

Inland Transit; Risk Factors and Mitigation

PII Case Study Competition 2018

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ABBREVIATIONS

FMCG	Fast Manufacturing Consumer Goods
IGI	International General Insurance
PCBPL	Premier Cola Beverages (Pvt.) Ltd.
HSE	Health, Safety and Environment
PET	Polyethylene Terephthalate
RGB	Returnable Glass Bottles
NRGB	Non-returnable Glass Bottles
FG	Finished Goods
HTV	Heavy Transport Vehicle
R & D	Research and Development

Inland Transit; Risk Factors and Mitigation:

Analyzing inland transit risk factors and preparing risk mitigation plans for a fast manufacturing consumer goods (FMCG) provider.

KEY PARTIES INVOLVED:

1. Insurer – IGI General Insurance Ltd.

IGI is a public listed general insurance company (KSE: IGIL) that was founded in 1953. Being part of the Packages Group, IGI is the largest insurance company by market capitalization. Headquartered in Karachi, IGI has offices in 8 cities nationwide and offers a wide range of general insurance products including Fire, Motor, Marine, Travel, Health, Personal Accident and Home Insurance.

2. Insured – Premier Cola Beverages (Pvt.) Limited (PCBPL)

Premier Cola Beverages (Pvt.) Limited (PCBPL) is a multinational beverages provider; introduced in Pakistan in 1950s. The beverages are produced locally with product range and marketing; reflecting Pakistani taste and life style. PCBPL manufactures, packages, merchandises and distributes the branded beverages.

Note: Actual name of the insured company has not been mentioned to maintain confidentiality.

INTRODUCTION:

Premier Cola Beverages (Pvt.) Limited (PCBPL) is a multinational beverages provider and holds a major market share in Pakistan. Serving for more than a century; PCBPL maintains excellent health, safety and environment (HSE) standards. Being a fast manufacturing consumer's goods (FMCG) company, they have inland transit requirements all over Pakistan.

In 2016, PCBPL had been facing continuing inland transit losses. PCBPL provided healthy business and a promising long-term relationship to IGI. Despite their own risk mitigation efforts, PCBPL had been facing these inland transit losses and ultimately IGI, being insurers of PCBPL, had been experiencing claims settlements. These claims were making quite a headache for the IGI's higher management and they were in a fix about how to manage these affairs. As an underwriting hedge, IGI could have opted for; increasing deductibles, putting certain exclusions in policy wordings or charging higher premiums. However, in such competitive insurance market in Pakistan, changing policy conditions or charging higher premium rates meant enticing peer groups to pitch their offers and consequently losing a good business.

BACKGROUND OF THE CASE:

PCBPL had 06 manufacturing units and 13 warehouses all over Pakistan. They maintained international health, safety and environment (HSE) standards in their all manufacturing and warehousing facilities. However, losses generally occurred during inland transit. Their inland transit arrangements required the involvement of third party vendors. Initial loss analysis by PCBPL suggested that prime reasons of these losses were; road accidents, bursting of carbonated drinks and theft/pilferage. Though some loss contributing factors had been identified by PCBPL in their initial loss analysis reports and some mitigation measures had also been undertaken by them; however, there was no significant reduction in loss events.

ADDITIONAL DETAILS:

Digging deep into the case, management of IGI requested PCBPL to share those loss analysis and risk mitigation measures reports and decided to analyze the scenario. An initial meeting was called upon by the underwriting head of IGI insurance, where claims manager and Risk engineers were invited to understand the case and to agree upon a workable future plan.

A thorough analysis was carried during the following week and it was identified that the loss analysis and mitigation measures carried by PCBPL, were generic in nature. Specific factors were not considered for specific sites and specific hazards. Furthermore, some critical factors were also neglected during the study. That is why, there was no significant reduction in losses. It was, therefore, decided to form a fact finding committee; who can visit some of the locations themselves and identify the potential hazards and recommend risk mitigation actions accordingly.

Hence a Fact finding committee, comprising of a risk engineer and a claims manager, was formally formed with an aim to analyze any particular patterns or reasons they could find and to come up with the feasible solutions.

In initial planning; the committee selected 06 locations from all over Pakistan to conduct the visits. A summary of complete plan was also shared with PCBPL, who quite graciously, committed to make all the required arrangements.

Starting from Lahore warehouse, the committee surveyed those 06 locations from all over Pakistan. During the visits product variants, transportation vehicles, types of transits, transit route maps, palletizing and material handling were keenly observed. Meetings were also held with logistics managers and third party vendors. Summarized details of those observations are hereunder;

1) Product Variants and respective packing:

1. PET bottle 500 ml; 1,000 ml; 1,500 ml; 2,000 ml; 2,250 ml.
2. Returnable Glass Bottle (RGB) 250 ml.
3. Nonreturnable Glass Bottle (NRGB) 250 ml.
4. Can 250 ml; 330 ml.
5. Beverage in Bags 20,000 ml.
6. PET resin in PP bags
7. Preforms in cardboard bins

2) Type of transit

Transport of FG & raw material takes place within the city, or intercity, as follows:

Plant > Warehouse (PW) | Warehouse > Warehouse (WW) | Warehouse > Sales center (WS) | Sales center > Distributor (SD) | Vendor > Plant (VP) | Vendor > Warehouse (VW).

3) Palletizing

Description		Mode of Packing	Pallet Grade
PET Bottles	500 ml	12 bottles are shrink wrapped then placed on a wood pallet in 06 layers of 28 cases/layer. A cardboard sheet is placed atop each layer and machine stretch wrapped. Pallet contains 168 cases; weighs say 01 mTon.	Re-suable
	1 Liter	06 bottles are shrink wrapped then placed on a wood pallet in 06 layers of 28 cases/layer. A cardboard sheet is placed atop each layer and machine stretch wrapped. Pallet contains 168 cases; weighs say 01 mTon.	Re-suable
	1.5 Liter	06 bottles are shrink wrapped then placed on a wood pallet in 05 layers of 22 cases/layer. A cardboard sheet is placed atop each layer and machine stretch wrapped. Pallet contains 110 cases; weighs say 01 mTon.	Re-suable
	2.25 Liter	06 bottles are shrink wrapped then placed on a wood pallet in 04 layers of 16 cases/layer. A cardboard sheet is placed atop each layer and machine stretch-wrapped. Pallet contains 64 cases; weighs say 900 kg.	Re-suable
RGB	250ml	24 bottles are placed in a plastic crate the placed on a wood pallet in 06 layers of 10 cases/layer. Pallet contains 60 cases.	Re-suable
NRGB	250ml	24 bottles on a cardboard sheet are shrink wrapped then placed on a wood pallet in 06 layers of 28 cases/layer. A cardboard sheet is placed atop each layer and machine stretch-wrapped. Pallet contains 168 cases; weighs say 01.1 mTon.	Re-suable
PET Resins		1,150 kg ‘PET resin (Polyester Chips-Bottle Grade)’ is stuffed in PP bags and loaded on 40FB in 02 layers, 20 bags/layer. A 40FB carries 40 bags of Resin.	N/A
Preforms		[i] from Vendor: say 400kg of various sizes as per CCBPL demand, stuffed in PP lined cardboard bins; bins strengthened by cardboard rolls or wood slats at corners to avoid pressing / bending during transit and stacking. [ii] from CCBPL, husky profiles for other territories: Preforms of say 400kg of various sizes as per CCBPL demand, stuffed in PP lined cardboard bins; bins	Disposable

4) Vehicles transporting FG & raw materials:

1. 20ft structured vehicle (20SV): caged for FG products in pallets mainly to distributors within city.
2. 20ft flatbed truck (20FB): open flatbed trucks to transport FG & raw material within city and intercity.
3. 40ft structured vehicle (40SV): caged for FG products in pallets to transport intercity.
4. 40ft flatbed trailer (40FB): open flatbed trailer to transport FG & raw material intercity.
5. 40ft containerized trailer (40CT): carry 40ft sea container to transport FG & raw material intercity.

RISK ASSESSMENT

After conducting a through assessments on all the sites, the committee found following factors that majorly contributed towards losses;

Inland transit Risk factors

1. Reckless driving by insufficiently experienced driver on bad roads in interior Punjab.
2. Mechanically unfit trucks.
3. Bad stacking, insufficient dunnage or securing of packages on truck at loading.
4. Improper or hasty handling by workers &/or insufficient care of forklift operator.
5. Multiple handling; Plant > warehouse, warehouse > warehouse, warehouse> sales center causing shrink wrap to loosen & stretch, pallet tilt, crush &/or collapse.
6. Bursting of product container due to variation of temperatures at production, storage and transit.
7. Rain &/or Storm damage due to inadequate tarpaulin covering for the road journey.
8. Theft / pilferage of products during transit in southern Sindh.

It was found in the study that certain production variants go through certain losses; however, frequency of these risks generally vary according that variant.

Description	Lower Risk Frequency	Medium Risk Frequency	Higher Risk Frequency
PET Bottle	Road Accident, Rain/Storm, Pilferage, Fire, Terrorism, Road Riot & Strike	Blows/Knocks & Bursting due to temperature Change	Mishandling during Loading/Unloading
RGB	Road Accident, Rain/Storm, Pilferage, Theft, Blows/Knocks, Fire, Terrorism, Road Riot & Strike	NA	NA
NRGB	Road Accident, Rain/Storm, Pilferage, Theft, Blows/Knocks, Fire, Terrorism, Road Riot & Strike	NA	NA
Can	Road accident, Rain/Storm, Blows/knocks, bursting, loading/unloading, Theft, Fire, Terrorism, Road riot & strike, multiple handling of products	NA	NA
Pet Resin	Blows/knocks, Rain/Storm, Theft, Fire, Terrorism, Road riot & strike	Road Accident	Mishandling during Loading/Unloading
Preforms	Rain/Storm, Theft, Fire, Terrorism, Road riot and Strike	Road Accidents, Blows/Knocks	Mishandling during Loading/Unloading

SOLUTION

After going through the whole analysis, committee recommended the following risk mitigation measures to CPBPL.

1. Road Accidents:

It was recommended that all the drivers must possess HTV driver license with 05-years minimum, haulage experience. Furthermore, transit should take place in a properly maintained truck after checking its fitness certificate.

2. Uniform Stretch Wrap

It was observed that stretch wrap for pallets was not uniform at each plant, especially in Sialkot and Gujranwala factories. This non-uniform stretch wrapping caused imbalance and non-uniform load distribution around its center of gravity. Committee recommended to have a stretch wrap of uniform thickness of 50 microns and 06-07 layers per pallet.

3. Interlay Sheets standards

It was observed in Sialkot factory that interlay sheets of different sizes and different materials were used during palletizing. It was recommended to set a standard of cardboard sheet of 03 mm thickness to be used for inter layer sheeting for all plants.

4. Bursting:

Committee observed increased losses up to 3% due to bursting in the months of April-September. It could be reduced to less than 1%, if quality of tin and sealing cap could be improved, especially in these months.

5. Temperature variation

Cans and PET bottles are generally prone to bursting in the summer heats during the months April to August. It was recommended to transit these product in a vehicle, in which cargo temperature rises no more than 40-45° C. Preferably, cargo trucks should travel in the night time as much as possible, in these months.

6. Mishandling

It was recommended to educate the labor about safety standards on all locations. Trainings should be provided on regular basis, safety talks of around 05 minutes should be arranged daily. A standard 8 km/h speed should be standardized for Forklift drivers during cargo operations. Multiple handling should be avoided; such as due to space constraints pallets are moved between warehouses, or sales center or back to the distributor. Stretch wrap also loosens due to multiple handling.

7. Atmospheric Damage:

Open trucks were prone to rain/storm damage so it was recommended to cover those open trucks by tarpaulin sheets.

8. Theft/pilferage

Drivers were recommended to check the payloads at stops during transit and advised that truck should not be left unattended at any time, especially during night travels.

IMPLEMENTATION:

After the successful and thorough analysis by the committee; the next and even harder phase for IGI, was to convince the client for implementation of those risk mitigation recommendations. Though, some of the recommendation such as mishandling, uniform stretch wrapping etc., were of procedural nature; however, some recommendations such as; increasing tin quality and temperature variation control meant huge investments. Furthermore, training all the labor meant training costs as well as opportunity cost for huge human resource.

A meeting was arranged, where IGI put the whole case in front of PCBPL's top management and highlighted the "room for improvements" in pre-existing procedures of PCBPL. Surprisingly, PCBPL was quite welcoming to those recommendations and shown a great urge to improve their systems. Time frame was decided upon criticality of the hazards and PCBPL promised to keep IGI updated regarding the implementation.

After this successful initial meeting, regular follow-ups were conducted over phone and e-mails. PCBPL started the implementation with procedural improvements. All the vendors were asked to induct the drivers who possessed; HTV driver license, 05-year minimum haulage experience and a properly maintained truck with fitness certificate. Stretch wrapping was made uniform and interlay sheets protocols were standardized at all plants, after conducting continuous training sessions.

Drivers were recommended to check the payloads at stops during transit and to make sure that trucks should not be left unattended at any time, especially during night travels. Tarpaulin sheets were made mandatory for open trucks to avoid any atmospheric damage.

A standard 8 km/h speed was standardized for Forklift drivers during cargo operations. Safety signs were displayed and reward system was implemented to encourage the labor for compliance.

Supply chain management was improved to control any back-logs or overstocking in the warehouses, so that multiple handling could be avoided.

PCBPL remained accommodating enough to share all those details with IGI during the whole process.

The implementation of these procedural improvements shown remarkable results that urged PCBPL to implement those recommendations as well, that required higher investments. Of course, enhancing the quality of materials and demanding better equipped trucks meant increased costs of raw materials and vendors; however, PCBPL envisioned the better outcomes and invested to enhance the safety standards. PCBPL asked the vendors to engage those trucks that had better built-in controls to maintain at least ambient temperature. Quality of tin and sealing caps was also improved as suggested by PCBPL's R & D department. The whole process took around 06 months for implementation.

MUTUAL BENEFITS

Statistical analysis showed that claims ratio decreased by more than 53% in just 01 year. These were drastic numbers that did not only benefit IGI; as they had a loss free business, but also the insured; who cherished several benefits such as business continuity, client satisfaction etc., as an outcome.

Rigorous analysis by IGI helped PCBPL to identify the loop holes in their preexisting safety standards. It also helped the insured to develop a strong database of all its standard operating procedures for "non-core" operations. Improved vendor management insured better control for inland transit. Better supply chain management insured lesser labor costs and improved man hours that ultimately helped PCBPL for efficient production. Decreased number of loss events also helped decreasing "loss of profit" and increasing client retention.

LEARNING OUTCOME

Process industry operations are predominantly focused more upon production numbers, instead of safety compliance. On the other hand, changing psychology of industry today signifies that safety compliance results in better profit returns in a longer run. An investment in safety today will benefit in financial growth manifolds; as less number of incidents help minimizing direct losses and costly business interruptions. Safety, health and Environment is not a cliché anymore, in fact these are strong pillars of an organization's culture and operations. Risk management is always better than disaster management.

On the other hand, this study has cracked this myth that “an average person does not want to improve!” As a matter of fact, our industry as any other has a great urge to improve. The need is to persuade and convince them in a more meaningful way. It is important to make people realize that pre-existing standards for an in-house observer always appear to be near to perfect; however, “there is always a room for improvement” that can be better identified sometimes, by a “Third Eye”; an independent observer.

For an insurance industry; it is essential that presenting viable solutions and helping the insured to improve is always better than imposing stringent policy conditions. Insurers, with the help of their risk management department, should help their clients to understand criticality of their issues and present such feasible solutions. Instead of acting as stern auditors, they should present themselves as valuable consultants. More understanding and accommodating behavior from insurers can help client retention as well as hazard mitigation. Hence affecting both net premiums and net profitability statistics.

Furthermore, this study also signifies the importance of research and development in an insurance industry as well. Risk management, though appears to be non-core activity that does not affect the income statements directly; however, this study shows that Risk management can work as a financial tool instead of pre dominant psyche of “underwriting adjustments”. Instead of altering underwriting conditions such as; premium rates, policy excesses, exclusions etc. fruitful results can also be achieved by managing a risks in a better way. Introduction of “insurtech” emphasizes even more for the need of technological advancements in insurance industry.

TESTIMONIALS BY THE CLIENT

We really appreciate the work and efforts put-in by the whole management of IGI and special thanks to the fact finding committee members, who were considerate enough to take their times out of their busy schedules and conducted a rigorous task. Your prudent analyses pointed out the right improvements required in our pre-existing systems and really helped us to improve our safety standards. Upgraded SOPs provided us a better control over third party and supply chain management. Grateful to you, we remain.

Regional Manager-PCBPL