

A RESEARCH ABOUT THE PRODUCTION ACTIVITIES OF FOREST PRODUCTS INDUSTRY IN TURKEY

Erdoğan GAVCAR^(*)

Abstract: In this research a questionnaire was applied on 176 Forest Products (industries) concerning their production activities, and 138 of them answered the questionnaire. This questionnaire was administered to large-scale businesses in timber, furniture and paper industries, and to all in the chipboard, fiberboard and plywood industries.

According to the results obtained from the research 56% of forest products industries make mass-production, 38% order-based production and 6% batch production. Of these industries, 23% supply their products to workshops, and 39% to the buildings and 33% other, 5% residences. And raw material, labour and energy costs are most effective factors in determining the prices of products produced by forest products industries. While 31% of the businesses in this sector have no problems at production stage, 68% of them report that they do have problems. The problem of low quality raw materials takes the first place with 38%, and it is followed by lack of qualified labour with 31.5%.

Key Words: Forest Products Industry, Production Activities, Research, Questionnaire.

I. Intraduction

The production of forest products industries is divided into two main groups, namely as main and subordianate, and in forest products industry as main and by-products. It is also possible to classity these industries among themselves.

The main forest industries consist of timber, plywood, veneer, chipboard, parquet, empreny and match industries.

The forest sector supplies wood-based raw material to the above-mentioned industries and this study aims to investigate the production activities of these industries which process raw materials and serve their products to the market. In Turkey forest products industry is classified as private and public sector businesses.

II. Material And Method

First of all the purpose of this study is to evaluate the, situations problems and demands of forest products industry at production stage. For this reason not only does this study include all the chipboard, fiberboard, veneer and plywood bussinesses, but also large-scale timber, furniture and paper industries employing more than 50 workers.

^(*)Muğla Üniversitesi İktisadi ve İdari Bilimler Fakültesi İşletme Bölümü Öğretim Üyesi

The questionnaire was applied to all of the pre-determined managements by face to face communication or by mail. On the other hand the number of participant businesses was increased by re-mailing the managements which hadn't answered in first correspondence. Finally the results were obtained from the analysis of the data collected.

III. Findings And Discussion

As it was mentioned above, this study is based on a questionnaire applied on all of the public and large-scale privately-owned managements in Turkey. Of these managements, 138 had answered and returned the questionnaire. It is also notable that those which didn't answer the questionnaire are all privately-owned managements.

The number of the managements which participated in this study is shown in Table 1 according to the industry branches.

Table 1. The Number Of The Managements Which Participated In This Study and Answered the Questionnaire.

Although all of the public managements (100%) answered the questionnaire applied, 22% of the privately-owned ones did not. The highest participation was observed in the paper industry with 94%, and lowest in the furniture industry with 55%. This is mainly due to the absence of the public managements in the furniture industry.

The production types of forest products industries in Turkey were given in Table2.

Table 2. Production Types Of Forest Products Industries

Graph 1. Production Types Of Forest Products Industries (%)

While 56% of forest products industries carry out mass-production, 38% of them make order-based production and 6% batch production.

Of the public managements, 77% make mass-production and 16% order-based production. In private sector 46% of the managements make mass-production while 49% are carrying out order-based production.

Among these industries the highest level of mass production is seen in chipboard industry in private sector with 84%, and in timber industry in the public sector with 91% . On the other hand the highest level of order-based production is seen in the paper industry in private sector with 82% and in timber industry with 80%.

The production and sales of forest products industries are shown in Table 3.

Table 3. Number of the Products Produced by FPIM (%)

Graph 2. Number of the Products Produced by FPIM (%)

32 (23%) of the managements which participated and answered the questionnaire sell their products to workshop, 54 (39%) to the buildings, and 45 (33%) to the other markets. However, 50% of the public managements supply most of their products to the building sector. Meanwhile most of the private

managements in the paper industry choose other alternatives enabling them to sell their waste paper to corrugated cardboard, packing and box factories.

Table 4. The Factors Affecting Prices of Products Produced by FPIM(%)

According to the Table 4 raw material plays most important role in determining the prices of products produced by 14 managements (10%), and for 34 managements primarily raw material and then labour are two important determinants. Yet 42 managements (30%) take into consideration raw material, labour and energy costs while determining the prices of their products. The price determinants of 38 managements (27%) are raw material, energy and labour costs successively.

In the public sector raw material and labour costs are two important price determinants for 18 managements (41%), and raw material, labour and energy costs for 16 managements (36%). In the private sector raw material, labour and energy costs are two most important determinants for 36 management (38%) but 26 managements emphasize that raw material, labour and energy costs are most effective.

In determining prices raw material is the only effective determinant for 39 managements out of 44 in the public sector, and for all 94 managements in the private sector. It is also notable that raw material is the most effective price determinant for 133 managements over 138 which participated in this research.

On the other hand energy costs are the seconds most important price determinants for the products of paper industry.

According to these results raw material costs take the first place in determining the prices, and labour and energy costs the second. This also means that energy costs are as effective as labour costs. On the other hand it is worthwhile to note that energy costs in Turkey are comparatively higher.

Whether or not FPIM has any problem at production stage and if any, their order of importance were given in Tables 5, 6 and Graph 3.

Table 5. The Problems Seen in Production.

While 43 (31%) of 138 managements claimed that they had problems at production stage, 95 (69%) don't.

The results obtained from the questionnaire indicate that 35 management in the public sector (80%) and 60 managements (64%) in the private sector do have problems at production stage.

While the fiberboard section has most problems in this industry, the paper industry has the least.

Table 6. Problem Priorities in Production.

Graph 3. Problem Priorities in Production (%).

The most important problems to be noted are input of unqualified raw material with 37% and lack of qualified labour with 32%, and shortage of management capital with 19% and lack of technical equipment with 12%.

While unqualified material and lack of management capital with 37% are primary problems in the public sector, lack of qualified labour with 45%

and unqualified raw material are problem of high primery in the private sector.

The reason why unqualified raw material is a primary problem in the public sector is that the managements in this sector are forced to buy whatever raw material they find because of their high capacities.

In the light of these findings the most important problems of forest products industry can be listed as follows:

- Lack of high quality raw material
- Lack of standards in raw materials
- Absence of high-technology
- Capital
- High cost of production
- Lack of proper planning and programme in production and distribution.
- High cost of production
- Lack of proper planning and programme in production and distribution.
- High cost of Energy.
- Lack of qualified labour.

Table 1. *The Number of the Managements Which Participated in the Research and Answered the Questionnaire Applied.*

Industry Branches		The managements Which was applied answered the Questionnaire			The Management Which Participated in Research		
		Public	Private	Total	Public	Private	Total
Timber	Number	22	25	47	22	20	42
	Capacity (1000 m ³)	737	-	-	737	287.78	1024.78
Veneer	Number	3	25	28	3	14	17
	Capacity (1000 m ³)	6500	81740	88240	6500	50640	57140
Plywood (*)	Number	4	16	20	4	10	14
	Capacity (m ³)	21700	121400	143100	21700	97000	118700
Furniture	Number	-	18	18	-	10	10
	Capacity (m ² , Nbr)	-	-	-	-	10025000 565125	10025000 565125
Chipboard	Number	5	24	29	5	19	24
	Capacity (1000 m ³)	144	1634.2	1778.2	144	1287.2	1431.2
Fiberboard	Number	2	5	7	2	4	6
	Capacity (1000 m ³)	35	454	489	35	424	459
Paper	Number	8	19	27	8	17	25
	Capacity (1000 ton)	634	757.3	1391.3	634	672.3	130.3
Total		44	132	176	44	94	138

(*) Both Plywood and Contrtable are Utilised Together. Nbr: Number

Table 2. *The Production Types of FPIM*

Industry Branches	Order-Based Production		Batch Production		Continuous Production	
	Public	Private	Public	Private	Public	Private
Timber	1	16	1	1	20	3
Veneer	1	7	-	-	2	7
Plywood (*)	1	3	-	2	3	5
Furniture	-	4	-	1	-	5
Chipboard	1	2	2	1	2	16
Fiberboard	1	-	-	-	1	4
Paper	2	14	-	-	6	3
Total	7	46	3	5	34	43
General Total	53		8		77	

Table 3. *Number of the Products Produced by FPIM (%)*

Industry Branches	Workshop		Residences		Buildings		Other	
	Public	Private	Public	Private	Public	Private	Public	Private
Timber	5	2	-	-	16	14	1	4
Veneer	1	2	-	-	1	8	1	4
Plywood	-	3	-	-	2	5	2	2
Furniture	-	1	-	7	-	1	-	1
Chipboard	1	8	-	-	1	4	3	7
Fiberboard	1	3	-	-	1	-	-	1
Paper	-	5	-	-	1	-	7	12
Total	8	24	-	-	22	32	14	31
General Total	32		7		54		45	

Table 4. *The Factors Affecting Prices of the Products Produced by FPIM %)*

Industry Branches	1		12		14		124		142		421	
	Pb	Pv	Pb	Pv	Pb	Pv	Pb	Pv	Pb	Pv	Pb	Pv
Timber	3	7	12	3	-	-	7	8	-	2	-	-
Vencer	-	1	2	-	-	3	1	4	-	6	-	-
Plywood	-	-	2	-	-	-	2	4	-	6	-	-
Furniture	-	1	-	7	-	-	-	-	-	2	-	-
Chipboard	-	-	2	6	-	1	2	4	1	8	-	-
Fiberboard	-	2	-	-	-	1	2	-	-	1	-	-
Paper	-	-	-	-	-	-	2	6	1	11	5	-
Total	3	11	18	16	-	5	16	26	2	36	5	-
General Total	14		34		5		42		38		5	

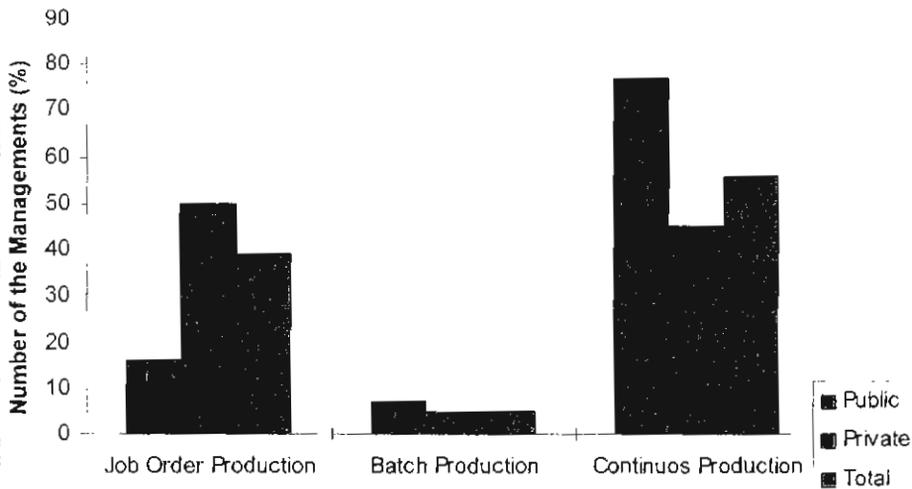
Table 5. *Problems Observed in Production*

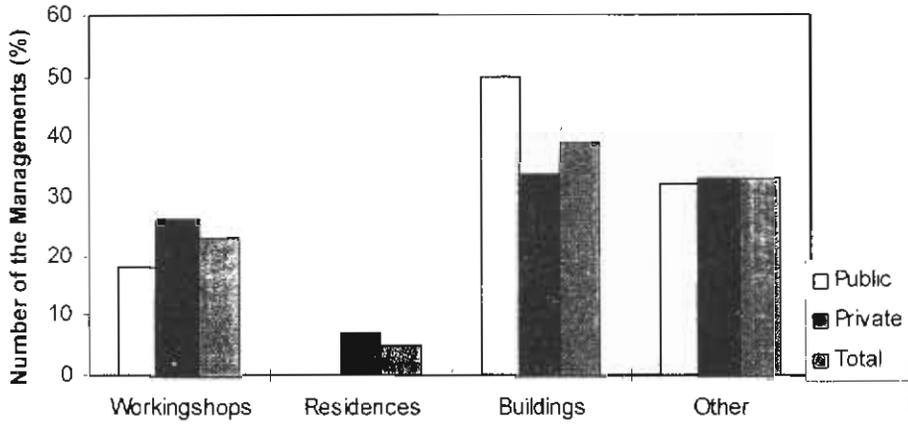
Industry Branches	No Problem		Problem	
	Public	Private	Public	Private
Timber	2	9	20	11
Veneer	1	3	2	11
Plywood	1	3	3	7
Furniture	-	4	-	6
Chipboard	1	7	4	12
Fiberboard	-	-	2	4
Paper	4	8	4	9
Total	9	34	35	60
General Total	43		95	

Table 6. *The Presence of Problems in Production*

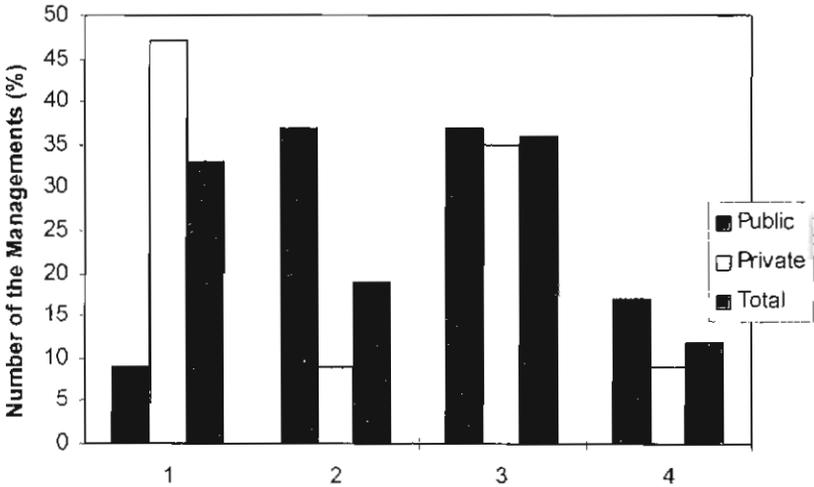
Industry Branches	1		2		3		4	
	Pb	Pv	Pb	Pv	Pb	Pv	Pb	Pv
Timber	2	5	12	2	4	3	2	1
Veneer	-	2	-	-	2	8	-	1
Plywood	-	6	1	-	1	1	1	-
Furniture	-	5	-	-	-	1	-	-
Chipboard	-	4	-	1	3	6	1	1
Fiberboard	-	-	-	-	1	3	1	1
Paper	1	5	-	2	2	1	1	1
Total	3	27	13	5	13	20	6	5
General Total	30		18		36		11	

1. Lack of qualified labour,
2. Lack of management capital,
3. Input of unqualified raw material,
4. Lack of technical equipment.

Graph 1. *Production Types Of Forest Products Industries (%)*



Graph 2. Number of Products Produced by FPIM (%)



Graph 3. The Presence of Problems in Production (%)

Özet: Bu arařtırmada 176 Orman Ürünleri Endüstri İřletmesine üretim faaliyetleri ile ilgili olarak anket çalıřması yapılmıř, bunların 138 'i ankete cevap vermiřtir. Anket çalıřması büyük ölçekli kereste iřletmelerine, mobilya ve kağıt endüstrisi ile bütün yonga levha, lif levha ve kaplama endüstri iřletmelerine uygulanmıřtır.

Arařtırma sonucuna göre orman ürünleri endüstri iřletmelerinin %56 'sı seri üretim yaparken %38 'i sipariře göre üretim, %6 'sı her ikisini birlikte yapmaktadır. Bu endüstrilerin %23 'ü diđer iřletmelerin hammaddede ürünlerini üretirken %39 'u inřaat sektörüne, 33% 'ü diđer sektörlere, 5% 'i konutlara üretim yapmaktadır. Orman ürünleri endüstrisinde üretilen ürünlerin fiyatlarının belirlenmesinde hammadde, iřgücü ve enerji maliyetleri en etkili faktörlerdir. Ankete katılan iřletmelerin %31 'i bu sektörde üretim problemlerinin olmadıđını, %69 'i ise üretimde problemlerinin olduđunu belirtmiřlerdir. Bu problemlerin bařında %38 ile ilk sırayı düşük kalitedeki hammaddeler alırken, bunu %31.5 ile kaliteli iřgücü eksikliđi izlemektedir.

Anahtar Kelimeler: Orman Ürünleri Endüstrisi, Üretim Faaliyetleri, Arařtırma Anket