

Business studies essay sample

[Nutrition](#), [Healthy Food](#)



Changes witnessed over the last few years on mode of packaging and its economic impact. 1. The changes in transportation of fruits and vegetables such as cardboard crates being used in place of wooden crates, etc. Reasons for above changes. Disadvantages of wooden crates-

Deterioration

* After wooden pallets are used several times, the wood begins to wear. It splinters, cracks and even breaks under the pressure of continued use. The deterioration is natural and occurs eventually, even if the wood is treated to repel moisture and to strengthen it. This disadvantage leads to replacement much sooner than with plastic pallets. Infestation

* Wooden pallets are more susceptible to infestation by termites, ants and other insects that make their home inside the wood. Pallets stored outdoors are more likely to succumb to infestation than the ones kept within a warehouse. The insects burrow into the wood, eating away at it and thus weakening what should be a support structure.. Cleanliness

* In addition to germs, wooden pallets are collectors of dirt and debris. Cleaning them becomes more and more difficult over time as the pallets age. They must be heat-treated to get rid of the contamination and washed to be rid of dirt and debris. However, the heat accelerates deterioration, and the water, if improperly dried, can feed mold spores that thrive on wood and harm the vegetables and fruits inside it.

Advantages of cardboard crates-

Protects Items

* As packaging, cardboard protects vegetables being shipped or moved.

Corrugated cardboard often has multiple pieces of cardboard placed on top of each other to cushion soft vegetables. Cheap Material

* Cardboard is cheap to produce, and is usually made from recycled materials and doesn't cost much money if purchased wholesale. Other packaging materials are made from plastic, wood or metal, all expensive materials that are often heavier than cardboard, which adds to shipping costs. Easily Sealed

* Cardboard can be sealed firmly as a package in a number of different ways. Use metal staples to hold cardboard together, as it is thick and doesn't easily tear if a package is dropped or falls to the ground.

Flexibility

* Some pieces of cardboard are incredibly rigid and heavy, to protect what they're packaging, while other cardboard varieties can be wrapped around items so that material isn't wasted and the package isn't bulky or difficult to ship or store.

2. Milk being supplied in glass bottles later in plastic bags and now in tetra.

Disadvantages of glass milk bottles-

Milk bottle collection, washing, loss, theft and breakage were a significant cost to dairies. In cold climates bottle breakage was a problem due to freezing temperatures while the bottle sat on the porch. Many milk bottles were broken by accident during collection, washing and filling. Damage was also an issue. Many bottles had small chips and flakes off the glass but were still returned to service. Bottle users often kept (or stole from the dairies

point of view) glass bottles to use around the home for other foods or even toxic materials in the shop.

Collection of glass milk bottles was also an expense. The empty milk bottles took up space in the wagon or truck and added extra weight. Dirty milk bottles were in close proximity to the fresh, clean bottles. Dairies in many cities formed bottle exchanges to recover milk bottles from various sources such as dumps or markets and return them to the dairy that owned the bottle. There also was the issue of sanitation with glass bottles that were to be reused. Disadvantages of milk in plastic bags-

Milk bags sometimes puncture or burst, are weaker than milk jugs, and have thin linings. When pouring, the top of the bag can also topple over, causing the milk to spill. Spillage can be avoided by cutting a secondary hole at the other side of the bag for air intake, by pinching the top of the bag while pouring, or by using a pitcher with a lid to keep the milk bag in place. Milk bags cannot be sealed once open, although some consumers fold over the spout and use clips to help maintain freshness.

Advantages of tetra pack-

Tetra Pak Packaging has a very important function, which is to protect food and drinks safely and efficiently from where they made to where they will be consumed. It has following benefits: Protection

Packages protect the contents from light, microorganisms and air, and the environment from the contents of the package. Preservation

Good packages can help preserve food and prolong its shelf life during

storage, transport retailing and consumption. Communication

Packages carry important product information about ingredients, quantities, nutritional value, use, sell-by dates and much more. Convenience

Packages provide convenience for the consumer, enabling the food to be handled, served and then stored what is left for future use without getting it all over our hands.

3. Plastic furniture [doors and stools] gaining preference over wooden furniture.

Disadvantages of wooden furniture-

* Sun, moisture and sudden temperature changes can impair the form and colour. However appropriately dried and processed wood is more robust than plastic or aluminum. * The surface can be damaged by sharp objects; stains can remain in case water, alcohol or other colored liquids are spilt and not cleaned properly. Please, consult our wood care guide for keeping the perfect appearance of your wooden furniture. * Wood gets darker with time.

Varnishing and painting can restore the initial colour, although the dark colour of furniture is a symbol of luxury and stability. Quite frequently furniture is aged artificially.

Advantages of plastic furniture[Doors and Stools]-

Over the years, mostly raw materials, furniture market, a variety of wood-based materials, but as the reduction of timber resources, people are increasingly seeking to enhance environmental awareness, color and shapes began to fashion furniture plastic furniture market . Compared to plastic

furniture and other furniture, has the following advantages: colorful colorful and bright flowing lines, plastic furniture, in addition to common other than white, red orange Huanglv Qing blue-violet a variety of colors available, and There are clear of furniture, the permeability of the visual effects to bring people a comfortable feeling. The same time, plastic furniture is molded by the mold, it has smooth lines and distinctive characteristics of each fillet, every curve, every grid, and interfaces are naturally smooth, no traces of hand. Variety of arbitrary shape and beautiful features of plastic are easy to process, so making such furniture has a more random shape. Arbitrary shape to express highly personalized design designer ideas, hard to reach through the general shape of the furniture to reflect a kind of casual beauty.

Get convenient portable compact compared with ordinary furniture, plastic furniture gives the impression that light, you do not need to spend a lot of effort, you can easily carry it, and even the internal plastic furniture metal stent, The stent is generally hollow or very small diameter. In addition, many plastic furniture can have a folding function, so not only saves space, it is convenient to use. Easy to clean and easy to protect the plastic furniture is dirty, can use water to clean, easy and convenient. In addition, the plastic furniture is also easier to protect, to the indoor temperature and humidity requirements are relatively low, can be widely applied to various environments. Cultivars for a wide variety of plastic furniture not only apply to public places can also be used for ordinary families. In public places, you see the most is the variety of chairs and tables, which are applicable to the family and countless varieties, such as dining tables, chairs, lockers, racks,

shoe racks, flower, etc.. 4. The origin of cardboard and the various stages of changes and growth. Origin of cardboard-

The Scottish-born Robert Gair invented the pre-cut cardboard or paperboard box in 1890 – flat pieces manufactured in bulk that folded into boxes. Gair's invention came about as a result of an accident: he was a Brooklyn printer and paper-bag maker during the 1870s, and one day, while he was printing an order of seed bags, a metal ruler normally used to crease bags shifted in position and cut them. Gair discovered that by cutting and creasing in one operation he could make prefabricated paperboard boxes. Applying this idea to corrugated boxboard was a straightforward development when the material became available around the turn of the twentieth century.

Growth of cardboard-

The advent of flaked cereals increased the use of cardboard boxes. The first to use cardboard boxes as cereal cartons was the Kellogg Company.

Corrugated (also called pleated) paper was patented in England in 1856, and used as a liner for tall hats, but corrugated boxboard was not patented and used as a shipping material until December 20, 1871. The patent was issued to Albert Jones of New York City for single-sided (single-face) corrugated board. Jones used the corrugated board for wrapping bottles and glass lantern chimneys. The first machine for producing large quantities of corrugated board was built in 1874 by G. Smyth, and in the same year Oliver Long improved upon Jones's design by inventing corrugated board with liner sheets on both sides. This was corrugated cardboard as we know it today.

The first corrugated cardboard box manufactured in the USA was in 1895. By

the early 1900s, wooden crates and boxes were being replaced by corrugated paper shipping cartons.

By 1908, the terms “ corrugated paper-board” and “ corrugated cardboard” were both in use in the paper trade. The Musée du Cartonnage et de l’Imprimerie (Museum of the Cardboard Box) in Valréas, France traces the history of cardboard box making and the art involved in printing, in the region. Cardboard boxes have been used there since 1840 for transporting the Bombyx mori moth and its eggs from Japan to Europe by silk manufacturers, and for more than a century the manufacture of cardboard boxes was a major industry in the area.

5. Brown paper bags packing to recycled paper bags to plastic bags and cloth bags- One area where plastic bags then brown paper bags are more efficient is durability. They can usually carry more weight than their paper counterparts, and they aren’t as vulnerable to water damage. Plus, even though paper bags have more volume, the fact remains that you can only carry about two at a time. With plastic bags, you can carry as many as you can fit around your grip in your hands and not be as concerned with tearing or breakage.

Paper bags- To produce paper bags, the natural environment is being demolished, since wood is needed in paper’s manufacture. According to the Washington Post newspaper website, 14 million trees are cut down across the world on an annual basis to produce paper bags.

But, however, Plastic bags are not renewable, which means they cannot be easily recycled like paper bags. They are made of petrochemicals, which is

what makes them non-renewable and a risk to the health of the planet. If not carefully disposed of, plastic bags can be devastating to animal life.

Canvas or cloth bags are a smart alternative to plastic. Cloth can be washed and reused, and lasts up to 10 years on average. Bringing a few cloth bags with you to the store will greatly reduce the number of plastic bags in the environment. Paper bags are not as beneficial for the environment as canvas/cloth bags, but they are recyclable. Infants cannot suffocate on paper bags either. If you're creative, you can make an old plastic bag into arts-and-crafts.

6. Reuse of packaging to attract customers for their product- Compostable Packaging

* Sun Chips recently came out with compostable packaging for their line of snack foods. As customers are looking for more environmentally-friendly options, using compostable packaging can set your product apart from others on the shelf. Compostable packaging also demonstrates a company's commitment to the environment. Reusable Packaging

* Using reusable packaging, such as a decorative box or collectible tin, can add additional value to a product. Instead of having packaging to throw out, they'll have a tin that reminds them of your product every time they use it. The added value of packaging that can be reused after the initial product also provides additional value for consumers. Fabric Bags

* Fabric bags and packaging can be imprinted with a logo or enhanced with labels to create a unique look on store shelves. The natural look of fabric

gives products a hand-crafted appearance for additional appeal. Products that are well-suited for fabric packaging include soaps, candles, skin care and beauty products.

7. The concept of pyramid packaging for milk-

In 2006, Conway and Torquato showed that a packing fraction about 72% can be obtained by constructing a non-Bravais lattice packing of tetrahedra (with multiple particles with generally different orientations per repeating unit) or pyramid packaging, and thus they showed that the best tetrahedron packing cannot be a lattice packing (with one particle per repeating unit such that each particle has a common orientation). These packing constructions almost doubled the optimal Bravais-lattice-packing fraction 36. 73% obtained by Hoylman. In 2007 and 2010, Chaikin and coworkers experimentally showed that tetrahedron-like dice can randomly pack in a finite container up to a packing fraction between 75% and 76%. In 2008, Chen made a significant improvement, proposing a structure with a packing fraction of 77. 86%. A further improvement was made in 2009 by Torquato and Jiao, who compressed Chen's structure using a computer algorithm to a packing fraction of 78. 2021%.

Later these same authors obtained a denser random tetrahedron packing with a packing fraction of 82. 26% using the same algorithm. In mid 2009 Haji-Akbari et al. showed, using MC simulations of initially random systems that at packing densities $> 50\%$ an equilibrium fluid of hard tetrahedra spontaneously transforms to a dodecagonal quasicrystal, which can be compressed to 83. 24%. For a periodic quasicrystal approximant with an 82-

tetrahedron unit cell, they obtained a packing density as high as 85.03%. In late 2009, a new, much simpler family of packings with a packing fraction of 85.47% was discovered by Kallus, Elser, and Gravel. These packings were also the basis of a slightly improved packing obtained by Torquato and Jiao at the end of 2009 with a packing fraction of 85.55%, and then by Chen, Engel, and Glotzer in early 2010 with a packing fraction of 85.63%. Wallenberg had initially planned to join the Army as an officer, but fell ill during military training and had to abandon his plans.

He was accepted at Karolinska Institute medical school in Stockholm, but decided to move to Lund and try to enter the medical school at Lund University instead. In 1943, waiting to get accepted at Lund University, Wallenberg got a job as lab assistant at Åkerlund & Rausing, a local firm manufacturing food packaging. When his manager got drafted in 1944, he became head of the research lab, aged 28. The team had orders from the company owner Ruben Rausing to produce a viable packaging for milk that was cheap enough to compete with the current milk distribution system, based on loose milk sold in reusable glass bottles. The key to this was to use as little packaging material as possible. The research lab had tried and failed a number of different solutions.

Finally, reportedly when ill with fever, Wallenberg got the idea of using one single sheet of paper rolled into a cylinder and folded from two different sides, creating a mathematical tetrahedron. The volume created only needed to be sealed in three places and the packages could be produced in one subsequent sequence from one roll of paper, using a minimum of material,

with a minimum of waste. After some initial hesitation, Ruben Rausing became convinced that the invention was a good idea and ordered the project to be developed. In March 1944 he filed for a patent, and in 1951 Tetra Pak was created as a subsidiary to Åkerlund & Rausing. The tetrahedron package made Tetra Pak one of the world's most successful companies. The package is still sold today under the name of Tetra Classic Aseptic.

8. Cost being borne by the consumer/manufacturer in packaging-

9. Packaging used as means of advertisement-