



# Analysis of Ready-To-Assemble (RTA) Furniture with Reference to Metropolitan Cities in India

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**Abstract:** Design and the furniture industry have been evolving a lot, with the advancements in the lives of human beings. With the passage of time, the furniture industry has continuously adapted itself to suit the needs of the mass. However, in the time being, the design of furniture has become competitive in order to fulfil the increasing demands in the lives of human beings. More and more people are migrating to metro cities like Delhi National Capital Region, Mumbai, Bangalore etc., for better job opportunities. Due to lack of space in the compact houses in these metro cities, unlike the earlier times, people prefer easily transportable furniture and don't take much space in the house. All these qualities have been seen the RTA (Ready-To-Assemble) furniture that are easy to transport, easy to assemble with the basic tools, does not take up much space in the house and can be used for different purposes like sofa cum bed. The preference of RTA furniture by the majority of masses in the metro cities can be observed on the demand and supply chain on e-commerce platforms like flipkart, amazon, urban ladder, pepperfry and both physical stores and online websites like IKEA and home centre etc. Fast-fashion is another reason for the rising demand of RTA furniture, in order to keep in pace with it, people have changed their preferences from long durable furniture to the modern and minimalistic furniture. This study presents an analysis of the furniture industry, taking RTA (ready to assemble) furniture as the focal point, since there have been a lot of advancements in every field; the furniture industry has also evolved a lot.

**Keywords:** Ready-To-Assemble (RTA), Do It Yourself (DIY) furniture, IKEA, interior design, Delhi, India

## 1. Introduction

World is moving fast and people are having lesser and lesser time with themselves. It is seen that the problems in the present day lives are more complex than those of the ones before. Starting from eating habits to having their homes minimalistic, the lives of people are undergoing changes. With the evolution and the changes, industries are adapting themselves according to the needs of the audience on the large scale. The design and furniture industry has a history tracing long back as the furniture was being used since the ancient times, we have the traces of furniture pieces made by craftsmen made of natural wood. In the past, furniture making was a handicraft but the growth of sophistication in technique revolutionized the making process of furniture. Today, the industry is a major mass-production industry which is largely a 20th century industry.

The Design industry have been evolving at a fast rate, with the discovery of the cave paintings from the stone age design has become important in the lives of the people, giving them ways to keep in contact with the society. The demand for design was caused by the industrialization. At present design is a part of human life, being present in every layer of the society like user experience (UX) design, eco-friendly design, graphic design etc.

By the end of 2025, it has been estimated that the global furniture market will reach 800,596 million dollars, with a CAGR of 3.5% from 2018 to 2025. Due to multiple vendors in regional and international level, the market is greatly fragmented. Factors like people of a particular section of society demanding for modern luxury furniture, rising disposable incomes are driving the rising demand in the market. On the basis of distribution channel and region, the segmentation of the market is done.

The furniture market in India is highly competitive and fragmented. It keeps on growing with the high demand and supply which is helped by the adequate availability of the resources and raw materials in India. The growing middle class, urban households and their disposable incomes are some of the major factors influencing the market. Furthermore, during the forecast period of 2021-26, it is said to attain a high growth (Bhalla, 2021).

Based on the type of furniture, there is a growing demand of the Ready-To-Assemble (RTA) Furniture has different names like flat-pack furniture, knock-down furniture, etc. This furniture is designed to be more affordable than those of the fully built furniture and are easy to assemble by the customers at home using the basic tools. These are called flat pack

furniture because it can be packed flat and it is way easier to be transported and delivered. Solid wood, chipboard, MDF or metal are some of the materials, the furniture is made from. It comes with all the fixings required to put the furniture together. These are very customizable; the customers can choose the colors, designs and the layouts by themselves (Wikipedia, 2021).

The Ready-To-Assemble (RTA) furniture market can be categorised further as residential and office component. Small Office, Home Office component (SOHO) is another name for the office component; it is growing at the fastest rate in the RTA furniture market. Between the years 1994 and 1999, the market share peaked from 20 to 26 percent. 74 percent of the market value is added to by the residential component. The rising demand of furniture can be a positive sign for RTA furniture (Reportlinker, 2021).

## **2. Literature review**

### **2.1 Furniture from the past to the present day-**

Christophe Pourny with Jen Renzi, in their book 'The Furniture Bible' (2014), talks about furniture from various time periods. The authors mention the evolution of furniture from providing the basic needs to be something very decorative and eye-catching, which shows the shifting of power in the society. The time period and place of origin can be easily traced through the furniture design states the authors (Pourny et. al., 2014).

In the medieval society, furniture was very limited and due to very little trade and commerce, it was made on the spot using local resources. With the cultural advancements and social evolution, furniture became more functional and permanent and by the late 1400s, furniture had diversified even more; every piece had a precise function, and embellishments had become more sophisticated. During the renaissance in Art, Architecture and Interior Design, relative peace and comfort were allowed for the revival and the outlook of the furniture became more important, lighter and more comfortable furniture found its place. Authors assert that in the early 17th century, the look of furniture was austere with simple lines, and furnishings became larger and darker and large cabinets, armoires, Cordoba-leather-upholstered seats were created. Authors mention that in the 18th century, the ornament in furniture followed natural inspirations and took on more fluid forms, the functions changed too. In the latter part of the 18th century, furniture became easily movable as they became light weighted. The 19th century was an age of political revolutions, spreading all over Europe, coupled with the continuing changes effected by the Industrial Revolution, which led to the making of furniture in the factories rather than handmade that made it less expensive and more accessible, expresses the authors. In the 20th century, furniture design was no longer associated with sovereigns and successive styles reflected a multiplicity of influences, innovations, new lifestyles and World War I ushered in modernity states the authors (Justus,1878).

### **2.2 Ready-To-Assemble furniture**

With all the evolution in the furniture industry with the passing time, furniture like Ready-To-Assemble (RTA) or Do-It-Yourself (DIY) are taking their place in the market and finding its way to the people's lives at a very fast rate. According to US Patent, RTA furniture has a history tracing way back as the cabinetmakers were making furniture that were easy to disassemble for transportation purposes and Thonet No. 14 bentwood chair, which was first made in 1859, is said to be the earliest RTA furniture, which was made with the sole purpose of saving space during transportation. In an article 'The Radical Possibilities of a box' by Elizabeth Evitts Dickinson it is mentioned that an early attempt during World War I, in selling RTA furniture was done by designer Louise Brigham and her two partners. Later Home Art Masters was started by 1915, where they offered RTA furniture kits through mail-order catalogue. In the late 1940s, Frederick Charles Ward, an Australian designer, started a mail-order RTA business to provide people with affordable furniture (Ward, 2021). 'Home and Office Furniture' states that the first U.S. patent for RTA furniture was received by Eric J. Sauder, a cabinetmaker, in the year 1953, for a table easily assembled without hardware or glue; which was named "snap-together" furniture (Sauder, 2010).

Gillis Lundgren, a Swedish technician invented the furniture kit, later discussed this with his boss and later in 1956, the world's first ready-to-assemble (RTA) furniture was launched by IKEA, a Swedish furniture maker and ever since, it became the world's largest and environmentally conscious furniture retailer (Morby, 2016).

In the article 'A Market Analysis of the Ready-To-Assemble Furniture Industry', the author Kofi Poku mentions that in the world's furniture market, RTA furniture is growing at the fastest speed. It is becoming more and more convenient for the consumers with all the advancements and innovations in its creation. The furniture serves the consumers with several purposes as it comes in various forms and sizes that can be used as office furniture, tables, living room furniture etc., and its affordability is one of the prime factors in its growing demand. However, the major reasons that the consumers are widely attracted towards the furniture are better quality, assembly process and newer styles (Poku, 2021).

## 2.3 Role of design

In the thesis 'Mass Customisation in the Furniture Design Industry; the case of Thonet chairs' by Mário Barros, it is mentioned that the importance of design is primary in the creation of any product like furniture as an example. The author mentions that it is important to integrate the various necessities and improve the information flow between design and engineering in the embodiment design, detail design and production process with regard to the design process. There should be an ideal balance between the design, process and the manufacturing process of the product. Digital design tools help in the integration of the different steps in the product development products and these tools help the designer in generating several alternatives from a unique model by using computer-aided design. In the design process, new patterns for interdisciplinary approaches can be contemplated and the usage of computer-aided design with engineering (CAE) and manufacturing helps in the formalisation of the design variables throughout the design process (Barros, 2015).

According to Nonaka creating new knowledge in organisations greatly relies on the conversion of tacit knowledge into explicit knowledge by externalising the former. The tacit knowledge relies on individual and empirical experience while explicit knowledge can be formalised and systematised. These premises applied to design phase needs to be formalised for it to become explicit in the embodiment design phase for a better communication with the other disciplines involved in the design process (Nonaka, 1994).

Stiny and Gips provide a formalised method for encoding the generation procedures of design style. In addition, they enable both formal and functional aspects to be represented in Shape Grammars (Stiny, 1972). The creation of reliable information generated by design knowledge and its communication to subsequent steps of the design process can be assisted by the use of digital tools.

## 2.4 Ready-To-Assemble (RTA) Furniture Market

According to Transparency Market Research, RTA furniture is greatly preferred by the commercial offices due to low consumption of space and easy transportation with easy assembly which makes it highly customer friendly. The growth of start-ups globally, has led to the growth of ready-to-assemble furniture market, on a large scale and low cost is another important factor for the market growth, states the research. The research mentions the division of RTA furniture market, on the basis of material is done like, wood, plastic etc., and residential and commercial in terms of end-user. It can be divided into online, and offline platforms, in terms of distribution channel and about regional distribution, it is divided into South America, Europe, and Middle East etc. Some of the key players in the global ready to assemble furniture market are Inter IKEA Holding, Walmart, Inc., etc., states the research. With the growing trends and demands, the companies are continuously designing and innovating RTA furniture in order to gain more customers and increase the sales.

Based on the RTA furniture market- growth, trends and forecasts (2020-2025), the fastest growing region globally, is Asia-Pacific in terms of RTA furniture market. Countries with the most contribution in the region are Japan, South Korea, and India etc. With the aim of increasing the sales and toughening up the distribution network, several major companies of furniture market along with RTA furniture are coming forward and partnering up with platforms like e-commerce, states the forecast.

## 2.5 IKEA as a leading Ready-To-Assemble (RTA) furniture company

According to the official website of IKEA, since 2008, it is one of the biggest players and largest furniture retailer in the world, in terms of the RTA furniture market. IKEA which is a European multinational group, designs and sells RTA furniture, home and kitchen appliances as well as provides home services. In 1956, through mail-order, IKEA started selling RTA furniture. It is mentioned that the company is globally known for selling RTA furniture in flat-pack form of Scandinavian style (IKEA, 2021).

As per Porter's Five Forces Analysis of IKEA, it is the leading furniture retail brand in the world with the maximum market share at the international level and in 2018, the global revenue collection of IKEA was 545.46 billion USD. Competitive rivalry is very high for IKEA due to the presence of competition from several local and multinational brands, states the analysis. According to an article by business insider, India, the first store in Hyderabad, India was opened by IKEA in 2019, it has plans to gain more customers by reducing its prices and opening stores in the metro cities. The company is planning to provide its products to the customers through offline stores as well as through online platforms. It has e-commerce presence in cities like Pune, Mumbai, Ahmedabad etc., mentions the article.

## 3. Scope of the study

The scope of the study is transformable and sustainable furniture and the future of furniture industry. With the advancement in materials and technology, the furniture industry is expected to fully transform with respect to the kind of space it acquires. The concept of 'the unrecyclable nature, the uneasiness of changing forms and shapes', is nothing new, however

with the increasing population and compact living houses in the urban suburbs will lead to the rapid growth in the furniture industry in the near future. The sofa cum bed in the houses of the middle-class families espouses the evidence for the fact. Hence, transformational furniture is the only way forward for the convenience of all. The parameters and challenges which are ahead in front of designers and engineers are quite crucial. However, as they say "Necessity is the mother of Invention", it is time to realise that the research shall contain all such parameters and challenges into consideration and look for a more holistic approach in terms of consumer satisfaction and experience. It shall not only fit into the lifestyle of the consumer with all their aspects. But shall also create a win-win situation at the end of the production and manufacturing capacity.

## 4. Research analysis

The global RTA furniture market consists of many big and mid-sized players and is highly fragmented. The introduction of trendy RTA furniture was led by the head-on competition among the major companies in the field. IKEA is a major player and there are certain key players in India as well, such as Urban Ladder, Pepperfry, Damro, Style spa, etc., which are sold in the respective company websites as well as on other online shopping platforms like IndiaMart, Flipkart, Amazon etc. There are certain local furniture making companies which have also taken up to manufacture RTA Furniture. The methodology of the paper is to look at some of the RTA furniture companies. Furniture industry includes all the activities and companies that involve in designing, distribution, manufacturing and sale of functional and decorative objects (Bhalla, 2021). The modern-day manufacture of furniture is different from the earlier times, in the advanced regions like Europe and US, it is a major mass-production industry. Its development is totally driven by its mass consumer market and the development of the production technique.

## 5. Paradigms of Ready-To-Assemble (RTA) furniture

Since the 1950's the popularity of RTA furniture has steadily increased. This furniture is a way to keep prices down since the cost for shipping, storage, and not least assembly is reduced. The purpose of creating this furniture is to offer convenience of use to the consumers as well as to serve a decorative purpose in the house. It is considered worthy and greatly preferred due to its easy assembly and its need for not so much of space. These certain features, comes as very helpful to consumers as they can easily dismantle it and transfer it from one place to another in times of need. Also, as DIY (do it yourself) has become a major trend in the design and creative world, people have realized the importance and bliss to doing things on their own and staying creative as well. The RTA furniture gives this pleasure to the consumers, letting them have the freedom to assemble it on their own according to their choice and staying creative as well. With the advancements the modern people are having lesser patience and time by themselves and thus, the furniture companies are constantly trying their best in creating something that will offer the convenience to the consumers. Companies are continuously investing in improving the assembly method of furniture as well as the design needed for the assembly instruction.

There are certain restraints faced by the RTA furniture that can easily affect the demand and supply chain of the products. As the installation of the furniture requires a lot of abilities, it should come with manual instruction booklets, because when consumers cannot properly assemble the furniture, it can cause mental frustration in them. The durability is not guaranteed in the furniture sometimes and thus it can damage over time if properly not taken care of. These are some major factors that can lead to decreasing demand for the furniture in the long run that will restrain the market growth of RTA furniture as well.

### 5.1 IKEA Brimnes Dressing Table

The details of IKEA Brimnes Dressing Table along with dimensions and specifications are given in Figure 1 and Figure 2.

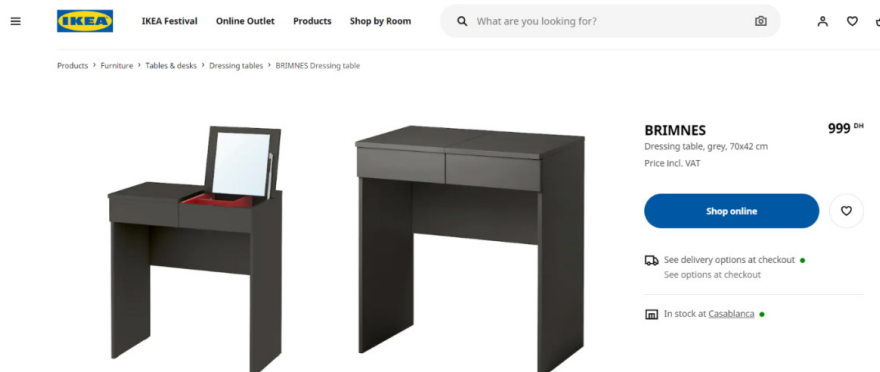


Figure 1. IKEA Brimnes Dressing Table

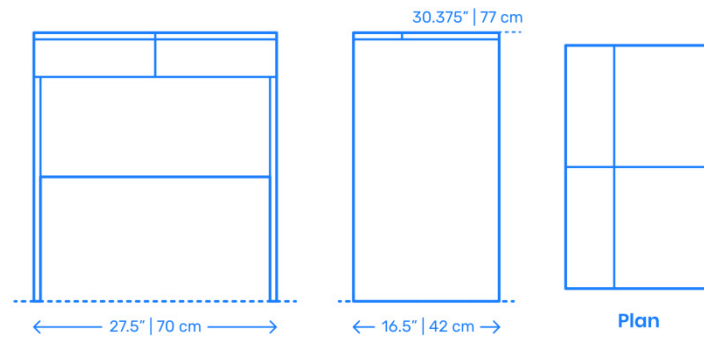


Figure 2. Details of IKEA Brimnes Dressing Table

Specifications and dimensions:

- Materials- particleboard and fibreboard structure; mirror glass
- Assembly type- knock down
- Height- 30.375" | 77cm
- Width- 27.5" | 70cm

## 5.2 Bharat Lifestyle Nano Fabric 6 Seater Sofa

The details of Bharat Lifestyle Nano Fabric 6 Seater Sofa along with dimensions and specifications are given in Figure 3.

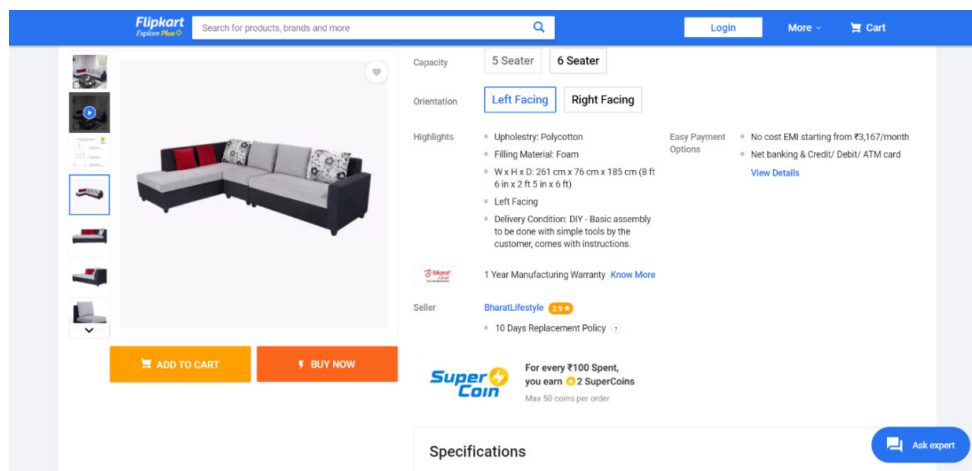


Figure 3. Details of Bharat Lifestyle Nano Fabric 6 Seater Sofa

## 5.3 Damro office cupboard

The details of Damro Office Cupboard along with dimensions and specifications are given in Figure 4 and Figure 5.

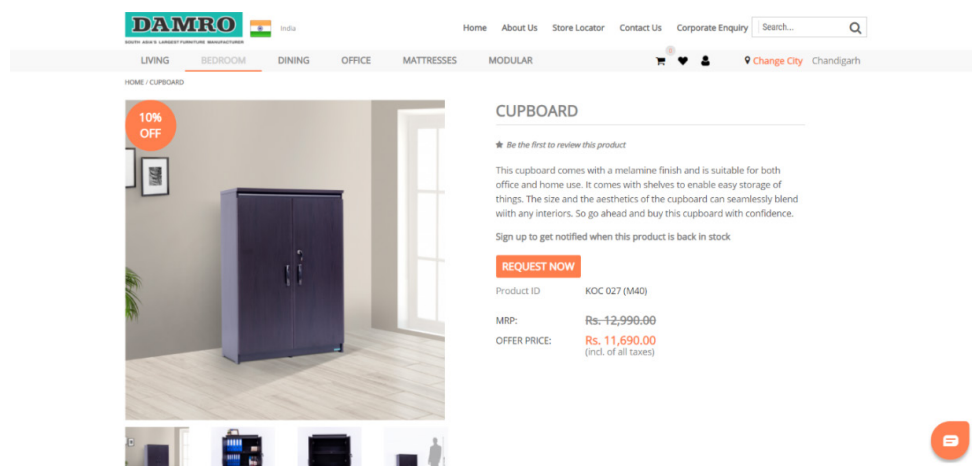


Figure 4. Damro Office Cupboard



Figure 5. Details of Damro Office Cupboard

Specifications and dimensions:

- Material- melamine-faced engineered wood
- Assembly type- knock down
- Width- 800mm
- Depth- 400
- Height- 1240mm

#### 5.4 Vigo 2 seater with lounge sofa cum bed

The details of Vigo 2 seater with lounge sofa cum bed along with dimensions and specifications are given in Figure 6 and Figure 7.

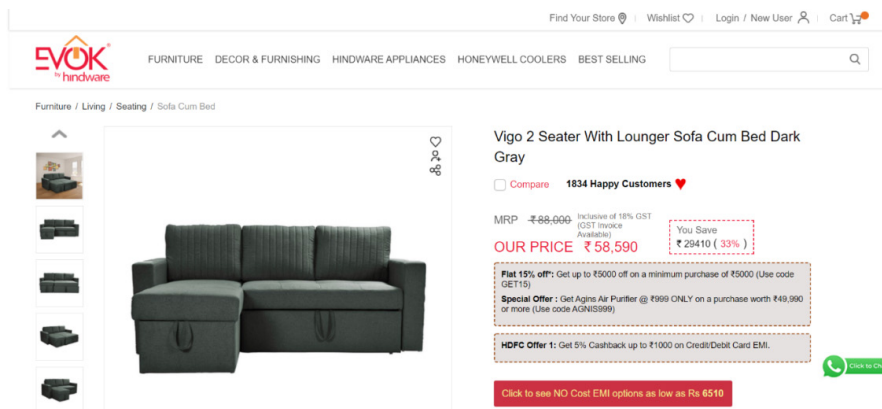


Figure 6. Vigo 2 seater with lounge sofa cum bed

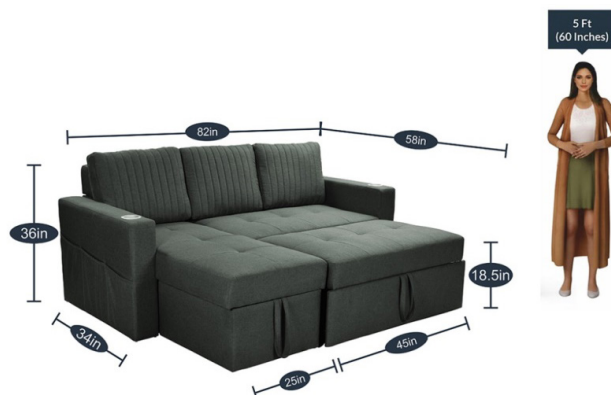


Figure 7. Details of Vigo 2 seater with Lounger Sofa cum bed

Specifications and dimensions:

- Materials- fabric, foam, wheels, ply
- Assembly type- knock down
- Length/width in cm- 261.62
- Breadth/depth in cm- 152.4
- Height in cm- 91.44

### 5.5 Perfect Homes by Flipkart Webster TV Entertainment Unit

The detail of Perfect Homes TV Entertainment Unit along with specifications is given in Figure 8.

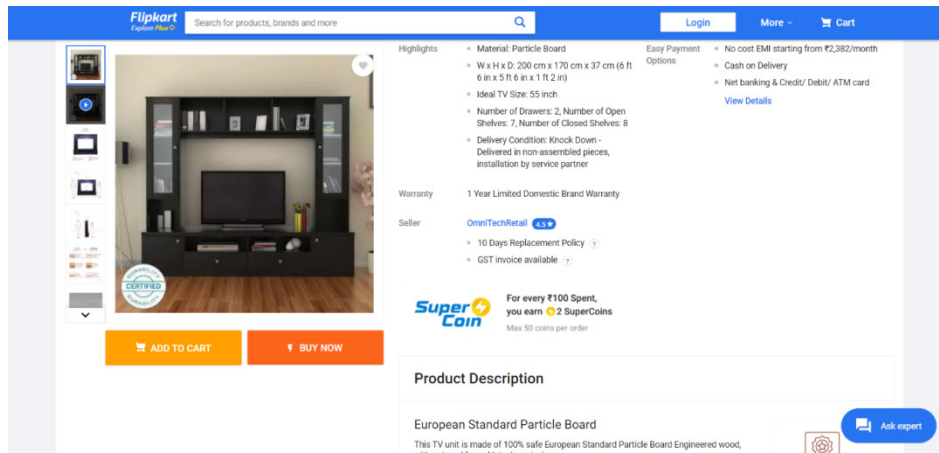


Figure 8. Details of Perfect Homes by Flipkart Webster TV Entertainment Unit

### 5.6 Edo Sofa Cum Bed

The details of Edo sofa cum bed along with dimensions and specifications are given in Figure 9 and Figure 10.

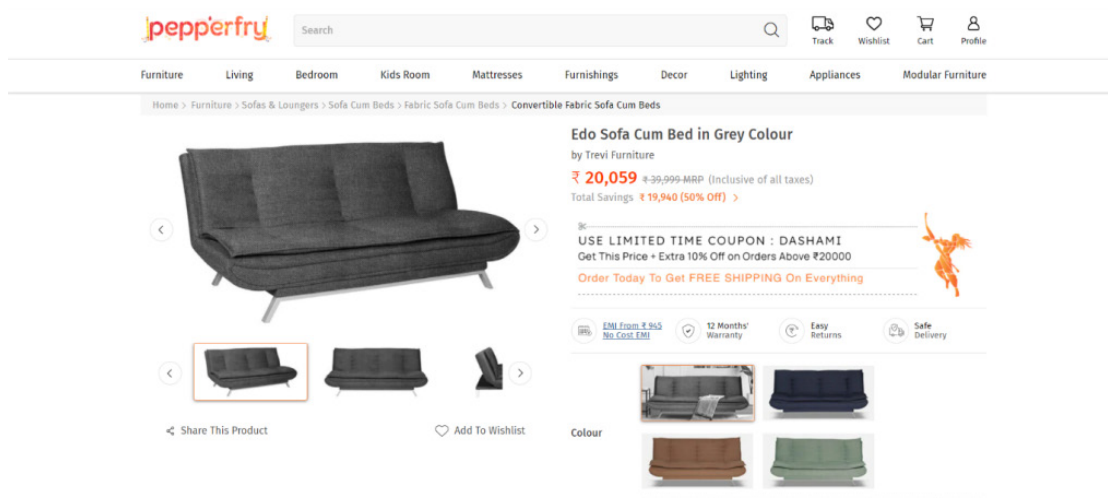


Figure 9. Edo sofa cum bed

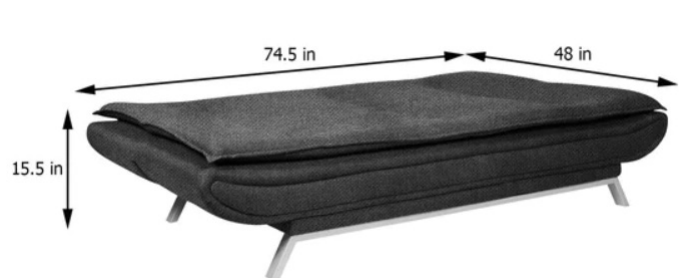


Figure 10. Details of Edo sofa cum bed

Specifications and dimensions-

- Material- fabric
- Dimensions- Sofa: H 35 x W 74.5 x D 25; Bed: H 15.5 x W 48 x D 74.5(All dimensions are in inches)

### 5.7 Anton study table

The details of Anton study table along with dimensions and specifications are given in Figure 11 and Figure 12.

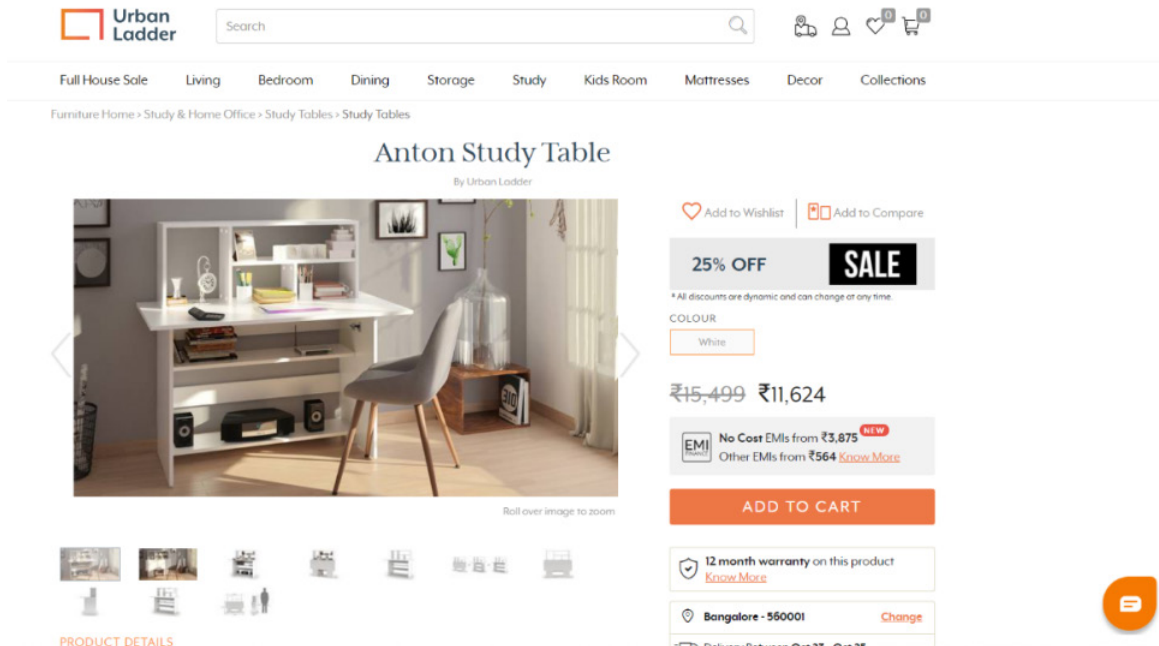


Figure 11. Details of Anton study table

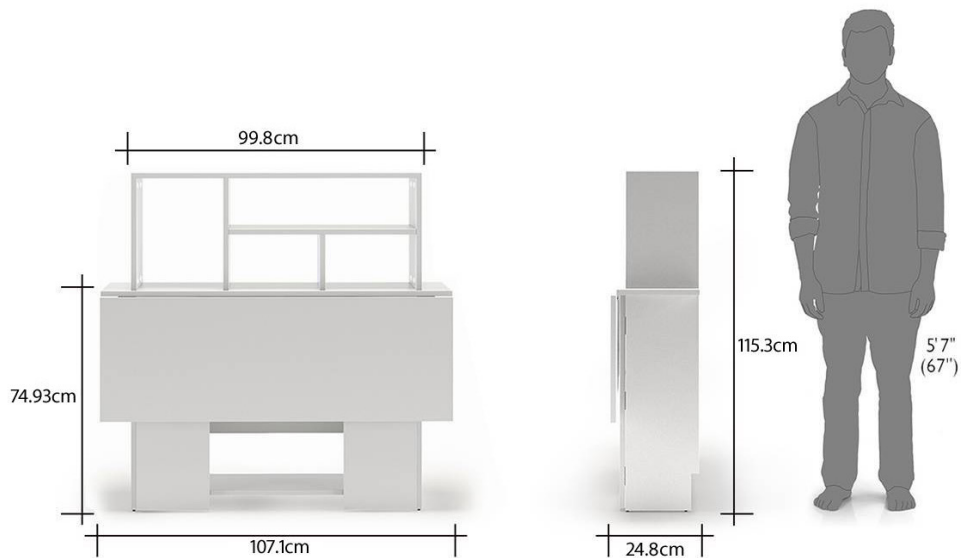


Figure 12. Details of Anton study table

Specifications and dimensions:

- Material- engineered wood
- Assembly type- knock down
- Product dimensions- 1153.0 mm x 1199.0 mm x 249.0 mm

### 5.8 Parlin sideboard

The details of Parlin sideboard along with specifications is given in Figure 13.



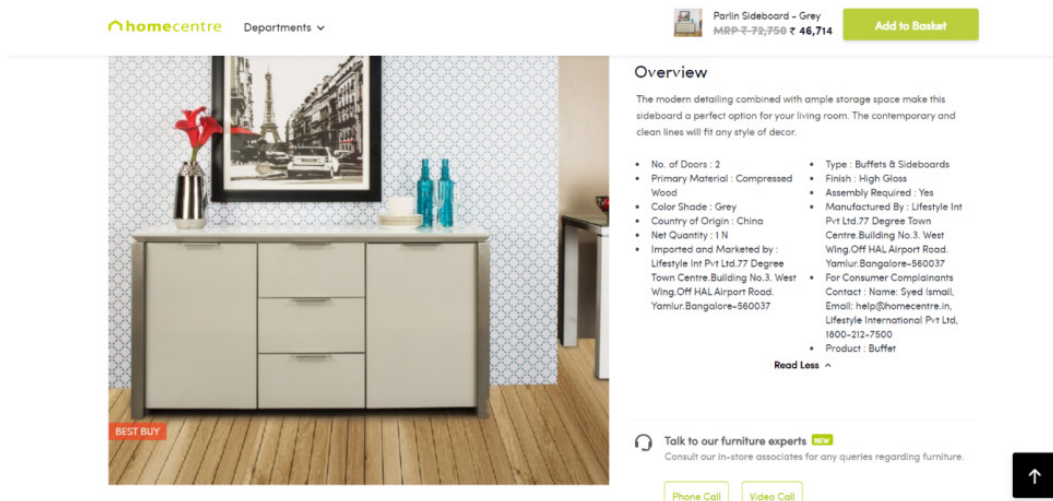


Figure 13. Specifications of Parlin sideboard

## 6. Findings of the study

Based on the analysis done on the RTA furniture, the following major findings can be summarized:

**Furniture market:** The growth rate of Indian furniture market is good at present. It has always kept its pace with the developments in the design industry, and has successfully innovated furniture to suit the needs of the mass. The local Indian furniture companies have also introduced the furniture market with RTA furniture.

- **RTA Furniture:** The type of furniture has been consumed and greatly preferred by the people living in the metro cities as it is easy to assemble by the customers with the basic tools, it is also easy to transport and it does not take up much space in the compact houses in the big cities. As it can be used for more than one purpose according to the needs of the customers, it is gaining its popularity among the millennials at a huge rate.
- **Volume:** RTA furniture is easy to assemble by the customers at home with the basic few tools, reading the instructions. The furniture is generally packed in flat pieces and then delivered accordingly, thus it is easy to transport. Thus, it has been seen that the furniture does not have much volume and does not take up much space while being transported.
- **Awareness:** RTA furniture is not yet widely known in India, except for the metro cities. As the people living in these cities have to keep shifting, it is preferred by them greatly. Otherwise, people living in the other parts of the country are still going for the traditional furniture type.
- **Beginners:** RTA furniture is still new to India as there is no company yet, that is solely manufacturing RTA furniture. However, it is manufactured and sold by other furniture companies both online and offline, that sells normal furniture. It will take a while for RTA furniture to take up on the furniture market as a strong individual.
- **Local companies:** There are local companies that have introduced the Indian furniture market with the RTA furniture. These companies are selling both traditional and RTA furniture to the mass. IKEA have also established its shops in India.
- **Shopping convenience:** The RTA furniture is being sold along with the traditional furniture, both online and offline. The furniture companies have their official websites where the people can select and purchase the type of furniture they want. This type of furniture is also being sold on e-commerce platforms like flipkart and amazon, which makes it convenient for the people who have a busy life, the convenience of shopping.

Hence it has been seen that, although the RTA furniture is new to the people in India, it is gaining its importance with the passage of time. As the people are getting busier with their lives and as they are trying to keep in pace with the modern lifestyle, they are opting for RTA furniture. Thus, the scope of RTA furniture market in India is good and more and more people will keep opting for this type of furniture. As the furniture type makes the lives of people easier in many ways, it will be preferred in huge rate by the people in the near future.

## 7. Conclusions

Based on the study carried out on the furniture industry and RTA furniture as the focal point, it has been noticed that this form of furniture is widely accepted and utilised by the mass. The furniture design industry is expanding and evolving at a great speed. As the society is evolving and the world is shifting itself to deliver an experience today rather than the product. There are many technology-orientated concepts that have already started visualising furniture as something that can easily transform and hence solving one problem and then another in the modern lifestyle. The futuristic interventions may completely change the concept of buying furniture. Rather, furniture in future shall be something which one can transform as per one's need. This will not only save the space but will give them a flexibility of utilisation of spaces in the most optimal way. Thus, furniture which can change its form, shape and function yet not compromise with the value of the product and lifestyle of the people will be the furniture of the future.

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