

Broiler Business is the Best Diversification for Furniture Business

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Abstract – The research objective was to analyze the potential and contribution of the broiler business as business diversification in increasing household income for furniture entrepreneurs. The research was conducted in Jepara Regency as the center of the furniture industry. The research used a purposive sampling method with 101 respondents. LQ and DLQ analysis is used to explore business potential, while the income contribution uses a business diversification model. The average broiler LQ and DLQ results are 1 and 1.2, while the average broiler income contribution is 52.3% of the total household income of diversified entrepreneurs, by contributing above 50%. Therefore, the broiler business diversification model is the best alternative to increase the household income of furniture entrepreneurs.

Keywords – business diversification, business potential, income contribution, furniture business, broiler business.

1. Introduction

Furniture is a processed product made of wood with highly artistic value. The unique natural color of the wood makes the product look more attractive. Another uniqueness of furniture is that it's flexible in shape in order to adjust the position of the place, and by removing the concern of the furniture waste that could damage the environment [1].

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Demand for furniture models can vary according to consumer tastes, thus affecting the increasing market demand [2]. It is this uniqueness that makes furniture products attractive to consumers. Jepara is one of the central furniture regions in Indonesia.

The superiority of Jepara furniture products has unique design characteristics. The uniqueness of the design of furniture products highlights the characteristics of local wisdom values thereby influencing the increase in consumer demand [3]. Furniture market consumers are not only in demand by local consumers but also foreign ones. Overseas consumers are from Asia, Europe to the Middle East. The biggest market is the Middle East region with an export value of 37% [4]. Jepara furniture has strong competitiveness and is a mainstay export commodity.

Another business that has the potential to develop in the Jepara area is the broiler business. Broiler business is profitable and worthy of further development because it has a higher rate of return than bank interest loans. Even though the analysis results show a decrease in the selling price of 15%, the average total income is higher when compared to bank loan interest rates that reach above 10% [5]. However, to avoid the risk of loss, the development of technical infrastructure and technology is carried out.

Broiler business income turnover is very fast. Based on the maintenance time to harvest, the average broiler business is only 35 days or 5 weeks. During the maintenance period the body weight reaches 1.5 kg to 2.5 kg per head. The advantages of high body weight growth in a relatively short time greatly affected the income of entrepreneurs, because income conversion is based on body weight [6]. Consumers like broiler meat is to meet the needs of animal protein [7]. This is why market demand for broiler commodities increases every year. Capital access support from banks is based on market demand analysis, which is always increasing.

In addition to market potential, the goal of banks providing broiler business capital loans is to develop the livestock and agricultural sectors [8]. This is the support made by the government to develop food potential, with relatively affordable and profitable capital.

Broiler business is an alternative business for furniture entrepreneurs in order to increase income. The main strategy in diversifying the business is to increase revenue and maintain a balance of business expenses [9]. Business diversification is an ideal business strategy to mitigate the risk of decreasing revenue [10]. Therefore, business diversification is appropriate for entrepreneurs to develop their business and control market risk [11].

On the other hand, the increasing demand for furniture has affected the availability of raw materials. The availability of raw materials is currently and increasingly very difficult to obtain, due to forests experiencing land conversion [12]. Forest conversion that occurs causes the amount of wood production to decrease, affecting the price of raw materials [2]. This condition causes production costs to increase, which will reduce the income and welfare of the entrepreneur's household furniture [13]. Therefore, to control production costs which are increasing, labor wages are under pressure. The strategy of suppressing labor wages is carried out by employers and it had an impact on the scarcity of skilled human resources [14]. The problem of scarcity of raw materials and human resources which results in high production costs, greatly affects the furniture industry.

The attractiveness of the furniture industry which is wide open increases the tightness of business competition. Naturally, the prospect of ever-increasing market potential is an attraction for business actors. That is why there must be regulations that can protect market openness from becoming a problem to business actors [15]. However, what happened was that the government was unable to protect the furniture industry, so many new business actors took on the role of competing with existing business actors [16]. This condition increases competition both in terms of price, quality, and services offered, by having income lower. On the other hand, the problem of high production costs has not been resolved, coupled with increasingly fierce market competition, and a new problem emerged, namely the Covid-19 virus pandemic, made increasingly difficult for businesses to operate [17]. This is the basis for furniture business players to look for new business opportunities that have the potential to increase revenue.

The decline in the export growth rate of the furniture industry was influenced by consumer demand. Based on foreign trade data, the value of Jepara's export growth rate, especially the wood processing industry, has decreased. Based on data, the average growth rate of the furniture industry for the last three years from 2019 to 2021 has decreased by 0.76% [18].

This is also supported by the decline in the average export value of the last three years from 2019 to 2021 to several main destination countries such as: Europe by 0.95%, ASEAN by 1.68%, Japan by 2.15%, and China by 1.29%. Based on data on the declining export growth of the furniture industry, which continues to fall, this greatly affects the sustainability of the furniture business. Competition is getting tougher as furniture supply increases, consumer demand declines.

Declining operating income is one of the causes of market saturation. The furniture business is starting to experience market saturation, the impact of demand which has decreased is smaller than supply [20]. This condition is a characteristic of the market not responding to revenue growth. Therefore, alternative innovations, both products and new businesses, are the best choices for controlling risk [21]. Horizontal business diversification is a business innovation strategy that remains an option [22]. Broiler business is the right choice to increase income outside the furniture business [23]. Broiler business is a relatively effective business with limited resources but with a good profit potential [24]. The contribution of new business markets that can be developed is still enormous, by facing the previous business situation which experienced uncertainty [25].

Market uncertainty reduces the contribution of operating income. The contribution of the furniture business to household income has decreased. Operational costs are increasing, revenues are decreasing due to the production of goods not being absorbed by the market [26]. Structural change of business is about to become a bigger market risk chain [27]. This condition brings a domino effect of increasing uncertainty in achieving the welfare of business households [28]. Therefore, there is need in order to avoid the risk of market through uncertainty in development of information, with both product and business innovation.

Decreasing business potential is a risk of losing business profits. The furniture business in general has experienced a decline in income, however this can be controlled by diversifying into the broiler business [29]. The concept of business diversification is a new paradigm for a business model to be able to share and control business risks [30]. The business diversification strategy is expected to be able to build new business potential, namely the broiler business in conditions of increasing income [31]. This strategy can be an alternative to increase the contribution of household income, since the furniture business is experiencing a decline.

Based on the phenomena that occur, this study aims to analyze the potential and contribution of the broiler business as a diversification effort in increasing household income of furniture entrepreneurs. The furniture business is difficult to develop due to increasingly fierce competition. The problem is not only the increasingly fierce competition, but also the declining income. This condition affects furniture entrepreneurs to look for other business alternatives. Therefore, broiler business is the best choice to increase household income profits in the furniture business.

2. Research Methods

The research was conducted from 2019 to 2021 in the Jepara region as a center for the furniture industry. The research used a survey method, while determining the sample, it utilized a purposive sampling method. The total number of samples taken in 10 districts was 101 respondents. Empirical data is collected from primary sources, which is called cross sectional data. Secondary data is time series data from BPS Central Java Province. Data was analyzed by using descriptive statistics, and by utilizing LQ and DLQ for business potential to analyze furniture and broiler businesses. Meanwhile, to analyze the size of the revenue contribution from the furniture business and broiler business, the business diversification model is used.

2.1 Location Quotient (LQ) Analysis Model and Dynamic Location Quotient (DLQ) Analysis Model

Location Quotient (LQ) and Dynamic Location Quotient (DLQ) analyzes were carried out in this study to analyze how much the potential in contribution of the furniture and broiler businesses is to the economic sector at both the Jepara Regency and Central Java Province levels. This is supported by research conducted by Tanjung et al [32] that analysed the magnitude of the contribution of the leading sector in a region. Therefore, the Location Quotient (LQ) and Dynamic Location Quotient (DLQ) analysis calculation models can be formulated as follows:

$$LQm = \frac{vim / vtm}{Vim/Vtm} \dots \dots \dots (1)$$

Information:
 LQ = Furniture Location Quotient (LQ) Value
 vim = PDRB According to the Furniture Industry in Jepara Regency
 vtm = PDRB Total According to Business Field in Jepara Regency

Vim = PDRB According to the Furniture Industry in Central Java Province
 Vtm = PDRB Total According to Business Field in Central Java Province

$$LQb = \frac{vib / vtb}{Vib/Vtb} \dots (2)$$

Information:
 LQ = Broiler Livestock Location Quotient Value
 Vib = Population of Broiler Livestock in Jepara Regency
 vtb = Total Population of Poultry in Jepara District
 Vib = Broiler Livestock Population in Central Java Province
 Vtb = Total Population of Poultry in Central Java Province

Dynamic Location Quotient (DLQ) analysis is used to explore changes in the diversification of the furniture and broiler businesses of the economic sector in Jepara Regency. DLQ can be formulated as follows:

$$DLQm = \left(\frac{(1 + gim)/(1 + gjm) t}{(1 + Gim)/(1 + Gjm)} \right) \dots \dots \dots (3)$$

Information:
 DLQ = Index potential of the furniture sector in the district
 gi = The Growth Rate of the Furniture Industry in Jepara Regency
 gj = Average Total PDRB Growth Rate in Jepara Regency
 Gi = The Growth Rate of the Furniture Industry in Central Java Province
 Gj = Average Total PDRB Growth Rate in Central Java Province
 t = The difference between the final year and the beginning of the year

$$DLQT = \left(\frac{(1 + gib)/(1 + gjb) t}{(1 + Gib)/(1 + Gjb)} \right) \dots \dots \dots (4)$$

Information:
 DLQ = Broiler Livestock Potential Index in the District
 gi = Broiler Livestock Growth Rate in Jepara Regency
 gj = Average Total Growth Rate of Poultry in Jepara District
 Gi = Growth rate of broiler livestock in Central Java Province
 Gj = Average total growth rate of Poultry in Central Java Province
 t = The difference between the final year and the beginning year

The combined analysis of LQ and DLQ is used to analyze the repositioning of superior commodities from furniture diversification businesses and broiler businesses, with the following criteria:

1. If the value of $LQ > 1$ and $DLQ > 1$, it means superior the furniture business and broiler business remain the basis both now and in the future.
2. If the value of $LQ > 1$ and $DLQ < 1$, it means prospective of the furniture business and broiler business have been repositioned from basic to non-basic in the future.
3. If the value of $LQ < 1$ and $DLQ > 1$, it means that the mainstay of the furniture business and broiler business have been repositioned from non-basic to basic in the future.
4. If the value of $LQ < 1$ and $DLQ < 1$, it means that it is lagging behind, meaning that the furniture business and broiler business will remain non-basic now and in the future.

2.2 Business Diversification Analysis Model

Income contribution in this study is used to measure and analyze how much the contribution is made by the furniture business and broiler business to household income. Therefore, the greater the income contribution donated by one business, the higher the contribution. The measure of the high and low contribution of a business is when the percentage of income is above 50%, but if the contribution is below 50%, it means that it cannot contribute dominantly. According to [33], the more relationship between the potential contribution of business income is greater, the more potential of the business can be relied on. Therefore, the contribution to business diversification can be formulated as follows:

$$K \text{ Business diversification} = \frac{Xi}{Y} \times 100\% \dots \dots \dots (5)$$

Information:

- K = Diversification business contribution to household income (%)
- Xi = Broiler livestock business income (Rp/year)
- Y = Furniture business household income (Rp/year).

3. Results Of Research And Discussion

Analyzing the picture of business potential in a region is a very important strategy. This is done to make strategic decisions in order to avoid risks that will occur in the future. The more potential a business has in an area, the more feasible it is to maintain and increase its working capital, as well as to obtain the expected profit. However, on the contrary, if the business has experienced a downward repositioning and the results cannot be expected to develop in the future, then the need for new business potential is arising.

Detailed analysis of the identification of furniture business potential is shown in the table 1.

Table 1. Potential for the furniture business

Description	Year		
	2019	2020	2021
PDRB by Field of Furniture Industry in Jepara Regency (Million Rp)	7108961.97	6982209.6	7342990.68
PDRB Total According to Business Field in Jepara Regency (Million Rp)	21384282.93	20973089.31	21944232.37
PDRB According to the Furniture Industry in Central Java (Million Rp)	338470983.2	325617665.7	333156603.4
PDRB Total According to Business Field in Central Java Province (Million Rp)	991516543.3	965225709.1	997317097.3
LQ	0.97	0.99	1
DLQ	1	1	1

Based on table 1 data, it shows that the growth rate of the furniture business in the Jepara region is experiencing a negative growth trend. This condition indicates that the growth rate of the furniture business in Jepara Regency affects the growth rate of the furniture business in Central Java Province by 1.03%. The decline in the growth rate of the furniture business in the Jepara region will slow down the Jepara region's economy and also have an impact on the economy of Central Java Province, which can result in resource inefficiency. This is supported by the opinion of [34] that the economic potential of a region is determined by the rate of growth in productive resources, so that the regional economy develops. In table 1, Jepara experienced a decrease in growth of 1.02% from 2019 to 2020. This also has an impact on the increasingly high negative trend of the furniture business in Central Java Province, which is 1.03%. However, there was a slight increase in 2021 of 0.03% of the total increase of 1.05%, due to the government's stimulus to boost the economy by opening exports to destination countries.

Meanwhile, the total decline of 0.01% greatly affected other sectors, both in the Jepara region and Central Java Province, which were directly in contact with the furniture business.

Based on GRDP data for all business sectors, both in the Jepara region and also in Central Java Province, the average accumulation trend is decreasing by 1.02%. A negative growth rate of -1.02% for a region will have a negative impact which will not only decrease people's income and purchasing power, but unemployment and poverty will increase as well in that region. The same view [35] has by explaining that declining economic trend is the impact of the progressive structure of the economy, which explains the trend of declining economic growth in the Jepara region is the impact of the progressive growth structure of the furniture business weakening. Factors that have stimulated the growing furniture business have experienced a weakening movement, starting from high cost raw materials affecting production costs, to increasingly fierce competition that declines market demand due to the COVID-19 virus pandemic.

Economic growth declined from 2019 to 2020, due to the covid 19 virus. This turned is out to have an impact on the growth of the furniture business in the last two years, namely 2019 and 2020, which were not only caused by external factors, but also influenced by internal factors. Internal factors that influence are the increasing cost of production, and the high cost of labor. This condition affected the furniture business, so that furniture exports decreased by an average of 1.04%. this was supported by the opinion [36] who stated that the effect of decreasing income has an impact on a declining economy, unemployment, and in relation to the to demand which continues to decrease elastically. The condition of the last two years has greatly worsened the furniture business in the Jepara region particularly and generally in Central Java. However, even though in 2021 there will be an increase in the growth rate of the furniture business by 0.1% from the previous year, economic development has yet to fully recover.

But even so, the furniture business is still the mainstay of the Jepara region as a base sector. This condition indicates that the growth rate of the furniture business in Jepara Regency is relatively higher when compared to the growth rate of the broiler business in Central Java Province. Based on the analysis of LQ and DLQ the average is 0.98 and 1 or mainstay business. This means that the furniture business has been repositioned from non-based to basic in the future. According to [37] the focus on restoring economic potential in order to become a superior business sector is a difficult thing, but economic dynamism has major advantages, such as the growth in the value of LQ and DLQ of the furniture business.

An increase in the potential for the furniture business shows that economic dynamism in the Jepara region can grow quickly.

The hope is that the furniture business will be able to become a leading sector or base again. This condition is reinforced by research conducted by [38] in hat businesses that have been running for a long time and are expected to continue, by looking at new strategies or building new businesses that support the sustainability of existing businesses. Therefore the base sector or superior sector is a priority. Changing the furniture business into a base sector or leading sector can help increase the growth of the Jepar region, thereby influencing economic growth. Leading sectors will also have an impact on increased workforce and increased added value. However, once again the condition of the furniture industry is cannot be recovered easily and immediately.

Identification of LQ and DLQ analysis of broiler business is presented in table 2. Positive growth trends can be seen when compared to the furniture business. The increase in the broiler population for the last three years from 2019 to 2021 has increased as a result of the accumulation of market demand trends that have occurred.

Table 2. Broiler business potential

Description	Year		
	2019	2020	2021
Broiler population in Jepara Regency (thousands)	545.9	1525.05	1540.3
Total Poultry Population in Jepara Regency (thousands)	2079,23	2440,49	2456,07
Central Java Province Broiler Population (thousands)	208587,82	227905,63	230690,99
Total Poultry Population in Central Java Province (thousands)	337254,03	299993,06	303699,33
LQ	0.42	1	1
DLQ	1	1.6	1.01

Based on table 2 data, broiler population growth in the Jepara region in 2019 has increased from the previous year by 1.02%. Whereas in 2020 there was a positive trend of increase by 2.79%, and also in 2021 it increased again by 1.01%.

The increase in demand for broilers in the Jepara region had an impact on increasing market demand in Central Java by an average of 1.05%. This also has an impact on demand for consumption of poultry products in the Jepara region by an average of 1.18%. The increase in demand for the poultry market in Central Java was an average of 1.05%, due to the influence of the poultry market in Jepara. The increase in demand for broiler livestock in the Jepara region according to [39] is the influence of global market demand on meeting the needs of animal protein sources for humans. Therefore, this implication affects the growth rate of broiler business in Jepara.

Influence and potential for broiler business has increased from the non-base sector to the base sector. Based on table 2 data regarding the analysis of potential LQ and DLQ values which continue to experience a positive increasing trend from 2019 to 2021, this is a positive impact on the growth rate of world demand globally. Fulfilling the needs of the local market for broiler consumption, which has an average annual increase of 2.15%, is a potential business. Therefore, to maintain a balance in the availability of broilers on the market, maximum effort is needed by the opinion of [40] that in order to maintain market opportunities, so that the broiler business develops, there should not be a product shortage in the market.

It can be seen that there is the potential development of the broiler business in the future by analyzing the results of LQ and DLQ calculations. Based on table 2 it is known that the magnitude of the LQ value and the average DLQ value of 1 and 1.2 fall into the category of $LQ = 1$ and $DLQ > 1$, meaning they are reliable. This means that the broiler business has been repositioned from a non-base to a future basis. The average values of 1 and 1.2 indicate that the broiler business commodity in the Jepara region is one of the prospective sectors. The prospective sector for broiler business is a sector that has a comparative advantage that can be developed into a leading sector. The broiler business sector can help increase regional growth and influence economic growth. Not only that, the impact of leading sectors will also have an impact on increasing employment and increasing added value for other businesses as well.

Identification of income contribution analysis from broiler businesses and furniture businesses is presented in table 3. Analyzing the comparison of business income contributions is very important in order to be able to carry out strategic policies in controlling risks that will occur in the present and in the future.

Table 3. The average income contribution of the furniture and broiler businesses

Description			Average value
Average Broiler Business Income (Rp)			33466703.13
Average Furniture Business Income (Rp)			33771465.35
Average Total Household Income (Rp)			67238168.48
Average Broiler Business Revenue Contribution (%)			52.3
Average Revenue Contribution of Furniture Business (%)			47.7

Based on the results of the income contribution analysis, the average broiler business contribution is 52.3% of the total household income of diversified entrepreneurs. This indication shows that the broiler business is included in the high business class category. According to the opinion of [41] dan [34] the high business category means that an average business can contribute 50% of the total business income. The high value of the broiler business contribution indicates that there is a new business alternative, namely the broiler business is able to support the household income of furniture entrepreneurs.

Based on the data presented in table 3, the furniture business is only able to contribute 47.7% of total household income. Starting to decline in revenue contribution of 4.6% is an indication of increasingly tight business competition pressure in the furniture sector. This shift in conditions is a natural problem faced by a businesses when experiencing market saturation, it is difficult to develop due to increasingly fierce competition. This is according to the view of [19] that explained the implications of business competition that will affect the macro economy and have an impact on business competitiveness. Intense business competition will suppress the revenue contribution in order to be obtained. Therefore it is natural to be dominated by broiler business income to the contribution of total household income. Even so, the furniture business still contributes over 40% of revenue, and cannot be abandoned but is supported by diversifying new businesses.

The results showed that the broiler business experienced better growth when compared to the furniture business, which experienced negative growth. The results of the comparison of differences in business are presented in Tables 1 and 2, that show the growth of the broiler business in Jepara Regency, with the trend that has an average positive increase of 1.6%.

In contrast, the trend of the growth rate of the furniture business in Jepara district is an average of 1.03%, this indication shows that the potential for the broiler business has a more positive growth rate.

In addition, to show the potential of the broiler business through a comparison of the average LQ and DLQ values of 1 and 1.2, the category of $LQ = 1$ and $DLQ > 1$ is included, meaning the mainstay business category. Mainstay business and being superior for broiler business has a preposition from non-base to base in the future. However, even though the average LQ and DLQ values for furniture businesses are 0.98 and 1 and are not that different, the trend for broiler businesses is still improving.

The trend of increasing broiler business is due to the broiler business being the main commodity business for public consumption, so the demand for broiler business continues to increase. On the other hand, the furniture business is a secondary needs business with a fluctuating trend, so the demand is lower than that of broilers. Evidence of broiler demand continues to increase from an increase in broiler populations both in the Jepara region and in the Central Java province, where the average increase is above 1.02%, the data is presented in table 2.

Another comparison of the furniture business with the broiler business is in labor. The furniture business workforce must have special skills in order to follow market trends so that the product remains in demand by consumers. On the other hand, broiler business workers are not required to have special experience, but they have to follow a predetermined SOP system. Broiler business products do not need to be promoted, in contrast to furniture businesses which must always be promoted through various media to support sales.

Finally, another advantage of the broiler business when compared to the furniture business is faster maintenance, for better business income turnover. Based on the maintenance time to harvest, broiler business average maintenance is only about 35 days or 5 weeks. The relatively short business time generates income, so it greatly affects the turnover of business capital. In contrast, the average turnover of the furniture business begins to experience sales transactions in the second semester from July to December or before the year and the celebration of religious holidays. This condition is very difficult for entrepreneurs who have to invest high business capital on stock of goods. This means that capital turnover for furniture products is very slow, for those who want to develop their business in order have more capital.

Therefore, an alternative to broiler business diversification is a policy that is appropriate for furniture entrepreneurs to be able to control business risks.

When the condition of the furniture business is declining, there must be another business that can support household income, namely the broiler business.

4. Conclusion

The results of the study concluded that the broiler business is an alternative to increase the household income of furniture entrepreneurs who are in a declining condition. Broiler business diversification is very appropriate to choose from, because broiler meat consumption commodity that is needed by the community. Demand is always increasing more than supply, so that it becomes a mainstay business and in the future it has a preposition to become a business base for the Jepara region. It can be analyzed through the value of LQ and DLQ included in the mainstay business category with a value of 1 and 1.2 or $LQ = 1$ and $DLQ > 1$ mainstay category. According to the results of the income contribution analysis, the broiler business is very high or equal to 52.3% of the total household income of diversified entrepreneurs. This indication shows that the broiler business is categorized as high class, meaning that the broiler business is able to dominate the total entrepreneur household income, which is above 50% on average.

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References

- [1]. Hrovatin, K., & Hrovatin, J. (2020). Bio-based Methods with Potentials for Application in Wooden Furniture Industry. *Biološke metode s potencijalom za primjenu u proizvodnji namještaja od drva. Drvna Industrija*, 71(3), 301–308.
- [2]. Sakagami, M., & Sakaguchi, D. (2022). Estimating Preferences for Wood Furniture in Terms of Sustainable Forest Management. *Forests*, 13(5).
Doi: 10.3390/f13050687
- [3]. Muhammad Suandi, M. E., Amlus, M. H., Hemdi, A. R., Abd Rahim, S. Z., Ghazali, M. F., & Rahim, N. L. (2022). A Review on Sustainability Characteristics Development for Wooden Furniture Design. *Sustainability (Switzerland)*, 14(14).
Doi: 10.3390/su14148748
- [4]. Grzegorzewska, E. (2021). – Lesson From the Selected EU Countries. *Wood Research*, 66(5), 859–874.
- [5]. Wantasen, E., Umboh, S. J. K., & Leke, J. R. (2021). Investment advantages of broiler production using the partnership system: A study in Indonesia. *Journal of Agricultural Sciences - Sri Lanka*, 16(2), 215–225.
Doi: 10.4038/jas.v16i2.9325

- [6]. Hadieva, G., Lutfullin, M., Pudova, D., Akosah, Y., Shagimardanova, E., Gogoleva, N., Sharipova, M., & Mardanova, A. (2021). Supplementation of *Bacillus subtilis* GM5 enhances broiler body weight gain and modulates cecal microbiota. *3 Biotech*, *11*(3), 1–13. Doi: 10.1007/s13205-020-02634-2
- [7]. Aji, K. W., & Arisuryanti, T. (2021). Molecular Identification of Mudskipper Fish (*Periophthalmus* spp.) from Baros Beach, Bantul, Yogyakarta. *Journal of Tropical Biodiversity and Biotechnology*, *6*(3), 1–13. Doi: 10.22146/jtbb.66391
- [8]. Margaret, K. G., & Ruth, N. K. (2019). The effect of banking services on the business performance of bank agents in Kenya. *Cogent Business and Management*, *6*(1). Doi: 10.1080/23311975.2019.1684420
- [9]. Agirre-Maiora, A., Murua-Uria, I., & Zabalondo-Loidi, B. (2020). Tight business models for slow journalism projects: Economic subsistence of slow media outlets. *Profesional de La Informacion*, *29*(6), 1–15. Doi: 10.3145/epi.2020.nov.20
- [10]. Johny, J., Wichmann, B., & Swallow, B. M. (2017). Characterizing social networks and their effects on income diversification in rural Kerala, India. *World Development*, *94*, 375–392. Doi: 10.1016/j.worlddev.2017.02.002
- [11]. Han, M., Lee, S., & Kim, J. (2019). Effectiveness of diversification strategies for ensuring financial sustainability of construction companies in the Republic of Korea. *Sustainability (Switzerland)*, *11*(11). Doi: 10.3390/su11113076
- [12]. Carracedo, P., Puertas, R., & Marti, L. (2021). Research lines on the impact of the COVID-19 pandemic on business. A text mining analysis. *Journal of Business Research*, *132*, 586–593. Doi: 10.1016/j.jbusres.2020.11.043
- [13]. Lundholm, E., Sandow, E., & Malmberg, G. (2020). Income distribution in family networks by gender and proximity. *Population, Space and Place*, *26*(7), 1–12. Doi: 10.1002/psp.2373
- [14]. Tang, M., Liu, Y., Ding, F., & Wang, Z. (2021). Solution to solid wood board cutting stock problem. *Applied Sciences (Switzerland)*, *11*(17). Doi: 10.3390/app11177790
- [15]. Heyes, G., Sharmina, M., Mendoza, J. M. F., Gallego-Schmid, A., & Azapagic, A. (2018). Developing and implementing circular economy business models in service-oriented technology companies. *Journal of Cleaner Production*, *177*, 621–632. Doi: 10.1016/j.jclepro.2017.12.168
- [16]. Azizi, M., & Mansouri, H. (2021). Analysis Of Marketing Strategic Planning In The Home Furniture Industry By Applying Anp: A Case Study Of The Iranian Home Furniture Industry. *International Journal of the Analytic Hierarchy Process*, *13*(1), 51–91. Doi: 10.13033/ijahp.v13i1.813
- [17]. Asegie, A. M., Adisalem, S. T., & Eshetu, A. A. (2021). The effects of COVID-19 on livelihoods of rural households: South Wollo and Oromia Zones, Ethiopia. *Heliyon*, *7*(12), e08550. Doi: 10.1016/j.heliyon.2021.e08550
- [18]. BPS Natuna. (2022). *Pertumbuhan Ekonomi Kabupaten Natuna Tahun 2021*. bPS Kabupaten Natuna. Retrieved from: <https://natunakab.bps.go.id/pressrelease/2022/06/21/174/pertumbuhan-ekonomi-kabupaten-natuna-tahun-2021.html> [accessed: 10 January 2023].
- [19]. Gillpatrick, T. (2019). The Digital Transformation of Marketing: Impact on Marketing Practice & Markets. *Economics*, *7*(2), 139–156. Doi: 10.2478/eoik-2019-0023
- [20]. Nguyen, A. P., Nguyen, V. A., Ho, T. H. M., & To, T. T. T. (2021). Diversification of business and technical efficiency of companies in Vietnam. *Journal of Eastern European and Central Asian Research*, *8*(4), 481–494. Doi: 10.15549/jecar.v8i4.772
- [21]. Orlando, B., Renzi, A., Sancetta, G., & Cucari, N. (2018). How does firm diversification impact innovation? *Technology Analysis and Strategic Management*, *30*(4), 391–404. Doi: 10.1080/09537325.2017.1313405
- [22]. Filistrucchi, L., & Prüfer, J. (2019). Faithful strategies: How religion shapes nonprofit management. *Management Science*, *65*(1), 188–208. Doi: 10.1287/MNSC.2017.2945
- [23]. Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of Business Research*, *116*, 199–208. Doi: 10.1016/j.jbusres.2020.05.025
- [24]. Hossain, M. (2020). Frugal innovation: Conception, development, diffusion, and outcome. *Journal of Cleaner Production*, *262*, 121456. Doi: 10.1016/j.jclepro.2020.121456
- [25]. McCaig, B., & Pavcnik, N. (2018). Export markets and labor allocation in a low-income country. *American Economic Review*, *108*(7), 1899–1941. Doi: 10.1257/aer.20141096
- [26]. Schmidt, E., Mueller, V., & Rosenbach, G. (2020). Rural households in Papua New Guinea afford better diets with income from small businesses. *Food Policy*, *97*, 101964. Doi: 10.1016/j.foodpol.2020.101964
- [27]. Cappa, F., Oriani, R., Pinelli, M., & De Massis, A. (2019). When does crowdsourcing benefit firm stock market performance? *Research Policy*, *48*(9), 103825. Doi: 10.1016/j.respol.2019.103825
- [28]. Bresciani, S., Ferraris, A., & Del Giudice, M. (2018). The management of organizational ambidexterity through alliances in a new context of analysis: Internet of Things (IoT) smart city projects. *Technological Forecasting and Social Change*, *136*, 331–338. Doi: 10.1016/j.techfore.2017.03.002
- [29]. Pogodina, T. V., Muzhzhavleva, T. V., & Udaltsova, N. L. (2020). Strategic management of the competitiveness of industrial companies in an unstable economy. *Entrepreneurship and Sustainability Issues*, *7*(3), 1555–1564. Doi: 10.9770/jesi.2020.7.3(9)
- [30]. Myslín, J., & Kaiser, J. (2022). State Modeling Methodology for Business Processes. *TEM Journal*, *11*(4), 1824–1834. Doi: 10.18421/TEM114-50

- [31]. Soh, B. H., Lim, G. T., & Chua, S. Y. (2021). Competitiveness of Malaysian Fisheries Exports: A Constant Market Share Analysis. *Malaysian Journal of Economic Studies*, 58(2), 175–198. Doi: 10.22452/MJES.vol58no2.1
- [32]. Tanjung, G. S., Suryantini, A., & Utami, A. W. (2021). The priorities of leading sub-sector in the sector of agriculture, forestry, and fisheries in economic development in bangka belitung province. *Agraris*, 7(2), 160–175. Doi: 10.18196/AGRARIS.V7I2.11615
- [33]. Tłuczak, A. (2019). Potential and competitiveness of EU countries in terms of slaughter livestock production. *Agricultural Economics*, 65(12), 550–559. Doi: 10.17221/156/2019-AGRICECON
- [34]. Tłuczak, A. (2020). Diversity of the selected elements of agricultural potential in the european union countries. *Agricultural Economics* 66(6), 260–268. Doi: 10.17221/381/2019-AGRICECON
- [35]. Pártlová, P., Líšková, Z. D., Felcan, M., Straková, J., Váchal, J., & Polomský, J. (2020). New approach to determining the economic potential of rural area on the example of the south bohemian region of the Czech Republic. *Entrepreneurship and Sustainability Issues*, 8(2), 914.
- [36]. Adenso-Díaz, B., Lozano, S., & Palacio, A. (2017). Effects of dynamic pricing of perishable products on revenue and waste. *Applied Mathematical Modelling*, 45, 148–164. Doi: 10.1016/j.apm.2016.12.024
- [37]. Rebolledo, J. L. S., Martínez, M. B. G., Ibarra, R. C., & Salvador, L. E. M. (2020). Smart specialization for building up a regional innovation agenda: The case of san luis Potosí, Mexico. *Journal of Evolutionary Studies in Business*, 5(1), 81–115. Doi: 10.1344/JESB2020.1.j069
- [38]. Warid, H., & Asrol, M. (2022). GIS-based Sustainability Assessment for Palm Oil Industry. *TEM Journal*, 11(4), 1432–1438. Doi: 10.18421/TEM114-02
- [39]. Nalunga, A., Komakech, A. J., Jjagwe, J., Magala, H., & Lederer, J. (2021). Growth characteristics and meat quality of broiler chickens fed earthworm meal from *Eudrilus eugeniae* as a protein source. *Livestock Science*, 245, 104394. Doi: 10.1016/j.livsci.2021.104394
- [40]. Karavolias, J., Salois, M. J., Baker, K. T., & Watkins, K. (2018). Raised without antibiotics: Impact on animal welfare and implications for food policy. *Translational Animal Science*, 2(4), 337–348. Doi: 10.1093/tas/txy016
- [41]. Turoń, K., & Kubik, A. (2021). Business innovations in the new mobility market during the covid-19 with the possibility of open business model innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3). Doi: 10.3390/joitmc7030195