

## Analyzing Marketing System of Rice in Punjab, Pakistan

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**Abstract:** Total geographical area of Pakistan is 79.61 Million hectares out of which the area under cultivation is 22.04 million hectares. In this cultivated area 8.9 million hectare is used for crop cultivation and rice covers 10% (0.89 million hectare) of this area. This study general objective is to investigate the marketing chain of rice in Lahore and Gujranwala districts of Punjab, Pakistan. These Study areas were selected purposively which are the best rice producing regions. Specifically, this study proposed on the basis of marketing system upgrading; analyze marketing system of the rice economic efficiency; assessing the sharing of profits and margins and; identify problems and recommend the appropriate measures to improve marketing system of rice. Questionnaires were well developed and pre-tested. Primary data were collected from 2 major rice producing districts in which Lahore and Gujranwala were included and in which 110 rice actors were selected for the investigation. In addition, personal interviews were undertaken with 110 selected key actors along with the chain i.e. Farmers, commission agents/wholesalers (paddy rice), millers, wholesalers (edible white rice) and retailers. Analysis of data involved some different techniques like players' linkage matrix, profitability analyses and marketing margin. It was found that the wholesalers enjoying the greatest share of marketing margin as compared to the farmers. This indicates unfair distribution of the benefits between actors, where reward toward traders were very higher than producers. The net margin of producers was 627.21, the net market margin of commission agents/wholesalers (paddy rice) were 82.33, the net market margin of miller was 630, the market margin of wholesalers (edible white rice) were 62.5 and net margin of retailers were 682 RS/ 40 This education recommended trained labor in the field and farmer's education. This study also recommended the government to make the policy in such a manner to distribute the fair shares between all the actors which they deserve. Moreover, lack of suitable agricultural infrastructure as well as the systems of market information was detected to be policy concerns critical areas. Policies for providing the subsidies and microcredit institutions proceeding credits provision to rural growers were also suggested to improve the productivity of rice through capacitating smallholder growers to use up-to-date agricultural machinery. Appropriate statistical techniques had been employed to analyze the collected data in order to evaluate the marketing system of rice in Punjab.

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**Key words:** Rice, Punjab, Marketing chain.

### 1. Introduction

Pakistan has a population of 191.7 million and major part of this population belongs to the rural area, which is estimated two-third (116.5 million) of the total population. Agriculture sector is known as a backbone of our economy which includes livestock, grain crops and horticultural products. 20.9% of total GDP (gross domestic product) and 30% of total GNP (gross national product) is added by the Agricultural sector (GOP, 2015). Every agriculture commodity has its own marketing system. Marketing is a core concept which has three main categories. (1) Market segmentation, Target market; Positioning; In a broad sense marketing of agricultural products have four main strategies which are also known as 4Ps: I)

Product ii) Price. iii) Place. iv) Promotion (Annie, 2002).

Rice (*Oryza sativa*) is a Staple foodstuff for Greater than half of the world's population, especially in Asia greater than 200 billion people obtain their calories about 60-70% from rice as well as its products (FAO, 2004). Total value of rice which Pakistan contributes in agriculture sector is 3.2% and in total gross domestic product (GDP) share is 0.7%. Rice is the 2<sup>nd</sup> important staple grain crop after wheat in Pakistan. According to Area terms rice is the 3<sup>rd</sup> largest crop sown in Pakistan after the wheat and cotton. It covers over 10% of the total cropped area in Pakistan. Pakistan stands at 4<sup>th</sup> in all over the world after China, India and Indonesia (FAOs, 2015). Super Kernel Basmati, Pk-385 basmati rice, super basmati,

pk-198 basmati rice and some other varieties are sown in Pakistan. Rice value chain study will classify the zones where the Pakistan might add value alongside the global value chain of rice.

Rice is the greatest one popular crop which is grown in Pakistan. In certain areas it has shifted slightly from existence a mere cereal crop to the commercial one. This is all due to its demand on behalf of the both external and internal market is growing with time. The key factors for the presence of massive rice supply are the climatic conditions and favorable land availability to produce paddy, as well as production diversification from cash crops to the food crops. Because all its increasing production and popularity over time, rice has a potential to get significant deviations in the income of rural Pakistan. Despite this potential chain of the rice marketing is poorly systematized. In traditional marketing system, growers grow their commodities after that these commodities are pushed into marketplace. Farmers are usually isolated from final consumer as well as have small regulator over input profit or costs expected for their things. A selling system of the most traditional farmers inclines to receive least profit (RIU, 2010).

There is insufficient knowledge particularly on the learning area, on how the market of rice is organized, how the numerous key players are acting in distribution terms of gains alongside with the chain. In our country actors are facing many challenges along with the value chain of rice and their possible results are not visibly known. Thus, sub sector of this study on rice is important therefore as to deliver insights on marketing channels and conduct, accrued distribution benefits as well as associated challenges. The main objective of this research to examine the marketing chain of rice in two districts of Punjab like Gujranwala and Lahore, as well as recommend policy methods for improving the marketing system of rice efficiency in these study areas.

## 2. Methodology

### 2.1. Study Area

In the Punjab province a district of Gujranwala and Lahore was selected because Rice, sugarcane and wheat are the major grown crops in these districts. Wheat and Rice are the two main food crops however rice governs with the 1.8 million foreign exchange earnings. Besides, Bajra, Jawar, Moong, Mash sunflower and mustard are also cultivated in a small quantity.

### 2.2. Justification for Selecting the Study Area

Conducted of this study were two different districts Gujranwala and Lahore. These districts belong towards the extremely agriculture productive zones in Punjab. In Punjab, rice has stimulated from

being a food crop toward commercial crop, paying a momentous number of individuals in various activities. Rice is the top priority crop receiving severe attention from domestic government as well as other development shareholders due to reduction of its prospective in poverty. In a manner, this study furthermore targeted at breaking habit of numerous researchers to deliberate on easily reached areas and places alongside the central roads, as well as it was revealed that no experimental research was completed in the sub-sector of rice in these regions.

## 2.3. The Research Design

### 2.3.1. Sources and types of data

Both primary as well as secondary sources were used to collect the information for this research. Primary information's were collected directly from the field respondents during the study. Primary data Sources were the farmers, commission agents/wholesalers (paddy rice), rice millers, wholesalers (edible white rice) as well as retailers. Secondary type data were attained from the materials of web based, Bureau of statistics, United Nations Organization of Food as well as Agriculture (FAO), Economic survey of Pakistan, Social and Economic Research Foundation (SERF) as well as from the Food security and ministry of agricultural information office.

### 2.3.2. The Sampling procedures

In this research simple random sampling was applied during selecting the districts as well as respondent process. Simple approach was working to get diverse and detail information on value chain of the paddy and rice. According toward the Kabuje (2008), simple approach was useful in the estimated information of the triangulating reliability. It is normal for researchers towards employ mixed technique designs to examine same phenomenon of the dissimilar aspects.

### 2.3.3. Distribution of respondents by districts

District	Counts	Percentage
Gujranwala	10	50
Lahore	10	50
<b>Total</b>	<b>20</b>	<b>100</b>

From the farmers, data related towards production as well as paddy sales, access towards the markets and inputs of agriculture, accessibility to the extension services as well as exercise were collected. Others are demographic and socioeconomic information valuable for learning the participation and productivity determinants in the marketing.

### 2.3.4. Distribution of respondents by categories in selected areas

Actors	No. of respondents
Commission agents/wholesalers (paddy rice)30	
Millers	10
Wholesalers (edible white rice)	20
Retailors (vendors)	30
<b>Total</b>	<b>90</b>

This completed sample size commencing the primary information source being 110 respondents. Producers were interviewed towards capture the info on in what way desire is come across in standings of the product output (price) preferences. Data from these groups was recorded from domestic markets, region markets as well as domestic milling machines constructed on the semi-structured interviews (checklists) as well as personal observations. It was originating that all actors were determined in city towns and in some measure in villages particularly in peak season.

### 2.3.5 Sources of secondary data

These types of data were gained from libraries, literatures of web-based and value chains past studies in Pakistan and world other places. Research on the Poverty Alleviation (REPOA), Social and Economic Research Foundation (ESRF) and office of the Vice Presidents' were used on the way to obtain poverty and income data status in Pakistan Economic survey of Pakistan Bureau of statistics, United Nations Organization of Food as well as Agriculture (FAO). In Pakistan, Ministry of the agriculture information Centre was convenient in obtaining numerous statistics related towards paddy production. Existing studies from the electronic web-based resources were reviewed consequently.

### 2.3.6 Qualitative analysis

#### 2.3.6.1 Marketing chain mapping

Marketing chain Mapping of Stakeholders was used on the way to define the identified rice channels. In link with these, actors' linkage atmosphere was used in the direction of define the activities combination and relationships amongst actors themselves. In fact, each actor conventionally has a relation with other actors, on the other hand this matrix defines solitary whatever was found now the search area. Though matrix looks to be alike towards actor's map linkage, the previous is more broad and descriptive as associated to link map. Existence of the 2 provides detailed relationships information calculated in this effort. In some studied empirical studies, used linkage matrix by the Astewel Takele (2010) in his research on rice marketing chain and profitability analysis in the Ethiopia of Fogera Woreda, Similarly, Stephen Biggs as well as Harriet

Matsaert (2004) useful this technique while they were increasing poverty reduction programs through using actors' concerned with method in natural assets in Bangladesh.

### 2.4. Descriptive statistics

Descriptive statistics used in the frequency distribution as well as average form and for analysis of the socio-economic characteristics as well as market margins of each and every actor in the supply chain in terms of the services provided. This formula was used for understanding.

$$F = X / N * 100$$

Where

F= Frequency distribution

X= Observed Values

For Average Calculation this Formula was used

$$AM = \text{Submission } X / N$$

Where

A M = Arithmetic mean

X = Values of observations

N= Total numbers of Observations

### 2.5. Margins Analysis

Margins of complete supply chain are spread over the whole supply chain system as well as different actors receive different margins according towards the services providing. Margins or Profit or is the difference between sale price of the produce as well as purchase price of the produce after subtracting the marketing cost.

$$\text{Gross Marketing Margin} = SP - PP$$

Where

SP = Sale Price

PP = Purchase Price

$$\text{Percent Marketing Margin} = GMM \div ASP * 100$$

Where

GMM = Gross Marketing Margin

ASP = Average Sale Price

$$\text{Net Margin} = GMM - MC$$

Where

GMM = Gross Marketing Margin

MC = Marketing Cost

$$\text{Net profit as percentage of margin} = NM \div GMM * 100$$

Where

NM = Net Margin

GMM = Gross Marketing Margin

$$\text{Net profit as percentage of sale price} = NM \div ASP * 100$$

Where

NM = Net Margin

ASP = Average Sale Price

## 3. Results And Discussion

**Distribution of farmers According to their age**

Age	Frequency	Percentage
20-25.	3	15
26-30.	5	25
31-35.	7	35
36-40.	4	20
41-45.	1	5
<b>Total</b>	<b>20</b>	<b>100</b>

**Distribution of farmers According to their Education**

Education	Frequency	Percentage
Illiterate	0	0
5 years	11	55
8 years	5	25
10 years	2	10
<b>Total</b>	<b>20</b>	<b>100</b>

**Distribution of farmers regarding their Farming Experience**

Experience	Frequency	Percentage
1-5.	6	30
6-10.	4	20
11-15.	5	25
16-20.	4	20
21-25.	1	5
<b>Total</b>	<b>20</b>	<b>100</b>

It was initiated that age configuration in the research area mainly focused on 31 to 35 years, which are contributed 35% for the production of rice. As per works, the section has perception, is visible as well as has capability to solve the problems (Williams et al., 2012). In between 26 to 30 was 25% to produce rice in these research areas. In the study areas most of the farmers are uneducated they do not have any knowledge about the new technology and they do not take any advantage from the latest farming techniques. Due to this lack of education, our farmers are having low yield as compared to the other progressive countries. Educated farmers easily be adopting latest as well as existing practices of the production and so results in increased the output sold amount. Experience of farming is a very important key factor in the farming of staple food as well as grain marketing. In these study areas, most of the farmers were having great experience for example an average of farmers every farmer having some experience some have in a great amount and some were in less.

In a Pakistan most of the farmers having small land of farming. In these research areas most of the farmers were small irrigation land in which the big contribution were the 1 to 15 acres those percentages were 90% and the remaining were the above than 15 acres. According towards the study findings, 40% of the farmers in these study areas cultivated the paddy crop on the area of 6 to 10 acres, 35% farmers had

paddy area of the 1 to 5 acres and 25% farmers cultivated paddy crop on an area of 25% had grown paddy on an paddy cultivated area 11 to 15 acres.

**Distribution of farmers regarding their Farming Land**

Land	Frequency	Percentage
1-5.	4	20
6-10.	6	30
11-15.	6	30
16-20.	4	20
<b>Total</b>	<b>20</b>	<b>100</b>

**Distribution of farmers regarding their Paddy cultivation**

Paddy	Frequency	Percentage
1-5.	7	35
6-10.	8	40
11-15.	5	25
<b>Total</b>	<b>20</b>	<b>100</b>

**Distribution of commission agents according to their Age**

Age	Frequency	Percentage
20-25.	4	13.
26-30.	2	6.666667
31-35.	12	40
36-40.	2	6.666667
41-45.	6	20
46-50.	2	6.666667
51-55.	2	6.666667
<b>Total</b>	<b>30</b>	<b>100</b>

**Distribution of commission agents according to their education**

Education	Frequency	Percentage
Illiterate	4	13.33333
5 years	6	20
8 years	14	46.66667
10 years	4	13.33333
12 years	2	6.666667
<b>Total</b>	<b>30</b>	<b>100</b>

According to the below table mature persons at the age of 31 to 35 years were run this business those contribution was 40%. According to the below table clearly shows that mostly mature persons are interlinked with this business due to their rural background and their experience in this field.

Commission agents/wholesalers (paddy rice) education plays a dynamic role to understand the marketing activities as well as education also helps the commission agents/wholesalers (paddy rice) to increase their purchase by making linkages with the big millers. In these study areas most of the commission agents are uneducated or middle pass they do not have a lot of knowledge about the new

policies. In addition, these commission agents/wholesalers (paddy rice) not having any knowledge about the world paddy demand so they earn less profit due to their lack of knowledge.

### 3.1. Experience of the Commission agents/wholesalers (paddy rice)

Experience	Frequency	Percentage
1-5.	8	26.66667
6-10.	10	33.33333
11-15.	4	13.33333
16-20.	2	6.66667
21-25.	2	6.66667
26-30.	4	13.33333
<b>Total</b>	<b>30</b>	<b>100</b>

Experience in every field is very important factor if you are having less experience then there are many problems for you and the other and if you are having no experience then you are not retaining this business more time as well as you are having greater experience then you are the most successful businessperson in this field and any field. According to my analysis experienced persons are involved in this business every commission agent/wholesaler (paddy rice) having some experience. Due to their experience, commission agents/wholesalers (paddy rice) earn more profit.

### 3.2. Socio economic characteristics of Millers

Age	Frequency	Percentage
25-30.	3	30
31-35.	1	10
36-40.	3	30
41-45.	1	10
46-50.	2	20
<b>Total</b>	<b>10</b>	<b>100</b>

#### Distribution of Millers According to their Education

Education	Frequency	percentage
10 years	1	10
12 years	2	20
14 years	2	20
16 years	5	50
<b>Total</b>	<b>10</b>	<b>100</b>

#### Distribution of Millers regarding their Experience

Experience	Frequency	Percentage
1-5.	4	40
6-10.	2	20
11-15.	2	20
16-20.	2	20
<b>Total</b>	<b>10</b>	<b>100</b>

Age is a very important socio-economic variable. Age Affects the Person's attitude. According to the below table persons at the age of 31 to 35 years and 25 to 30 were mostly run this business those

contribution was 60%. According to the below table clearly shows that mature any age of persons are interlinked with this business. Miller's education plays a dynamic role to understand the marketing activities as well as education also helps the Millers to increase their purchase by making linkages with the big traders and the world trade exporters. According to my analysis, most of the Millers were well educated and they had enough knowledge about the internal and external markets. This is the reason in a Pakistan rice mills earn more profit. According to this analysis experienced persons are involved in this business every miller having some experience. Due to their experience, millers earn more profit.

### 3.3. Socio economic characteristics of Wholesalers (edible white rice)

Age	Frequency	Percentage
20-25.	2	10
26-30.	3	15
31-35.	5	25
36-40.	5	25
41-45.	3	15
46-50.	1	5
51-55.	1	5
<b>Total</b>	<b>20</b>	<b>100</b>

#### Distribution of Wholesalers According to their Education

Education	Frequency	Percentage
5 years	1	5
8 years	6	30
10 years	6	30
12 years	6	30
14 years	1	5
<b>Total</b>	<b>20</b>	<b>100</b>

#### Distribution of Wholesalers regarding their Experience

Experience	Frequency	Percentage
1-5.	7	35
6-10.	2	10
11-15.	3	15
16-20.	4	20
21-25.	2	10
26-30.	2	10
<b>Total</b>	<b>20</b>	<b>100</b>

According to the below table persons at the middle-aged 31 to 40 years were mostly attached a business those contribution was 50%. According to the below table clearly shows that mature any age of persons are interlinked with this business. In these study areas, most of the wholesalers are educated but not much. According to my analysis, most of the Millers are educated and they had knowledge about the internal and external markets. This is the reason in



wholesalers earn more profit. According towards this analysis more experienced individuals are linked this business each wholesaler having certain experience. Due toward their experience, wholesalers get more profit.

### 3.4. Socio economic characteristics of the Retailers

Age	Frequency	Percentage
15-20.	7	25
21-25.	7	25
26-30.	13	45
31-35.	3	5
<b>Total</b>	<b>30</b>	<b>100</b>
Distribution of Retailers According to their Education		
Education	Frequency	Experience
5 years	6	15
8 years	13	50
10 years	8	30
12 years	3	5
<b>Total</b>	<b>30</b>	<b>100</b>
Distribution of Retailers regarding their Experience		
Experience	Frequency	Percentage
1-5.	18	60
6-10.	12	40
<b>Total</b>	<b>30</b>	<b>100</b>

According towards my survey finding 25% retailers were lesser than 20 years, 25% retailers were in the age limit of 21 to 25 years, 45% were fell into the age limits of 26 to 30 years, as well as 5% were into the 31 to 35 years. Retailers education are represented through capital of human helps towards

Items Rs/maund
Farmers average production yield /acre = 42.9
Farmers average production cost = 547.79
Average sale price of the farmers = 1175
Net Margin = average sales price of farmers - Farmers average production cost 1175 - 547 = 627.21

Our farmers used traditional methods they do not used the new technologies some of them know about new technologies. This is the reason our production is lesser than the advanced countries. One of the main reason our farmers having lack of credits, due to lack of credit they do not perform too much activities in the marketing chain. According to analysis, average yield of paddy per acre was 42.9 and the total

the comprehend market as well as business activities like markets as well as fluctuations of price effects buying grain decisions. According to my analysis results, primary passed retailers were 15%, a big contribution of middle passed retailers those were 50%, and up to matric level 30%. As well as only the 5% retailers those educations, level goes up to the intermediate.

### 3.5. Experience of the Retailers

Retailers business experience is directly related towards the business success as like it help business owners towards generate the profits as well as risks evaluate through using different statistical methods like as for market speculation and casting activities (Hewapathirana, 2009). The results indicated that 60% retailers had experience 1 to 5 years the remaining 40% retailers had experience 6 to 10 years.

### 3.6. Marketing Margins and different cost incurred by different stakeholder's works in the marketing chain of RICE

Farmers are playing very vital role in the production of the paddy rice. After the farmer's commission agents/wholesalers (paddy rice) plays their role in the marketing system of rice. Pre-harvest commission agents/wholesalers are those who buying the farmers yield in the fields and they carry the yield into the rice processing mills. Afterwards the paddy come into the rice mills they are doing their actions and change the paddy into the rice. Then the next rice marketing chain actor is a wholesaler who purchase the rice in a bulk quantity and sell this quantity to the traders and different retailers. Finally, the last step are the retailers who purchase the great quantity and sell the households.

#### 3.6.1 Average Marketing cost and profit of Rice Farmers in Punjab, Pakistan.

expenses average per maund was 547.79. Finally, the sale price of a farmer was an average of per maund was 1175. According to this analysis farmer earns profit 627.21. This margin is very suitable as compared with the other crops.

#### 3.6.2 Average Marketing cost and profit of Rice Commission agents/wholesalers (paddy rice) in Punjab, Pakistan.

Items	Rs/maund
Average sales price of the farmers is the purchase price of the commission agent/wholesaler	
Average purchase price of the commission agents	= 1175
Average marketing cost of the commission agents	= 92.67
Average sale price of the commission agents	= 1350
Gross marketing Margin	= Sale Price – Purchase Price = 1350 - 1175
Gross marketing margin	= 175
Percent Marketing Margin	= Gross Marketing Margin / Average sale price * 100 = 175 / 1350 * 100
Percent Marketing Margin = 12.97	
Net Margin	= Gross Marketing Margin – Marketing Cost = 175 - 92.67
Net Margin	= 82.33
Net profit percentage of margin	= Net margin / Gross marketing margin * 100 = 82.33 / 175 * 100
Net profit percentage of margin	= 47.04
Net profit percentage of sale price	= Net Margin / Average sale price * 100 = 82.33 / 1350 * 100
Net profit percentage of sale price	= 6.10

Two types of the commission agent's one of them purchase the crop in the fields and secondly who purchase the crop when it harvested. In a Pakistan, commission agents are not well educated but they earn suitable profits. According to the above analysis, commission agents purchase the crop from farmers at the price of 1175 per maund. After purchase, he carried out their yield into the rice mills and this all done by paying some cost, which was 92.67 and sold out this yield at the price of 1350. Average of all the

commission agents earning the gross marketing margin was 175 rupees, which was very suitable because their practices are very less and marketing margin in a percentage was 12.97%. Net margin of a commission agent/wholesaler (paddy rice) according to their sales was very great 82.33 rupees and net profit percentage was 47.04%. Net profit sales percentage was 6.10 rupees.

### 3.6.3 Average Marketing cost and profit of Rice Millers in Punjab, Pakistan.

Items	Rs/maund
Average sale price of a commission agent/wholesaler (paddy rice) is the purchase price of miller	
Average Purchase price of a miller	= 1350
Average marketing cost of the Miller	=1675
Average sale price of a Miller	=3655
Gross marketing Margin	= Sale Price – Purchase Price =3655 – 1350
Gross marketing Margin	=2305
Percent Marketing Margin	= Gross Marketing Margin / Average sale price * 100 = 2305 / 3655 * 100
Percent Marketing Margin	=63.06
Net Margin	= Gross Marketing Margin – Marketing Cost = 2305 - 1675
Net Margin	= 630
Net profit percentage of margin	= Net margin / Gross marketing margin * 100 = 630 / 2350 * 100
Net profit percentage of margin	= 26.80
Net profit percentage of sale price	= Net Margin / Average sale price * 100 = 630 / 3655 * 100
Net profit percentage of sale price	= 17.24

Millers are the third main marketing chain actors. They are doing the major actions to altered the paddy into the rice. Millers doing many actions like

refining, coloring, processing and separation the by-products like broken rice husk oil etc. We also say that the major activity in the marketing chain is

processing of rice. Millers purchased the paddy from the commission agents/wholesalers (paddy rice) at the average price of 1350 per maund as well as the sold the rice at the average price of 3655 per maund. Average of the marketing cost, processing cost and all the other costs were 1675 rupees. Average gross marketing margin was 2305 rupees, which was very high regarding to the other marketing chain actors

margin as well as the percentage of this marketing chain margin was 63.06 percent. Net margin of the millers were 630 rupees and in a percentage, this was 26.80 percent. Finally, the net profit percentage of the sale price was 17.24%.

### 3.6.4 Average Marketing cost and profit of Rice Wholesalers (edible white rice) in Punjab, Pakistan.

Items	Rs/maund
Average sale price of the miller is the purchase price of the wholesaler (edible white rice)	
Average Purchase price of a wholesaler	= 3655
Average marketing cost of the wholesaler	=10
Average sale price of a wholesaler	=3727.5
Gross marketing Margin	= Sale Price – Purchase Price = 3727.5 – 3655
	=72.5
Percent Marketing Margin	=Gross Marketing Margin / Average sale price * 100
Percent Marketing Margin	=1.95
Net Margin	= Gross Marketing Margin – Marketing Cost = 72.5 - 10
Net Margin	= 62.5
Net profit percentage of margin	=Net margin / Gross marketing margin * 100 =62.5/72.5* 100
Net profit percentage of margin	=86.20
Net profit percentage of sale price	=Net Margin / Average sale price * 100 = 62.5/ 3727.5 * 100
Net profit percentage of sale price	=1.68

Wholesalers (edible white rice) are the key players in the marketing chain. All the trade depends upon the wholesalers because wholesalers (edible white rice) having links both with the external and internal traders. Some wholesalers are also direct links with the world rice market. Wholesalers in a Pakistan earn more profits regarding to other chain actors. According to the above analysis, wholesalers purchased the rice from the millers at the average price of 3655 rupees and sold out this at average price

of 3727.5 rupees. Average of the all-marketing costs were 10 rupees, which was very less. Gross marketing margins were 72.5 rupees and when these net margins converted into percentage then these were 1.95%. Wholesaler's (edible white rice) average net margin was 62.5 rupees, when these converted into percentage this was 86.20%. Finally, the average percentage of the sale price was 1.68 percent.

### 3.6.5 Average Marketing cost and profit of Rice Retailers in Punjab, Pakistan.

Items	Rs/maund
Average sale price of the wholesaler is the purchase price of the retailer	
Average Purchase price of a Retailer	=3727.5
Average marketing cost of the retailer	=168
Average sale price of a retailer	=4577.5
Gross marketing Margin	= Sale Price – Purchase Price
	=4577.5 – 3727.5
Gross marketing Margin	=850
Percent Marketing Margin	=Gross Marketing Margin / Average sale price
*100=850/4577.5*100	
Percent Marketing Margin	=18.57
Net Margin	= Gross Marketing Margin – Marketing Cost = 850 - 168
Net Margin	= 682
Net profit percentage of margin	=Net margin / Gross marketing margin * 100 =682/ 850* 100
Net profit percentage of margin	=80.24
Net profit percentage of sale price	=Net Margin / Average sale price * 100 =682/ 4577.5 * 100
Net profit percentage of sale price	=14.90



Every retailer fulfills the household needs. Retailers purchase the rice from the wholesalers (edible white rice) and directly from the millers. According to my analysis, all the retailers purchased the rice from the wholesalers (edible white rice) at the average price of 3727.5 rupees and sold this at the average price of 4577.5 rupees. Average of the marketing cost which is paid by the farmers was 168 rupees. Average of the gross marketing margin was 850 rupees and in a percentage, this was 18.57%. Average net margin of all the retailers was 682 rupees and in a percentage, this was 80.24%. Finally, the average percentage of the sale price was 14.90 percent.

### 3.7. Major Problems of All the Supply Chain Actors

Problems	Frequency	Percentage
Limited cultivated area	4	20
Lack of knowledge	5	25
Old production methods	2	10
Lack of advanced technology	3	15
Poor financial position	2	10
Shortage of finance	3	15
Crop rotation improperly	1	5
<b>Total</b>	<b>20</b>	<b>100</b>
<b>Distribution of Commission agents/wholesalers Problems</b>		
Problems	Frequency	Percentage
Lack of market Knowledge	5	16.66
Unskilled labor	6	20
Infrastructure problems	3	10
Storage problems	2	6.66
Improper roads	5	16.66
Lacking of packaging material	3	10
Loading and unloading	6	20
<b>Total</b>	<b>30</b>	<b>100</b>

### Distribution of Farmers Problems

According to my investigation, lack of knowledge is a major problem in farmers which percentage is 25%. After this limited cultivated area is a main problem because when the cultivated area is short then the input prices are very high as compared to the greater cultivated area which percentage is 20%. Furthermore, some more problems like old production methods, lack of the advanced technology, poor farmers, shortage of finance from the government and crop rotation improperly as well as these percentages are 10%, 15%, 10%, 15% and 5% respectively.

Commission agents/wholesalers (paddy rice) are the key players in the marketing chain system. They earn more profit as compared to their work.

They also faced some problems like according to my studies the main problems, which are faced by the commission agents/wholesalers (paddy rice) are unskilled labor as well as loading and unloading both percentage is the same 20%. There is a big loss during the loading and unloading due to the unskilled labor. There are also some other problems like improper roads, shortage of the packaging material, storage problems and lack of market knowledge.

### 3.8. Problems of the Millers

Problems	Frequency	Percentage
High input cost	1	10
High processing cost	2	20
Uneducated & unskilled labor	2	20
Government policies	2	20
Cash flow problems	1	10
Electricity problems	2	20
<b>Total</b>	<b>10</b>	<b>100</b>
<b>Distribution of Wholesalers (edible white rice) Problems</b>		
Problems	Frequency	Percentage
Lack of market knowledge	2	10
Loading and unloading	5	25
Untrained labor	4	20
Roads problem	3	15
Infrastructure	2	10
Lack of credit	2	10
Cash flow problem	2	10
<b>Total</b>	<b>20</b>	<b>100</b>

In the rice marketing system miller is the key player because miller converted the paddy into the eatable rice. Miller also faced many problems to run their business. And according to my investigation the major problems are high cost of processing, uneducated and unskilled labor, government policies and electricity problems these problems percentages are the same 20%. In Asian countries wholesalers (edible white rice) are the backbones of every business. Wholesaler (edible white rice) also faced many little and big problems. According to my analysis, unskilled labor and loading & unloading are the big problems those percentages 20% and 25% respectively. There are some other problems for example roads problem, cash flow problem etc.

### 3.9. Distribution of Retailers Problems

Problems	Frequency	Percentage
Poor quality	9	30
High transportation cost	7	23.33
Lack of knowledge	5	16.66
Poor roads	6	20
Non-availability of storage	3	10
<b>Total</b>	<b>30</b>	<b>100</b>

Retailers are the last actor of the marketing system. Retailer faces less problems as compared to the other actors. Retailer big problem is to unavailability of the good quality sometimes the quality is very good but sometimes it's very bad instead of he purchased the quantity from the same wholesaler (edible white rice). This problem is mainly due to the lack of experience and blind trust. According to my investigation, this type of quality problem having the highest percentage as compared to other problems which is 30%. Other problems high cost of transportation, lacking of knowledge, poor roads as well as storage non-availability are 23.333%, 16.666%, 20% and 10% respectively.

#### 4. Conclusions and recommendations

Rice is the major staple food of Pakistan. Most of the people like only rice as compared to the other staple food of wheat. Rice is not cultivated the whole parts of our country. Rice cultivated mostly those areas where the supply of water is more. Hafizabad is called the city of rice because the production and cultivation of rice in this area is much greater than the other areas in a Pakistan. There are many varieties are sown in Pakistan but the basmati rice is the major one other famous varieties are super kernel and IRRI varieties. Total cultivated area under the rice cultivation in a Pakistan is 2748.5 thousand hectares and total estimated production of rice per year is 6811.4 thousands of tons.

In the past, quality of the Pakistani rice was much better as compared to the other countries and our basmati rice was famous all over the world due to their taste and fragrance. But now our varieties are very poor as compared to other countries like India due to our mismanagement and lack of new technologies. Due to improper management by the government and lack of farmer's education and technology our exports decreases day by day for example in the year of (2014/15) our exports are 2.035 billion US\$ as compared to the year of (2015/16) our exports of rice decreases at 1.860 billion US\$.

Rice is cultivated whole of the country but Punjab at the top of the provisions regarding to their production. Punjab producing 58% of the rice which is much greater than other provinces. This is the reason I selected the Punjab districts for my research. Gujranwala and Lahore both are the leading rice producing belts in Punjab. Hafizabad "City of rice" also in the Gujranwala district.

According to my research, I concluded that Pakistani land is very good for the production of rice and the people of our country wanted to cultivate the rice at large scale. But there are many things, which create problems for those. The main problem which I concluded is the lack of government intention.

Government provide more support to the wheat farmers but not taking any interest of the paddy farmers. Government not provide any financial support to the farmers as well as not taking any action about the export barriers. In a Pakistan farmers input prices are very high as compared to the other countries. India provided subsidies to their farmers but in our country government provide subsidies only the wheat farmers and other crops.

Many of the problems are created due to the lack of education and experience. In a Pakistan most of the farmers are uneducated they don't know about the new technologies. In a Pakistan, Farmers used old methods of cultivation no use of technology this is the reason our rice production and quality decreases day by day. Electricity is the main problem of the Milles due to the electricity shortage millers used other resources like coal and diesel. Input prices are very high due to the usage of other resources and this is the reason input prices are high and then the rice prices domestically are very high. When the input prices are high then our production price exceeds the world prices and it's a barrier to export our commodity at fair prices. In a Pakistan, marketing chain power in the hands of the middleman they earn more profits.

There are many problems in the whole marketing system regarding to the management and government. If the government intervals, then we overcome these problems and we also earn more profit like other countries earn. Some policy implementations are suggested towards be addressed.

- Strengthening the existing price and market information system
- Intervention to increase production and productivity of rice
- Facilitating extension services
- Promoting education and trainings in production and marketing
- Promoting potentially collective organizations (cooperatives)
- Improving the quality of rice
- Licensing the traders

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