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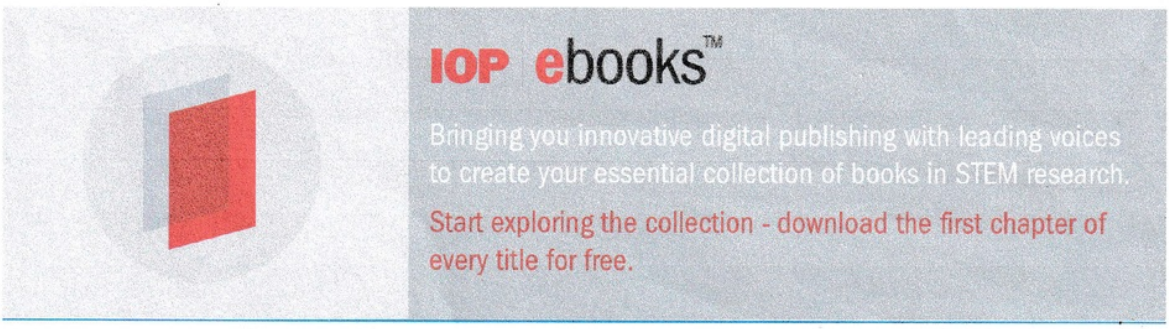

Contribution and efficiency of labor allocation analysis of income in household industry using raw material of agricultural commodity in South Sulawesi.

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Abstract. In South Sulawesi, various home industry businesses have grown. This industry is actually the basis of community livelihoods that need to be developed and nurtured by the government so family income get increased and the absorption of workers will improve the regional economy in general. The purpose of this study is to analyse the contribution of income, and efficiency of labour allocation in household industries made from raw agricultural commodities. The method of determining the respondents is done by direct appointment (purposive) on the industry players made from raw agricultural commodities. The type of research is quantitative descriptive and data are analysed using income analysis, cost analysis, income contribution analysis, Working Day (HOK) analysis and efficiency analysis of labour allocation. The results showed that the average income earned per year ranged from IDR. 16,866,867.- up to IDR. 125,271,500.-. There are 2 industries that have high contribution to family income such as banana chips industry and rice milling industry with value of 96.3% and 68.7% respectively. In the meantime, there are 5 industries with high average labour allocation efficiency of IDR. 218,135.- / HOK per day and above the efficiency standard of labour allocation based on UMR in South Sulawesi Province.

1. Introduction

The micro, small and medium industries have proved to be the most resistant industry groups in the face of the economic crisis, both during the crisis of the late 1990s and the worldwide crisis in late 2008 to early 2009. In the period 1997 to 2000 contributions Small and Medium Micro Enterprises (MSMEs) are more than 46% in Indonesia's GDP. Furthermore, in 2007 Indonesia's GDP grew by 6.28%, where at the time, small and medium enterprises grew by 18.76% and specialized in the small and medium scale manufacturing sector had a growth of 16.29%, well above average GDP growth in Indonesia [1].

Besides contributing to GDP growth, small and medium micro industries have a role to play in employment and become a source of income for the wider community. For example, according to Soeratno [1], the absorption of manpower in the sector of Small Industry, Handicraft and Household (IKKR) is based on 23 Industry Classification of Indonesian Industrial Industries (KBLI) for more than 8 million workers which, when compared to manufacturing industry group it only absorbs about 4.5 million

workers. This condition further reinforces the role of small and medium industries in moving the Indonesian economy.

The same thing is shown in South Sulawesi Province, where household industries made from raw agricultural commodities have developed various businesses such as; business of making brown sugar, food processing industries and others scattered in several cities / districts. In general, these efforts become a source of livelihood of the community that continues to be developed along with government support by providing various policy facilities to encourage the role of society in the economic field. Bantaeng Regency is one of the districts in South Sulawesi which is one of the areas of small and home industry development (IKRT) which can be seen in table 1.

Table 1. Number of Household Industries (Micro), Small and Medium Based on Division District Area in Bantaeng Regency, South Sulawesi, 2012 [2]

No.	Sub-District	Number of Industries		
		Household (Micro)	Micro	Medium
1	Bantaeng	59	27	-
2	Bissappu	213	44	1
3	Eremerasa	32	2	1
4	Sinoa	7	-	-
5	Ulu Ere	6	1	-
6	Gantarangkeke	29	3	-
7	Tompobulu	17	6	-
8	Pajukukang	20	16	1
	Amount	383	99	3

Bissappu Sub-District (table 1) has the largest number of home industries and most of these industries are made from agricultural commodities. This is a consideration for researchers to choose the area purposively as a research area. Household industries made from raw agricultural commodities are generally developed by farmers, farmers' wives and other family members on the grounds that in addition to adding value to the farm products they have been producing, it also has the potential to become an additional source of family income including expanding employment opportunities. According to [2], the type of household industry made from raw agricultural commodities developed in Bantaeng Regency to date is; compost making industry, rice milling, corn flour milling, red sugar industry, banana chips and seaweed food.

Base on the various classical problems faced by the perpetrators of industries made from raw agricultural commodities such as limited business capital, marketing and product quality is still low, apparently until now the industry still survive and still be a mainstay for business actors in supporting the family economy. Based on the phenomenon, the researcher is interested to study how much income earned by the industrial business actors and the large contribution of the income to the family income and efficiency of family labor allocation in the industry made from raw agricultural commodities.

2. Method

The research was conducted in Bissappu Sub-District Bantaeng Regency of South Sulawesi Province, purposively chosen with the consideration that this sub-district has a varied household industry and generally made from agricultural commodities as well as being a population in this study (table 2).

Table 2. Population and Sample of Household Industries made from Raw Agricultural Commodity in Bissappu District, Bantaeng Regency, 2013

No.	Household Industries using Raw Material of Agricultural Commodities	Population	Sample
1	Compost	1	1
2	Rice Milling	16	2
3	Corn Flour Milling	18	2
4	Brown Sugar	64	6
5	Seaweed Food	1	1
6	Banana Crackers	2	2
	Amount	102	14

The types of data are secondary data (obtained from library studies and related institutions, such as BPS-Statistics of Bantaeng Regency, Trade and Energy Industry Office of Bantaeng Regency, and Bissappu District Office of Bantaeng Regency) and primary data (collected by field observation followed by interviews on respondents using questionnaires systematically). The data collected, then analyzed using quantitative descriptive analysis to confirm the analysis based on research objectives.

The income analysis, is done by formulation;

$$\pi = TR\text{-}TC = (\Sigma Y.Hy) - (FC + VC) \quad (1)$$

where; π = Revenue (Rp),
TR = Total Reception / Revenue (Rp),
TC = Total Cost (Rp),
ΣY = Total Production (Kg),
Hy = Production Price (Rp),
FC = Total Fixed Cost (Rp) and
VC = Total Variable Cost (Rp).

The results of income calculation are then categorized as referring to the Regional Minimum Wage (UMR) standard of South Sulawesi Province of Rp.1.400.000, - per month. If > from UMR is categorized as large, and if < from UMR is categorized as small.

Analysis of the contribution of household income [3], from agricultural raw materials to family income, using the formula;

$$K = (P1 / PtRt) \times 100\% \quad (2)$$

where; K = Contribution of household industry income (%),
P1 = Net income of home industry ladder (Rp) and
PtRt = Total household income (Rp).

Contribution rate category is low contribution = 0% - 33.3%, medium = 33.4% - 66.6% and high = 66.7% - 100% [4].

Analysis of labor allocation of family household industries [5], made from raw agricultural commodities, using the formulation;

$$Jktotal = JO \times HK \times JK \text{ and } HOK = JKtotal / JKS \quad (3)$$

where; HOK = Day of worker (Weekdays),
JO = Number of persons Person),
HK = Day of work (Day),
JK = Working hours (Hours) and
JKS = Standard working hours (8 Hours).

Furthermore, the efficiency level of family labor allocation is used formulation: Efficiency Labor Allocation's formula;

IRT Acceptance / IRT Labor Allocation (4)

The efficiency level indicator of labor allocation of household industries made from raw agricultural commodities is determined by comparing the efficiency standard of labor allocation based on the Regional Minimum Wage (UMR) of South Sulawesi Province of 53.846 26 Working Days. If > from 53.846 26 Working Days = High Efficiency and if < 53.846 26 Working Days = Low Efficiency.

3. Results and Discussion

3.1. Industrial Household Income using Raw Material of Agricultural Commodities

Household income is income earned by the household concerned either from the basic work income or income received from the side job. Source of income received by respondents in each type of home industry made from raw agricultural commodities varied considerably. Sources of income are obtained from within the household industry made from raw agricultural commodities and some are from outside the home industry (non-industrial). The more sources of family income the greater the income earned by households. Rural and non-industrial household income as shown in table 3.

Table 3. Average Revenue of Household Industry Using Raw Material of Agricultural Commodities Sourced of Industrial and Non-Industrial Income in Bissappu District, Bantaeng Regency, 2013

No	Industries	Household Income of Industrial (IDR)	Household Income of Non-Industrial (IDR)	Total Income (IDR)
1	Corn Flour Milling	110,702,375	29,250,000	139,952,375
2	Brown Sugar	16,566,867	9,766,666	26,633,533
3	Seaweed Food	4,675,000	16,800,000	21,475,000
4	Banana Crackers	125,271,500	4,750,000	130.021.500
5	Compost	47,458,500	73,000,000	120,458,500
6	Rice Milling	52,662,750	22,850,000	75,512,750

Corn flour milling industry, the brown sugar industry, banana chips industry, compost industry and rice milling industry provide average net income of Rp 16,866,867 up to Rp 125,271,500 per year, while the seaweed food industry provides a small net income with a value of Rp 4,675,000 per year. In general, it appears that the income of the home industry is greater than that of non-domestic industries. The same thing is shown in the results of the study [6] which states that the greatest incomes of farmers generally come from agriculture (on-farm) in both raw and processed forms.

3.2. *Contribution of Industrial Income using Raw Material of Agricultural Commodities to Family Income*

Revenue contribution is a donation received in return for members of the working household [7]. The contribution of household income made from agricultural commodities in Bissappu District is calculated based on the comparison between household income from household income from agricultural commodity with total household income multiplied by 100%. The total income of the household is determined by the income from the household income sector made from raw agricultural commodities and income outside the sector of household industry income. The contribution of households' incomes using raw materials from agricultural commodities is shown in table 4.

There are two industries that have high income contribution level, namely banana chips industry and rice milling industry with contribution value of 96.3% and 68.7% respectively. Three industries with medium income contribution, corn flour milling industry, red sugar industry and compost industry with 66.53%, 65.6% and 39.4% contribution respectively and one industry with contribution level low income, namely seaweed food industry with a contribution value of 21.76%. The results [8] show similarly that the management of domestic corn chip industry can contribute to household income of 71.43%, while female labor can contribute to household income of 8.43%.

Table 4. Average Revenue Contribution of Household Industry Using Raw Material of Agricultural Commodities Sourced from Industry and Non-Industry Revenues To Household Income at Bissappu District, Bantaeng Regency, 2013.

No	Industries	Household Income of Industrial (IDR)	Contribution To Total Household's Income (%)	Household Income of Non-Industrial (IDR)	Contribution To Total Household's Income (%)	Total Household's Income (IDR)
1	Corn Flour Milling	110,702,375	66.53	29,250,000	32.97	139,952,375
2	Brown Sugar	16,866,867	65.60	9,766,666	34.40	26,633,533
3	Seaweed Food	4,675,000	21.76	16,800,000	78.24	21,475,000
4	Banana Crackers	125,271,500	96.30	4,750,000	3.70	130,021,500
5	Compost	47,458,500	39.40	73,000,000	60.60	120,458,500
6	Rice Milling	52,662,750	68.70	22,850,000	31.30	75,512,750

3.3. *Analysis of Labor Allocation and Efficiency of Labor Allocation in Home Industry using Raw Material Agricultural Commodities.*

An analysis of the efficiency of the allocation of domestic labor, preceded by knowing the amount of labor allocation and net income of the industry. Clearly the efficiency of labor allocation of agricultural commodity-based industries in Bissappu District, Bantaeng Regency can be seen in table 5.

Table 5. Average Labor Allocation and Efficiency of Household Industry Domestic Allocation Using Raw Materials of Agricultural Commodities in Bissappu District, Bantaeng Regency, 2013

No	Industries	Household Income of Industrial (IDR)	Labor Allocation (HOK/Year)	Efficiency of Labor Allocation on Household Industrial (IDR/HOK)
1	Compost	110,702,375	544.125	203,450
2	Rice Milling	16,866,867	321.30	52,495
3	Corn Flour Milling	4,675,000	78.00	59,935
4	Brown Sugar	125,271,500	561.00	231,748
5	Seaweed Food	47,458,500	151.00	314,294
6	Banana Crackers	52,662,750	215.63	281,270
	Average		65.60	190,532

There are five industries that have average efficiency of high allocation of labor, namely corn grinding industry, banana chips industry, compost industry, rice milling industry and seaweed food industry, with efficiency value greater than standard efficiency of labor allocation based on UMR of South Sulawesi Province, then only 1 industry has average efficiency level of low labor allocation, with efficiency value less than standard efficiency of labor allocation based on UMR of South Sulawesi. The results of the study [1] show that the technical efficiency of labor in technological innovation of certified rice seed programs is positive, which means that the addition of 1% of labor can still increase production by 1.014% in the pre-program period and 0.467% after the program.

4. Conclusion

It can be concluded as follows: Corn flour milling industry, red sugar industry, banana chips industry, compost fertilizer industry and rice milling industry provide average net income with bigger value than Regional Minimum Wage (UMR), while the seaweed food industry provides a small net income with less income value than UMR South Sulawesi. There are two industries that have high income contribution rate, namely banana chips industry and rice milling industry, three industries that have medium income contribution rate, corn flour milling industry, red sugar industry and compost fertilizer industry and one industry with low income contribution seaweed food industry.

Furthermore, there are five industries that have average efficiency of high allocation of labor that is corn flour milling industry, banana chips industry, compost industry, rice milling industry and seaweed food industry with efficiency value greater than standard efficiency allocation of labor based on UMR of South Sulawesi Province, and only 1 industry having average efficiency level of low labor allocation with value less than standard efficiency of labor allocation based on UMR of South Sulawesi Province.

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