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A research on the effect of global trends in Turkish kitchen furniture sector

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Abstract: Through survey results, this study evaluated global trends' effects on Turkish kitchen furniture production. The level of knowledge and difficulties of catching up with and implementing developmental trends in the Turkish kitchen furniture sector has been seen as having a structure equivalent to world standards because the level of material and technological development has been determined by four criteria: consumer demand, housing plans, technology inadequacy, and material inadequacy. According to the results, findings in this framework, consumer demand was most influential (45.4%) in capturing and implementing enterprises' trends. Evaluation results on kitchen furniture projects implemented by Turkish enterprises within the last 5 years showed that they mostly worked with models with one-lid views in cabinet-door applications (41.6%). As a result, world trends reflect the direct influence of Turkish kitchen furniture manufacturers on cabinet-door models and color preferences for kitchen units.

Keywords: Kitchen furniture trends, Turkish kitchen furniture sector, kitchen furniture, color preferences in kitchen furniture

Türkiye mutfak mobilyası sektöründe global trendlerin etkisine yönelik bir arastırma

Özet: Bu araştırmada, gelişmenin küresel, sürekli ve makroekonomik güçleri olan trendlerin, mutfak mobilyası sektöründeki üretim ve projelendirme çalışmaları üzerindeki etkisi incelenmiştir. Bu kapsamda, Türkiye'deki mutfak mobilyası üreticileri üzerinde yapılmış olan anket çalışması sonuçları dünya mutfak trendleri çerçevesinde değerlendirilmiştir. Malzeme ve teknolojik gelişmişlik düzeyi olarak dünya standartlarına eşdeğer bir yapıya sahip olduğunun görüldüğü Türkiye Mutfak mobilyası sektörünün dünya mutfak mobilyası alanındaki gelişim trendlerini yakalama ve uygulama konusundaki bilgi düzeyleri ve güçlükleri 4 kriter (tüketici talebi, konut planı, teknoloji yetersizliği, malzeme yetersizliği) üzerinden belirlenmiştir. Bu çerçevede elde edilen bulgulara göre, işletmelerin trendleri yakalama ve uygulama konusunda tüketici talebinin en fazla etkili olduğu (%45,4) ortaya çıkmıştır. Sektör işletmelerinin son 5 yılda uygulamış oldukları mutfak mobilyası projelerinin değerlendirme sonuçlarına göre, mutfak projelerindeki kapak uygulamalarında çoğunlukla tek kapak görünümüne sahip modellerle çalıştıkları (%41,6) belirlenmiştir. Sonuç olarak, mutfak mobilyası alanındaki dünya trendlerinin Türkiye mutfak mobilyası sektöründeki etkisini ve yansımalarını öncelikle mutfak ünitelerindeki kapak modellerinde ve renk tercihlerinde doğrudan yansımakta olduğu görülmektedir.

Anahtar Kelimeler: Mutfak mobilyası trendleri, Türkiye mutfak mobilyası sektörü, mutfak mobilyası, mutfak mobilyasında renk tercihleri.



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1. INTRODUCTION

In this research, the effects of the development of global, continuous and macroeconomic forces on the production and projecting studies in the kitchen furniture sector have been examined. Trends define the world of the future and change by influencing businesses, economies, societies, cultures and personal lives as the global, ongoing and macroeconomic forces of development. Trends have different effects on industries, firms and individuals. Accordingly, in order to be used as a basis for strategic decision-making, the effects of trends need to be well understood. For this reason, securing sustainability in sectoral developments today necessitates global developments and follow-ups in the sector (Uçar et al., 2016; Kurtoglu and Dilik, 2015; Smardzewski, 2015; Hasell and Scott, 1996). As it is known, the preferences of the people, institutions and organizations that interact with the technological and economic infrastructure of the sectors have a direct effect on the catching up and following of trends in sectoral developments. To this end, the level of knowledge and difficulties in catching and implementing the development trends in the world kitchen furniture sector of the Turkish kitchen furniture industry; consumer demand, housing plan, technology insufficiency, material inadequacy criteria. In addition, it has been tried to determine the level of change of door models, door systems, corner drawers, shelf systems and color preferences in the kitchen furniture over the kitchen furniture projects that the sector companies have implemented in the last 5 years (Uçar, 2016; Kurtoglu and Dilik, 2015; Kurtoglu, 2000; Dilik, 2015).

In recent years, as the most striking qualities of the trend set in furniture, which can be described as multi-purpose with very vibrant and striking colors. On the other hand, it seems that the technology of information is more important every day in furniture world. Now the furniture has to have different and striking features besides its main purpose of use. In fact, according to the visions of furniture designers, almost everything in the house; whether it is a chair, a kitchen, or a coffee table, is remotely controlled. On the other hand, with laser-cut edge bands, the digital printing techniques that trigger innovation everywhere seem to be on the front line of the furniture industry with unlimited possibilities (Blum TR, 2015a, 2015b; Hafele TR, 2015a, 2015b; Kesseböhmer, 2015; ZOW, 2016).

Today, the effects of global trends on the development of the furniture sector can be summarized as follows (Uçar et al., 2016):

- The delivery and propagation of modern electro-furnitures equipped with technology as a means of modern life.
- The effects of smart housing and green building formations and smart furniture, environment friendly furniture applications are more common.
- Increasing the share of the world market of human and environment friendly, lightweight, functional, easy to carry, modular furniture which increases the quality of life and improves ease of use due to urbanization and rapidly increasing housing concept.
- More involvement of suppliers in the design process, with different areas of expertise (furniture, electronics, information technology, accessories, etc.).
 - Increasing importance in recyclability and recycling of furniture waste.
- The use of nano-technology applications in materials, dyes, environmentally friendly sponges, dyes, varnishes that do not adhere to dirt and stains is rapidly spreading.

2. MATERIALS AND METHOD

In the research, a method based on survey research and literature research were used. Within this scope, a framework society consisting of 165 items of kitchen furniture producers selected to be representative of the kitchen furniture industry has been determined in Turkey. It has been adopted that the participation of 7 geographical divisions in Turkey in representation of the framework society is guaranteed and participation in the work is guaranteed and face-to-face interviewing is applied. The results have been evaluated in the context of world culinary trends. The global trends and trends based on the assessments are based on the 2012 and 2014 trend reports in the EuroCucina fair. This exhibition is a fair where the trends in the sector are determined and the brands and countries that guide the world kitchen furniture sector come together (Blum TR, 2015a, 2015b; Hafele TR, 2015a, 2015b; Kesseböhmer, 2015; ZOW, 2016; Gijs van, 2013).

In the statistical evaluation of the data the measured average method was used by scoring the influence factors in the findings to determine the significance levels whereas the graphic method based on the arithmetic mean was used in the evaluation of the data of the other findings (Kalıpsız, 1988).

3. RESULT AND DISCUSSION

3.1 Structural Status of Turkish Furniture Sector

Until 2000, the Turkish furniture sector, which is a sub sector of the woodworking sector, has been defined as the main sector by the Turkish Chambers and Commodity Exchanges within the scope of the 9th Development Plan objectives. The sector is one of the industrial sectors that exports 1.9 billion dollars to 214 countries today and does not give foreign trade deficit with the increasing value of export from 2001 to the purchaser. It is seen that the sector has important strategic plan objectives in achieving sustainability in this development and in achieving the goals of development plans. For Turkey's vision for foreign trade for the year 2023, the furniture sector has aimed to be among the top 10 furniture producers in the world and the top 5 furniture producers in Europe with 25 billion dollar production and 10 billion dollar export expectation (Anonymous, 2012; TOBB, 2013). Ön the other hand, it is clear that the industry is in need of organizing and structuring in order to attain its goals, which it has achieved and continues to make progress.

As can be seen from the various research results, the characteristics of the Turkish Furniture Sector are mostly composed of small and medium sized enterprises and the sectors that constitute the sector are defined in 3 groups. These are;

- 1.Group: Large Scale Enterprises, which have a wide range of after-sales service, marketing and distribution network, which are capable of providing all kinds of project and montage services on a national scale,
- 2. Group: Medium-Scale Enterprises, which are able to produce small-scale serial production in accordance with the standards that provide project and assembly services in the local area, and whose product range is relatively limited,
- 3.Group: Small Scale Enterprises. Carpenters and carpenters who do not carry complaints to comply with the standards but work with only mandatory machinery and equipment in production, mostly with limited capacities, which provide assembly services on order but mostly do not provide project services (Uçar et al., 2016; Kurtoglu and Dilik, 2015; Anonymous, 2012; TOBB, 2013).

3.2 Reflections of Global Trends on Turkey Kitchen Furniture Sector

It is seen that the Turkish furniture industry is making considerable efforts to catch up trends in parallel with the developments in the world. Indeed, in recent years, it has hosted trend works and innovation fairs, where international furniture trends are exhibited in the major centers of the furniture world.

Kitchen furniture includes the manufacture of kitchen furniture made of wood, wood products, plastic, glass and metal materials used in manufacturing, residential and non-residential spaces. Kitchen furniture business description; which can be defined as project-based realization of kitchen cabinets and their complementary elements together with ergonomics, functions and aesthetic factors that provide a healthy and functional hiding of food and beverages (Kurtoglu and Dilik, 2015; Dilik, 2015).

Table 1. Productivity (production per capita) indexes in sub-sectors of furniture manufacturing industry (2005=100) (ISO, 2015)

| T 11 1 M 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 1 | 1 1 1 1 (2005 100) (150 2015) |
|--|---|-------------------------------------|
| Labio I. Mobilya imalat sanayi alt se | ektörlerinde verimlilik (kisi basına üretim |) endeksieri (2005=100) (ISO, 2015) |

| Code | Description of the product | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| 31 | Furniture Manifacturing | 92.4 | 115.8 | 133.5 | 136.9 | 136.1 | 153.7 | 134.9 | 146.3 |
| 31.01 | Office and Shop Furnitures | 94.5 | 164.3 | 186.6 | 153.1 | 120.1 | 142.5 | 130.0 | 136.3 |
| 31.02 | Kitchen Furniture | 93.6 | 127.8 | 219.8 | 261.2 | 361.1 | 484.2 | 389.9 | 420.4 |
| 31.03 | Bedroom Furniture | 93.8 | 84.9 | 75.9 | 88.6 | 89.7 | 87.4 | 94.7 | 103.8 |
| 31.09 | Home and Garden Furnitures | 91.3 | 104.2 | 113.3 | 123.0 | 123.2 | 135.5 | 120.1 | 131.6 |
| С | Mnufacturing Industry | 104.6 | 107.7 | 106.5 | 104.7 | 114.3 | 116.7 | 113.5 | 113.6 |

The effect of global trends has been tried to be determined on the Turkish kitchen furniture production sector. Because, as can be clearly seen in Table / Tablo 1, Turkey is in the position of a leading sub-sector in terms of productivity and production indices in the sub-sectors within the furniture sector. For this purpose, the effect of global trends on the findings obtained regarding the level of preference change of the sector enterprises in the last 5 years (2011-2015) production and projecting studies has been determined (Dilik and Ucar, 2017).

3.2.1 Knowledge of Businesses' Kitchen Furniture Trends

In this research, two questions were asked separately in order to determine the level of knowledge about the trends of the manufacturers' development in the kitchen furniture and the difficulties in catching and implementing the trends. First, the question "What is your level of knowledge about development trends in kitchen furniture in the world as a manufacturer?" was asked to businesses for the determination of knowledge levels, and the results obtained were determined as in Figure / Şekil 1 (Uçar, 2016). Secondly, "On the difficulties of catching up and implementing development trends in kitchen furniture space, consumer requirements, housing plan, technology inadequacy, and material inadequacy?" the question was addressed and attempts to be made to determine the trends of these criteria and to determine the effects of implementation.

Findings obtained in this framework are shown in Table / Tablo 2. According to this, it is determined that 45.4% of the enterprises are more influential in catching up and implementing trends of housing plans, 22.4% of them are more effective in implementing trends, and technology and material inadequacy are insignificant. This indicates that the industry has a structure equivalent to world standards as a level of material and technological development.

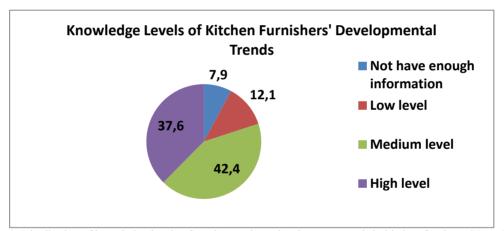


Figure 1. Distribution of knowledge levels of producers about development trends in kitchen furniture (Uçar, 2016) Şekil 1. Mutfak mobilyalarında gelişme eğilimlerine ilişkin üreticilerin bilgi düzeylerinin dağılımı (Uçar, 2016).

Table 2. Difficulties in capturing and implementing development trends in the kitchen furniture space of businesses (Uçar, 2016)

Tablo 2. Mutfak mobilya alanlarındaki gelişme trendlerini yakalama ve uygulama konusundaki güçlükler (Uçar, 2016)

| | Non | | On low level | | | On medium level | | On high level | |
|--------------------|----------------|-----------|--------------|--------------------|------|--------------------|------|---------------|--|
| Criteria | Numb busine | | | Number of business | | Number of business | | | |
| | Item | Ratio (%) | Item | Ratio (%) | Item | Ratio (%) | Item | Ratio (%) | |
| Consumer demand | 37 | 22.4 | 16 | 9.7 | 37 | 22.4 | 75 | 45.4 | |
| House plan | 45 | 27.3 | 41 | 24.8 | 42 | 25.5 | 37 | 22.4 | |
| Lack of technology | 85 | 51.5 | 27 | 16.4 | 34 | 20.6 | 19 | 11.5 | |
| Lack of material | 91 | 55.2 | 29 | 17.6 | 29 | 17.6 | 16 | 9.7 | |

3.2.2 Orientation Status of Lid Models Applied in Kitchen Projects

The findings obtained in this framework are shown in Table / Tablo 3. According to these results; it was found that the tendency towards models with a single lid appearance in the lid applications of the projects of the enterprises was found to be over 41.6%. In this case, it can be said that the enterprises in the Turkish culinary sector mostly work in parallel with the trends of the world in this area by studying models for single lid applications.

Table 3. Orientation to models with a single lid view in kitchen furniture projects (Uçar, 2016) Tablo 3. Mutfak mobilyası projelerinde tek kapaklı görünümlü modellere yönlendirme (Uçar, 2016)

| D' | Number of business | | | | | |
|------------------------|--------------------|-----------|--|--|--|--|
| Disposition situation | Item | Ratio (%) | | | | |
| Fixed (No Orientation) | 7 | 4.2 | | | | |
| On low level | 30 | 18.2 | | | | |
| On medium level | 59 | 35.8 | | | | |
| On high level | 69 | 41.6 | | | | |
| Total | 165 | 100 | | | | |

Findings for the increase and decrease ratios of the handle and hold applications in the kitchen furniture projects of the last 5 years, handless or hidden hand models are determined. According to these results; 26% of businesses indicated that the rate of increase remained between 1-10%, while 25% indicated that the rate of increase was between 41-50%. According to this; it can be said that there is usually an increase in handled or hidden handle applications in kitchen projects. In this context, it can be argued that the Turkish kitchen sector has developed its development towards the unsealed or hidden handle applications that are widespread in the world.

3.2.3 Special Designs in Kitchen Furniture Projects and Changes in Kitchen Units

In order to determine the changes in the kitchen furniture models of our country; "When you consider your kitchen furniture projects that you have produced in the last 5 years, the question is how is the special design in your models and the change in interior design?". The results of the findings obtained in this framework are given in Table / Tablo 4. According to this; It is indicated that the change in the interior decoration of the kitchen furniture models is 48.5% higher than that of the enterprises and 32.7% is the moderate change. It is seen that there is no change in only 2.4%. It is possible to say that this situation originates from the project type production (order type), which is dominant in the kitchen furniture sector.

In order to demonstrate the change in the kitchen furniture units, the question "How is the change in the kitchen furniture units when you consider your kitchen furniture projects in the last 5 years" is directed and the findings obtained in this frame are shown in Figure / Şekil 2. As can be seen from the data, the changes in the units that make up the kitchen furniture have emerged at least and mostly as follows.

Table 4. Special design in your kitchen furniture models and change in internal rendering (Uçar, 2016) Tablo 4. Mutfak mobilya modellerinizde özel tasarım ve dahili işleme değişikliği (Uçar, 2016)

| Changa laval | Number of business | | | | | |
|------------------------|--------------------|-----------|--|--|--|--|
| Change level | Item | Ratio (%) | | | | |
| Fixed (No Orientation) | 4 | 2,4 | | | | |
| On low level | 27 | 16,4 | | | | |
| On medium level | 54 | 33,7 | | | | |
| On high level | 80 | 48,5 | | | | |
| Total | 165 | 100 | | | | |

In the corner drawers, 62.4% of the businesses stated that there was no change. However, the change rate in the drawer units was 43% higher, 42.4% in the open shelf systems, 52.1% in the garbage units, 44.8% in the under-cabinet drawers, 82.4% and the rate of change in the bottle drawer is over 40%. As a result, according to the kitchen furniture projects of the last 5 years; it is observed that the changes in the use of lifting door systems, garbage units, under-drawer, drawer

cellar units and bottle drawers are experienced to a great extent. Corner drawers and open rack systems are the result of no change. In this case, it is seen that in the kitchen furniture sector, parallel to the trends in the world, it is applied in the lifting door systems in kitchen units. On the other hand, the kitchen furniture unit, which has had little or no change, is seen as corner drawers.

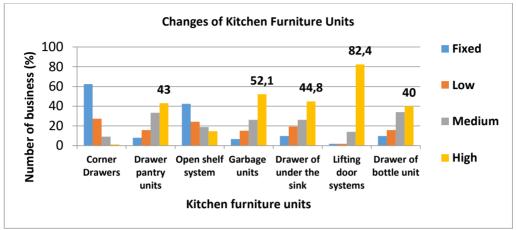


Figure 2. Graphical representation of change status of kitchen furniture units (Uçar, 2016) Sekil 2.Mutfak mobilya ünitelerinin değisim durumunun grafik gösterimi (Uçar, 2016)

3.2.4 Color Trends in Kitchen Furniture Projects (Orientations)

In order to determine the color preferences of the kitchen furniture, the enterprises were asked "the colors they preferred the most in their models according to the kitchen furniture projects they produced in the last 5 years" and the findings obtained in this context are determined as shown in Figure / Şekil 3. According to this, it is seen that the enterprises prefer the white color in the kitchen furniture projects (95.8%), then the cream color (48.5%) and natural wood colors (37.6%) respectively.

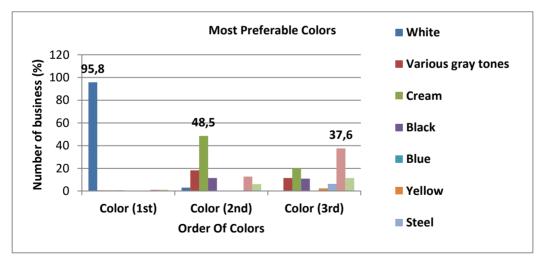


Figure 3. Distribution of colors that businesses preferences most in kitchen furniture projects (Uçar, 2016). Şekil 3. Mutfak mobilyaları projelerinde işletmelerin tercih ettiği renk dağılımı (Uçar, 2016)

3.3 Developments in Lower Cabinet and Sliding Door Designs in Kitchen Furniture Projects

In the case of kitchen furniture models, in order to determine the developments in the bottom cabinet designs, the enterprises were directed to the question "If you consider your kitchen furniture projects that you have produced during the last 5 years, please specify your designs in the door/drawer front design of the bottom cabinets. Findings obtained in this frame are shown in Figure / Sekil 4 is shown.

Vertical design (36.4%) and mixed design (46.1%) were preferred at moderate level, while vertical design was used most at 85.5% in front door/drawer front designs in bottom cabinets. These preferences are directly attributed to the developments and trends in the accessories sector.

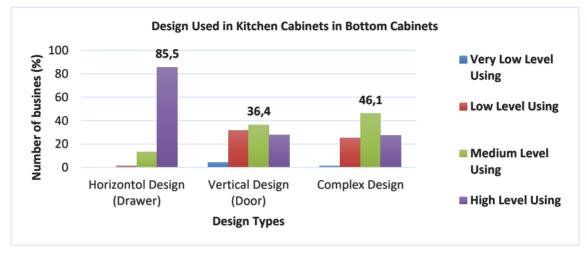


Figure 4. Distribution of use of door / drawer front designs in bottom cabinets in kitchen furniture models (Uçar, 2016) Sekil 4. Mutfak dolap modellerinde alt dolaplarda kapı / cekmece ön tasarımlarının kullanım dağılımı (Ucar, 2016)

On the other hand, in order to determine developments regarding the use of sliding doors in the kitchen furniture models, the question "How are the changes in sliding door usage in your models when you consider your kitchen furniture projects in the last 5 years?" Are addressed and the findings are as shown in Table / Tablo 5. Operationally, the most commonly used sliding door applications; If the results obtained for sliding door, folding sliding door and normal sliding system in the body are examined; It is stated that there is no change of 77% in the use of sliding lid in the trunk, only 3% of the change is too much change, 69,1% of the use of folding lid is not changed, and 7.3% It is seen that the usage in normal slider systems is not changed by 57.6% and it is changed by 13.3%. Other than these, the operators stated that they did not use any sliding covers (97%).

Table 5. Changes in the use of sliding door in kitchen furniture (Uçar, 2016)

| Tablo 5. Mutfak mobilyalarında sürgülü kapı kullanımındaki değisiklikler | (Hear | 2016) |
|--|-------|-------|
| Table 3. Mutak inconvalaring surguru kabi kunanningaki ucgisikiikici | ocar. | 40101 |

| | | xed hange) | | lestly nging | | nediate ange | | eding vels |
|-----------------------------|------|---------------|------|-----------------|------|-----------------|------|-----------------|
| Sliding Cover Models | | ber of iness | | ber of iness | | ber of iness | | ber of iness |
| | Item | Ratio (%) | Item | Ratio (%) | Item | Ratio (%) | Item | Ratio (%) |
| Body Slide Cover | 127 | 77 | 22 | 13.3 | 11 | 6.7 | 5 | 3 |
| Folding Sliding Door | 114 | 69.1 | 22 | 13.3 | 17 | 10.3 | 12 | 7.3 |
| Normal Sliding Systems | 95 | 57.6 | 24 | 14.5 | 24 | 14.5 | 22 | 13.3 |
| Other Sliding Door Systems | 160 | 97 | 4 | 2.4 | 1 | 0.6 | 0 | 0.0 |

According to this, it is seen that changes in the use of sliding doors are generally less in Turkey's kitchen sector. It has been argued that at the beginning of the reasoning of the business this is the production habits and the quality of the staff. In addition, it has been observed that large scale enterprises are the ones that indicate that there is too much change in these applications. In order to determine the developments of the hinge and closure systems used in the kitchen furniture, the questionnaire was directed to the question "How are the changes in the applications of completely brake

or extra brake hinges that you use in your models when you consider your kitchen furniture projects in the last 5 years" and the findings are given in Table / Tablo 6. According to this, it is found out that the use of hinges with brake or extra brake in kitchen furniture projects varies considerably by 84%.

Table 6. Fully-braked or change situation in additional brake hinge applications (Uçar, 2016)
Table 6. Ek fren mentese uygulamalarında tamamen frenlenmiş veya değiştirme durumu (Uçar, 2016)

| Change Lands | Number of business | | | | |
|--------------------|--------------------|---------|--|--|--|
| Change Levels | Item | Ratio % | | | |
| It does not change | 3 | 2 | | | |
| Less Changing | 5 | 3 | | | |
| Medium Changing | 18 | 11 | | | |
| High Changing | 139 | 84 | | | |

4. CONCLUSIONS

Reflections of world culinary trends in the production and projecting studies in the Turkish kitchen furniture sector are presented based on the levels of knowledge and preference change levels of the sector trends.

The results obtained in this framework:

- When we look at the level of knowledge of the country's kitchen furniture industry's development trends around the world; businesses often appear to have little or no information. However, it appears that the vast majority of businesses that have sufficient knowledge are comprised only of information obtained from domestic and international follow-up.
- According to the findings determined for the effect levels of the four main criteria such as consumer demand, housing plan, technology and material insufficiency, which are determined as effective factors in catching up and implementing development trends of enterprises; It was found that the consumer demand effect was the highest at 45.4%, while the housing plan was 22.4%, the technology insufficiency was 11.5% and the material insufficiency was 9.7%.
- The tendency towards the single cover models in the world kitchen furniture sector indicates that 41.6 % of the enterprises have a high tendency towards the findings of the reflections in the kitchen furniture sector of our country, whereas only 4.2% of the enterprises indicate that there is no direction in this issue. From here, it can be said that the enterprises in the Turkish culinary sector are working in accordance with the world trends in this area by producing models for single cover applications.
- According to the findings of the special design direction in the world kitchen furniture sector and the changes in the kitchen units for the reflections of our country in kitchen furniture production sector; It is stated that the special design of kitchen furniture applications and the change situation in interior designations are overrated by 48.5% of the sector. However, it has been found that there is no business in the sector that indicates that it has a special design patent or know-how.
- If the findings regarding the reflections of the changes in the color trends of the kitchen furniture in the world are reflected in the kitchen furniture sector of our country, White and tones are dominant as it is in the world (95.8%). This follows the preference of cream 48.5% and natural wood colors 37.6%, respectively. It has been noted by industry operators that these colors, which are determined to be applied in kitchen furniture, are generally preferred to bright tones, and also increase in different color applications in lower cabinets and upper cabinets.
- In parallel with the world trends, when the findings obtained in order to determine the designs used in the door/drawer front designs in the bottom cabinets in the kitchen furniture models are examined; In our country kitchen furniture sector, 85,5% horizontal design is used in bottom cabinet designs. In the last years, if findings obtained for the developments of the kitchen furniture industry in our country are evaluated, the brake hinges and closure systems. It is seen that the use of completely brake and wide-angle hinge systems is preferred by 84%.

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