FICCI CASCADE

ILLICIT MARKETS- A THREAT TO OUR NATIONAL INTERESTS

THE FMCG-PACKAGED FOODS INDUSTRY

About this report:

This report has been prepared by Thought Arbitrage Research Institute (TARI) for FICCI Committee Against Smuggling and Counterfeiting Activities Destroying the Economy (CASCADE).

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- *Corporate Governance*
- *Whistleblowing / Vigil Mechanism*
- *CSR & Sustainability*
- *Economics & Public Policy*

TARI was founded by Kaushik Dutta and Kshama V Kaushik.

Research Team - Thought Arbitrage Research Institute

Research Conceptualisation and Industry Interface:

Kaushik Dutta

Principal Authors:

Kshama V Kaushik, Rosanna M. Vetticad

Principal Researchers:

Ananya Roy, Rewa P Kamboj, Rosanna M. Vetticad

Contributing Authors and Research Support:

Prasanna Mohanty, Saumya Sah

Report Editors:

Souvik Sanyal

E-mail: contactus@tari.co.in, gayathri.venkatraman@tari.co.in

Address:

Thought Arbitrage Research Institute
C-16, Qutab Institutional Area, New Delhi - 110016, India
Tel: 011 41022447 / 41022448
Website: www.tari.co.in

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ILLICIT MARKETS- A THREAT TO OUR NATIONAL INTERESTS

THE FMCG-PACKAGED FOODS INDUSTRY

Foreword

Product counterfeiting put consumer safety at a great risk. Counterfeit, fake and smuggled goods are no longer just about luxury items. Today, almost all sorts of products are being copied and smuggled having fatal consequences for the consumers.

FICCI has been at the forefront of advocating policy framework on various aspects affecting the industry. In 2012, a FICCI CASCADE study titled "Socio-Economic Impact of Counterfeiting, Smuggling and Tax Evasion in Seven Key Indian Industry Sectors" was released which was the first ever compilation of facts and figures on counterfeiting, smuggling and tax evasion in seven key industry sectors in India. After the earlier comprehensive study which not only estimated the size of the grey market in the select industry sectors but also highlighted the losses to the industry in sales and Government in revenue, we have now gone a step further and developed 10 sector specific reports on 'Illicit Markets - A Threat to Our National interests'. This report is specific to the FMCG-Packaged Foods Industry and aims at updating the estimates of grey markets in the FMCG packaged food sector, projecting the resultant losses to the industry and assessing its impact on innovation and investment.

I would like to thank and congratulate all the committee members and stakeholders who have contributed towards this project particularly Thought Arbitrage Research Institute (TARI). It is hoped that this study would provoke further debate on extent of this problem, and ways and means to mitigate the challenge.

I wish FICCI-CASCADE success in its future initiatives.

Dr. A. Didar Singh
Secretary General
FICCI

Chair's Message

I am pleased to present the report on 'Illicit Market: A Threat to Our National Interest' which is specific to the FMCG packaged food industry.

Products from Illicit market operations prove to be a huge loss to the brand as well as the national exchequer. It is not only damages business and investment opportunities but also have a negative impact on society and the global economy. Additionally, it also poses serious threat to law and order, generates unemployment and even causes danger to human health.

The FMCG packaged food industry is vulnerable to counterfeiting, which directly affects the health of consumers. Be it counterfeits or smuggled, products can be particularly dangerous because consumption of non-standard or low quality edible food items may cause serious health ailments or be life-threatening.

At a time when India is emerging as a growing market place for FMCG packaged food products and given the thrust on "Make in India" products; technology, invention, and innovation will play a key role in the country's economic development. However, presence of counterfeits and fakes will dampen growth prospects of legitimate industries, rob consumer confidence and drain the country's economy. Hence, it is imperative to take corrective and proactive measures to fight this menace.

This report has estimated the size of the illicit market; its adverse impact on innovation and investment in the FMCG packaged food sector. I am certain that the findings from this report would increase consumer awareness, drive support from policy makers in tax related reforms and step up the industry for greater investment in R&D and encourage innovation.

I hope that this research will be useful for all stakeholders including consumers, industry, policy makers and researchers on the issues in the FMCG packaged food industry and the challenges ahead if concerted efforts are not taken to curb the menace of smuggling and counterfeiting.

Anil Rajput

Anil Rajput
Chairman
FICCI CASCADE

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Executive Summary

The existence of grey markets is a matter of serious concern for any economy. In a 2012 FICCI CASCADE study titled "Socio-Economic Impact of Counterfeiting, Smuggling and Tax Evasion in Seven Key Indian Industry Sectors" the existence of such markets was established by estimating its size in seven key industry sectors and the consequent losses to the industry in sales and the government in revenue for 2008 and 2010. The present study, commissioned by FICCI's Committee Against Smuggling and Counterfeiting Activities Destroying the Economy (CASCADE), aims at updating the estimates of grey markets in selected sectors, projecting the resultant losses to the industry and government and assessing their impact on innovation and investment. This report is specific to the FMCG-packaged foods sector.

FMCG - PACKAGED FOODS

GREY MARKET ESTIMATES INDUSTRY & GOVERNMENT LOSS

IMPACT ON:
- Innovation
- Investment
- inter-state Tax Arbitrage
-Terrorism

Size of the illicit market

FMCG goods can be broadly classified into three categories: packaged food or food and beverages, personal goods and house care products.

The packaged foods market, according to CRISIL ratings of September 2014, stands at ₹ 1.2 trillion (₹ 1.2 lakh crores) and accounts for more than 50% of the entire FMCG market. Its

CAGR is 1.5 times that of other FMCG segments, as a result of which its share in the total FMCG pie has grown from 48% in 2008 to 54%.[1] It includes items like biscuits, dairy value-ads, edible oil, snacks, bakery and ready to eat items, soft drinks, etc.

The segment is expected to grow at 9% annually to become a $ 100 billion (₹ 6 lakh crores) industry by 2030, dominated by milk, sweet and savoury snacks and processed poultry, according to an industry body report. One of the major factors contributing to this growth story, is the opportunity that the Indian market provides.

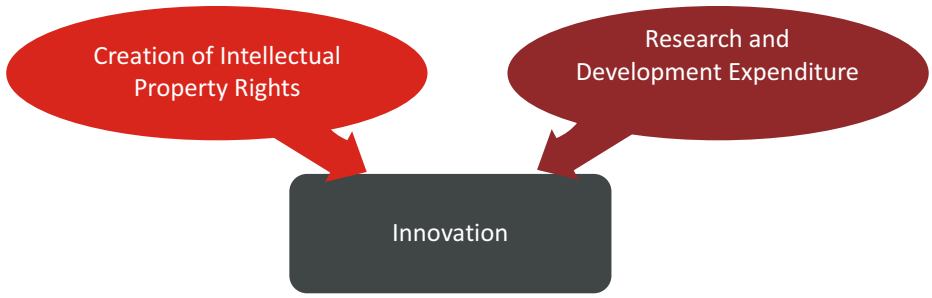
In this study we find that as against the 2012 FICCI CASCADE estimates, the size of the grey market in the packaged foods sector has actually shrunk. While the previous study estimated the grey market percentage to be 25.4% in 2008, and 23.4% in 2010, the current study estimates it to have further fallen to 21.7% in 2012. This may mainly be attributable to better use of technology and innovations in the packaging of products to prevent counterfeiting. However, due to the increase in the market size the estimated loss due to grey markets has gone up from ₹ 20,378 crores in 2010 to ₹ 21,957 crores in 2014.

Industry	Grey Market %age		Loss to Industry (₹ crores)	
	2012	2010	2014	2012
Computer Hardware	21.7%	23.4%	21,957	20,378

The total loss to the government estimated for 2014, on account of the illicit markets in the FMCG-packaged foods industry is ₹ 6,096 crores, up from ₹ 5,660 crores in 2012. This loss is only on account of tax revenues as we have not estimated the incremental costs incurred by government on account of welfare measures, enforcement and legislation and interest costs.

Impact of illicit market on innovation

The present study looked at two proxies to assess the impact of grey markets on innovation - creation of intellectual property rights and research and development (R&D) expenditure.



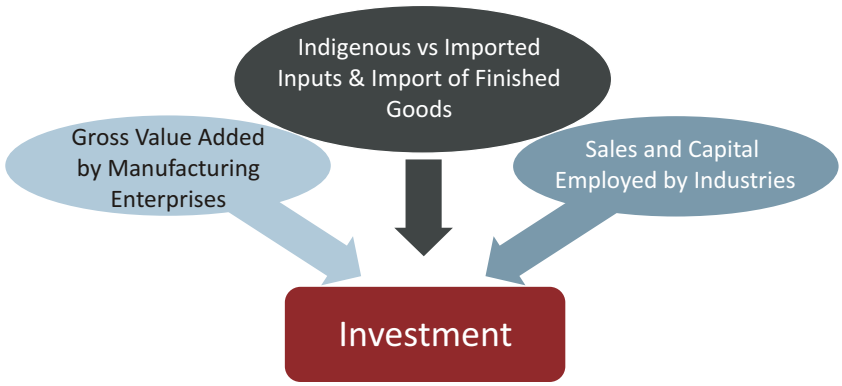
Our analysis indicated that the number of patents filed by the Council of Scientific and Industrial Research (CSIR) in the food products sector was reasonably high at 257, 15% of all its patents in force (17% on including the beverages sector). (CSIR has filed the largest number of patents in India)

Research and development (R&D) expenditure as a percentage of the operating expenditure however was abysmally low and also showing a declining trend, averaging just 0.10% during 2008 to 2013. This suggests that the industry is not spending much on research and development of new products and processes.

Low spending on innovation may be attributed to the presence of grey markets and the consequent uncertainty of return due to a higher risk of counterfeiting, smuggling and piracy. When read with the high number of patents filed, it appears to imply that growth in this sector is encouraging innovation in the form of patents; however, without significant R&D expenditure (which has remained very low over the period under review) future innovation is bound to be impacted. The fall in the grey market size however, can be attributed to extraneous factors, i.e. the packaging industry which is increasingly becoming technology oriented with innovations driving the market. The FMCG-packaged foods industry is a key user of the packaging industry.

Impact of illicit market on investment

To assess the impact of illicit markets on innovation, the study analysed three proxies.



GVA as percentage of total output has been very low for the packaged foods sector, with an average of 7.26%, without significant variation during the years under analysis. This indicates lower investment by the industry in adding value to the finished products.

Sector	2010		2012	
	GVA as % age of Total	Grey Market %age Output	GVA as %a ge of Total Output	Grey Market %age
FMCG-Packaged Foods	8.17	23.4	7.07	21.7

The risk of counterfeiting (which continues to be high in this industry, despite the falling trend) appears to be thwarting investments by the SME units, which dominate this industry, resulting in lower GVA. The low GVA is a factor of under-utilised capacity and high input costs, which the large illicit market is fuelling. Similarly, capital employed over sale, has remained low, varying from 1.6% to 1.8% during the period 2008 to 2013, another indication that not enough investment is happening which will lead to higher sales in future.

The use of imported inputs is significantly lower than indigenous inputs, and has been showing a declining trend over the years. Imported finished goods has also been declining steadily. This is a good sign and is indicative of a certain level of sophistication in domestic production processes in this industry.

The increased use of domestic/ indigenous raw materials as compared to imported raw materials implies that the level of sophistication in domestic production processes is improving and value (and jobs) is being added domestically. This has resulted in a shrinking of the grey markets. A low GVA however suggests that despite the declining grey market, industry is averse to making additional investments, this is because, the illicit markets still stand at a very high percentage of 21.7%. Further decline, would likely show improvements. We have thus been able to establish a reasonable correlation between the size and change in the grey markets with the level of investments in the industry.

Rising disposable income levels and the young demographic profile are expected to drive future consumption. The lack of continued investments in India by legitimate businesses though will fuel growth of the illicit markets. However increasing use of indigenous inputs in the industry in the past few years signifies that efforts are being made to bring down dependencies and increased costs related to imports and create a higher gross value added in India.

Illicit Markets, Terror Organisations and Criminal Networks

While statistical data is available for the number of terrorist attacks that have taken place in India, it is difficult to directly correlate it to the grey market data in absence of sufficient information and research, which are lacking at present, especially in the Indian context.

Furthermore, despite the existence of requisite laws in India and arrests of suspected criminals by the police, the scale of illicit markets is huge and the criminal networks and illicit markets organisations continue to thrive. Clearly, the existing laws and police operations are not resulting in the desired outcome and do not act as a deterrent. This could be due to the low conviction rates in India.

The lack of adequate data based on search and seizure in India makes it difficult to link the increase in illicit markets to terror funding. Establishment and determination of the extent of such a link calls for strategic intelligence gathering and preparation of robust databases, which are clearly missing at present. Given the security implications, if not outright financial

considerations, there is little to argue against carrying out such exercises. This would be the first step to contain counterfeiting and its corollary, terror and ensure that genuine business interests do not suffer.

Conclusion & Way Forward

To conclude, the packaged foods industry is marked by the following characteristics:

- A declining grey market
- Higher patents in comparison with other industries under review
- Low R&D expenditure
- Low GVA
- Low sales to average capital employed
- Increasing use of indigenous inputs
- Fall in use of imported inputs and finished goods

All these factors would suggest that legitimate producers have found ways of beating the illicit markets without a significant amount of innovation or investment. However, this could be because the sector is at the initial stages of development which translates into immediate gains in the short term as consumers are eager to try out the benefits of packaged food. In order to sustain this growth and momentum over the medium to long term, the sector would have to invest in R&D. The packaging industry which supports the packaged foods sector, would also need to sustain its growth and innovation thus making it more challenging for counterfeiters to replicate state-of-the-art packaging.

With regard to funding of terrorist organisations, like many other countries India needs to enhance legal and operational wherewithal and technical expertise to zero in on terrorist financing sources and initiate prosecution.

The development of a framework for prevention of terrorist financing is a step towards this end. It will track financing hubs and also act as a deterrent to ultimately bring down the threat of terrorism. Such a framework will include training and capacity building among enforcement agencies, use of technology to detect and track sources of finance and increasing consumer awareness to empower consumers to take more informed decisions.

Although it is showing a declining trend since 2008, government and industry would do well to protect the industry from the illicit markets. This would require ***collaborative efforts between all stakeholders – industry, government (state, central and international) and consumers.***

As our analysis has shown, the industry is set to grow in the coming years due to changing tastes and lifestyles of consumers and increasing income levels. ***According to a recent Dun & Bradstreet report,[2] rising income levels coupled with increase in the young working-age***

population will lead private final consumption expenditure to grow steadily over the years, averaging around 7.0% during FY15-FY20. The tendency and opportunities for counterfeiters and smugglers to trade in the illicit markets in such a scenario would be much greater, setting the industry up for increased exposure to the grey markets. Therefore apart from the obvious losses to the industry and government, particular care is necessary in this industry due to the detrimental effects consumption of these illicit products can have on consumers – adults and children alike.

SUMMARY OF CONCLUSIONS

- The FMCG packaged foods industry in India is marked by the following characteristics:
  - A grey market that has declined from 23.4% in 2010 to 21.7% in 2012.
  - Loss to the industry has increased to ₹ 21,957 crores in 2014 from ₹ 20,378 crores in 2012
  - Loss to the government estimated for 2014, on account of the illicit markets is ₹ 6,096 crores, up from ₹ 5,660 crores in 2012.
  - Higher patents in comparison with other industries under review, 17% of all patents filed by CSIR (which has filed the largest number of patents in India).
  - Low R&D expenditure and with declining proportion to total operating expenditure averaging 0.10% during 2008-2013.
  - Low GVA as a percentage of total output, standing at an average of 7.26% and no significant variation over the years.
  - Capital employed over sale, has remained low, varying from 1.6% to 1.8% during the period 2008 to 2013, another indication that not enough investment is happening which will lead to higher sales in future.
  - Increasing use of indigenous inputs and fall in use of imported inputs and finished goods which are good signs, indicative of a certain level of sophistication in production processes.

Inadequate data based on search and seizure in India makes it difficult to link the increase in illicit markets to terror funding. Establishment and determination of the extent of such a link calls for strategic intelligence gathering and preparation of robust databases, which are clearly missing at present.

Our analysis shows that the industry is set to grow in the coming years due to changing tastes and lifestyles of consumers and increasing income levels. The tendency and opportunities for counterfeiters and smugglers to trade in the illicit markets in such a scenario would be much greater, setting the industry up for increased exposure to the grey markets. Therefore apart from the obvious losses to the industry and government, particular care is necessary in this industry due to the detrimental effects consumption of these illicit products can have on consumers - adults and children alike.

Objective of the Study

The existence of grey markets is a matter of serious concern for any economy, more so in India where rapid technological advancement and economic liberalisation seems to have made it easier to spawn a parallel economy out of counterfeit and tax evaded products.

In a 2012 FICCI CASCADE study titled "Socio-Economic Impact of Counterfeiting, Smuggling and Tax Evasion in Seven Key Indian Industry Sectors" the existence of grey markets was established by estimating its size in seven key industries and the consequent losses to the industry in sales, and the government in revenue for 2008 and 2010. The present study, commissioned by FICCI's Committee Against Smuggling and Counterfeiting Activities Destroying the Economy (CASCADE), aims at updating the estimates of grey markets in selected sectors, projecting the resultant losses to the industry and assessing their impact on innovation and investment. This report is specific to the FMCG-packaged foods sector.

FMCG - PACKAGED FOODS

GREY MARKET ESTIMATES INDUSTRY & GOVERNMENT LOSS

IMPACT ON:
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Grey market percentages are currently ascertainable for 2012, as reliable government data from the Ministry of Statistics and Planning Implementation (MoSPI) of the Government of India is available for 2012. This data includes the Annual Survey of Industries (ASI) for 2012 which provides data on factory production across the country and National Sample Survey

Organisation's (NSSO) National Sample Survey (NSS) 68th round, which provides household consumption data across the country for the year 2012.

Loss to the industries concerned in 2013-14 has then been ascertained by extrapolating the industry size determined for 2011-12 based on assumptions about the growth of the industry over the two year period 2012-13 and 2013-14. These assumptions are obtained from industry reports and discussions with industry experts. Assuming that the grey market percentage remains constant over this two year period, it is applied to the market size so estimated to arrive at the loss to the industry for 2013-14.

As indicated in several studies including the 2012 FICCI CASCADE study, by their very nature, since counterfeiters operate outside the law, estimating the extent of counterfeiting and piracy and the harm these activities cause is extremely challenging. Illegal businesses do not report information on their activities to any government agency therefore measuring their size must be done using indirect methods.[3]

Industry Coverage

Taking off from the 2012 FICCI CASCADE study this sector study quantifies the extent of grey markets and estimates of losses due to illicit markets in the FMCG-packaged foods industry. It also assesses the impact of illicit markets on factors like investment, innovation, consumers, etc.

This study is perhaps the first quantitative study in India on the impact of illicit markets on various economic aspects. Depending on the quality and credibility of data available, the study has quantified different types of impacts on this sector using latest Government of India data on consumption and production, which is available for 2012 (released in 2014).

Literature Review

We have reviewed past studies and published research on the subject of grey markets including counterfeiting, smuggling and tax evaded goods and their impact on innovation, investment, tax arbitrage and funding terrorist activity.

This review included global studies commissioned by public institutions and agencies of repute, industry associations working on anti-counterfeiting endeavours, academia and major corporates. Such works were reviewed to analyse the scope of research, methodology adopted, analysis techniques and results.

Extracts from some of the significant reports are reproduced in Annexure I to give a broad understanding of global thinking on the subject.

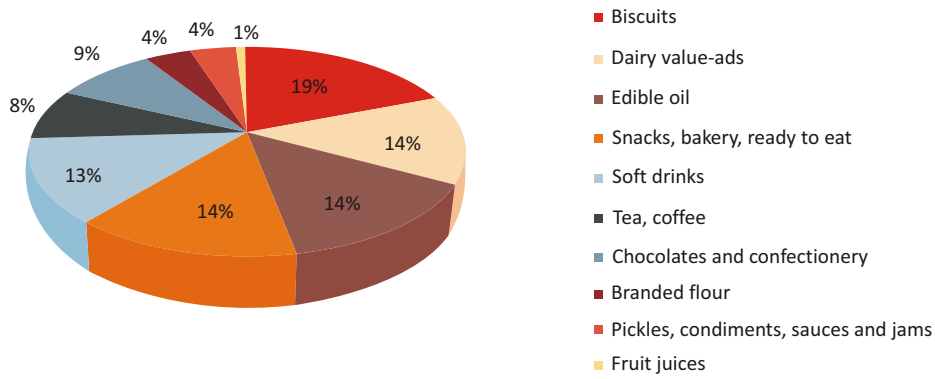
FMCG-Packaged Foods: Industry Profile in India

Background of the Packaged Foods Industry in India

Fast Moving Consumer Goods (FMCG) are packaged goods which include all consumables other than groceries/pulses people buy at regular intervals. The most common are toilet soaps, detergents, shampoos, toothpaste, shaving products, shoe polish, packaged foodstuff and household accessories, beverages and extends to certain electronic goods. It is the fourth largest sector in India with generated revenue of $37 billion (₹ 224,148 crores @ ₹ 60.91 a dollar) in 2011-12. The sector has grown at an annual average of about 11% over the last decade and is expected to grow at a compounded annual growth rate (CAGR) of 14.7% to $ 110 billion during 2012-2020, according to India Brand Equity Foundation (IBEF) of the Ministry of Commerce and Industry.[4] It can broadly be classified into three categories: packaged food or food and beverages, personal care and house care products. Packaged food includes items such as baby food, biscuits, bread, butter, edible oils, tea, coffee, juice etc. and forms the largest chunk of the entire FMCG market.

The packaged foods market, according to CRISIL ratings of September 2014, stands at ₹ 1.2 trillion (₹ 1.2 lakh crores) and accounts for more than 50% of the entire FMCG market. Its CAGR is 1.5 times that of other FMCG segments, as a result of which its share in the total FMCG pie has grown from 48% in 2008 to 54%.[5]

Break-up of Packaged Foods Sector



The packaged foods segment is expected to grow at 9% annually to become a $ 100 billion (₹ 6 lakh crores) industry by 2030, dominated by milk, sweet and savoury snacks and processed poultry, according to an industry body report. It predicts India will become an agriculture and high-value food powerhouse by 2030. The food processing industries attracted foreign direct investments (FDI) worth $1,811 million during the period April 2000 to March 2013, as per data published by the Department of Industrial Policy and Promotion (DIPP).

One of the major factors contributing to this growth story, is the opportunity that the Indian market provides. Though India ranks among the largest food producers in the world, its share in the processed food industry is small. The 2014 CRISIL report says the untapped opportunity in the packaged foods sector is almost three times that of the personal care and manifold times that of the home care product. Secondly, rise in income levels and that of nuclear and double-income families in urban areas has seen a major change in consumer preferences, resulting in more families banking on packaged food for daily sustenance and experimenting with newer products.

With Indian consumers becoming more brand and health conscious, the sale of products perceived as being healthier-wheat cornflakes and muesli, baked and non-fried potato chips and snacks, organic or green tea, etc.- is also rising. Furthermore, with growing urbanisation and rural incomes, packaged food has found new customers among the urban poor and semi-urban and rural areas. More women (who traditionally run home kitchens) joining the work force is adding to the demand for ready-to-cook and ready-to-eat food. The Indian government, keen to promote the food processing industry, has also extended various tax incentives contributing to the growth of this sector.

Industry structure

At the top, tier-1 companies are mostly multinationals and large domestic manufacturers who manufacture products in one or more of the FMCG segments - packaged foods, personal care

and house care. At the next level, tier-2 companies comprise hundreds of small and medium companies, which are mostly regional players, followed by a large unorganised sector comprising hundreds of micro/cottage scale enterprises spread across the country that thrive on products based on traditional and local recipes.

According to CRISIL (September 2014), the tier-2 players - the small and mostly regional players - have outgrown the high and mighty in the segment and have increased their share in the domestic market from 20% to 30% in the last six years. These companies have grown at nearly twice the pace of tier-1 players. By 2019, they are expected to capture 40% of the market.[6]

The distribution channels are similarly characterised by a large chunk which is in the organised sector but a larger one is unorganised. Nearly 7.8 million retail outlets sell FMCG goods. While the economic growth of the past decades has witnessed the growth of supermarkets and malls, spreading fast to semi-urban areas there is an equally strong presence of the unorganised sector taking care of a larger section of semi-urban and rural areas. The local kirana shops (grocers) dominate retail sellers, accounting for about 59% of sale.

Ancillary industries

Many large FMCG companies are known to outsource their products, packaging materials and chemicals as inputs, thereby supporting a large number of ancillary units. An entire packaging industry has grown around FMCG companies. Besides, FMCG products have helped set-up a huge country-wide distribution network, including kirana/grocery stores specially dealing with such products.

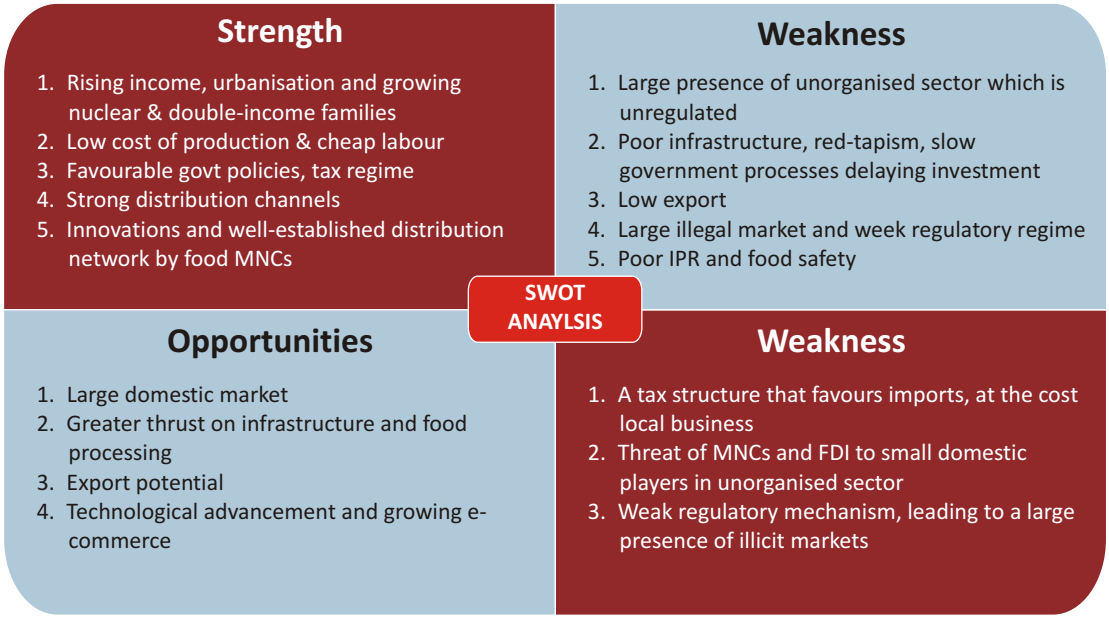
Government Policy

To promote the food processing industry in India, the Ministry of Food Processing Industries (MoFPI) has prepared the Vision 2015 document, which envisages tripling the size of the processed food sector by increasing the level of processing of perishables from 6% to 20%, value addition from 20% to 35% and share in global food trade from 1.5% to 3%, by 2015.

Introduction of GST will remove a long pending demand of FMCG companies to cut excise and sales taxes on some items like soft drinks, shampoo and toiletries containing alcohol, which hamper growth. Higher tax also promotes spurious/ counterfeit products and smuggling. Coupled with lower excise, higher local taxes make imports cheap and domestic products expensive.

SWOT Analysis

The following chart presents a broad analysis of the strengths, weaknesses, opportunities and threats faced by the industry in India.


Strength
1. Rising income, urbanisation and growing nuclear & double-income families
2. Low cost of production & cheap labour
3. Favourable govt policies, tax regime
4. Strong distribution channels
5. Innovations and well-established distribution network by food MNCs
Weakness
1. Large presence of unorganised sector which is unregulated
2. Poor infrastructure, red-tapism, slow government processes delaying investment
3. Low export
4. Large illegal market and week regulatory regime
5. Poor IPR and food safety
SWOT ANAYLSIS
Opportunities
1. Large domestic market
2. Greater thrust on infrastructure and food processing
3. Export potential
4. Technological advancement and growing e-commerce
Weakness
1. A tax structure that favours imports, at the cost local business
2. Threat of MNCs and FDI to small domestic players in unorganised sector
3. Weak regulatory mechanism, leading to a large presence of illicit markets

Counterfeiting in the FMCG-Packaged Foods Industry

The packaged foods sector is particularly vulnerable to counterfeiting because it consists of a large unorganised sector which is virtually unregulated. Counterfeiters take advantage of this and use advanced technology to imitate the original products and replace them with inferior substitutes. They either pass off brands with similar sounding names by deliberately misspelling it or similar looking trademarks as the originals. A September 2013 report titled "Counterfeiting, Piracy and Smuggling in India - Effects and Possible Solutions" prepared by ICC BASCAP and FICCI CASCADE, quotes a study conducted by AC Nielsen which estimates that 30% of FMCG business is lost to fake products, and 80% of the consumers who purchased these products believed that they had bought originals.[7]

Premium brands are more vulnerable to counterfeiting. It is particularly dangerous because consumption of non-standard or low quality edible food items may cause serious health ailments or can be life-threatening.

Established brands and premium products are often the biggest sufferers as look-alike products are available at cheaper prices. Counterfeiting is prevalent as it is relatively easy and requires small investments. Besides the revenue losses, counterfeits affect the brand adversely as they are unsafe or adulterated and could hit customer confidence as fake products do not give the desired results promised by the brand.

Factors Driving Illicit Trade in FMCG-Packaged Foods

A huge disparity in income and standards of living, coupled with a weak regulatory mechanism, produce an environment conducive for illicit markets to flourish in India. The case is no different for the packaged foods industry. Some of the driving factors are listed as follows:

- A large unorganised sector in the packaged food industry.
- Weak regulatory and implementation mechanism.
- High price of branded and premium products.
- Huge income disparities creating a market for cheap alternatives to the branded and premium products among the low income population.

Size of the Illicit Market in the FMCG-Packaged Foods Industry

Data Sources

In order to calculate the grey market percentage for 2011-12, the gap between supply and demand will be derived.

For ascertaining supply and demand we have to determine the different kinds of products that have to be considered under the industry category. They remain the same as in the earlier study, which were identified separately for each sector through literature reviews, consultation with FICCI-CASCADE members and industry representatives.

This study has used a combination of data analytics on Government of India statistics, corporate information from data aggregators and industry validations to estimate the extent and level of grey market operations. The key data sources are the Annual Survey of Industries (ASI) and National Sample Survey (NSS) published by the Ministry of Statistics and Programme Implementation (MoSPI) of the Government of India. This is supplemented with data from the Directorate General of Commercial Intelligence (DGCIS) under the Ministry of Commerce and Industries and Ministry of Micro, Small and Medium Enterprises (MSME) and information extracted from PROWESS database for companies.

Supply Side Estimation

ASI - Gross Sales Value: The Central Statistical Organisation (CSO) of the MoSPI collects national data on manufacturing activity for each district (rural and urban) to compile ASI statistics. Gross Sales Value (GSV) in ASI data includes product cost, excise duty, sales tax and other distribution expenses.

GSV data of selected products identified for domestic sales was for 2012 as well. The data (after taking the multiplier effect as suggested by CSO) covered the ASI survey for the financial year 2011-12. 13.33 lakh data points were analysed. Data was extracted from Block A and Block J. Details are provided in the following table.

Table: ASI Data Points Analysed

Particulars	Description of data series	Data Points evaluated
Annual Survey of Industries 2011-2012	Factory wise details of manufacturing activities pan India for the period April, 2011 to March 2012.	Block A and Block J, gross sales value, multiplier, NPCMS Code etc.

ASI 2011-2012 has changed its coding structure and now uses the NPCMS code structure for product classification and industry grouping which is a 7-digit classification. The previous FICCI CASCADE study used ASICC code classification (5 digits) to determine the product classification under various industry heads.

In order to maintain consistency and comparability with the previous FICCI CASCADE study results, a similar product classification has to be followed under the NPCMS code structure. Hence NPCMS codes have been mapped with ASICC codes and then allocated to the industry sectors concerned. Additional NPCMS codes identified post mapping with ASICC codes have been further deciphered to allocate to the industry sectors concerned.

Annual Production Amounts of MSME: ASI data captures production of units registered under the Factories Act. Broadly according to the Factories Act, 1949, a factory means any premises where ten or more people are working where the manufacturing process is carried on with the aid of power or otherwise where twenty or more workers are working.

There are also a large number of micro, small and medium enterprises (MSME) in the sectors covered in this study. As per the MSME Development Act, a micro enterprise is one where investment in plant and machinery does not exceed ₹ 25 lakhs, while in a small enterprise the limit is between ₹ 25 lakh to ₹ 5 crores and medium enterprises are those which have investment values between ₹ 5 crores to ₹ 10 crores.

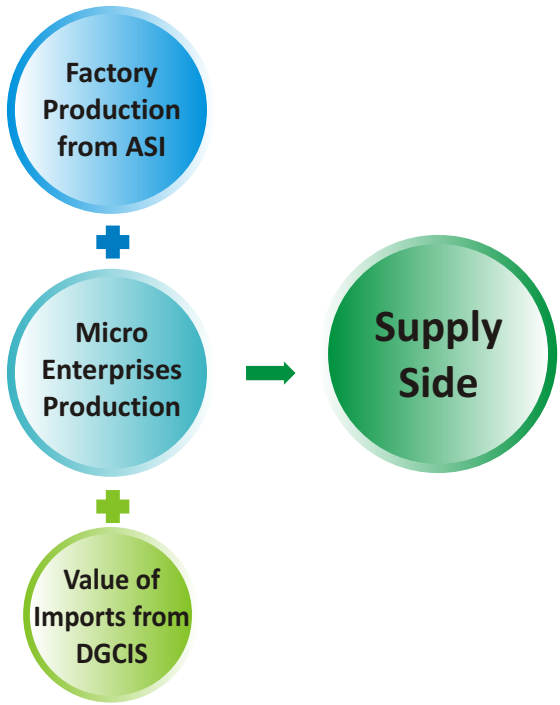
Comparing these definitions it can be assumed that small and medium enterprises would have been covered by ASI. Accordingly annual production of micro enterprises that are engaged in manufacturing activities has been extracted from the MSME annual production.

Out of the 24.01 lakh units surveyed in 2006-2007 as a part of the MSME Census, only 22.48 lakh were found relevant to MSME of which 15.64 lakh units were found working, 4.96 lakh units were closed and 1.88 lakh units were not traceable. The survey results give details of the registered units, segregate such units into micro, small and medium enterprises and map their products into National Industry Code (NIC) classification.

In this study, the value of the goods manufactured from registered micro enterprises and supplied to the selected industry sectors has been estimated by taking inputs from MSME Census of 2006-2007 and the Annual Report of the Ministry of MSME for the year 2011-2012. These estimates supplemented the GSV obtained from ASI data.

Value of Goods Imported: The value of goods imported into the country has been taken from the data published by the Directorate General of Commercial Intelligence and Statistics (DGCIS) under the Ministry of Commerce and Industry. For this study, we have used the eight digit code classification import data for the year 2011-2012. Import value data was extracted to supplement the production figures obtained from factories and micro-enterprises to arrive at the total of the supply side for domestic consumption.

ASI 2012 uses NPCMS code classification whereas import data uses ITC HS codes. Import data follows the harmonic system code for classification and for 2010-2011 a total of 10,032 codes were scrutinised up to an 8 digit level. MSME data is based on the 2 digit classification of NIC 2004.



Consumption/Demand Estimation

The National Sample Survey Organisation (NSSO) of MoSPI conducts a survey on household consumer expenditure and employment and unemployment covering the entire country. This National Sample Survey (NSS) is one of the largest sample surveys of its kind and collects data on household characteristics such as household size, principal and secondary occupation, household type, land ownership/ possessed/ leased, land cultivated, land irrigated, primary source of energy, household ownership, etc.

For this study, data was analysed from NSS's 68th round survey, covering the period July 2011 to June 2012. Consumption expenditure data for the last 30 days / 365 days (as the case may be) for the country, was arrived at after giving effect to the multiplier suggested by NSSO.

Approximately 123.35 lakh data points were analysed for NSS 68th round where the codes were assigned to the respective industry sectors and then mapped to find the related consumption values. The blocks and codes of NSS 68 from which data was extracted for this study are given in the table below.

Table: NSS Data Points Analysed

Particulars	Description of data series	Data Points evaluated
National Sample Survey (Round 68)	Household consumer expenditure for the period July 2011 to June 2012.	Block 5, 9, 10, 11 and 12; Item code, subsample code, consumption value, multiplier, weight to be applied, NSS/NSC code.

Estimating the Illicit Markets-Methodology

The grey market percentage for 2012 was thus determined, using the following formula:

$$\textit{Grey Market \%age} = \frac{\textit{Total Consumption - Total Supply}}{\textit{Total Consumption}} \times 100$$

The difference between total consumption and total supply can primarily be attributed to the following:

- Goods produced or imported and sold in the country by evading taxes.
- Sale of domestically produced counterfeited (either deceptive or non-deceptive) goods.

FMCG-Packaged Foods-Data Analytics

Consumption of FMCG-packaged foods includes expenditure on items such as baby food, biscuits, bread, butter, edible oils, tea, coffee, juice etc. Consumption expenditure as per NSS was considered for 26 different codes.

In the previous FICCI CASCADE study it was ascertained that these goods are sold both in packed and non-packed forms and since this study is required to analyse packaged food, consumption was bifurcated into these categories.

The proportion of availability of packed and unpacked versions varies substantially between urban and rural India. NSS segregates consumption expenditure into rural and urban expenditure. We have considered 10% of the rural consumption in the categories listed above to be FMCG food products available in packaged form.

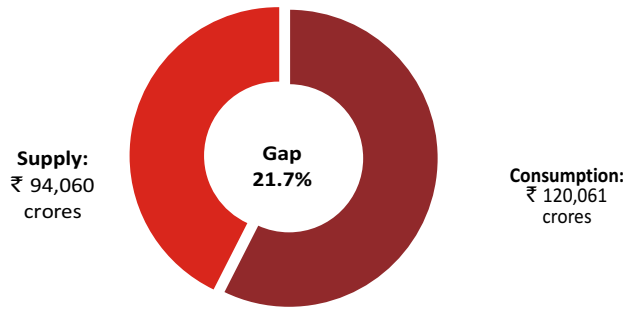
For estimating consumption of packaged food in urban areas, our opinion survey of industry experts' during the earlier FICCI CASCADE study showed a variation of 2.5 to 3.0 times of the

rural estimates. This factored in the effect of modern trade and fast changing urban customer preferences. Another recent study showed urban consumption of packaged food to be nearly 3 times that in rural areas. Therefore, on a conservative basis, we have considered urban consumption of the items considered under various NSS codes to be 2.5 times of the rural packaged consumption.

These factors were applied on products sold in both packaged and unpackaged condition. Thereafter packaged food consumption was computed as a percentage of the aggregated food consumption across all codes. This percentage was found to be 18.72% and was also used in supply side estimation.

Household consumption expenditure on FMCG-packaged foods for 2012 has thus been estimated at ₹ 120,061 crores.

FMCG-Packaged Foods Supply vs Consumption Gap 2012



In order to determine the supply side of the equation, the domestic production of FMCG packaged foods was computed as follows.

As explained earlier while estimating the consumption expenditure, since certain items are sold in both packaged and non-packaged form; production of such items has been calculated at 18.72% of their value. The value of so determined, of domestically produced FMCG-packaged foods is ₹ 85,338 crores.

The value of imported FMCG-packaged food products for 2012 available from DGCIS data is ₹ 1,114 crores.

The share of production of micro enterprises in the FMCG packaged foods category was ascertained from the MSME annual report and determined to be ₹ 7,609 crores.

The resultant total supply of packaged food products in the country for 2011-12 is ₹ 94,060 crores.

The grey market percentage in the FMCG packaged foods segment has thus been estimated at 21.7%.

Summary

Based on analysis of reliable data government, for the year 2011-12, it has been established that illicit trade in the FMCG-packaged foods segment continues to exist. This may be in the form of sale of counterfeited products, smuggled goods or tax evaded goods.

₹ crores

Industry	2012		Grey Market		
	Total	Total	2012		2010
	Supply*	Consumption*	Total Loss	%age	%age
FMCG-Packaged Food	94,060	120,061	26,001	21.7%	23.4%

*(*Based on NSSO/ASI/DGCIS data for 2012)*

Compared to 2010 however, the grey market percentage has come down to 21.7% from 23.4%. This is the only sector among the industries under FICCI CASCADE review which shows a declining trend.

Impact of Illicit Market-Estimating Loss to the FMCG-Packaged Foods Industry

For the purpose of arriving at the loss to the industry in 2013-14, we have assumed that the grey market percentage will remain constant over 2012-13 and 2013-14. The industry size for 2013-14 has been arrived at for the sector with reference to expected and actual growth rates for the past two years provided by industry reports or analysts. These growth rates have been used to extrapolate the industry size established for 2011-12 to 2013-14. Industry size for 2011-12 is taken as the domestic factory production of the industry, ascertained from ASI 2012 data.

Thus loss to the industry (purely in terms of sales) has been established as follows:

Estimated Loss of Sales to Industry = Size of Industry in 2013-14 X Grey Market Percentage (2011-12)

Estimating the Loss for 2013-14

The size of the FMCG-packaged foods sector for 2011-12 has been estimated at ₹ 85,338 crores.

The food processing sector as an important segment of the Indian economy constitutes around 9%-10% of gross domestic product (GDP) in the agriculture and manufacturing sector. According to Mr. Swapan Dutta, Deputy Director General, Indian Council of Agricultural Research (ICAR) it is currently growing at more than 10 per cent per annum and is expected to touch US$ 194 billion by 2015 from a value of $ 121 billion in 2012.[8] The packaged food segment, as per a industry body report[9] is expected to grow at 9% annually to become a ₹ 6 lakh crore ($ 100.19 billion) industry by 2030, dominated by milk, sweet and savoury snacks and processed poultry, among other products.

Fig: Estimated Loss to FMCG-Packaged Goods Industry in 2013-14

Estimated Size of Industry in 2013-14 X Grey Market Percentage (2011-12) = Estimated Loss of Sales to Industry ₹ 101,390 crores X 21.7% = ₹ 21,957 crores

Based on these estimates, we have considered that the FMCG-packaged foods industry has grown by approximately 9% from 2011-12 to 2013-14. Accordingly, the market has been estimated at ₹ 101,390 crores for 2013-14. Applying the grey market percentage calculated for the industry (i.e. 21.7 %) to this market size, **the grey market for 2013-14 is estimated to be approximately ₹ 21,957 crores.**

Compared with 2012, there is an increase in the loss to the industry, while the percentage of counterfeiting has actually come down. The increase in loss is attributable to the growth of the market.

Fig: Loss of Sales to Industry 2013-14 (in ₹crores)

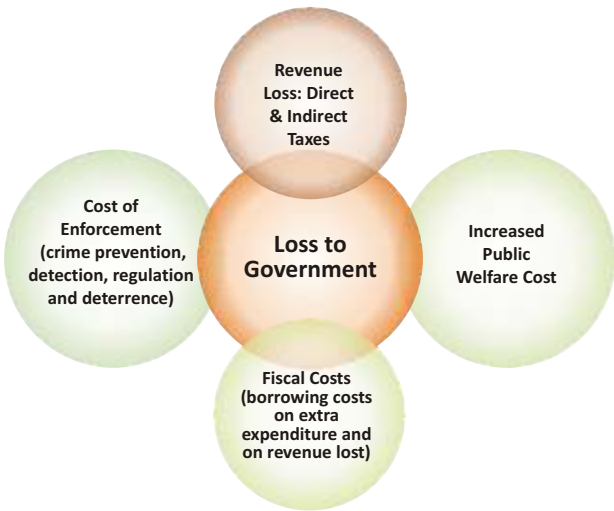
Industry Sector	2014	2012
FMCG-Packaged Food	21,957	20,378

Estimating Illicit Markets - Loss to Government

Apart for resulting in loss to the industry concerned, the operation of the illicit markets results in losses to the government in the form indirect taxes and direct taxes. Illicit markets cause losses to the original right holders in the form of reduced sales, lower profits, brand value, reputation, consumer distrust, etc. Governments lose tax, incur higher expenditure on public welfare, insurance and health services. Ultimately corporates shy away from making investments (as established in an earlier section) due to limited/no protection of rights, resulting in loss of employment opportunities.

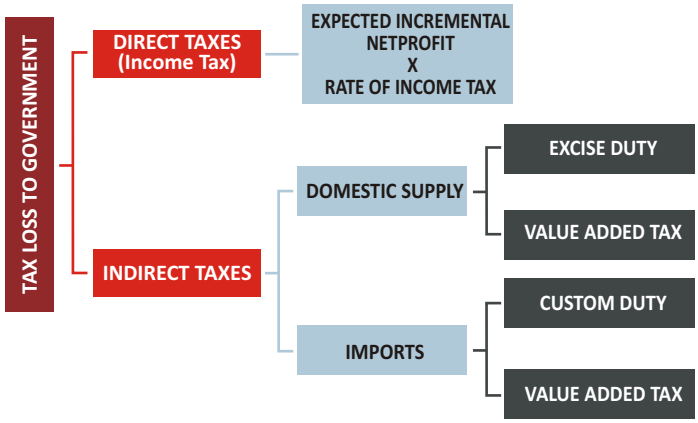
Governments that lose taxes will find it difficult to function and will be unable to provide quality and timely public services. They will be unable to deliver their legislative programmes, provide public goods or redistribute wealth.

This section aims to estimate the loss to the government of India on account of the illicit markets in the FMCG-packaged foods industry. It is imperative to develop an estimate of the challenge to the National and State exchequers with the objective of introducing strong regulatory measures.



Methodology

There is very little data on the global economic impact of counterfeiting and the losses to public revenues, employment, investment and innovation.[10] This study aims to project only the consequential tax loss to government on account of counterfeiting and the presence of grey markets in India. As in the 2012 FICCI CASCADE study, the methodology used in this report is derived from the economic model used in the BASCAP report that analyses the negative impact of counterfeiting and piracy on government receipts and expenditures.



The Tax loss to government has been estimated as loss of direct taxes (income tax) and indirect taxes (value added tax, import duty and excise duty).

Revenue Loss to Government =Loss on account of Direct and Indirect taxes in case entire gap is met by the legitimate manufacturers or importers

For calculating the loss in income tax and indirect taxes (excise/customs/VAT), the following approach was followed:

Direct Taxes (Income Tax):

To determine the loss attributable to income taxes, this study analysed annual reports of a sample/representative companies in the industry concerned to determine the weighted average net profit before taxes over sales. This percentage was applied to the sales loss to the industry determined in the previous section ("Size of the Illicit Market in the FMCG-Packaged Foods Industry"). The resultant figure is the incremental net profit that would have accrued to the industry had legitimate industry been able to fulfil sales lost to the grey market. The number so determined is multiplied by the income tax rate to arrive at the income tax forgone by the government. Additional profit will be taxed at the highest income tax slab rate, hence the tax rate considered is 33%.

Income tax lost by the government due to the operation of the illicit markets in the FMCG-packaged foods industry is tabulated below:

Indirect Taxes (On Domestic Manufacture and Imports):

Industry Sector	Net Profitability	Direct Taxes Loss		Change	
	Percentage	2014	2012	₹ crores	%age
FMCG-Packaged Foods	8.2	594	552	42	8%

Indirect Taxes (On Domestic Manufacture and Imports):

Loss of indirect taxes to the government on account of illicit markets has already been ascertained. This loss comprises loss on domestic production and loss on imports. The gap in consumption and supply is assumed to be met through legitimate domestic factory and registered MSME production, as well as imports, in the same ratio using 2012 ASI, MSME and DGCIS data.

Indirect tax loss in case of domestic production (ASI & MSME) arises on account of loss of excise duty and VAT. In case of imports the loss arises on import duty (basic and countervailing duty) and VAT.

Based on the principle of conservatism we have considered the following rates of indirect taxes for the FMCG-packaged foods industry. The table also shows the proportion of sales loss met by domestic production and imports:

Industry Sector	Loss to Industry met by .. (₹ crores)			Duty Rates (percentage)	
	Total	Domestic Production (ASI + MSME)	Imports	Excise Duty + VAT	Import Duty + VAT
FMCG-Packaged Foods	21,957	21,697	260	25	30

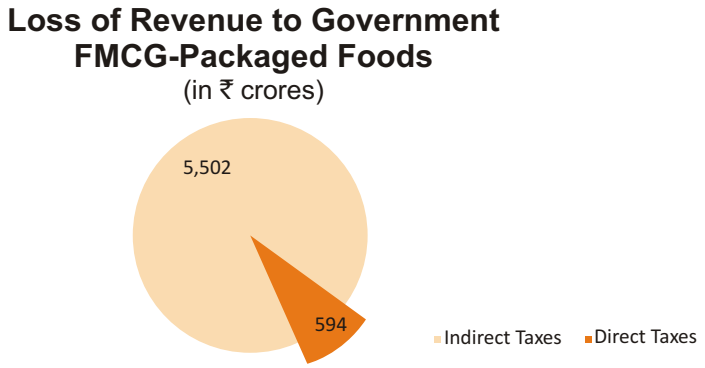
These rates of tax were applied to the sales loss to the industry ascertained earlier, to arrive at the loss to the government on account of indirect taxes.

Loss of Indirect Tax Revenue to Government (₹ Crores)

Industry Sector	Excise Duty + VAT	Import Duty + VAT	Total Indirect Taxes Loss - 2014	Total Indirect Taxes Loss - 2012	Change	
					₹ crores	%age
FMCG-Packaged	5,424	78	5,502	5,108	394	8%

Conclusion:

Thus, the total loss to the government estimated for 2014, on account of the illicit markets in the FMCG-packaged foods industry is ₹ 6,096 crores, up from ₹ 5,660 crores in 2012. As stated earlier, it needs to be highlighted, that this loss is only on account of tax revenues. We have not estimated the incremental costs incurred by government on account of welfare measures, enforcement and legislation and interest costs.



Impact of Illicit Markets on Innovation

This section aims to look at the plausible relationship between illicit markets and innovation. There is considerable evidence available to demonstrate how illicit markets tend to act as a disincentive for businesses to undertake innovation activities such as new product designs, manufacturing processes, conducting research and development (R&D) activities etc.

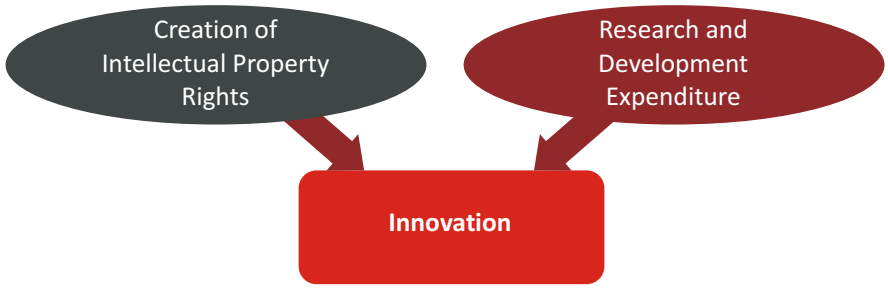
Illicit markets broadly include:

- Counterfeit goods (infringement of trademarks).
- Pirated goods (infringement of copyright).
- Smuggled goods (import or export without paying taxes).
- Tax evaded goods (taxes on both production & distribution of goods).

Innovation entails the process of design, invention, development and/or implementation of new or altered products, services, processes, systems, organisational structures, or business models for the purpose of creating new value for customers and financial returns for the firm.[11] An innovation is the implementation of a new or significantly improved product (goods or services), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations.[12]

The risks associated with investing in innovation are grossly accentuated in case these products can be easily copied (counterfeited), whereby the profits of the original innovator get transferred to the counterfeiter. This section of the report therefore aims to assess the effect of illicit markets on innovation, using quantitative and qualitative tools.

The following proxies have been identified for measuring innovation:



Creation of Intellectual Property Rights

For the purpose of this study, we have analysed the patents filed in India in the packaged foods industry.

A patent is an intellectual property right for inventions and is the grant of exclusive right, for a limited period, provided by the Government to the patentee, in exchange of full disclosure of the invention, for excluding others, from making, using, selling, importing the patented product or process producing that product for those purposes. In India, the Patent Office under the Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, performs the statutory duties related to the grant of patents for new inventions and registration of industrial designs. For this study we have reviewed the Annual Report of the office of the Controller General of Patents, Designs, Trademarks and Geographical Indication to understand the type and number of patents filed in India.

Analysis of Creation of Intellectual Property Rights
• Types of IPR's in India - patents, copyrights and trademarks • Analysis of trends in the number of patents filed/examined/granted over the financial years 2007 to 2012 • Analysis of fields, sectors and institutions with higher concentration of patents over the financial years 2007 to 2012 • Data related to patents was collected from the Office of the Controller General of Patents, Designs, Trademarks and Geographical Indication; data pertaining to copyrights, trademarks was not available

Patent applications (filed, examined and granted) of the last 5 years show a declining trend in the number of patents granted by the Patent Office. The number of patents granted between 2008 and 2012 has fallen by almost 70%, though the number of patent applications filed has increased by a modest 22.65% during the same period.

The maximum number of patents filed in India during the last five years are in the mechanical, chemical, computer electronics, electricals and drugs sectors. The Council of Scientific & Industrial Research (CSIR) has filed the largest number of patents in India and abroad pertaining to both products and processes. The top ten industries in which CSIR's patents are in force constitute almost 81% of their patents. Those related to food and beverages products are tabulated below.

Table: Number of patents filed by CSIR, Corresponding NIC Classification 2008 for the Top Ten industries

S.No.	Name of Industry as per NIC classification (2008)	Patents Filed	%age to total CSIR patents in force
1	Manufacture of other food products	257	15
2	Manufacture of beverages	32	2
	Total	**289**	**17**

Our findings show that the FMCG-packaged foods sector ranks third among CSIR's top ten patents by sector, with 257 patents filed accounting for 15% of all patents of CSIR in force. Beverages, though they form a miniscule number are nevertheless amongst CSIRs top ten patents.

One of the reasons for the low number of patents filed in India may be attributed to the small and medium sized enterprises (SMEs), which prefer to use trade secrets rather than patents as a form of protecting their inventions to stay competitive. This in conjunction with the fact that the Indian manufacturing sector is dominated by the micro, small and medium enterprises (MSME), accounting for nearly 45% of this sector, results in lesser number of patent applications.[13] The main reasons given by SMEs for shying away from patenting their inventions include high costs and complexity of the patent system.[14] SMEs form an important part of the FMCG-packaged foods industry. In such a scenario, therefore, the manufacturing sector particularly needs to be given greater incentives in this regard, since it is one of the key drivers of the economy, contributing 8% of the country's GDP and 40% of exports

Research and Development Expenditure

Research and Development (R&D) expenditure data is often used by researchers as one of the most significant inputs in estimating the level of innovation.

Research and Development Expenditure

- Analysis of R&D and operating expenditure for a sample of companies over a period of 6 financial years
- Analysis of ratio of R&D and operating expenditure over a period of 6 financial years for each sector
- Data was extracted from the Prowess database for a sample of public and private companies in India over the sample period

Methodology

Based on various research reports, this study has developed the following approach with the objective of understanding the relationship between the presence of illicit markets and organisations' decisions to undertake expenditure on activities such as research and development.

R&D expenditure is one of the main inputs towards a series of activities resulting in an innovation and has been taken as a proxy for innovation. Our sample size comprises the public and private limited companies operating in India and belonging to the sectors covered in this study.

Financial details of these companies has been extracted from the annual reports compiled by the CMIE, Prowess database.

Information on 27,650 companies is available in the public domain. These details were examined to ascertain the nature of products/ services produced/ rendered by them. Information relating to the following parameters was extracted for the period 2007-08 to 2012-13 for the industry sectors under review:

- Research and development expenditure (both on capital and current account)
- Operating expenditure[15]

$$\frac{\text{Research and Development Expenditure*}}{\text{Operating Expenditure**}} \times 100$$

* R&D expenditure includes both capital and revenue expenditure as it appears in the financial statements of the company
** Operating expenditure includes all types of expenditure on raw materials, labour, selling and distribution etc

Data was collected for this six year period to ensure that a complete economic cycle of low, medium and high level of business activity is captured. More than six lac data points were analysed to understand the trend of research and development expenditure over the last six years across the selected sectors. Since comparison of absolute amounts of research and development expenditure incurred will not reveal any meaningful results, the study looked for a suitable representative ratio. Based on literature review and discussions with subject matter experts, a comparison was made of the percentage of R&D expenditure over operating expenditure.

Data Analytics Results

The following table shows the percentage of R&D expenditure incurred by companies in the packaged foods sector, over their total operating expenditure for the last six years.

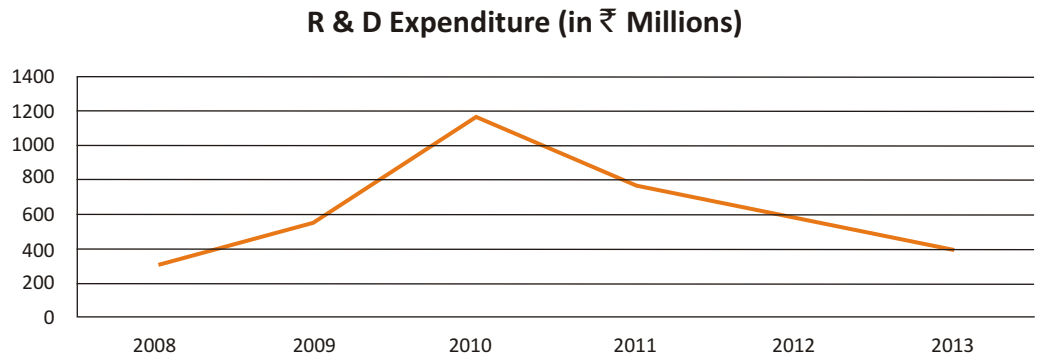
Table: R&D Expenditure as a %age of Operating Expenditure

Industry	2008	2009	2010	2011	2012	2013	Average %age
FMCG - Packaged Foods	0.08	0.11	0.18	0.10	0.06	0.04	0.10

The packaged foods sector shows a significantly low level of R&D expenditure as a percentage of operating expenditure. There appears little incentive to invest in research and development.

Data suggests that the ratio of R&D expenditure over operating expenditure is very low for most industry sectors. Our analysis shows that during the period 2008 to 2013 (refer graph below), while it was steadily rising till 2010, expenditure on R&D began to steadily decline subsequently. This could be due to the following reasons:

- Lack of patent protection and/or
- Uncertainty of return due to higher risk of counterfeiting, smuggling and piracy.



Conclusion

Analysis of innovation proxies in the packaged foods industry throws up some interesting results. While 15% of CSIRs patents pertain to this industry, expenditure on R&D remains low, at an average of 0.10% of operating expenditure. And although the grey market percentage has fallen, it is still high at 21.7%. This may be attributed to smarter and efficient use of technology in the packaging of these products which counterfeiters have not yet been able to crack or replicate.

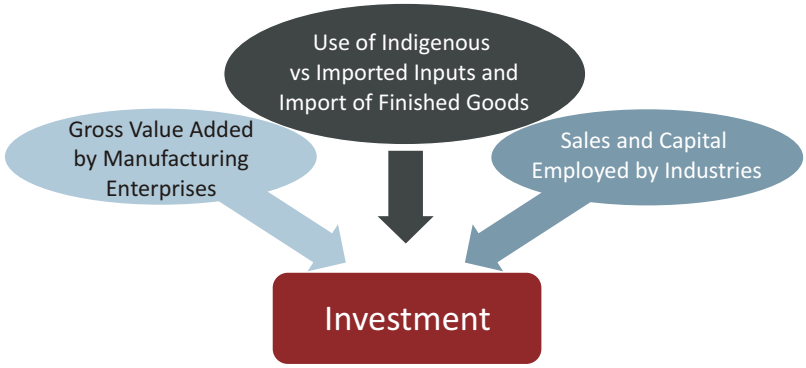
IBEF data shows that the Indian packaging industry, of which the packaged foods sector is a key user, is increasingly become technology oriented with innovations driving the market.

Thus while the packaged foods industry itself has significantly low levels of R&D expenditure, innovation in the packaging of its products, which counterfeiters have failed to successfully replicate, is a contributing factor to the fall in the grey market percentage. Industry needs to be cautious though, as this is likely to be a temporary phase till counterfeiters determine methods and technology to replicate packaging as well.

Since research is a risky activity, returns on successful R&D must be large enough to compensate for the high proportion of R&D that is unsuccessful, generating in this way a normal return on R&D. For an industry faced with the challenges of a grey market, the returns would be much lower on account of this. This holds true for the FMCG-packaged foods sector as well, where the grey market is still quite high, despite a visibly falling trend.

Impact of Illicit Markets on Investments

In this section we measure the level of domestic investment in India through an assessment of the indigenous and imported inputs and finished goods used in the industry. This will help to understand whether Indian companies are investing in capacity enhancements or process improvements as warranted by increasing consumer demand rather than simply relying on imports of goods. It will also reflect the efficiencies achieved in manufacturing capacity over the period of investment cycle.



Investment is one of the most important drivers of growth in an economy. Among the myriad concerns of domestic and foreign investors wishing to invest in India, an important one has been the threat of diminished returns as a result of the presence of illicit markets, counterfeiting and smuggling.

The presence of counterfeited and smuggled products at significantly lower prices than legitimate products, rips legitimate businesses of profits. It acts as a disincentive for companies to invest resources for research and development, a critical element for innovation which has far-reaching long term implications. This is particularly damaging for a growing or developing economy's transition to a knowledge-driven economy. In addition to hurting businesses, it also results in huge tax losses to the government.

Gross Value Added by Indian Companies

Gross value added is the value of output minus the value of intermediate consumption; it is a measure of the contribution to GDP made by an individual producer, industry or sector. It is also referred to as the productivity metric that measures the difference between output and intermediate consumption. Gross value added provides value for the amount of goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production.

Thus, the gross value added by the manufacturing sector will measure the extent to which the output sold represents production in the country. It will quantitatively measure how much value addition actually takes place within the country or whether the value addition is taking place abroad. This will help establish whether the manufacturing sector is making enough long term investments for the sector to grow sustainably. It will be an important indicator against which the presence of illicit markets can be measured to understand whether this could be a contributing factor for the sector to be shying away from making enough investments for charting the course for long-term and sustainable growth.

Gross Value Added : Value added by companies in the manufacturing process

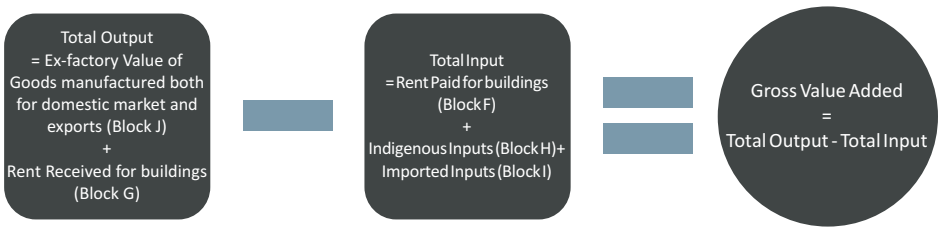
- Analysis of the Gross Value Added, extracted from the ASI data, for the seven key sectors over a period of five financial years, between 2007-2012.
- To measure this, the proxy used is the gross value added as a percentage of total output.
- The movement of the percentage of GVA over total output is shown over the five year period.

Methodology

The Gross Value Added (GVA) by companies has been calculated by using ASI data for the years 2007-08, 2009-10 and 2011-12. For the purpose of the present study, the blocks A, D, F, G, H, I and J have been used and a total of 13.32 lac data points have been analysed.

These sample manufacturing units for the sectors under review have been further examined in detail to understand the value of gross value added during the manufacturing process. A time series analysis for the three years 2008, 2010 and 2012 has been done to ascertain whether there is an increasing or decreasing trend towards value addition in the manufacturing process.

The formula for calculating the Gross Value Added[16] is as follows –



Data Analytics Results

GVA is expected to show an increase when there is optimum capacity utilisation or lower input costs. The factors relating to increase in consumer demand or higher rate of profitability may also contribute to increase in GVA.

Percentage of Gross Value Added over Total Output

For the present study, the proxy used to measure the value addition made by companies in the production cycle is the ratio or percentage of the gross value added over total output. GVA in absolute rupee terms is not a comparable indicator across sectors as each sector is at a different tier of output generation, and hence cannot be used as a stand-alone indicator. The total output principally measures an industry's sales or receipts and is dependent on the demand and other pertinent characteristics of a particular industry. To make a like-to-like comparison, it is important to take into account how the industry dynamics for each sector plays out. Hence, the ratio of GVA as a percentage of total output is a far more representative figure. This provides a good economic statistic and benchmark to compare and analyse value addition made by each industry.

A low percentage of GVA to the total output raises questions regarding the degree to which the output sold by the manufacturers represents the actual production within the country. In the present age of globalisation, countries attracting substantial amounts of foreign direct investment often have to grapple with concerns regarding the manufacturers depending on foreign sources for inputs in the manufacturing process which results in increase in imports. This also impedes the development of indigenous suppliers through backward linkages. Hence, the value addition may actually be taking place abroad from where the inputs are imported. In such a scenario, the domestic manufacturing segment would function merely for final assembly operations.[17] That is clearly not a desirable situation.

The following table shows gross value added as a percentage of total output for the years 2007-08, 2009-10 and 2011-12 in the packaged foods industry:

Sector	2008	2010	2012	Average
FMCG-Packaged Foods	6.53	8.17	7.07	7.26

Gross value added as percentage of total output in the packaged foods sector is very low with an average 7% during the period under review. The total output has increased by 102% in the last five years and total input has increased by 101%. There has been no significant change in the GVA for the packaged foods sector, the output and input costs have increased almost in tandem during the last five years.

Thus despite a declining grey market size, the low GVA to total output ratio suggests that capacity continues to be under-utilised and that there is scope for reduction of input costs. The large conglomerates operating in this industry show a significantly large GVA to total output

ratio, ranging from 30% to 50%. However the industry is dominated by SMEs in the unorganised sector which are more prone to the illicit markets. The risk of counterfeiting (which continues to be high in this industry) is therefore thwarting investments by these units resulting in lower GVA.

Use of Indigenous and Imported Inputs and Imports of Goods into the Country

For analysing the impact of illicit markets on investment and innovation, studying imports of inputs and goods into the country is critical. This section presents the results of the data analysis exercise to show how import of inputs and finished goods plays out with respect to investment and innovation in the country.

Imports of goods can be broadly classified into the following -

- Inputs to be used in the manufacturing process by Indian companies; and
- Finished goods to be sold directly in the domestic market

As businesses develop technology through new methods, new production techniques and introduce new inventions to the production process, there is a replacement of imported technology with indigenous technology. The level of sophistication in domestic production processes can be estimated by the increased use of domestic/ indigenous raw materials as compared to imported raw materials.

It has been observed that as businesses develop their own technology, the need for imported raw materials or inputs reduces. The underlying objective of most R&D projects is to enhance business efficiency thereby reducing production costs. By substituting imported raw materials with indigenous raw materials, businesses can hope to reduce their costs in the medium to long term.

Methodology

The World Economic Forum in their Global Competitiveness Report 2013,[18] points out that import as a percentage of Indian GDP is 33.7%, which is fairly high as compared to other countries. India ranks at 107th position among 148 countries on imports as a percentage of GDP and stands at 52nd position in the production process sophistication ranking with a score of only 4.1 out of 7. Considering these results, this study looked at the following proxies:

- Ascertaining the percentage of indigenous raw materials and imported raw materials used in production by Indian manufacturing units.
- Comparing the above ratio over a period of five financial years to examine whether there has been any import substitution with indigenous raw materials.
- Analysing import of finished products as a percentage of total production over a period of five financial years.

The proxy used for examining the above hypothesis is the following:-

$$\frac{\text{Imported raw materials consumed}}{\text{Total raw materials consumed*}} \times 100$$

*Total raw materials consumed is the sum of imported and indigenous raw materials

Production data from ASI and data on imports from DGCI&S are used to assess the level of dependence on imports against the total production. To quantify the level of reliance on imports and for a relative comparison, a proxy which serves this purpose and seems to capture the trend over years is imports as a percentage of total production.

Use of Indigenous and Imported Inputs and Imports of Goods into the Country

- Analysis of indigenous and imported inputs used by sample manufacturing units
- Distribution of indigenous and imported inputs as a percentage of total inputs used over a period of five financial years, 2007-2012, and percentage change in use over the sample period
- ASI data for 2007-08, 2009-10 and 2011-12 was extracted for the relevant blocks, for the sample factories covered in the survey, on imports and indigenous materials used in production
- Analysis of import of finished goods is done using data extracted from DGCIS over a period of five financial years.
- To estimate the dependence of the sectors on import of finished goods, the percentage of imports over total production is analysed over a five-year period between 2007-2012.

Use of Indigenous and Imported Inputs

The table below shows, that in the FMCG-packaged foods industry indigenous raw materials comprised 76% of the total raw materials in 2008, increasing to 81% in 2012. Indigenous raw materials consumed increased by 250% between 2008 and 2012 as against imported raw materials which increased by 154% during the same period. During the same period, imported raw materials used as a percentage of the total raw materials used has actually decreased from 24% in 2008 to 19% in 2012.

Table: Inputs consumed by Sample factories (DSL) - FMCG - Packaged Food

Source	Type	2007-08		2009-10		2011-12		%age increase in the sample period
		Amount in ₹ Mn	%age	Amount in ₹ Mn	%age	Amount in ₹ Mn	%age	
Block H	Indigenous	3,13,224	75.6	6,90,480	82.0	10,93,585	81.0	249.1
Block I	Imported	1,01,037	24.4	1,51,336	18.0	2,57,329	19.0	154.7
	Total	**4,14,261**	**100**	**8,41,815**	**100**	**13,50,914**	**100**	**103.2**

Data shows encouraging signs for the FMCG - packaged foods industry. The industry can demonstrate to their industry peers, the research and development initiatives undertaken for substitution of imported raw materials with indigenous ones. Despite the fact that R&D expenditure in this sector is not particularly high (as indicated in the previous section on innovation) the dependence on imported raw materials is relatively low. This implies that the industry has achieved a certain level of sophistication in products and production processes, thus discouraging the growth of the grey markets.

This sector is clearly not one that demands a great deal of R&D, however the processes already in place favour use of indigenous raw materials. The same may be replicated in other sectors too. Also, clearly the industry seems to be less prone to illicit markets as a result of innovation, particularly in the packaging of its products, which counterfeiters have failed to replicate, as this is the only sector which witnessed a fall in the grey market percentage from 23.4% in 2010 to 21.7% in 2012.

Imports of Finished Goods over Total Production

We now examine the extent of imports of finished goods over total production to estimate the level of production capacity within the country. An increasing trend would show that value (and jobs) is being created outside the country while a lower trend would show greater value being retained/generated within the country. The following table shows the trends in the FMCG-packaged foods sector:

Industry Sector	2008	2010	2012	Trend
FMCG - Packaged Food	4.0	1.34	1.18	Decreasing

The industry shows a declining trend in both imports of inputs as well as of finished products. The import percentage dropped suddenly from 4% in 2008 to 1.34% in 2010 and then marginally falls to 1.18% in 2012.

For a country's transition from a developing to a developed one, it is imperative that reliance on imports, especially by high-tech sectors is minimal, and that domestic markets are able to meet these demands. This can only be done by undertaking more innovation initiatives, which is critical for the long term survival and growth of these sectors.

Capital Employed over Sales

This section will analyse the relationship between capital employed and sales. Businesses invest in capital with a view to generate increased sales revenue. The ratio between sales and capital employed indicates that sales or revenues are 'x' times the money used in the business. This ratio helps to understand what level of sales are being generated by each rupee worth of assets invested in the business.

The objective of this section is to address the following questions -

- Is the pace at which sales are generated higher than the amount of capital employed in business?
- If so, are such increased sales attributable to investments or to imports?
- Are Indian companies shying away from making an investment?

To answer the above questions, a sector wise comparison between the year on year percentage change in sales and capital employed is analysed over a period of six financial years. Also, the ratio of sales to average capital employed for each sector and for the same time frame of six years has been calculated. The ratio of sales by the average capital employed reflects a company's ability to generate sales revenue from efficient utilisation of assets.

Methodology

To analyse the relationship between sales and capital employed, the following approach has been adopted -

- Comparison between the year-on-year percentage change in sales and capital employed for each sector and over a period of six financial years
- Ratio of sales over average capital employed is used as a proxy for capturing the relationship between the two

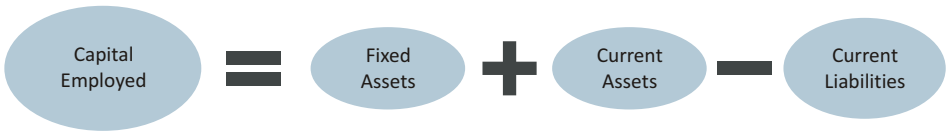
Using the CMIE Prowess database, data pertaining to financial details of companies like assets, liabilities, etc., has been extracted for a period of six years, 2008-2013. Our sample size comprises public and private limited companies operating in India. There are a total of 27,650 companies whose information is available in the public domain; this was examined in detail to ascertain the nature of products/ services produced/ rendered by them. Companies were classified into the relevant industry sectors on the basis of the major kinds of products being produced and the industry group they belong to.

A total of 2,706 companies were selected pertaining to the industry sectors under review and information relating to following parameters was extracted for a period of six years from financial year 2007-08 to 2012-13:

- Fixed Assets
- Current Assets
- Current Liabilities
- Sales

More than seven lac data points (covering all sectors under FICCI CASCADE review) were analysed to understand the trend in sales and capital employed over the last six years across the selected sectors. Data was collected for a period of six years to ensure that a complete economic cycle of low, medium and high level of business activity is captured.

The formula for calculating the capital employed is as follows -



$$\text{Average Capital Employed} = \frac{(\text{Opening Capital Employed} + \text{Closing Capital Employed})}{2}$$

The percentage change in the average capital is then calculated and compared with the percentage change in sales for each sector over a period of six financial years.

The other metric used is the ratio of sales over average capital employed. This captures the ability of a company to efficiently use its assets to generate sales revenue. This ratio of sales over average capital employed is calculated for each sector over a period of six financial years.

Comparison of Percentage Change in Sales and Capital Employed

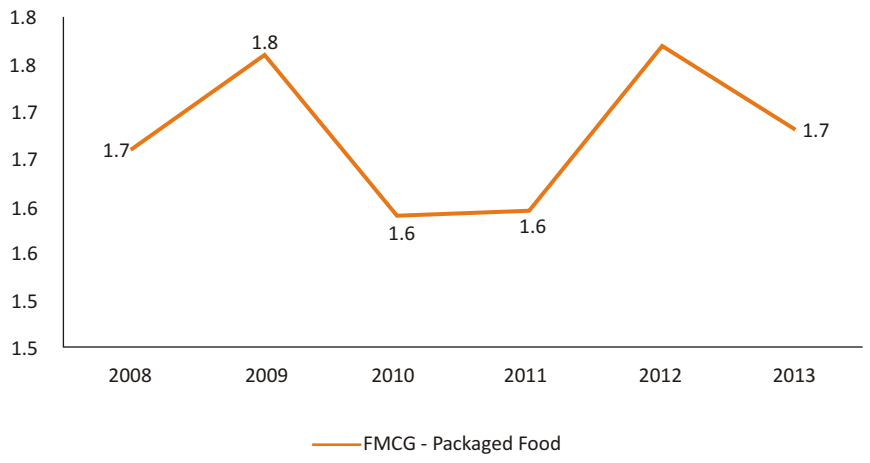
Though a higher year on year percentage change in sales than capital employed implies utilisation of the assets to generate sales, a huge difference will imply either over-utilisation of assets or generation of sales revenue by sourcing through import of products instead of domestic production and is characterised by a low level of investment. However, if the year on year percentage change in capital employed is much greater than that of sales, this means that the quality of investment is low and use of assets is inefficient. In such a scenario, the investments made by the companies are not generating the desired level of sales.

The year on year percentage change in sales of the packaged foods sector has been decreasing over the period 2008 to 2013. The year-on-year percentage change in the capital employed shows a similar trend except for a sudden spurt in 2011 vs 2010. The percentage change in sales has been higher than that of capital employed except the year on year change for 2011 vs 2010 and 2013 vs 2012.

Ratio of Sales by Average Capital Employed

The ratio of sales over average capital employed measures the management's efficiency in generating revenue from the net assets at its disposal. It depicts the amount of sales revenue generated for every rupee of capital invested in the business. The higher the ratio, the more efficient the business is in utilising the net assets and generating sales revenues.

Ratio of sales by average capital employed



The packaged foods sector has an average ratio of 1.6. The ratio of sales to average capital employed remains fairly steady, indicating that there has been no dramatic increase in investments in the years under review against which higher sales can be expected in the coming years.

Conclusion: Illicit Markets & their Impact on Investments

Our study looked at the impact of counterfeiting on investment by using three proxies – gross value added as a percentage of output, ratio of indigenous vs imported goods (raw materials and finished goods) and ratio of capital employed to sales.

Sector	2010		2012	
	GVA as %age of Total Output	Grey Market %age	GVA as %age of Total Output	Grey Market %age
FMCG-Packaged Foods	8.17	23.4	7.07	21.7

GVA as percentage of total output has been very low for the packaged foods sector, with an average of 7.26%, without significant variation during the years under analysis. This indicates lower investment by the industry in adding value to the finished products. The risk of counterfeiting (which continues to be high in this industry, despite the falling trend) is therefore thwarting investments by the SME units, which dominate this industry, resulting in lower GVA. The low GVA is a factor of under-utilised capacity and high input costs, which the large illicit market is fuelling. Similarly, capital employed over sale, has remained low, varying from 1.6% to 1.8% during the period 2008 to 2013, another indication that not enough investment is happening which will lead to higher sales in future.

This sector has witnessed a decline in the grey markets percentage from 23.4% in 2010 to 21.7% in 2012, which may be attributed to smarter and efficient use of technology in the packaging of these products which counterfeiters have not yet been able to crack or replicate.

With regard to the ratio of indigenous vs imported inputs and finished goods, the signs are positive. The industry has shown an increase in the use of indigenous inputs, with the proportion of imported inputs declining over the years. In spite of the fact that R&D expenditure is not particularly high, less dependence on imported raw materials indicates that the sector does not demand a great deal of R&D, yet the processes in place favour use of indigenous raw materials. Use of imported finished goods over the total production has also declined.

The increased use of domestic/ indigenous raw materials as compared to imported raw materials implies that the level of sophistication in domestic production processes is improving and value (and jobs) is being added domestically. This has resulted in a shrinking of the grey markets. A low GVA however suggests that despite the declining grey market, industry is averse to making additional investments, this is because, the illicit markets still stand at a very high percentage of 21.7%. Further decline, would likely show improvements. We have thus been able to establish a reasonable correlation between the size and change in the grey markets with the level of investments in the industry.

Impact of Inter-state Tax Arbitrage within India

It is often claimed, that higher tax rates, stringent entry barriers and excessive regulatory compliances tend to exacerbate the illicit markets of a country. A significant reason for higher tax rates giving a fillip to the illicit markets is the fact that high tariffs and taxes create opportunities for those involved in illicit markets to step in and supply 'reduced' versions of the original product at lower prices.

The purpose of this section of the report is to attempt to establish a relationship between high taxes and availability of illicit products. Discussions with FICCI-CASCADE set the framework for coverage of tax arbitrage to sectors with higher incidence of tax, set at 20%-25%.

However, we observed that in case of FMCG-packaged goods, tax rates for excise and custom were lower than 20-25%. VAT rates for these products did not vary significantly from state to state ranging from 4% to 5% in most of the states. It was therefore concluded that there is no scope for inter-state tax arbitrage in this sector. Accordingly analysis of tax arbitrage for this industry is not relevant for this part of study.

Anti-counterfeiting measures

India has several laws and regulations to protect intellectual property rights like patents, trademarks and copyrights. India is also signatory to the International Registration of Trademarks, known as Madrid Protocol. The Food Safety and Security Act was enacted in 2006 and came into force in 2011 accompanied by several regulations. A nodal authority, the Controller General of Patents, Designs and Trademarks also has been set up.

Manpower and fund scarcity have however led to poor enforcement of laws and regulations. The industry has stepped in to fill the gap by launching helplines, setting up their own monitoring mechanisms to identify and report counterfeit products and organising raids with the help of enforcement agencies. It has also been using high-tech packaging to counter counterfeiting. These efforts seem to have produced results as our estimates show that the counterfeiting in packaged foods has come down.

Some of the technological solutions that seem to have worked for the industry are listed below:

1. Visible features: These are prominently visible features put on a pack or carton to verify or authenticate a product and difficult to replicate. These also include features that cannot be removed without damaging or defacing the pack. Examples:
   - Transparent film wrappers with distinctive designs around a product
   - Use of inherently tamper proof packaging like tin cans, tetra packs sealed hermetically
   - Breakable caps like those in drinking water and soft drink
   - Holograms
2. Hidden features: These features enable the brand owner or grocers to identify and verify a product that may require image scanning devices and may not be detected by the consumers, such as encrypted texts or marks on the product or package.

3. Trace and track technologies: These involve assigning unique identity to each stock unit during manufacturing which remains through the supply chain. The identity includes name of the product, the lot number and expiry date. Examples: bar codes, watermarks, taggants (multi-optical layers) unique pack serialisation, nano printing or microscopic application of UV inks which allow invisible printing etc.

Apart from technology solutions, manufacturers also use other measures like consistent brand packaging to ensure better brand recall value. Frequent changes in packaging can create barriers to identification of products and make a brand vulnerable to counterfeiting.

Industry Perspectives on the Illicit Markets in the Industry

According to industry sources consumer safety and food safety become the primary concerns of counterfeiting in this industry. The health problems associated with consumption of such production will raise government expenditure on health.

The growth of the illicit markets will result in less manufacturing jobs and less employment generation due to illicit trade as a result of shrinking profitability of legitimate businesses and increasing lay-offs. Moreover, workers employed through piracy and counterfeits live with poor working conditions and lack of benefits.

There are three main negative effects of counterfeiting and smuggling on employment in the official market:

- Reduction in employment as a direct result of fall in sales and profits.
- Reduction in employment due to decrease in demand for services.
- Fall of induced demand due to reduction in expenditure by employees directly employed by the sector.

Children, the main consumers of these products fall easy prey to the wrongful designs of counterfeiters:

- Overall similar colour scheme and shape - visual deception
- Mixed-up with jars containing original products
- Phonetically similar
- Both visual/phonetic deception
- Same price point for end consumer

- Higher margins for trade, intermediaries etc. by counterfeiters
- Penetration in rural suburban areas
- Operations as fly-by-night operator: changing names, locale
- Cosy in their approach, anticipating that big companies do not take swift action
- Counterfeiting at its peak on launch of new product with advertising support

To curb this menace, industry sources suggest that customs prohibition of infringing imports needs to be strengthened. Registered trademarks and/or copyrights must be registered with customs services. Some suggestions to combat the problem include:

- Creating a common data base
- Informing members on spotting counterfeits/actions by one-another
- Action in the name of association, rather than individual company actions:
  - Engaging investigators
  - Trap purchases
  - Common corpus fund
  - Obtaining court orders in the name of association
  - Carrying raids under aegis of association
  - Newspaper advertisements
  - Press meets

Impact on Consumers

The existence of a substantial grey market in the packaged foods sector, which our study has estimated to be 21.7%, has serious health and safety implications. Counterfeit food products can be substandard, contain potentially harmful or toxic ingredients that can pose serious health hazards for the consumers.

The packaged food industry uses a large number of chemicals, like

- Additives to preserve food items
- Emulsifiers to keep oil and water together (as in mayonnaise)
- Artificial flavours
- Gelling agents to give shape and structure as thickeners
- Sweeteners
- Anti-caking agents to improve flow and mix well (like magnesium carbonate in table salt)
- Anti-oxidants to slow rate of oxidation and
- Acidulants, additives that give a sharp taste to food.

Besides, edible items are wrapped, canned, tubed and packed in a variety of materials.

The use of such a large number of chemicals, most of which will have serious health implications if not used scientifically, call for sophisticated technologies and rigorous standards suitable for mechanised operations.

Given that packaged food products use so many chemicals which are available in cheaper, low quality forms as well, presents an opportunity to illegitimate manufactures to produce goods

for the illicit markets, thus affecting consumers as well as the labour force. Manual handling of chemicals poses a risk to the huge labour force employed in the industry given the poor safety standards, unhygienic and unhealthy working conditions in which illegitimate manufacturers often operate.

A poor regulatory mechanism heightens these risks. The Food Safety and Security Act (FSSA) enacted in 2006 took five more years to be notified (in 2011), with a large number of regulations that have already created more problems than solutions.

Illicit Markets, Terror Organisations and Criminal Networks

Terrorism in India

Terrorism, in all its forms, constitutes a grave threat to peace and security of a nation. Those indulging in it use disruption and violence as the weapons of intimidation against the civilian population, the government to influence public policies or even effect a regime change. By its very nature, terrorism is against the established order of the day. There is, however, no universally accepted definition of the word. Different countries fighting the menace define it differently. In India, the Unlawful Activities (Prevention) Act of 1967, amended in 2004 to fight terrorism, uses the word "unlawful activity" instead of terrorism and defines it as "any action...intended, or supports any claim, to bring about, on any ground whatsoever, the cession of a part of the territory of India or the secession of a part of the territory of India from the Union, or which incites any individual or group of individuals to bring about such cession or secession; and which disclaims, questions, disrupts or is intended to disrupt the sovereignty and territorial integrity of India.[19]

Terrorist Attacks and its Financing: Need for Funding & Costs Incurred

Running a terrorist organisation requires substantial financial resources which are transferred to the groups through clandestine and often illegal channels. Terror expert Jean-Charles Brisard argues that 90 per cent of terror financing goes toward general maintenance of cells and equipment. Less than 10 per cent actually finances the execution of operations.[20] Costs incurred by terrorist organisations include materials such as bombs, vehicles, weapons and communication equipment and those related to planning and execution of attacks and expenses for running terrorist outfits.

While it is relatively easy to provide historical data citing an observational link between counterfeiting and terrorism, it is much less so to analyse the aggregate effects of the illicit markets industry on terror crimes in general. ***Moreover, lack of reliable data on terrorist financing leads to an enormous mismatch between the costs of a single attack and the supposed costs of running and maintaining a terror organisation.*** At the same time, estimates of actual financial flows among the parties involved in terrorist activities appear rather preliminary. However this information is essential in order to develop a sound cost-benefit analysis of anti- terrorist measures associated with terror funding.

It is important to note that while statistical data is available for the number of attacks that have taken place in India, it is difficult to directly correlate it to the grey market data in absence of sufficient information and research, which are lacking at present, especially in the Indian context.

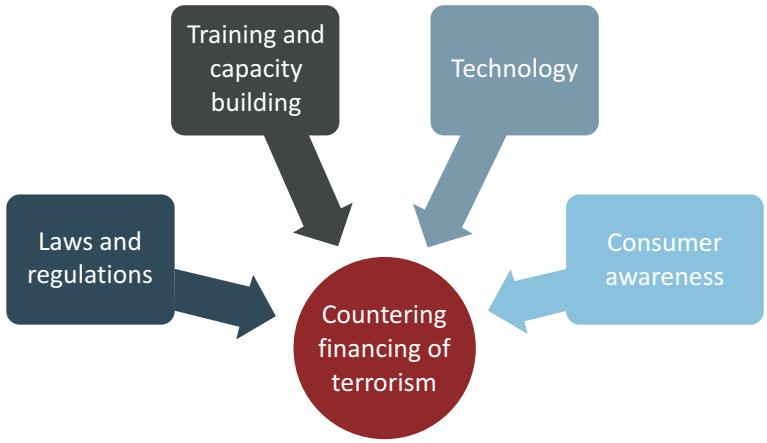
Furthermore, despite the existence of requisite laws in India and arrests of suspected criminals by the police, the scale of illicit markets is huge and the criminal networks and illicit markets organisations continue to thrive. Clearly, this means that the existing laws and police operations are not resulting in the desired outcome and are unable to act as a deterrent. This could be due to the low conviction rates in India.

The scenario in other jurisdictions is not very different, although, credible data on seizures may be more easily available. The UK government in their Report of October 2014, has estimated that they lose about 1.3 % of their total tax collection due to criminal networks, mainly from smuggling.

A number of international studies have been conducted in the past which highlight the involvement of counterfeiting and piracy in financing of terrorist activities, for example, Al Qaeda[21] has been linked to the counterfeit industry through the sales of fake perfumes and shampoos. Also, Al Qaeda training modules recovered in 2002 reveal recommendation of sale of fake goods as a means to raise funds for cells.

The illicit markets have grown exponentially across the world, not only costing the industry and governments dear but also promoting criminal enterprises and generating funds for terror activities. Inadequate laws, poor governance and information gaps have aggravated the problem. It is, therefore, crucial to tackle the menace on a global footing in which all countries share information and join forces in creating a legal and regulatory framework, backed by effective enforcement.

So far as India is concerned, lack of adequate data based on search and seizure makes it difficult to link or correlate the increase in illicit markets to terror funding. Establishment and determination of the extent of such a link calls for strategic intelligence gathering and preparation of robust databases, which are clearly missing at present. Given the security implications, if not outright financial considerations, there is little to argue against carrying out such exercises. This would be the first step to contain counterfeiting and its corollary, terror and ensure that genuine business interests do not suffer. It is therefore imperative to build a framework for prevention of terrorist financing which not only tracks down their financing hubs but also acts as a deterrent for them to ultimately bring down the threat of terrorism. The framework must deal with financing of terrorism from the following perspectives:



Conclusion & Way Forward

Our study shows, the grey market in the packaged foods sector has declined from 23.4%, in 2010 to 21.7% in 2012. This may mainly be attributed to better technology and innovations, primarily in the packaging of products which counterfeiters have found difficult to copy or circumvent. However, due to the increase in the market size the estimated loss has gone up from ₹ 20,378 crores in 2012 to ₹ 21,957 crores in 2014. The loss to the government for 2014, has also gone up to ₹ 6,096 crores, from ₹ 5,660 crores in 2012.

Encouraging Innovation & Investments

The study threw up several interesting results on the impact of illicit markets on innovation and investment in the packaged foods industry. While the sector had a very low percentage of R&D expenditure over total operating expenses varying from 0.04% to 0.18% between 2008 and 2013, the number of patents filed by CSIR is relatively high constituting 15% of the total number of CSIR patents in force. This industry category stood at third highest position among CSIR's other patents. The packaging industry (of which the FMCG-packaged foods sector is a key user), whose technology and innovations counterfeiters have yet to successfully replicate, is a contributing factor to the fall in the grey market percentage. Industry needs to be cautious though, as this is likely to be a temporary phase till counterfeiters are able to replicate the sophisticated packing of these products.

The analysis of imports of inputs and finished goods shows a declining trend. While the proportion of imported inputs used in production has always been much lower than indigenous inputs, it has shown a steady decline over the period under review, implying, that the industry is not dependent on imports for its production, and that value is being added domestically. Similarly, although a small proportion of total production, imported finished goods as a percentage of total production has also been steadily decreasing over the years. This is a good sign for the economy as a lowering dependence on imports when R&D expenditure is not particularly high coupled with a falling grey market size indicates that the industry is not as prone to the illicit markets as other industries.

The low GVA however shows that the industry is still susceptible to the grey markets, which though declining, continue to be quite large and are resulting in lower capacity utilisation.

To conclude, the packaged foods industry is marked by the following characteristics:

- A declining grey market
- Higher patents in comparison with other industries
- Low R&D expenditure

- Low GVA
- Low sales to average capital employed
- Increasing use of indigenous inputs
- Fall in use of imported inputs and finished goods

All these factors would suggest that legitimate producers have found ways of beating the illicit markets without a significant amount of innovation or investment. However, this could be because the sector is at the initial stages of development which translates into immediate gains in the short term as consumers are eager to try out the benefits of packaged food. In order to sustain this growth and momentum over the medium to long term, the sector would have to invest in R&D to deliver value to increasingly discerning consumers. The packaging industry which supports the packaged foods sector, would also need to sustain its growth and innovation thus making it more challenging for counterfeiters to replicate state-of-the-art packaging.

According to a recent Dun & Bradstreet (D&B) report titled "India 2020 Economic Outlook",[22] rising income levels coupled with increase in the young working-age population will lead private final consumption expenditure to grow steadily over the years. As per D&B's projections, growth in private final consumption expenditure is expected to average at around 7.0% during FY15-FY20.

This growth would also impact the FMCG packaged foods sector, given the rising disposable incomes and changing demographics with Indian consumers becoming more brand and health conscious. The illicit markets vitiate the environment and restrain such growth, reducing business efficiency, profitability and overall development. Collaborative efforts are therefore required between all stakeholders to curb any rise in the illicit markets and in fact sustain the decline of such markets in the FMCG-packaged foods industry.

To encourage innovation and investment the overall business environment needs to be improved. The patenting procedure should be simplified and the industry given incentives to file more patents. Consumer awareness, better collaboration between the industry and academia and simplification of the tax regime are some other measures that are equally important. So is the proposed unified tax regime, Goods and Service Tax (GST), which would address some of the tax anomalies, simplify tax structure, reduce tax cascading and remove incentives for imports in the FMCG-personal goods sector.

Data Collection and Analytics

A significant first step is for stakeholders to work in tandem to improve information sharing which will enable collation of credible statistics. Credible statistics will help to draw up and implement action plans that could undermine the activities of the perpetrators of this crime. Improving information sharing would entail: systematic data collection; comparability across sectors and across borders; and drawing from multiple sources.

Quality information would provide a solid basis for establishing the scope of illicit markets and form a key input in assessing the magnitude and effect of illicit markets

Several initiatives that industries may also undertake include:

- Supporting research and analysis of issues related to illicit markets;
- Conducting awareness programmes for retailers and consumers; and
- Innovations in products or packaging to combat illicit markets.

Countering Financing of Terrorism

With regard to funding terror organisations, owing to the extensive research carried out globally on terrorism and its links to proceeds from illicit markets, it is possible to state with certainty that illicit markets are instrumental in providing the much required funding to such organisations.

Terrorist groups need financial resources to train and support members, maintain and sustain logistics, and meet operational costs. Therefore, if the threat of terrorism is to be nipped, the access to funding has to be choked. The truth is that many countries do not possess the legal and operational wherewithal and technical expertise needed to zero in on terrorist financing sources and initiate prosecution.

It is imperative therefore to build a framework for prevention of terrorist financing which not only tracks down their financing hubs but also acts as a deterrent for them to ultimately bring down the threat of terrorism. Such a framework will include training and capacity building among enforcement agencies, use of technology to detect and track sources of finance and increasing consumer awareness to empower consumers to take more informed decisions.

Government and industry would do well to protect the industry from the illicit markets which though has been showing a declining trend since 2008, is not completely immune to the menace. As our analysis has shown, the industry is set to grow in the coming years due to the changing tastes and lifestyles of consumers and increasing income at their disposal. The tendency and opportunities for counterfeiters and smugglers to trade in the illicit markets in such a scenario would be much greater, setting the industry up for increased exposure to the grey markets. And apart from the obvious losses to the industry and government, particular care is necessary in this industry due to the detrimental effects consumption of illicit products can have on consumers – adults and children alike.

Annexures

Annexure I: Academic Literature Review

- **OECD** estimates international trade in counterfeit and pirated products could have been up to USD 200 billion in 2005 excluding domestically produced and consumed counterfeit and pirated products and the pirated digital products being distributed via the internet. The magnitude and effect of counterfeiting are of extreme significance and warrants strong, sustained and coordinated action from government, industry and consumers. Counterfeit and pirated products are infiltrating legitimate supply chains other than informal markets. The Internet has provided counterfeiters/pirates with a new and powerful means to sell their products via auction sites, stand-alone e-commerce sites and email solicitations.[23]

- **OECD** further states that the effects of counterfeiting and piracy on government come in the form of (i) lower tax revenues, (ii) the cost of anti-counterfeiting activities, including responding to public health and safety consequences and (iii) corruption. …Tax revenues. Tax collection is presumed to be far more effective from rights holders and their licensees than from counterfeiters and pirates. Potential losses include corporate income taxes, sales or value added taxes, excise taxes, import tariffs and social insurance charges. The revenue losses are particularly high in sectors such as tobacco and alcohol, where excise taxes are high and smuggling of counterfeit products to avoid those taxes is widespread.[24]

- **BASCAP** estimates that the total value of pirated and counterfeited products impacting G20 economies for 2008 is $455 to $650 billion and has been projected between $1,220 to $1,770 billion for 2015 including international trade, domestically produced goods and pirated digital products distributed via internet. The impact of counterfeiting and piracy on government tax revenues, legitimate employment, increased costs of crime, economic costs on consumer health and safety and downward pressures on FDI flows has been estimated at $125 billion per annum for G20 countries. Employment loss has been estimated at 2.5 million jobs for G20 countries excluding secondary impact on employment in the supply chain.[25]

- **International Anti-Counterfeiting Coalition, Inc.** (IACC) professes that low risk of prosecution and enormous profit potential has made criminal counterfeiting an attractive enterprise for organized crime groups. There are connections between intellectual property theft and terrorist groups and terrorists can use intellectual property crimes not only as a source of funding but also as a means of attack.[26]

- **GAO** states that it is difficult to quantify the economy wide impacts of counterfeiting because of varying assumptions on substitution of legitimate products with the pirated goods across industries. Hence each method of costs estimation has limitations on account of data

availability and underlying assumptions and no single method can be used across industry sectors.[27]

- **UNODC** says, "The ramifications of counterfeiting affect everyone, with Governments, businesses and society being robbed of tax revenue, business income and jobs. The flood of counterfeit and pirated products creates an enormous drain on the global economy by creating an underground trade that deprives Governments of revenue for vital public services and imposes greater burdens on taxpayers. It also leads to more public resources being spent on fraud-detection methods by public sector authorities and larger intelligence and policing budgets being needed to counter sophisticated schemes and networks. Counterfeit goods also undermine employment, as products are copied and produced illegally, thereby displacing sales of original merchandise and reducing the turnover of legitimate companies. Fraudulent medicines also have a direct impact on increased medical costs due to prolonged treatment periods and medical complications in the spread of treatment-intensive diseases. The prices of products also go up because companies increase security systems to counter organised criminal activities and have to invest more in research and development."[28]

- **A WIPO** study talks about the how intellectual property rights or their protection plays a role in the innovation process, emphasising that technological innovation is a principal determinant of successful firm performance. The study also indicates that small and medium sized enterprises (SMEs) prefer to use trade secrets rather than patents as a form of protecting their inventions to stay competitive. The main reasons given by SMEs for shying away from patenting their inventions include high costs and complexity of the patent system.[29]

- **Nam D. Pham** lays emphasis on the impact of innovation and the role of IP rights in his study. The study brings to the fore, the critical importance of allocating resources to innovation in sustaining long-run economic growth in both developed and developing countries. The author argues that countries with the highest technological capacity are better able to enhance the efficiency of their production methods and exploit new market opportunities. The study states that the protection and enforcement of IP rights are imperative for creating strong incentives for innovation and safeguarding it from counterfeiting, piracy, and other forms of IP theft. It concludes that with the growing importance of knowledge as a driving force for innovation and economic expansion worldwide, the protection of property rights has attracted greater attention and concern. The counterfeiting and piracy of products are rising exponentially and are costing the global economy hundreds of billions of dollars a year in lost revenues and thousands of jobs. The challenge for policymakers is therefore to continue encouraging investment in R&D and human capital in order to promote innovation while at the same time developing the policy instruments and frameworks to better protect intellectual property rights.[30]

- **A Harvard University** study delves into the relationship between counterfeit sales and financing of activities of terrorist organisations using a number of economic controls to analyse the effect of two proxies of annual counterfeit sales on two measures of international terrorism namely RAND database and DOS database. It states that while the societal and economic costs of counterfeit products are largely incontrovertible, one final effect of this crime industry is less definite: its support of international terrorism. Anti-counterfeiting organizations and luxury goods manufacturers are quick to suggest that counterfeit product revenues are directly funding terrorism. There is, however, only a small amount of hard data in support of this claim. The study conducts an inquiry into the purported causal link between measure of counterfeiting and terrorist incidents in a given year through a regression model but suggests that the empirical analysis fails to provide a conclusive relationship between the two.

- **A University of Wellington study** on cross border tax arbitrage states that in most cases, cross-border tax arbitrage increases the tax payable in one jurisdiction and decreases the tax payable in the other jurisdiction. 13 The decrease must be larger than the increase for the arbitrage to be worthwhile for the taxpayer. Tax arbitrage, therefore, redistributes resources not only from government treasuries to taxpayers, but often from one government treasury to another. The study says the direct consequence of cross-border tax arbitrage is to distort individuals' and corporations' investment decisions, and to reduce the revenue raised by governments. Although cross-border tax arbitrage may augment the coffers of one government's treasury, this augmentation is likely to be more than offset by a reduction in the revenue raised by the other government's treasury (otherwise the arbitrage is unlikely to be advantageous from a tax perspective).[31]

A significant anti-counterfeiting measure undertaken in recent times is the Anti-Counterfeiting Trade Agreement (ACTA). It builds on the Trade-Related Aspects of Intellectual Property Rights (TRIPS), but has been negotiated outside WTO (World Trade Organization) framework. The draft ACTA calls for increased use of criminal and civil penalties against people using copyright circumvention technologies and those accused of copyright infringements, and also for ISPs to have more responsibilities with regards to removing infringing material. ACTA has been rejected by the European Union in July 2012.

ACTA binds negotiating states and creates a new international standard which is likely to be imposed on third countries in future trade agreements. The current draft threatens fundamental rights in countries such as the right to freedom of expression and information, right to protection of personal data and fair trial/due process issues related to other fundamental rights. It was negotiated in unwarranted secrecy, without adequate input from civil society or parliamentarians, but in close cooperation with major IP right holders. It has resulted in disproportionate protection to big business.[32]

Annexure II: Items considered as part of operating expenditure

S. No.	Components of Operating Expenditure
1	Raw material expenses
2	Power & fuel
3	Water charges
4	Salaries & wages
5	Repairs & maintenance of buildings
6	Repairs & maintenance of plant & machinery
7	Repairs & maintenance of vehicles & others
8	Communications expenses
9	Travel expenses
10	Selling & distribution expenses
11	Printing & stationery expenses
12	Donations
13	Social and community expenses
14	Environment and pollution control related expenses
15	Subscriptions and membership fees
16	Research & development expenses
17	Other miscellaneous expenses
18	Miscellaneous expenditure

Abbreviations

ASI	Annual Survey of Industries
CASCADE	FICCI's Committee Against Smuggling and Counterfeiting Activities Destroying the Economy
CSIR	Council of Scientific & Industrial Research
CSO	Central Statistical Organisation
DGCIS	Directorate General of Commercial Intelligence and Statistics
FICCI	Federation of Indian Chambers of Commerce & Industry
FMCG	Fast Moving Consumer Goods
GDP	Gross Domestic Product
GSV	Gross Sales Value
GVA	Gross Value Added
IPR	Intellectual Property Rights
MoFPI	Ministry of Food Processing Industries
MoSPI	Ministry of Statistics and Planning Implementation
MSME	Micro Small and Medium industries
NIC	National Industry Code
NSS	National Sample Survey
NSSO	National Sample Survey Organisation
R&D Expenditure	Research and Development expenditure
TARI	Thought Arbitrage Research Institute
UNODC	United Nations Office on Drugs and Crime
WIPO	World Intellectual Property Organisation

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Contact:
FICCI CASCADE
Federation House, Tansen Marg, New Delhi 110001
email: cascade@ficci.com

About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. FICCI has contributed to this historical process by encouraging debate, articulating the private sector's views and influencing policy.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry.

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About FICCI CASCADE

In the recent past India's economic growth story has attracted world's attention bringing new challenges for the domestic economy. One of the challenges currently faced is the growing illicit trade in counterfeits, pass offs and smuggled goods. These activities are also threatening brands not only in every region of the country but across the globe.

Contraband and counterfeit products hurt the integrity of the brand, further diluting the brand owner's reputation. This not only results in erosion of sales of the legitimate product but further [CASCADE]s onto affect the consumers in the form of health and safety hazards.

With the above insight the Federation of Indian Chambers of Commerce and Industry(FICCI) took the initiative to dedicate a forum by establishing the Committee Against Smuggling and Counterfeiting Activities Destroying the Economy - CASCADE on 18th January, 2011 at FICCI Federation House, New Delhi.

FICCI Committee Against Smuggling and Counterfeiting Activities Destroying Economy (CASCADE)

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