

Activity situation analysis for production of furniture businesses

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Abstract

One of the greatest problems of developing countries is that they have limited sources. What is held should be optimally used as enrichment of sources and it requires a variety of long-term measures. Economic development of a country is merely possible with increase of production and income. With this study, production planning and control which is an irreplaceable function of production in businesses and of which requirement is felt more with time, analysis of activities and formation of substructure (field, construction, machine, personnel, market etc.) conditions for establishing a new furniture factory are enabled. Within this scope, feasibility studies should be conducted in detail for systematic functioning during establishment of the factory. 73% of said businesses state that they perform production planning, however it is of consideration that there are only a few utilizing professional management organization. It is inevitable that said businesses contribute to the sector in case of commencing mass production by overcoming financial deficiencies and adopting a way of increasing their capacities.

Keywords: furniture industry, production planning, smes, production.

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1. Introduction

Since the early ages, there have been production and change of goods and services for meeting limitless requirements of human being. These attempts have gone through various stages until reaching to an avant-garde and modern production system (Celikcapa, 2000). Production is one of the basics in development of a country. Production is one of the most important components of economy leading to employment and also contributing significantly to national income (Tanyas & Baskak, 2013). Production is called as generation of goods or services with the aim of meeting human needs. In explanations relating to production management, subjects will be handled which are related to situation in which a physical goods is present (Tekin, 2003). Production in the sense of conversion process is anticipated to be present since the initial days of human presence (Demirdogen & Kucuk, 2013). Physical units and arrangement of these in line with an aim are required for realization of the production. These physical arrangements should be organized to facilitate conversion into a product. Planning enables determination of product features and production areas with physical arrangements, placement of system facilities to be used and decision on other components enabling compatible operation of these (Yaman, 2011). First step in businesses is planning because everything is planned and designed in accordance with the product amount that can be sold. Generally, it causes damage to produce more products than that can be sold. Initially, customer mass, i.e., the amount that can be sold, should be determined, and situation in the market should be detected to establish a factory or business. It is highly important to observe and determine the products and features demanded in the market (Yaman, 2011). Planning for a business is a phenomenon comprising dynamism and continuity. A business without plan is like a sheering vessel (Celikcapa, 1999).

Production planning is a function determining production activities in the future and boundaries of its amounts. Production planning is a decision making procedure on production of products in a desired quality using existing sources of the business reasonably. In other words, production planning is composed of activities relating to desired amount, quality, place, time, people concerned, type and time of the production activities of the business (Tekin, 2003). Furniture sector is a field which is connected with many sectors, providing employment for people with different specialties and which is labor-, knowledge- and technology intensive. The furniture industry thought to be labor intensive with low technology and capital has become a knowledge- and capital-intensive sector by transforming rapidly in globalizing world with respect to previous years (Anonymous 1, 2015). Furniture sector has an important place among sectors with activity in Turkey manufacture industry. It is an important sector in terms of rate of exports meeting imports, branded companies, number of workplaces and rate of employment. Furniture sector may also supply materials such as solid wood, wood-based plates, fabric and leather products used in upholstery, all sorts of furniture equipment and accessories, paste, dye and lacquer required from national sources, excluding some special semi-finished products. Moreover, Turkey has made significant progresses in production of wood-processing machines in recent years. Production of CNC machines can be performed along with the production of all sorts of conventional machines used in plate-cutting, perforation and surface-side processing (Bal & Akkok, 2015). Turkey furniture sector advances from traditional production to modern production. This situation is seen more frequently in large and medium-sized businesses of the sector. Particularly, these sectors provide significant contributions to national economy along with sectoral development with being oriented towards corporate structure, following advanced technology, standardization, R&D activities, high production capacities and export possibility (Arslan, Sonmez & Gurleyen, 2009; Anonymous 2-3, 2013). Thus, a situation assessment of the businesses making production in furniture sector was performed in this study by researching whether these businesses perform in terms of market and demand research, technology, capacity and selection of site of establishment, product design and project design, production process, quality control and in-business organizations.

2. Material and Method

Turkish furniture sector has a structure having mostly workshop-type small businesses operating with traditional methods. On the contrary, transformation of small-sized businesses into medium and large-sized businesses has been experienced in the last 30 years in particular (Serin & Andac, 2012). On general assessment of the subjects relating to production managements for a business to carry out furniture production, the production planning should be regular and professional. In line with this scope, initially supply demand relationship in the market should be examined, needs should be detected and production capacity in line with these needs and afterwards region, province and specific location of establishment of the factors should be determined. Building of the factory should be constructed in light of plan-project to meet the demand. Machine selection should be made in accordance with the product to be used and machine arrangement should be done in accordance with required lines. Supply of material and personnel should be performed for production of the product compatible with the aim of the factory, and required arrangements should be made. Questionnaires were distributed to 100 businesses extending to Bursa (Inegol, centrum), Izmir (Centrum, Karabaglar), Mersin provinces to highlight the importance of information to be obtained relating to sectoral status of the businesses making furniture production in Turkey and to keep the information objective, however only 85 of these distributed questionnaires could be collected back. The questionnaires were filled with authorities to be applied one for each business and the obtained data were provided below in form of tables.

Table 1. Activity Situation Analyses of Businesses

Scale Questions	<u>Frequency</u>	<u>Percent (%)</u>
Activity Period of the Business		
0 – 2 Years	3	3.5
3 – 5 Years	3	3.5
6 – 8 Years	13	15.2
8 – 10 Years	8	9.4
11 and more	57	67
Others & Unanswered	1	1.1
Number of Employees in the Business		
1 – 9 between	33	38.8
10 – 19 between	27	31.7
20 – 29 between	13	15.2
30 – 39 between	5	5.88
40 – 49 between	2	2.35
50 and more	5	5.88
Ownership status of the Business		
Belonging to the company	24	28.2
Rent	53	62.35
Joint venture	8	9.4
Education Status of the Business Owner		
Primary school	9	10.5
Junior high school	23	27
Apprenticeship	8	9.4
High School	31	36.4
Vocation school	0	0
University	10	11.7
Unanswered	4	4.7
Management Type of the Business		
By owner	82	96.5
Professional Manager	3	3.5
Other	0	0
Establishment Reason of the Business		

Independent work request	39	45.8
The Absence another opportunity	9	10.5
Inheritance or transfer	3	3.5
Make Money Request for	49	57.6
Social Prestige	6	7
Others	11	12.85
Demand Research of the Business on Establishment		
Yes	29	34.1
No	56	65.9
Total	85	100

In the questionnaire study conducted, 67% of the businesses are businesses of 11 years and above, 15.2% of 6-8 years, 9.4% of 8-10 years, 3.5% of 3-5 and 0-2 years on examination of the activity periods of the businesses. On examination of the number of employees in the businesses, 38.8% have employee numbers of 1-9, 31.7% of 10-19, 15.2% of 20-29, 5.88% of 30-39 and 50 and above, 2.35% of the businesses employ 40-49 employees. On examination of the ownership status, 62.5% are seen to be renters, 28.2% to be owners and 9.4% to be common owners. On examination of the education status of the business owners, 36.4% are graduates of high school, 27% of secondary school, 11.7% of university, 10.5% of primary school and 9.4% of apprenticeship training. On examination of the management type of the businesses, 96.5% are managed by workplace owner and 3.5% by professional manager. Reasons of establishment of the businesses are stated as earning money by 57.6, independent working by 45.8, absence of any other choice by 10.5%, social status by 7%, legacy or assignment by 3.5% and other reasons by 10.5%. It is seen that 65.9% of the businesses conduct demand research on establishment of the businesses while 34.1 do not conduct the same.

Table 2. Analysis Assessment of The Businesses for Product Planning

Scale Questions	Frequency	Percent (%)
Settlement Type of the Business		
Workshop type settlement	69	81.2
Series production	16	18.8
Methods Used in Utilization of Designers in Production		
Technical Drawing	28	32.9
Manual Sketch Drawing	40	47.3
With Drawing Program	25	29.4
With Verbal and Practical Description	24	28.2
Other	1	1.2
Research and Development Activities in Businesses		
Yes	46	54.2
No	39	45.8
Material Stocks Required for Product		
Yes	55	64.7
No	30	35.3
Methods Used by Businesses Using Stock Application		
Visual control	39	45.8
Double Box Method	0	0
A – B – C Method	1	1.2
According to time of order	3	3.5
According to a certain order interval	4	4.7
Just-in-time stocking	8	9.41
Other	30	35.3
Production Planners		
Yes	62	72.9
No	23	27.1
Intervals of Production Planning		
Weekly	17	20

Montly	39	45.9
3 montly	5	5.9
6 montly	1	1.2
1 Year and more	0	0
Rates of Average Capacity Use		
0 – 25	4	4.7
26 – 50	7	8.2
51 – 75	58	68.2
76 – 100	16	18.82
Detection of Reasons of Business incapable of operating with full capacity		
Inability to supply regular raw material	14	16.5
Finance insufficiency	25	29.4
Difficulty of sales	22	25.9
Insufficiency of workforce	12	14.1
Transportation problem and/or costs	1	1.2
Pricing policy	3	3.5
In-plant arrangement (improper arrangement)	2	2.4
Quality	0	0
Competitors	4	4.7
Support of institutions	1	1.2
Others	40	47
Repair/Maintenances in the Businesses		
Thanks to employee responsible for the machine	25	29.4
In repair and maintenance unit	5	5.9
By outsourcing service	73	85.9
Total	85	100

81.2% of the businesses have the workshop-type settlement, 18.8% have the mass production settlement. 47.3% of the businesses use manual sketch drawing, 32.9% the technical drawing, 29.4% the drawing program, 28.2% the verbal or practical description method in design of the businesses.

54.2% of the businesses carry out the research and development activities while 45.8% do not carry out the same. 64.7% of the businesses stocks for the products to be used, 35.3% do not make the same. 45.8% of the stockers use the visual control, 9.41% the just-in-time stock, 4.7% the certain order interval, and 1.2% the A-B-C stock method. 72.9% of the businesses make the production planning regularly, 27.1% do not make the same. Intervals of production planning in the businesses are monthly for 45.9%, every 3 months for 5.9%, every 6 months for 1.2%. The rates of average capacity use in the businesses are 51-75(%) for 68.2%, 76-100(%) for 18.2%, 26-50 (%) for 8.2%.

Reason of inability to work full-capacity is the finance insufficiency for 29.4%, the difficulty of sales for 25.9%, the inability to supply regular raw material for 16.5%, the insufficiency of workforce for 14.1%, the competitors for 4.7%, the pricing policy for 3.5%, the in-plant arrangement (improper arrangement) for 2.4%, the absence of support of institutions for 1.2%, the transportation problem and/or costs for 1.2% and other reasons for 4.7%.

85.9% of the repairs in the businesses are performed by outsourcing service, 29.4% by the employee responsible for the machine and 5.9% by the repair and maintenance unit of the business.

Table 3. Professional Association Activities of the Businesses and Other Demographical Analyses

Scale Questions	Frequency	Percent (%)
Attendance to Professional Activities		
Yes	57	67
No	20	23.6
Unanswered	8	9.4
Rate of Faith into Activity of Professional Associations		
Yes	56	65.9
No	19	22.3
Unanswered	10	11.8
Distribution of Authorities Responding to Questionnaire in accordance with age		
11 – 19	0	0
20 – 29	18	21.3
30 – 39	42	48.2
40 – 49	19	22.3
50 and more	6	7
Period of Activity of the Authority Responding to Questionnaire in Furniture Sector		
0 – 2	1	1.2
3 – 5	3	3.5
6 – 8	3	3.5
8 - 10	7	8.3
11 and more	65	76.4
Unanswered	3	3.5
Total	85	100

67% of the businesses attend professional activities while 26.3% are stated not to participate in the professional activities. 65.9% believe that activities of professional institutions are beneficial while 22.3% do not believe the same.

Distribution of people responding the questionnaire in the businesses are as follows: 48.2% are in 30-39 age interval, 22.3% are in 40-49 age interval, 21.3% are in 20-29 age interval, 7% are 50 and above. They have a furniture sector experience of 11 years and above for 76.4%, 8-10 years for 8.3%, 6-8 years for 3.5%, 3-5 years for 3.5% and 0-2 years in 1.2%.

3. Results, Discussion and Suggestions

On interpretation of the data obtained from the questionnaire study applied to 85 businesses with the aim of collecting information about sectorial status of the businesses making furniture production, the activity period with 11 years and above activity period is 67%. It shows that the businesses are experienced.

63% of the businesses state that they continue their activities as renters, 66% that they did not perform demand research on establishing the business, 96% that it is managed by the business owner, 81% that they workshop-type settlement, 54% that they make research-developments activities and 65% that they make stocks.

73% of the businesses state that they make production planning, thusly they attach importance to the production planning. However, 19% work with full capacity, 30% could not work full capacity due to finance insufficiency, 86% overcome machine repair and maintenance by outsourcing service

and 76% of the authorities participating in the questionnaire have an activity period of 11 years and above in the sector, thusly being experienced in the sector.

Consequently, as seen above, a number of businesses perform production planning, however these are not performed properly and its disadvantages are experienced. The furniture businesses should go over finance insufficiencies, adopt mass production, look for ways for enhancing capacity, move forward new investments with the support of professional manager, they only thusly develop and provide better service.

Conflict of Interests

The authors declare no competing interests.

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