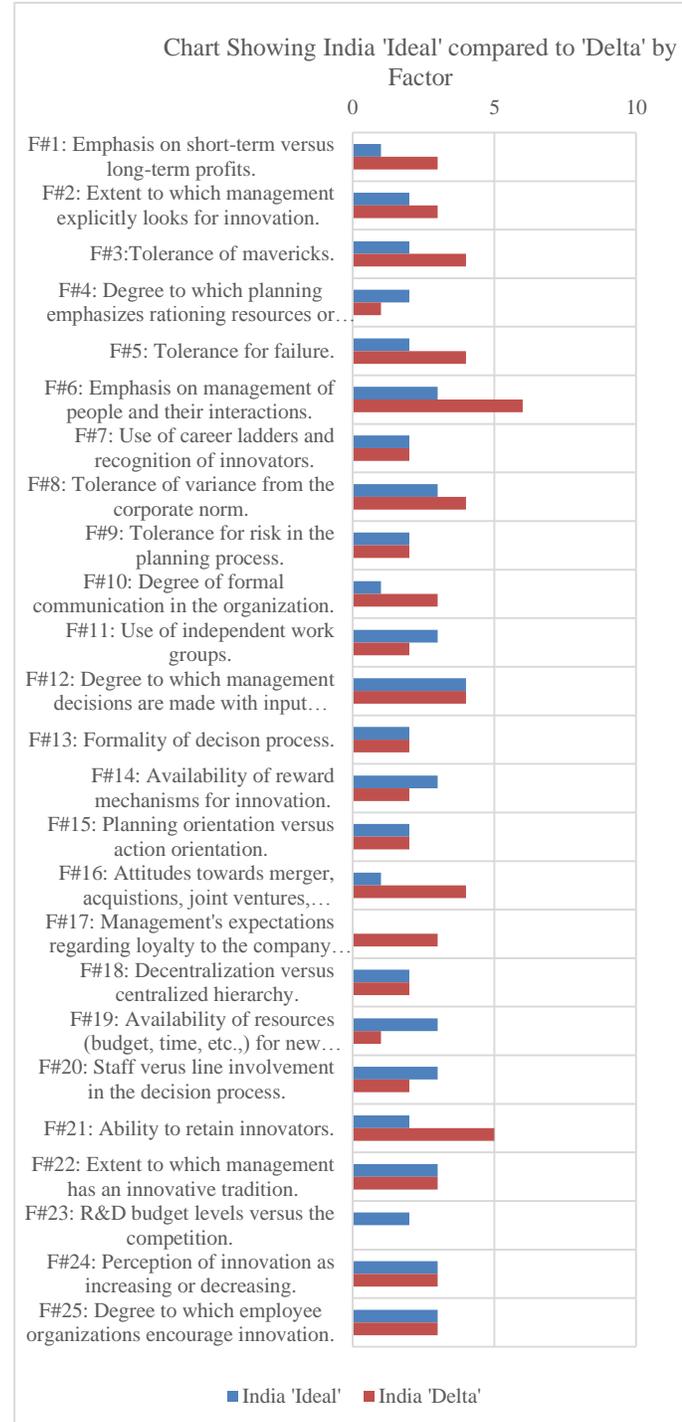
Our most recent review of India's management practices in the manufacturing sector, based on results from the on-line survey¹⁰, suggests that there is significant room for improving practices. Results from our on-line survey provide insight and a perspective on management practices. What can we glean from this data?

First a note on the process of registering for the on-line survey.

Respondents to the on-line survey¹¹ are asked to enter their 'Ideal' for each of 25 Factors. The 'Ideal' is, in their opinion, the best policy or management practice which they could envisage¹² for each Factor. After registering their opinion, by Factor, on the 'Ideal' situation, respondents then provide their opinion on their current situation; i.e. their 'Reality' which provides a view on what each respondent regards as their current situation. The next measure used is what we call the 'Delta', the difference between respondent's 'Ideal' and their 'Reality'; a measure of the respondent's dissatisfaction with their actual situation.

The chart sets out the differences between India's 'Ideal' and the 'Delta' between the 'Ideal' of respondents and their 'Reality'; averaged of course. For example, for Factor #1, respondents' 'Ideal' is rated at 'one' but their 'Reality' is rated 'three'; representing a degree of dissatisfaction on average'. Factor #6, dealing with the 'management of people and their interactions' shows the highest level of dissatisfaction as related to the subject of innovation.

For those respondents who stated that they are employed in India's manufacturing sector, we have analyzed the results for 22 (not all 25 Factors provided interpretable data) of the Factors. This is shown in the chart.



¹⁰ Available at <http://www.corporateinnovationonline.com>

¹¹ See on-line survey available at <http://www.corporateinnovationonline.com>

¹² The Factors are based on researching the policies and management practices of highly-innovative companies admittedly the research base is based on data from the U.S.A., Canada, Europe and Japan.

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

Respondents' (from India) concerns and a comparison with the 'Best of Breed'

Respondents, in the main, stated that they are senior executives of their company. There was also a mix of large and SME-sized companies. The 'Delta' highlights reality in India's manufacturing sector. The 'Delta' – i.e. the difference between the respondents 'Ideal' and their 'Reality, is particularly high for the following Factors.

- Factor #1; re the emphasis on short term or long term profits. Respondents are of the opinion that the emphasis is on achieving a profit over the short term, much too much emphasis on short term profits. Management lacks a balanced focus on both short and long-term profits.
- Factor #3; re tolerance of mavericks. There appears to be little or no tolerance for mavericks; i.e. management does not make room for or promote those who speak out of line or those who exhibit off-the-wall thinking.
- Factor # 5; re tolerance for failure. Failure is not treated lightly and therefore people are dissuaded from taking chances. Failure is not seen, as it is with highly-innovative companies, to be learning experience.
- Factor # 6, re the emphasis on people management and their interactions. Human resource management is not a priority.
- Factor #10; re the degree of formal communication in the organization. It would appear that there is insufficient information provided within the organization.
- Factor # 16; re the attitudes to mergers, acquisitions and divestitures. There is a concern regarding major restructurings. Often this results from a fear of what might result from a major restructuring.
- Factor #19; re the availability of budgets and resources if there good ideas presented. Respondents do not believe this is the case.
- Factor #21; re the concern is that innovators are leaving their organization. Innovators are leaving.

'An innovative climate is not just a sentimental need. It has powerful business implications and can bring real results. There's a reason why companies like Google and Apple have such a breathtaking record of rapid innovation; you need to look no further than their climate. A climate of innovation ensures that you'll have the inherent ability to not just innovate with an occasional flash of brilliance, but to do so continuously. That's an extremely important strategic advantage to have in a fast-moving marketplace that's overcrowded with competitors'.

Another interpretation could be that the Factors – policies and management practices - influencing innovation are not well understood in the manufacturing sector in India. They need to be!

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

We also examined how the 'Ideal' as stated by respondents compared with our standard of excellence, the Best of Breed (BofB). Respondents' 'Ideal' falls short of the BofB in 11 of the 22 Factors in this analysis. In other words, respondents are less demanding on each of these Factors than they should be if India's manufacturing companies wants to become highly-innovative – at least as compared to our data base. Or, put another way, the 'Ideal' in India falls short, by a considerable margin, of what would be considered best practice. The results are set out in Appendix B.

In particular, the following 10 Factors were considerably out of line, i.e. the average of the respondents 'Ideal' was out of line with the 'BofB'.

- Factor #1: measures the emphasis on short term profits versus long-term profits.
- Factor #2: does management explicitly look for innovation.
- Factor #3: is there a tolerance for mavericks; i.e. does management make room for or promote those who speak out of line or those who exhibit off-the-wall thinking.
- Factor #4; the degree to which planning emphasis cost reduction versus looking for opportunities.
- Factor #5: the tolerance for failure; i.e. is failure as a learning experience or can it be career shortening.
- Factor #6: is there an emphasis, by management, on people and their interactions.
- Factor #7: is there special recognition and reward for innovators?
- Factor #10; degree of formal/informal communication in the organization.
- Factor #11: is it a practice to use independent work groups, project teams, or work groups to accomplish tasks?
- Factor #13: is there a very formal decision making process?

So the situation in India is even worse than outlined in the earlier comments, in particular for these 10 Factors. This is based on comparing India to the Best of Breed; perhaps an unfair comparison given the state of management development in the country.

While the standard of comparison used, i.e. the 'BofB', may be too high and certainly the size of our sample partially limits the interpretation, the message is that the culture for innovation needs to be improved at the micro level. Policies and management practices need to be improved.

Many of these Factors fall under what we describe elsewhere as the 'organization and management of day-to-day affairs'. These are not complicated issues to address but do require a different management style. It is perhaps this style that is currently contributing to the lack of innovation in India's manufacturing sector!

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

SMEs need more attention, but where to focus?

There seems to be a growing awareness that SMEs, in particular, need to upgrade their policies and management practices and are the best hope for improving innovativeness in the manufacturing sector in India. In other geographies this is not new; Germany with its Mittelstand¹³ companies, Japan with its 'chuken kigyo'¹⁴ (strong medium-sized firms), and in Canada and the U.S.A., SMEs are very much the major source of innovativeness. SMEs provide an underpinning for OEMs. Often it is the smaller, typically privately-owned businesses that come up with new ideas, take a risk and find commercial success.

According to Ross Bradsen¹⁵, German Mittelstand have the following characteristics – perhaps exactly what India needs at this point. Often these companies are largely invisible to consumers because they supply high profile companies with products/technologies essential to the operation of their products. Often, a small priced product, with a huge impact on the performance of the product should it fail. The global technology industry depends on these products and these companies.

- Owner-operated (many privately/family owned) with emphasis on long term profitability (in contrast to the public corporations which face quarterly pressure to meet short term expectations).
- Focus on the final customer/end user as much as, if not more than, the immediate customer.
- Achieve unprecedented efficiencies by designing a business model with a razor-thin focus and learning to do few things really well.
- To compensate for their razor-thin focus... they diversify internationally and enjoy great economies of scale Export-oriented, they focus on innovative and high value manufactured products and occupy worldwide niche market leadership positions in numerous segments.
- They become leaders by being “the best” and charging premium prices over competition.
- They maintain leadership by “staying the best” and “maintaining premium prices”. They do what's in the best long term interests of the end user.
- They are not afraid to change. They innovate to stay “the best”.

¹³ Germany's Mittelstand companies (SME) are a very important part of the country's economy. In 2003, these companies employed 70.2% of all employees in private business, according to the Institut für Mittelstandsforschung. Some predicted their demise that year due to narrowing of credit availability and a record number of firms collapsing. So far these predictions have failed to materialize, Mittelstand companies continue to employ 70% of Germany's workforce.

¹⁴ The technology prowess is a reminder of the country's industrial strength – even after two decades of economic stagnation – and the loss its place to China as the world's second largest economy. The existence of these chuken kigyo firms is at the core of Japan's economic structure and act to support the larger well-known electronic firms as well as meet foreign needs. These components are known for their high quality and reliability. Small parts, yes, but parts that are essential for the operation of a larger system and require continual innovation to avoid becoming a commodity.

¹⁵ Ross Bradsen, Regional Director Southwestern Ontario, Sector Lead: Advanced Manufacturing, Ontario Centers of Excellence.

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

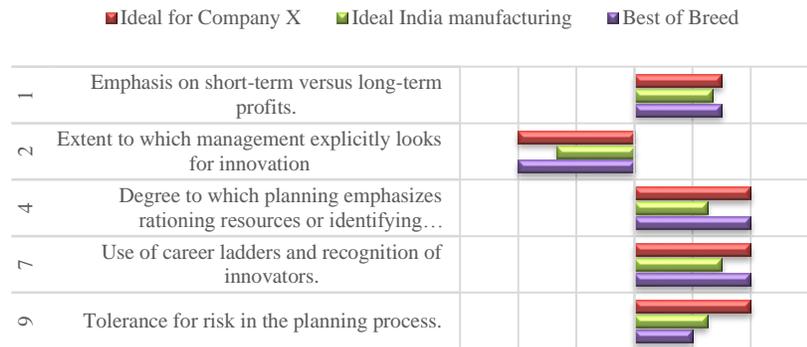
Dr. Vaish¹⁶ makes the point – see Appendix C - that SMEs ‘account for over 90% of industrial units in India and 40% of value added in the manufacturing sector and that this sector needs to be recognized for its contribution. This same point it emphasized by executives participating in discussions – primarily leaders of large, multinational Indian firms – in the report from the World Economic Forum¹⁷.

An example drawn from our data base serves as a further indication of the need and direction which change might take at the micro level albeit each company is different and requires a customized approach.

‘Leadership’, in the on-line survey, is comprised of 5 Factors. Each of these Factors can be traced to the actions and practices of senior management and/or the actions of the Board of Directors.

In our example for Company ‘X’, the ‘Ideals’¹⁸ are closely in line with the ‘Best of Breed’ except for Factor # 9, tolerance for risk in the planning process. In this case the respondents view, in our opinion, would be too idealistic and expectations should be lowered but for other Factors, the registrants opinion is very much in line with the BofBand the average for India.

An further analysis of the ‘Delta’ for Company ‘X’ provides insight into the areas where management practices fall short of expectations and are therefore most likely to be top-of-the list for corrective action in ‘X’. Factor 9’s ‘Delta’ should be revised downward for reasons noted in the preceding paragraph. The message from our example – ‘X’ – is clear; stop over emphasizing cost reduction (#4), and provide some incentives for innovators (#7). Factor #2, the call for the company to be innovative is a decision by senior management and in this case may not be the strategic choice taken by the senior group. This is often the case.



F#	Issue addressed	‘Delta’
1	Emphasis on short-term versus long-term profits	1
2	Extent to which management explicitly looks for innovation	5
4	Degree to which planning emphasizes rationing resources or identifying opportunities	5
7	Use of career ladders and recognition of innovators	6
9	Tolerance for uncertainty in the planning process	7
Total ‘Delta’ for Leadership		24

We have found that tolerance for risk is a characteristic of highly-innovative companies.

¹⁶ Dr Manoj Vaish, President & CEO – India, Dun & Bradstreet

¹⁷ Appendix A

¹⁸ Complete listing of ‘Ideals’ are provided in Appendix A

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

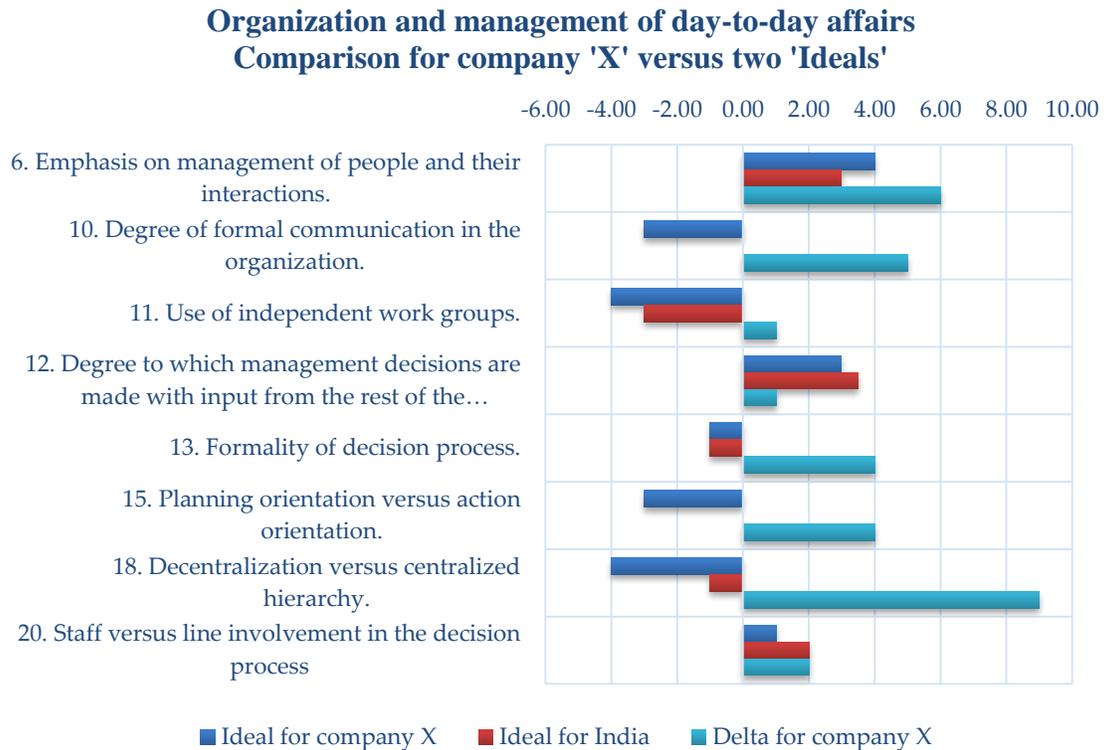
For a further comparison, on-line survey results are compared for company 'X' under the theme, organization and management of day-to-day affairs as set out under eight Factors.

For Factor #6; the 'Ideal' for both company 'X' registrant and overall Ideal for India are closely aligned but the 'Delta' at '6' is very high indicating a high degree of dissatisfaction for this Factor.

The level of dissatisfaction is highest for Factor #18 dealing with the issue of decentralization within company 'X'; i.e. it is insufficient.

For Factors number 11, 12, 13, and 20, the 'Ideals' are closely aligned but the dissatisfaction varies by Factor and could be addressed on a priority basis.

Based on this particular analysis, it is obvious that the first steps in the improvement process need to address those Factors which have the highest level of dissatisfaction and where there is an alignment between the registrant's Ideal and the overall 'Ideal' for India or, if a higher threshold could be the BofB..



CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

What to do?

Based on some research of Indian manufacturing companies, several characteristics stand out as potential problems in the development of an innovative culture in Indian-headquartered companies.

1. Management may not be sufficiently explicit in calling for innovation. This is a strategic decision taken by Board and CEO.
2. There is limited tolerance of mavericks – or personnel with ‘off-the-wall’ ideas.
3. Insufficient attention paid to matters such as intra-firm communication and recognizing the importance of a bottom-up process.
4. Planning's focus may be more directed to rationing resources and cost reduction than on identifying opportunities.
5. There is little evidence of the use of independent work groups to accomplish multi-disciplinary tasks. Their use is, however, a characteristic of innovative companies.
6. Special rewards and recognition for innovation or innovators may not be well developed.
7. Personnel may be discouraged from putting forth ideas since their view is that there is little prospect for receiving funding and management support.

Further research could be useful in identifying the significance and these and other potential road blocks to innovativeness. There is a need to infuse an innovative culture in the Indian-based manufacturing sector.

Modi has stated that “a one-size-fits all approach does not work for India¹⁹”. India must invent its own solution to the issue of innovation and adopt whatever management practices make sense for the country and for individual enterprises.

¹⁹ Modi – The Economist – May 23, 2015

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

Appendix A; World Economic Forum²⁰ Comments on Macro Issues

CEO Policy Recommendations for Emerging Economy Nations India

Highlighting is by White & Partners

A Rising Star

Over the last quarter century, India has moved away from its traditional socialist system and accelerated efforts to liberalize economic reforms. As a result, India today is recognized as one of the most competitive nations in the world, providing a strong talent pool in the areas of science, technology and research, as well as some of the lowest labour costs in the world. However, key challenges loom if India is to build on its achievements over the past 25 years. Namely, the country's healthcare systems, under-developed physical infrastructure, and policy and regulatory environment still create significant concern.

To improve its policy and regulatory environment and spur economic growth, India in 1950 established the Planning Commission, which is charged with formulating a strategy for the most effective use of the country's resources to improve the standard of living for Indian citizens. In support of its objectives, the Planning Commission has since its establishment implemented 11 Five-Year Plans, and implemented its 12th plan in March 2012 to target faster, sustainable and more inclusive growth.⁷

A Focus on Manufacturing

In 2011, India announced its National Manufacturing Policy and **its objective of increasing manufacturing sector growth** to 2-4% more than GDP growth, increasing manufacturing's share of GDP to 25% by 2025 and creating 100 million new jobs.⁸ Manufacturing currently contributes approximately 14.2% to India's total GDP, which is lower than other emerging economies recognized for delivering significant competitive advantages for manufacturers, including China (32.4%).⁹

In a highly collaborative, multi-stakeholder process, more than 26 working groups were involved in developing the current manufacturing policy, including ministry verticals and cross-sector groups. As part of the efforts of this report, the team conducted interviews with chief executives of Indian manufacturing companies and held a workshop during the World Economic Forum on India to understand what executives believe are the most critical aspects of the current Manufacturing Policy and the challenges of achieving the goals outlined in both the 12th Five-Year Plan and India's National Manufacturing Policy, and to understand their recommendations on overcoming those challenges.

²⁰ World Economic Forum Report on International Competitiveness 2013-2014
Building, sustaining and articulating innovation management best practices

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

Recommendations

Executives interviewed for this report consistently recognized the high level of stakeholder collaboration and effort that went into developing India's National Manufacturing Policy, yet believed implementation was analogous to a composer and maestro. Executives said the Planning Commission had and continues to play the role of the composer, but that the role of the maestro – who or what organization may be responsible for leading implementation (or the orchestra) – was still in question. Executives noted that the large number of stakeholders in India and the federal structure would result in wide variations in both the effectiveness and pace of implementation across India's states, yet urged strong leadership at the state level since much of the regulatory burden and business hurdles are created there.

The Indian Backbone Implementation Network (IBIN) is the Planning Commission's answer to the implementation challenge. A relatively newly announced initiative, the IBIN is a set of tools designed to manage dialogue, resolve conflicts, coordinate among stakeholders and manage implementation.

In addition to the broad policy implementation recommendations outlined by executives, those participating in the discussions also offered the following specific recommendations for improving India's competitive advantage.

Design effective ways to scale quality training for the workforce of the future

Executives consistently said skill development is the most pressing challenge to the manufacturing sector in India. Although the Indian government has put in significant effort over the past 50 years to develop its science and technical infrastructure, executives said the current capacity for workforce development does not meet the country's aggressive growth targets. Unlike Japan and Western European countries, India has a large young workforce, which all participants noted is a key strength to be leveraged. Executives almost unanimously supported the National Manufacturing Plan's approach to skills development; they stressed that the following actions would do much to scale workforce training initiatives.

Build skills among the large population of minimally educated workforce: Executives stressed the need to develop creative ways to address the workforce challenge, including leveraging digital technology.

Establish industry training institutes in the form of public-private sector partnerships to provide relevant vocational and skill training: Executives emphasized the need for both the private and public sectors to take responsibility, particularly for vocational and operator-level training. India's National Skills Development Corporation was cited as a good example.

Create additional polytechnic institutes focused on delivering higher education in vocational or technical subjects.

Develop targeted training and development for the general management and technical supervisory level: Executives consistently said that businesses need workers with strong critical thinking, leadership skills, and highly technical manufacturing skills. The challenge, however, is to comprehend manufacturing at a factory and product design level, management level, and value chain level.

Building, sustaining and articulating innovation management best practices

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

Develop less restrictive labour laws

Executives participating in the discussions said that labour laws in India are “fairly rigid and cumbersome”, making it difficult for companies to hire and lay off workers according to seasonality and volatility in demand. The rigidity of legacy labour laws results in companies hiring fewer people than they need and requiring the people they do hire to work overtime.

To improve in this area, executives said policy changes need to be enacted that focus on **improving workforce relations** and allowing greater flexibility for companies to react to changes in demand. Furthermore, executives agreed strongly that the labour costs in India must remain competitive. Some executives pointed to the Mahatma Gandhi National Rural Employment Guarantee Act, which gives adults living in rural areas a guaranteed period of work each year at a minimum wage on a public project, as a significant disadvantage to the manufacturing sector in terms of keeping the cost of labour low, as manufacturers compete with the agriculture sector to attract talent.

Invest in globally competitive infrastructure

While India has achieved a lot in terms of infrastructure, many executives noted concerns with the quality of India's infrastructure, and more concerning, believed the country still has **a long way to go for achieving an infrastructure environment that enables competitiveness.**

Infrastructure challenges that present hurdles for industry in India are primarily focused on supply-side constraints. For example, power supply is a challenge, as is the high cost of capital and controversies that often accompany land acquisition.

The World Economic Forum ranks Indian infrastructure 84th out of 144 countries. Not surprisingly, executives want to see tremendous effort and focus in this area from both policy-makers and public-private partnerships. In fact, there is demand for a greater level of private involvement to increase competition. Some executives said that the nation's policy framework itself is lower priority than some of the basic factors that make India competitive as a manufacturing destination. In discussing the hard infrastructure challenges in India, one executive stated, “We don't have a clue how this is going to happen.”

Develop infrastructure to bring industry, not vice versa: The prevailing sentiment was that it is irrelevant whether government, public-private partnerships or industry develop infrastructure. Historically, the model in India has been for industry to begin establishing itself in a location, and power supply, roads, water and other capabilities are added until the grid is overloaded. Executives said that this is the wrong way to build domestic capabilities and attract foreign direct investment.

Executives consistently noted that specific industries have specific needs when it comes to infrastructure. For example, auto executives and other consumer product companies called for improved roads to spur customer demand and efficiently deliver products to market. For technology industry executives, Building, sustaining and articulating innovation management best practices

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

telecommunications infrastructure is critical. Regardless of industry, the overriding message was to invest heavily in all forms of hard infrastructure, both for domestic purposes and to attract foreign direct investment.

Create industrial clusters that result in integrated industrial townships with state-of-the art infrastructure: Beyond direct measures that government can pursue in a country's infrastructure development (building ports, highways, power grids, etc.), executives were generally highly supportive of clusters that provide infrastructure and land use on the basis of zoning, clean and energy-efficient technology, necessary social infrastructure, skill development facilities, etc., to provide a productive environment to persons transitioning from the primary sector to the secondary and tertiary sectors.

Support the creation of industrial clusters by enacting regulatory improvements that remove complexity and uncertainty in areas that include land acquisition improvements, labour laws and taxation.

Develop showcase clusters to immediately demonstrate the benefits through such initiatives: Executives supported the creation of two or three showcase clusters developed quickly and immediately to illustrate the benefits that result in these integrated environments. Citing Tianjin, China, as an example, many executives believed that states would be more inclined to buy into the concept of national manufacturing zones. Said one executive: "If we wait for all stakeholders to be aligned, we will wait forever."

Relax policies defining reasonable levels of foreign direct investment

Executives consistently believed that key to growing India's manufacturing sector faster than GDP is an environment that promotes both private and foreign investment. These perspectives are supported by the National Manufacturing Policy, which states, "Foreign investments and technologies will be welcomed while leveraging the country's expanding market for manufactured goods to induce the building of more manufacturing capabilities and technologies within the country." However, many executives believed current laws are restrictive to supporting the objectives outlined in the policy and noted the following recommendations.

Review and reform regulatory restrictions on foreign investments in sectors deemed important and strategic to India's growth objectives: In the face of the economic downturn in Europe and the United States, India receives more and more attention from international developers, investors and financial institutions. However, the perceived lack of commitment from the government to relax regulatory controls and other factors are contributing to an environment of uncertainty among these stakeholders. Achieving the growth objectives outlined in the National Manufacturing Policy will be driven in large part by participation from international organizations, and removing restrictive barriers of entry and regulatory controls is critical to the process.

Enact basic financial sector and capital market reforms to attract private investments: While executives said India's growth is appealing to private investors, many also believed that current policies work against growth by adding risk and cost to private investments, which discourages capital inflow to the

CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

manufacturing sector. Specifically, cost of capital is extremely high, and private equity investors have limited exit strategy options.

Remove uncertainty from India's regulatory and legal environment

Most executives participating in the discussions agreed that the “regulatory goalposts” need to stop moving in India and that the inconsistency and arbitrariness of regulations is a hindrance to making investments.

Executives said the lack of transparency diminishes private sector confidence and opens the door for increased levels of corruption. Many noted that the National Manufacturing Policy cites regulatory reform as a key pillar in strengthening the manufacturing base, as it aims to centralize and rationalize business and environmental regulations among the various states and federal agencies. Executives also applauded Web enablement under the policy on matters related to business application, reporting and regulatory compliance. These measures, once implemented, would resonate with business leaders.

Other recommendations noted by executives include the following.

Implement laws that build trust among stakeholders, rather than laws that reinforce an environment of distrust.

Address the basic hurdles and fundamental issues that keep businesses from growing, developing and investing in India: Executives said regulatory reform, land acquisition reform and financial sector regulation are needed to spur investment and growth. Participants consistently supported environment and safety regulations that are in the best interest of society, but encouraged limiting the scope of such regulation to not impose overly burdensome regulation on business.

Remove and rationalize regulations to accelerate the pace of decision-making and approvals: Executives said that accelerating the pace at which decisions and approvals are made would significantly benefit the Indian economy. Interestingly, executives noted the importance of improvements in this area in the context of foreign organizations looking to invest in India, as well as domestic companies looking to reinvest in the country. One executive noted, “Some large companies in India seem to be focusing more on investment overseas than investing in India due in part to the regulatory burden and slow pace.”

Develop a more liberal and simplified tax structure with a greater level of transparency to improve consistency of interpretation

Executives participating in the discussions consistently called for improving tax policy in India – both in terms of facilitating more consistent interpretation and in terms of providing greater tax incentives and benefits related to priority areas that support competitive manufacturing. Vocational training, infrastructure and R&D were cited as specific areas that would benefit from such tax incentives.

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

Create a sustained competitive advantage by encouraging technological innovation and movement up the value chain

While India's technical talent is recognized the world over, many executives noted significant gaps in promoting interaction between industry and research institutions. Executives said the following actions would help to facilitate the connections that are required to create an environment that results in the ability to sustain the development of technological innovations.

Improve the intellectual property filing process and create an environment that results in an increase in the number of filings.

Develop industry-led standards and create activities that result in global acceptance of those standards.

India's approach to the automotive industry, which is a leading manufacturing sector, was noted as a success story in efforts to develop industry-led standards. The automotive industry took up policy entrepreneurship to bring all stakeholders together to work towards a common vision. As a result, an ecosystem was created in which auto-producing hubs in Chennai, Pune and the National Capital Region each benefitted from clusters of allied industries supplying components and parts to enable the big companies to mass produce.

*Baba Kalyani, Chairman & MD, Bharat Forge,
India and Seo Bo Shin, MD & CEO, Hyundai
Motors India*

Encourage and fund risk taking to create an environment which rewards efforts that drive and support activities that move technological innovations from R&D, through applied research to full commercialization.

Create inspirational science and technology goals and make attainment of requisite skills needed to attain those goals an aspiration.

Build India's Department of Science & Technology into a world-class organization to encourage greater collaboration with industry.



Share and apply best practices and knowledge across states to encourage innovation.

Building, sustaining and articulating innovation management best practices

CIO – Innovation management best practices India's manufacturing sector - best practices not yet in place

Provide government incentives for small and medium-sized enterprise manufacturers

The role of small and medium-sized enterprise manufacturers cannot be overstated in the development of a strong manufacturing base. SMEs in India contribute approximately 22% to GDP and an estimated 40% of manufacturing value-add, as well as 35% of merchandise exports. Due to their size, these manufacturing organizations often face challenges that are less pressing or simply non-existent for larger manufacturing organizations. Fortunately, the National Manufacturing Policy recognizes this problem and identifies a series of policy proposals for improving access to finance for SMEs in the manufacturing sector.

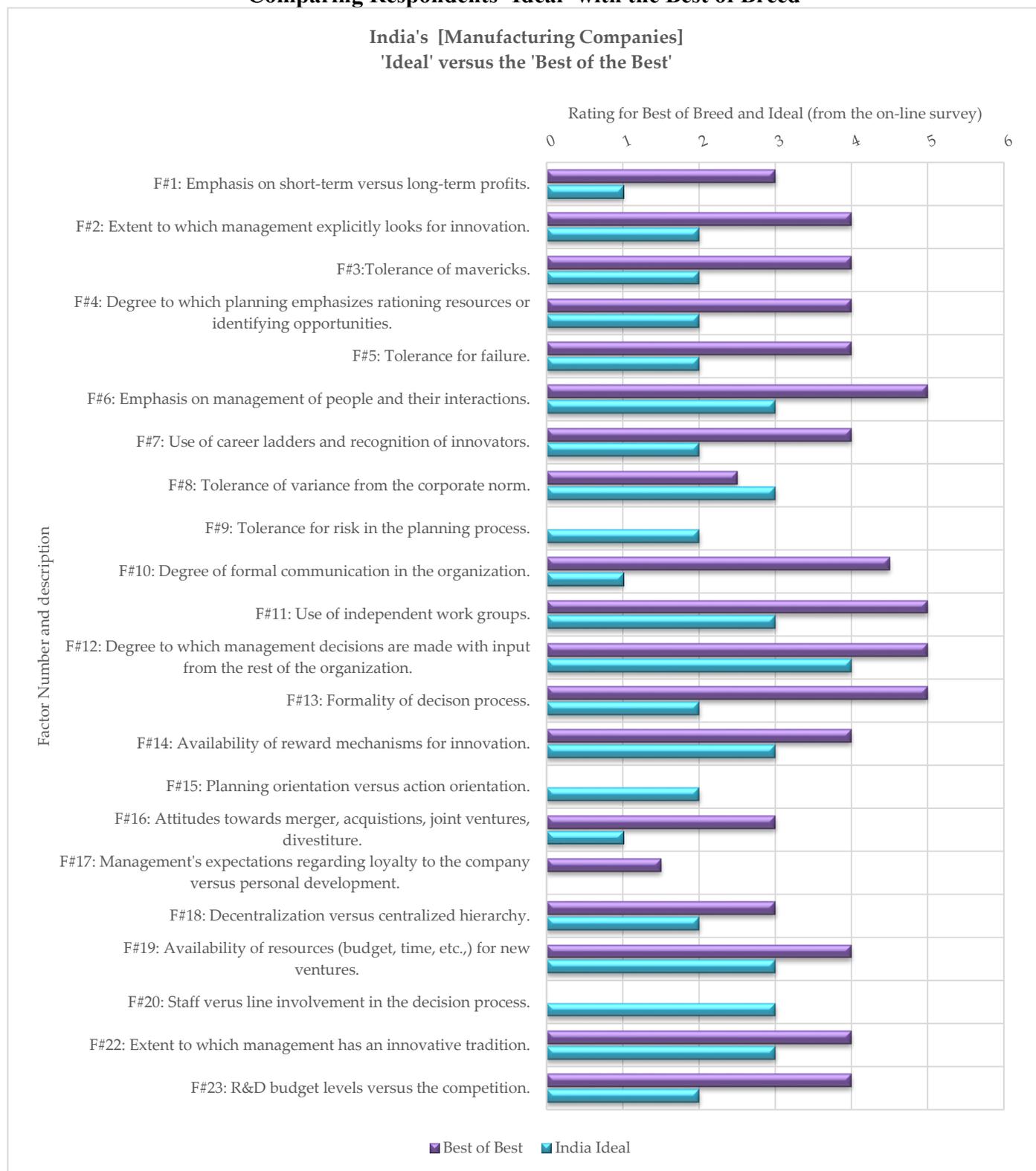
Executives participating in the discussions – primarily leaders of large, multinational Indian firms – were supportive of special treatment for SMEs and emphasized the following to benefit micro, small and medium-sized manufacturers.

Provide access to the basics beyond access to adequate and timely financing, to include availability of suitable technology, marketing resources and skilled workers. Executives cited the critical role that SMEs play in the manufacturing ecosystem, including their ability to take risks on a smaller scale to promote innovation. The cluster approach will significantly promote SMEs and address some of their unique challenges related to access to credit, adoption of new technologies and development of human resources. Finally, it is important to note trade policy came up during the interviews and working sessions in the context of policy-maker support in boosting exports to meet India's aggressive growth targets, and energy policy was touched upon by executives commenting on the criticality of infrastructure. However, these topics were not regarded as priority in the face of the more pressing policy issues previously noted

CIO – Innovation management best practices

India’s manufacturing sector - best practices not yet in place

Appendix B; Chart Showing On-line Survey Results Comparing Respondents ‘Ideal’ with the Best of Breed



CIO – Innovation management best practices

India's manufacturing sector - best practices not yet in place

Appendix C.; Dun and Bradstreet. “Emerging SMEs of India”

Dr Manoj Vaish, President & CEO – India, Dun & Bradstreet

Dun & Bradstreet India takes another step forward in its commitment to service the small and medium enterprises in India. In a strategic association with the SME Rating Agency of India Ltd (SMERA), D&B India has conceptualised the publication series, **Emerging SMEs of India**. “Emerging Textile SMEs of India” is the second publication in this sector-based series, after the successful launch of “Emerging Auto Component SMEs of India” in September 2006.



The SME segment has come into the limelight, with increased focus from several government institutions, corporate bodies and banks, and is rightly viewed as an agent of economic growth. In addition to the government's thrust towards promoting the SME segment, several latent business opportunities have also opened up with globalisation and sustained growth of India's economy. However, there is a lack of structured information on India's SME sector. A sincere attempt to fulfil this lacuna was our principal rationale in undertaking this exercise.

This unique publication is in recognition of the significant contribution made by SMEs to India's industrial development. It is estimated that SMEs account for over 90% of industrial units in India and 40% of value addition in the manufacturing sector. They contribute 35% to India's merchandise exports. This one-point reference document will provide a platform that enhances the visibility of these important constituents of the Indian growth story.

The publication on the Textiles sector was a unique undertaking and involved contacting over 8,000 companies, screening them on the basis of turnover, investment and employee size. The end result is a repository of authenticated information on the truly small and medium enterprises that have a turnover of less than Rs 1,000 mn.

The new business environment for textiles, defined since the phasing out of the Multi Fibre Arrangement in January 2005, has brightened prospects for Indian textiles and clothing trade. In 2005-06, textiles exports were valued at US\$ 17 bn, having recorded a 22% growth, y-o-y. This robust growth is expected to continue over the next 2-3 years, led by cotton ready-made garments and home furnishings. Apart from earning foreign exchange, the sector also has significant employment potential. The insights included in the publication are based on a statistical analysis of collated data, and highlight interesting benchmarks for textile companies in the SME segment.

The SME publication preserves the D&B commitment to providing information and knowledge that facilitate informed business decisions. D&B India has drawn on its time-tested expertise in the information business to the benefit of the small and medium companies, as this publication amply reflects.

Finally, I would like to thank the SMERA for their consistent support in this exercise. I am sure you will find this issue of ‘**Emerging Textile SMEs of India**’ useful and I look forward to your suggestions.