COVID-19 IMPACT ANALYSIS ON PACKAGING

FMI VIEWPOINT
FMI to Highlight Window of Opportunities within Packaging Industry Amidst the Ongoing Pandemic Turmoil
Agenda

1. Effect of Covid-19 on the Packaging Industry
2. Covid-19 Impact Heat-map Analysis
3. Impact Scenarios
4. Winning Imperatives Within Specialty Packaging
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   - E-commerce Packaging
   - Hygiene & Home Care Products Packaging
   - Fresh & Processed Food Packaging
5. Losing Imperatives
6. Strategies Adopted by Manufacturers

*NOTE: FMI drafted the report on 6th April, 2020*
Effect of Covid-19 on the Packaging Industry

The global packaging industry is projected to witness a loss of 150 BPS in the year 2020

Packaging is a massive global market that has been powered by a century of product innovations, and has already crossed the trillion dollar mark in the last few years. Packaging industry has shaped the global economy in a much more stable manner where companies can easily transport their goods around the globe very quickly and e-commerce boom has further strengthened the industry.

Over the past few years, the packaging industry is all set to be back on track after the global financial crisis of 2008, but the COVID-19 epidemic has interrupted everything as production halted, customers got self-isolated in their homes, global trade has also been stopped between several countries. The packaging market is facing a slowdown as a result of the COVID-19 epidemic, including the effects triggered by self-isolation guidelines, manufacturer’s moving supply chains away from China, and modifying packaging materials used for essential commodities.

The below figure represents the growth of the packaging industry before and after the emergence of covid-19. The effect of the pandemic is not likely to have a long term impact on the packaging industry.
Covid-19 Impact Heat-map Analysis

Packaging industry to have a relatively low impact due to the outbreak of Covid-19

Covid-19 Impact Heat-map Analysis by Industry

- Wholesale Distribution
- Non-food Retail
- Metals & Mining
- Chemicals
- Manufacturing
- Oil & Gas
- Consumer Non-durables
- Business Services
- Natural Products
- Processors
- Packaging
- Real Estate
- Construction
- Apparels
- Consumer Durables
- Passenger Airlines
- Lodging & Restaurants
- Automotive
- Shipping & transportation Services
- Food & Beverages
- IT Software & Services
- Waste Management
- Telecom & Media

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The packaging industry growth is projected to pick up pace from the first quarter of 2021.

Projected Growth of the Packaging Industry under Different Scenarios
In 2020-21

The adjacent figure exhibits the projected growth of the packaging industry during 2020-2021.

This depicts the growth of the packaging industry prior to the outbreak of covid-19.

However, if the spread of virus gets contained initially but measures are not sufficient to prevent resurgence in several countries, so social distancing continues for a prolonged period; this will result into slower recovery of the packaging industry and lead to sluggish growth for several regional specialty packaging providers.

If the number of cases continue to grow further, and public healthcare system fails to control the spread of this virus for an extended period of time, this will reduce the consumption of non-essential commodities and put the growth of the packaging industry under serious distress for a long time.

If the public health responses succeed in controlling the spread of the virus in the next three-four months, the industry growth will likely resume its pace till the beginning of the next year.
Winning Imperatives: Wherein Lies the Opportunity?

Continuous demand for essential commodities to boost the demand for specialty packaging solutions

The outbreak of this pandemic has impacted industries across the globe, including the packaging industry. However, there are pockets within packaging that are witnessing a spike in the demand which includes, healthcare consumables, e-commerce, hygiene & home care products, and fresh & processed food. As a result, packagers are scaling-up their production to make the most out of this surge in demand exhibited by aforementioned industries. Top tier packaging manufacturers can quickly capitalize on this latent opportunity by strategically allocating their resources and offset the losses incurred due to slow down in other end-use industries which do not fall under the category of essential goods.

### Pockets Within Packaging that are Experiencing Surge in Demand

<table>
<thead>
<tr>
<th>Healthcare Consumables Packaging</th>
<th>High demand for masks, gloves and test kits for COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh &amp; Processed Food Packaging</td>
<td>High demand for packaged food with longer shelf life such as canned food, MAP &amp; VSP packaged food</td>
</tr>
<tr>
<td>E-commerce Packaging</td>
<td>High preference as a sales channel</td>
</tr>
<tr>
<td>Hygiene &amp; Home Care Packaging</td>
<td>Spiked consumption of sanitizers, disinfectants and other hygiene products</td>
</tr>
</tbody>
</table>

- **Nonwovens, Flexible Films**
- **Food Cans, Flexible Films, Trays, Clamshells**
- **Corrugated Boxes, Padded Mailers, Bubble Wraps, Pouches**
- **Plastic Bottles, Pumps, Caps & Closures**
Winning Imperatives: Wherein Lies the Opportunity?
Manufacturers are ramping up their production capacities to cope with supply chain disruptions

Healthcare Consumables Packaging

The increased consumption of masks, gloves, vials, prefilled syringes, and closures have hiked the demand for healthcare packaging solutions across the globe. Medical and diagnostic centers are reporting shortage of these consumables, which has resulted into huge gap in demand and supply. The demand for N95 and other masks has fuelled the demand for nonwovens, as a result, leading packaging manufacturers are operating at their maximum production capacities to cope with supply chain disruptions.

In addition to this, millions of test kits are produced for covid-19 testing, which has created a massive demand for vials, pipettes, closures etc.

Projected Growth of the Healthcare Consumables Packaging Market

 Analyst Comment-

“Packaging manufacturers with high production capabilities are running their relevant production lines at maximum efficiencies to meet the burgeoning demand. However, reduced number of elective procedures might offset the overall growth of the pharmaceutical & healthcare packaging industry in short term.”
Winning Imperatives: Wherein Lies the Opportunity?

Sharp increase in consumption of canned food, particularly meat and fish is likely to be observed

Fresh & Processed Packaging-

With the increasing number of people getting affected with COVID-19, it is expected that in the following quarters consumers will cut down on their spending. Major expenditure would be on food and beverage consumption. More specifically on packaged or processed foods which are known be to less intervened by humans. Thus, the demand for trays, clamshells, folding cartons, cans and other such formats is poised to grow. Furthermore, packaging solutions which are known to provide elongated shelf-life are expected to grow at a significant rate in the next couple of quarters.

The demand for plastic-based packaging was witnessing a sluggish growth in the past years as sustainability was one of the decisive factor while making purchase. However, this recent outbreak has shifted the consumer preference towards safety & hygiene, thus the demand for flexible plastic packaging solutions is poised to grow at a moderate rate during 2020-2022.

<table>
<thead>
<tr>
<th>Products</th>
<th>Days of Refrigerated Shelf Life with Non-MAP</th>
<th>Days of Refrigerated Shelf Life with MAP</th>
<th>Preferred Material</th>
<th>Preferred Packaging Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Red Meat</td>
<td>2-3</td>
<td>6-10</td>
<td>PP, PVC, PE, PET, PS</td>
<td>Trays, Wraps</td>
</tr>
<tr>
<td>Fresh Fruits &amp; Vegetables</td>
<td>4-5</td>
<td>15-16</td>
<td>PP, PVC, PE, PET, PS, Molded Fiber Pulp</td>
<td>Punnets &amp; Clamshells</td>
</tr>
<tr>
<td>Processed Meat &amp; Poultry</td>
<td>3-10</td>
<td>12-18</td>
<td>Metal, PP, PVC, PE, PET</td>
<td>Cans, Trays</td>
</tr>
<tr>
<td>Processed Fruits &amp; Vegetables</td>
<td>5-16</td>
<td>21-30</td>
<td>Metal</td>
<td>Cans</td>
</tr>
<tr>
<td>Cheese</td>
<td>7</td>
<td>180</td>
<td>PP, PE</td>
<td>Wraps</td>
</tr>
</tbody>
</table>

Analyst Comment-

“Vacuum packaging and modified atmosphere packaging manufacturers are likely to benefit the most from the hiked demand for packaged foods, as these packaging solutions ensure product safety and extend shelf-life to a significant extent.”
Winning Imperatives: Wherein Lies the Opportunity?

E-commerce spend witnesses a rise as consumers are reluctant to go to brick mortar stores

E-commerce Packaging-

As the consumers are going in self-isolation, e-commerce is one of the most preferred sales channel for procuring essential commodities. Online purchases have witnessed a two-fold increase in the first quarter of 2020, bolstering demand for protective packaging solutions including conventional corrugated boxes, padded mailers, stretch films, and pallets. The demand for corrugated boxes in particular, might be resilient as it is used majorly for e-commerce and transportation of essential goods.

Manufacturers of corrugated boxes are operating their production plants to cater to the demand generated by e-commerce. Online sales of medical and pharmaceutical products, tissue and hygiene products have skyrocketed amid the COVID-19 pandemic. Corrugated board and box producers are continuing to operate production facilities under the guidelines of Center for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA) to ensure products continue to flow to market.

Estimated Increase in Demand, by Prominent Packaging Formats in 2020

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Boxes</td>
<td>~4.5 Bn</td>
<td>~4.64 Bn</td>
</tr>
<tr>
<td>Mailers</td>
<td>~3.48 Bn</td>
<td>~3.59 Bn</td>
</tr>
<tr>
<td>Protective Packaging</td>
<td>~2.76 Bn</td>
<td>~2.84 Bn</td>
</tr>
<tr>
<td>Labels &amp; Tapes</td>
<td>~1.78 Bn</td>
<td>~1.83 Bn</td>
</tr>
</tbody>
</table>

*The inner circle represents pre-covid demand for e-commerce packaging, outer circle represents the estimated demand post covid-19 in the year 2020.

Analyst Comment-

Manufacturers of corrugated boxes can collaborate with leading e-retailers to provide them a complete box solution which includes bubble wrap, air pillows, peanuts and other protective packaging along with the box itself.
Hygiene and Home Care Packaging

Sales of household cleaners, cleaning wipes, disinfectants, and sanitizers have witnessed a sharp increase during the past quarter. As compared to Q1 2019, the demand for these products increased up to 45% in Q1 2020. This number is further estimated to go up as consumers are very much concerned about their hygiene. This hiked demand presents packaging manufacturers with a remunerative opportunity as bottles, pumps, caps & closures are the primary packaging formats used for hygiene and home care packaging.

The adjacent figure represents growth projection for the following products for hygiene and home care packaging industry before and after the outbreak of covid-19 pandemic.

Even in heavily restricted containment zones, the supply of hygiene products has remained high. Even if the infections rise through the second quarter, the sales of hygiene products is likely to remain high, which will ultimately boost the demand for its packaging solutions. Manufacturers of plastic containers are anticipating a hiked demand and ramping up their production to benefit from the pull-through demand.

Analyst Comment-

"More than 150 non traditional producers are now manufacturing hand sanitizers to cater to the booming demand across the globe. Packaging converters can collaborate with these producers by tactically adjusting their businesses to capitalize on opportunities."
## Losing Imperatives

*These sectors are expected to have a relatively slower recovery, but growth is likely to pick up after 2021*

### Hardest Hit Packaging Markets

<table>
<thead>
<tr>
<th>Market</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alcoholic Beverage</strong></td>
<td>Large fractions of the population is under self isolation which has reduced the off-premises consumption of alcohol.</td>
</tr>
<tr>
<td><strong>Packaging</strong></td>
<td>Thus impacting the demand for cans, bottles, and single serve formats used for serving of alcoholic beverages at foodservice establishments.</td>
</tr>
<tr>
<td><strong>Automotive Parts</strong></td>
<td>Reduced demand from China, U.S. and Europe has led to a sharp decline in the sales of automotive. Besides, halted production and disruption in supply chain is projected to restrict market growth.</td>
</tr>
<tr>
<td><strong>Packaging</strong></td>
<td>The scenario is likely to improve as and when the economies restart and trade tensions are relieved</td>
</tr>
<tr>
<td><strong>Apparels &amp; Cosmetics</strong></td>
<td>The apparel and cosmetic packaging is witnessing an overall decline in private consumption as well as exports. Retail stores in many parts of the world are temporarily closed.</td>
</tr>
<tr>
<td><strong>Packaging</strong></td>
<td>The demand for these products is expected to take longer to return even after the effects of the pandemic subside.</td>
</tr>
<tr>
<td><strong>Luxury Goods</strong></td>
<td>Sales of luxury goods has come to a halt, as consumers are only concerned about the essential commodities.</td>
</tr>
<tr>
<td><strong>Packaging</strong></td>
<td>The luxury goods packagers can allocate their resources in manufacturing of specialty packaging solutions to stay afloat in this crisis.</td>
</tr>
</tbody>
</table>

As consumers are preferring to stay indoors and are purchasing only essential commodities, demand from several end-markets is shrinking.
Strategies Adopted by Manufacturers

Packagers are leveraging their resources and strength to essential goods and specialty packaging to sustain this turmoil

DS Smith Launched a Novel Specialty Packaging Solution to Curb the Pandemic Spread

To combat the spread of coronavirus, flexible packaging converters are coming up with new packaging solutions. DS Smith, a leading player in the flexible packaging industry has developed new packaging solution designed to maintain delivery of everyday requisites during breakdown of Covid-19 coronavirus pandemic. The company has worked with retailers across Europe to develop and design specialty boxes. This new strategy will allow employees involved in delivering emergency provision boxes to comply with social distancing and other government policies enforced to curb the spread of this pandemic. The company adopts “stacks, drop and go” approach which is more efficient, hygienic and saves time.

Packaging Giant, Amcor Plc comes Forward to Help China

Another major player in the flexible packaging industry Amcor Plc. has contributed RMB 1 million to China Health Organization, surgical masks and medical supplies to hospitals. The company is also donating rigid containers for production of sanitizers by local emergency services in North America.

“We were approached by several of our food supply customers to design a new packaging solution that would maximize efficiency and provide everyday essentials to many of society’s most vulnerable.

-Stefano Rossi, DS Smith packaging CEO

“Amcor’s global footprint and strong financial profile mean we remain ready to support customers through this event. We have thorough business continuity plans across plants and raw material supply chains to manage risk and maintain productivity, while keeping people safe. We continue to adapt our response to protect health and safety, and maintain service to our customers, globally.

-CEO, Amcor
Strategies Adopted by Manufacturers

Packagers focusing on non traditional end-uses such as hand sanitizers and other hygiene supplies

Brands Refit Packaging Lines to Produce Needed Supplies

To combat the spread of COVID-19, distillers, breweries are reshaping their packaging lines to package sanitizers to supplement inadequate supplies. Global beauty manufacturers such as LVMH, Pernod Ricard have stepped up and initiated the production of hand sanitizers, generating strong demand for packaging solutions. Distillery companies who produce hand sanitizer periodically are now engaged in full time job.

Postponement of Several Packaging Shows

Moreover, packaging associations have postpone largest packaging shows like “interpack” which was scheduled this April/May and is now rescheduled them on early 2021. Similarly, sustainable Packaging Coalition had to cancel its highly valued SPC Impact conference, scheduled for late March/early April.

US based Injection Molder, Comar LLC Ramps Up Production

Comar LLC, a manufacturer of antibacterial wipe lids and canisters, has ramped up their production capabilities as the demand is spiking. Products such as hand wipes and household cleaners have witnessed double-digit growth, which has contributed to demand for molders that manufacture bottles, caps and closures.
Thank You

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