Retraction

Retracted: Dynamic Alterations and the Affecting Attributes of the Unbalanced Economic Development in the Basin of the Yellow River: Analysis Utilizing Population-Weighted Coefficient of Variation

Journal of Mathematics

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] Z. Zhao, "Dynamic Alterations and the Affecting Attributes of the Unbalanced Economic Development in the Basin of the Yellow River: Analysis Utilizing Population-Weighted Coefficient of Variation," *Journal of Mathematics*, vol. 2022, Article ID 3549510, 8 pages, 2022.

Hindawi

Research Article

Dynamic Alterations and the Affecting Attributes of the Unbalanced Economic Development in the Basin of the Yellow River: Analysis Utilizing Population-Weighted Coefficient of Variation

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This paper employs a method called the population-weighted coefficient of variation (PWCV) to investigate the dynamic changes related to the imbalanced economic progression in the Yellow River Basin (YRB) between 2010 and 2020, and also analyzes the affecting attributes that are related to industry-specific and the spatial property of this change through the double decomposition of the PWCV method. The imbalanced economic progression in the YRB that tends to decline generally was found. The basin of the Yellow River, with three constituent regions, namely upper, middle, and lower streams of it, experiencing an imbalanced development has roots in the condition of the imbalanced economic progression in the YRB. However, since 2018, the imbalance ratio between regions has expanded. When the industrial decomposition is under consideration, the YRB experiences imbalanced economic development due to the dissimilarity between the industrial implementations, called the secondary and tertiary. Before 2018, the imbalance caused by the difference in the secondary industry accounted for more than 50%, while the imbalance led by the difference in the tertiary industry exceeded the imbalance caused by the secondary industry after 2018.

1. Introduction

Geographically, the basin is defined as a relatively narrow and long zone, and the economic operation and development of each section often present diversity. As the Yellow River Basin spans nine provinces, greater differences can be observed in the conditions of the natural resources, transportation infrastructures, education, science and technology levels, and economic policies, resulting in the increasingly prominent problem of the unbalanced development in the Yellow River Basin [1–5]. China's domestic research on the river basin economy has been mostly limited to the development and utilization of various resources; however, few research studies [6–9] lacks the perspective of regional economics, thus a mature theoretical system of the river basin economy has not been formed yet [10]. Moreover, the

research related to the imbalanced economic development in the river basin has been still in its infancy, and more attention has been preferably paid to the basins of the Yangtze River, the Pearl River, and the Xijiang River like the early research studies [11, 12], or the empirical research studies [13, 14]. As for the relevant research on the basin of the Yellow River, insufficiency can be instantly observed. Besides, some research results were involved in the past, which are outdated and could not reflect the latest trend of the unbalanced economic progression in the YRB when time is under consideration. Moreover, this manuscript utilizes a method called the double decomposition approach of the PWCV proposed by a few studies [15–18] to gauge the degree of the unbalanced economic development and the new dynamic changes in the YRB. Therefore, it analyzes both spatial and industrial causes of this change within a

systematic framework to provide a reference for the theoretical construction of the basin economy and help the decision-making process for more comprehensive regional development.

The organization of the rest of the paper is constructed as follows. Section 2 portrays an overview of economic development in the YRB. Section 3 presents the research method. Section 4 exhibits the results in detail. Section 5 provides a comprehensive discussion. Section 6 finalizes the research with some suggestions.

2. Overviewing the Basin of the Yellow River concerning Its Economic Development

The second-largest in China is the Yellow River whose journey begins at the Bayabgla Mountain in Qinghai Province and streams through the Qinghai, Sichuan, Gansu, Ningxia, Inner Mongolia, Shanxi, Shaanxi, Henan, and Shandong provinces, and pours into the sea called Bohai near the city of Dongying in the province of Shandong. The length is 5464 km, and the total drop is about 4480 m. It spans some typical areas in the West, Middle, and East, respectively. The lower reaches of the basin are mainly concentrated in the Shandong Taohuayu section of Henan Province, including the famous Shandong peninsula area. The middle reaches are mainly distributed in Shanxi, Shaanxi, and Western Henan with a catchment area of $3.44 \times 10^5 \text{ km}^2$. The upstream flow through Qinghai, Sichuan, Gansu, Ningxia, and Hekou town in Inner Mongolia, whose total length is 3472 km with a catchment area of $4.28 \times 10^5 \text{ km}^2$ [19]. The YRB has a key function in the economic development of the nation, accounting for 27.3% of the country's area, carrying 23.3% of the country's population and 21.8% of the total economy. The proportion of the whole society's fixed-asset investment and the revenue of the local public budget were 23.8% and 17.8%, respectively, in the country. However, the YRB experiences a low-quality progression concerning the measurements of GDP [20–24], GDP per capita, fiscal revenue, tertiary industrial structure, and urbanization rate that fall behind the average figures of the whole population. The general status of the economic progress in the YRB was presented in Table 1.

The figures show that (1) the basin of the Yellow River experiences a level of economic development whose shape is called a "reverse altitude gradient" with "lower (downstream) high and upper (upstream) low," that is, upstream < midstream < downstream in order; (2) the trend of the distribution does not exclude the possibility of certain "variation" within each domain. For example, some economic indicators of Inner Mongolia are higher than those of Shanxi and Henan in the upstream domain, which are relatively downstream. This special situation may be related to the relatively small population and richer mineral resources in Inner Mongolia; (3) the reverse geographical gradient difference of the economic progression rank of the basin has been particularly obvious in the other related indicators of industrialization such as industrial structure, and the rate of the urbanization.

3. Research Method

3.1. The Measurement Method of the Imbalanced Economic Progression in the YRB. In this manuscript, the PWCV approach is used to gauge the imbalanced economic progression in the YRB. Suppose that there are m regions, and the region consists of $\sum_1^m x_i$ cities. For instance, for region i, $\overline{y}_{ij}$ represents the GDP per capita of city j, N_{ij} represents the total population of city j where N_i represents the total population in region i, Y_i represents the GDP, and $\overline{Y}_i = (Y_i/N_i)$ denotes the GDP per capita in the region i. The same procedure may be easily adapted to obtain a total $N = \sum_{i=1}^m \sum_{j=1}^{x_i} N_{ij}$ that represents the total population in the basin of the Yellow River. Similarly, $Y = \sum_{i=1}^m \sum_{j=1}^{x_i} N_{ij}\overline{y}_{ij}$ expresses the total GDP, and $\overline{Y} = (Y/N)$ designates the GDP per capita in the basin, respectively. Then, the degree of the imbalanced economic progression in the YRB could be measured by the square of the PWVC shown in equation (1),

$$CV(Y) = \frac{1}{\overline{Y}^2} \sum_{i=1}^m \sum_{j=1}^{x_i} \frac{N_{ij}}{N} \left(\overline{y}_{ij} - \overline{Y}\right)^2, \tag{1}$$

where $\mathbf{Y} = (Y_1, Y_2, \ldots, Y_m)$.

3.2. Decomposition Method of the Affecting Attributes of the Unbalanced Economic Progression in the YRB. We decompose the PWVC of GDP into the spatial and income sources and examine their affecting role on the unbalanced economic progression in the YRB. The spatial decomposition is firstly conducted. By doing so, the imbalanced economic development of the regions and the imbalanced inter-regional economic development are separated. The income sources are secondly decomposed and investigated concerning the effect of various income sources related to the unbalanced economic progression in the YRB. Wenchao (1) implies the imbalanced economic progression in the YRB, which has been decomposed into intraregional and inter-regional imbalances expressed by equation (2).

$$V(\mathbf{Y})^2 = \frac{1}{\overline{Y}^2} \sum_{i=1}^m \left(\frac{N_i}{N}\right)\left(\frac{\overline{Y}_i}{\overline{\overline{Y}}}\right)^2 CV(\mathbf{Y_i})^2 + CV(\overline{Y})^2$$
$$= CV_W + CV_B, \tag{2}$$

where $CV(\mathbf{Y_i})^2 = (1/\overline{Y}_i^2) \sum_{j=1}^{x_i} (N_{ij}/N)(\overline{y}_{ij} - \overline{Y}_i)^2$ indicates the degree of the imbalance in the economic development in region i by (2), $CV_W = \sum_{i=1}^m (N_i/N)(\overline{Y}_i/\overline{Y})^2 CV(\mathbf{Y_i})^2$ indicates the degree of the imbalance in the economic development in m regions, $CV(\mathbf{Y})^2 = (1/\overline{Y}^2) \sum_{i=1}^m (N_i/N)(\overline{Y}_i - \overline{Y})^2$ shows the imbalanced degree in economic development among m regions. Noted that the weighted mean is not represented by CV_W when the degree of the imbalance in the region is a concern, so the weights cannot be added.

If the GDP per capita of each prefecture-level city is composed, the formulas

TABLE 1: Comparison of the main economic indicators in both provinces and regions located at the YRB in 2019.

Indicators	Per capita GDP (yuan/person)	Urbanization rate (%)	Tertiary industry (%)
Qinghai	48981	55.52	$7.1 : 41.9 : 51.0$
Sichuan	55774	53.79	$10.3 : 37.3 : 52.4$
Gansu	32995	48.49	$12.1 : 32.8 : 55.1$
Ningxia	54217	59.86	$10.2 : 39.1 : 50.7$
Inner Mongolia	67852	63.37	$10.8 : 39.6 : 49.6$
Shanxi	45724	59.55	$4.8 : 43.8 : 51.4$
Shaanxi	66649	59.43	$7.7 : 46.4 : 45.9$
Henan	56388	53.21	$8.5 : 43.5 : 48.0$
Shandong	70653	61.51	$7.2 : 39.8 : 53.0$
China	70724	60.6	$7.1 : 39.0 : 53.9$

$$\overline{y}_{ij} = \overline{y}_{ij1} + \overline{y}_{ij2} + \cdots + \overline{y}_{ijk},$$
$$\overline{Y}_i = \overline{Y}_{i1} + \overline{Y}_{i2} + \cdots + \overline{Y}_{ik}, \tag{3}$$

are employed where $\overline{Y}_{ik} = (1/N_1) \sum_{j=1}^{x_i} N_{ij} \overline{y}_{ijk}$.

Then, the internal imbalance in this region can be further decomposed as follows:

$$CV(\mathbf{Y_i})^2 = \sum_{k=1}^{K} z_{ik} COV(\mathbf{Y_i}, \mathbf{Y_{ik}}). \tag{4}$$

$COV(\mathbf{Y_i}, \mathbf{Y_{ik}}) = (1/\overline{Y}_i)(1/\overline{Y}_{ik}) \sum_{j=1}^{x_i} (N_{ij}/N_i) \quad (\overline{y}_{ij} - \overline{Y}_i)(\overline{y}_{ijk} - \overline{Y}_{ik})$ represents the weighted covariance of the regional GDP per capita. $z_{ik} = (\overline{Y}_{ik}/\overline{Y}_i)$ indicates the share of region i concerning k-item income per capita in regional GDP where $\mathbf{Y_i} = (\overline{y}_{i1}, \overline{y}_{i2}, \ldots, \overline{y}_{ix_i})$, and $\mathbf{Y_{ik}} = (\overline{y}_{i1k}, \overline{y}_{i2k}, \ldots, \overline{y}_{ix_i k})$.

Similarly, the imbalance in the regional economic development can be decomposed as follows:

$$CV(\overline{Y})^2 = \sum_{k=1}^{K} z_k COV(\overline{Y}, \overline{Y}_k). \tag{5}$$

$COV(\overline{Y}, \overline{Y}_k) = (1/\overline{Y})(1/\overline{Y}_{*k}) \sum_{i=1}^{m} (N_i/N)(\overline{Y}_i - \overline{Y})(\overline{Y}_{ik} - \overline{Y}_{*k})$ expresses the weighted covariance of GDP per capita in the YRB, and $z_k = (\overline{Y}_{*k}/\overline{Y})$ represents the share of kth item per capita income of GDP in the YRB. In this formula, the item could be described by $\overline{Y}_k = (\overline{Y}_{1k}, \overline{Y}_{2k}, \ldots, \overline{Y}_{mk})$ and $\overline{Y}_{*k} = (\sum_{i=1}^{m} N_i \overline{Y}_{ik}/N)$.

Substituting (4) and (5) into (1) results in (6).

By dividing both sides of the equation,

$$1 = \sum_{i=1}^{m} \frac{N_i}{N} \left(\frac{\overline{Y}_i}{\overline{Y}}\right)^2 \sum_{k=1}^{K} z_{ik} s_{ik} + \sum_{k=1}^{K} z_k \overline{s}_k. \tag{6}$$

is obtained where $s_{ik} = (COV(\mathbf{Y_i}, \mathbf{Y_{ik}})/CV(\mathbf{Y})^2)$, $\overline{s}_k = (COV(\overline{Y}, \overline{Y}_k)/CV(\mathbf{Y})^2)$.

Besides, $(N_i/N)(\overline{Y}_i/\overline{Y})^2 \sum_{k=1}^{K} z_{ik} s_{ik}$ represents the contribution rate of k-item income in region i to the unbalanced economic progression in the YRB, and the product of $z_k \overline{s}_k$ represents the contribution rate of k-item income to the unbalanced economic development between regions.

3.3. Data Source and Its Processing. The manuscript studies the imbalance circumstance and the affecting attributes of the economic development in the YRB between 2010

through 2020 with the utilization of the 69 prefecture-level cities in the lower, middle, and upper sections of the YRB. By going through the spatial level and utilizing these areas as the spatial units in the double decomposition of the PWCV for the state of the economic development, the contribution of the imbalanced economic development in these three areas dealing with the regional imbalanced economic development, and the contribution of the imbalanced economic development between them dealing with the regional imbalanced economic development are studied in the YRB, respectively. This paper uses the data sets that were extracted from *The Statistical Yearbook of Chinese Cities* from 2011 to 2021 and the statistical book for both provinces and autonomous regions published annually.

4. Results

4.1. The Changing Process of the Unbalanced Economic Progression in the YRB. Figure 1 depicts the imbalanced economic development in the YRB. Even though the long-run trend was downward, the period between 2010 through 2020 had witnessed some ups and downs. However, the imbalanced economic progression in the YRB has designated a sharp downward trend since 2010. We summarized what happened between 2010 through 2016 and 2017 through 2020 as follows. The PWCV for the economic progression in the YRB decreased from 0.3836 to 0.3208 between 2010 through 2016 with an average annual decrease of 2.73%, and the fluctuation range of the imbalanced economic progression in the YRB during this period was small. On the other hand, the decline was particularly straightforward between 2017 through 2020. The PWCV for the economic progression in the YRB decreased from 0.3725 to 0.1816 with an average annual decrease of 17.08%.

4.2. The Spatial Decomposition of the Unbalanced Changes in the Economic Progression in the YRB. Utilizing the three areas in the YRB for comparison aims at studying the imbalanced economic development. Table 2 shows that the contribution of the imbalanced economic development in these regions to the regional imbalanced economic progression in the YRB changed between 75.54 through 89.48%, and the contribution of the imbalanced economic development among the three regions to the regional imbalanced economic progression in the YRB varied between 9.56
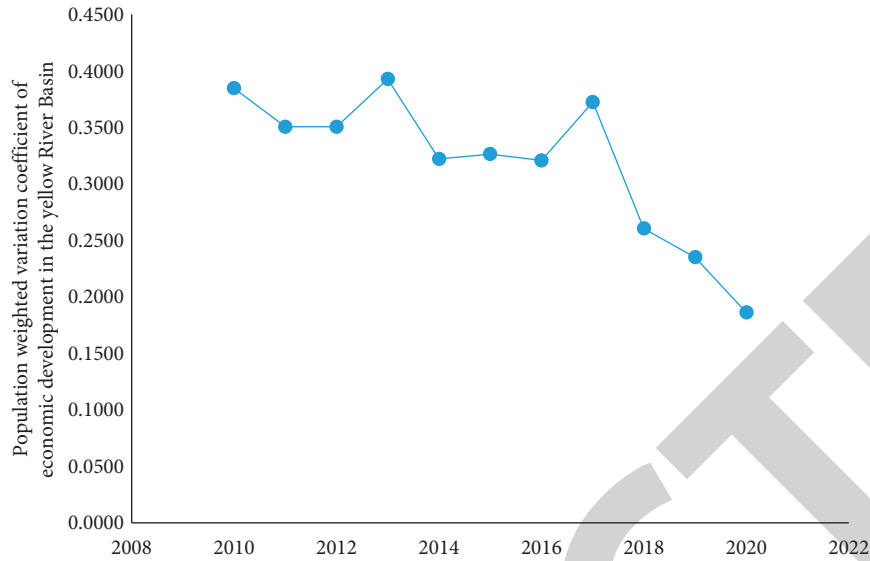
Figure 1: The process of the unbalanced economic progression in the YRB during 2010–2020.

Table 2: The spatial decomposition results of the unbalanced development changes in the YRB between 2010 and 2020.

Years	Regional internal imbalance		Imbalance between regions	
	PWCV	Proportion in regional imbalance (%)	PWCV	Proportion in regional imbalance (%)
2010	0.3310	86.0568	0.0536	13.9432
2011	0.3138	89.4846	0.0369	10.5154
2012	0.3131	89.2824	0.0335	9.5606
2013	0.3511	89.3736	0.0417	10.6264
2014	0.2828	87.7935	0.0393	12.2065
2015	0.2805	85.9385	0.0459	14.0615
2016	0.2718	84.7285	0.0490	15.2715
2017	0.3253	87.3299	0.0472	12.6701
2018	0.1968	75.5372	0.0637	24.4628
2019	0.1927	81.9731	0.0424	18.0269
2020	0.1516	81.4656	0.0345	18.5344

through 24.46%. Thus, the imbalanced economic development in the three regions was the main influencing factor for the imbalanced economic progression in the YRB. The mechanism worked as follows. The imbalanced economic situation in the region was mainly caused by the imbalanced economic development followed by the imbalanced economic progression between regions. Therefore, the imbalanced economic progression between regions tended to expand on a yearly basis.

Figure 2 depicts that the regional imbalanced economic progression in the YRB was characterized as a fluctuating downward inclination between 2010 and 2020. The year 2016 was used as a split point so the full period was divided into two subperiods, namely, between 2010 through 2016 and between 2016 through 2020. The PWCV for the economic progression in the YRB decreased from 0.3310 in 2010 to 0.2718 in 2016 with an average annual decline of 2.98%. Besides, the PWCV for the economic progression in the YRB decreased from 0.2718 in 2016 to 0.1516 in 2020 with an average annual decline of 11.06%. Thus, the imbalanced economic development in the YRB decreased significantly between 2016 and 2020. Therefore, it can be concluded that

the degree of the imbalance within the economic development region of the YRB was generally high and volatile.

Figure 3 depicts that the imbalanced economic progression in the YRB between 2010 and 2020 had been constantly fluctuating. While the average annual decline of the PWCV among economic progression regions in the YRB was 6.5% between 2010 through 2012, the average annual decline of the PWCV among economic progression regions in the YRB was 4.7% between 2012 and 2018. On the other hand, the average annual decline of the PWCV among economic progression regions in the YRB was 15.28% between 2018 through 2020. It can be concluded that the degree of the imbalance among regions in the YRB was generally towering and changing.

4.3. The Industrial Decomposition of the Unbalanced Changes in the Economic Progression in the YRB. When GDP was decomposed concerning the classification of primary, secondary, and tertiary industries, this paper decomposed the unbalanced changes in the economic progression in the YRB. We select the years 2010, 2013, 2015, 2018, and 2020, which are significant, to investigate the effect of these three
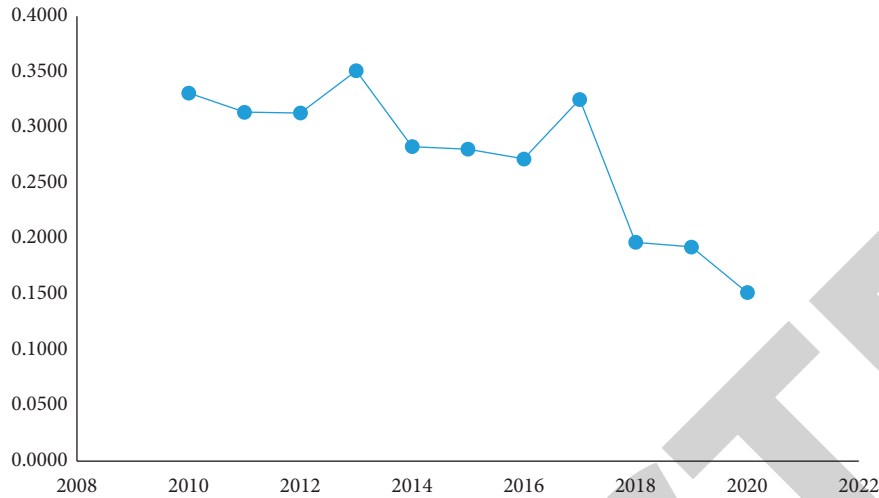
Figure 2: The unbalanced change process of the economic progress in the YRB between 2010 and 2020.
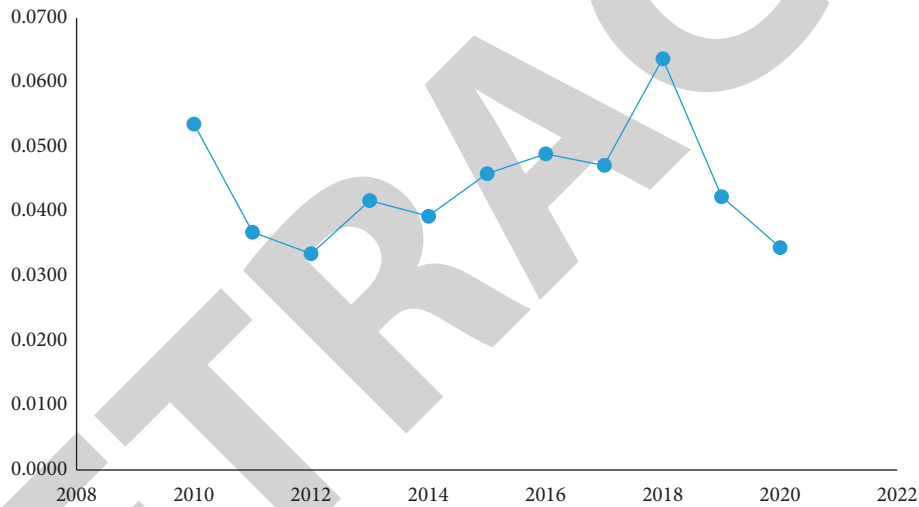

Figure 3: The change process of the regional imbalance of the economic progress in the YRB between 2010 and 2020.

Table 3: The industrial decomposition results of the unbalanced development in the YRB in 2010 (unit: %).

Regional imbalance	Regional internal imbalance	Internal imbalance in the upstream region	Internal imbalance in the middle reaches	Internal imbalance in downstream areas	Imbalance between regions	Total
Primary industry	0.56	0.14	0.31	0.11	0.83	1.39
Secondary industry	51.24	13.28	18.38	19.58	7.99	59.23
Tertiary industry	34.26	8.21	14.13	11.92	5.12	39.39
Total	86.06	21.63	32.81	31.62	13.94	100

industries on the unbalanced economic progression of the YRB. The results are presented in Tables 3–7.

Tables 3–7 firstly present that (1) the dissimilarity between the secondary and the tertiary industries is the most important factor leading to the unbalanced economic progression in the YRB among the industrial sources with the proportion reaching more than 98%. (2) The secondary industry contributing to the unbalanced economic progression in the YRB was more than 50% and decreased after 2018, and the last figure was 45.67% in 2020. (3) The tertiary industry contributing to the unbalanced economic progression in the YRB increased on a yearly basis, which changed from 39.39% to 55.62%. (4) However, its contribution to the regional imbalanced average income of the residing people in rural areas of China was marginally higher than that of the average wage in 1993, and its contribution

TABLE 4: The industrial decomposition results of the unbalanced development in the YRB in 2013 (unit: %).

Regional imbalance	Regional internal imbalance	Internal imbalance in the upstream region	Internal imbalance in the middle reaches	Internal imbalance in downstream areas	Imbalance between regions	Total
Primary industry	0.75	0.10	0.27	0.38	0.53	1.29
Secondary industry	50.23	11.77	18.33	20.12	5.40	55.63
Tertiary industry	38.39	8.46	14.62	15.31	4.69	43.09
Total	89.37	20.33	33.23	35.81	10.63	100

TABLE 5: The industrial decomposition results of the unbalanced development in the YRB in 2015 (unit: %).

Regional imbalance	Regional internal imbalance	Internal imbalance in the upstream region	Internal imbalance in the middle reaches	Internal imbalance in downstream areas	Imbalance between regions	Total
Primary industry	0.23	−0.08	0.38	−0.06	0.55	0.78
Secondary industry	44.98	10.11	19.00	15.88	7.06	52.04
Tertiary industry	40.72	9.07	18.01	13.65	6.45	47.17
Total	85.94	19.09	37.38	29.46	14.06	100

TABLE 6: The industrial decomposition results of the unbalanced development in the YRB in 2018 (unit: %).

Regional imbalance	Regional internal imbalance	Internal imbalance in the upstream region	Internal imbalance in the middle reaches	Internal imbalance in downstream areas	Imbalance between regions	Total
Primary industry	0.04	−0.14	0.26	−0.08	0.67	0.71
Secondary industry	37.56	5.08	13.19	19.29	11.81	49.37
Tertiary industry	37.94	6.26	12.05	19.64	11.98	49.92
Total	75.54	11.20	25.49	38.84	24.46	100

TABLE 7: The industrial decomposition results of the unbalanced development in the YRB in 2020 (unit: %).

Regional imbalance	Regional internal imbalance	Internal imbalance in the upstream region	Internal imbalance in the middle reaches	Internal imbalance in downstream areas	Imbalance between regions	Total
Primary industry	−0.88	−0.31	0.08	−0.65	0.09	−0.79
Secondary industry	38.11	6.35	15.63	16.13	7.56	45.67
Tertiary industry	45.13	6.75	12.34	26.04	10.49	55.62
Total	82.36	12.79	28.05	41.52	18.14	100

was also lower than that of the average wage in other years. In 2009, its contribution was 47.88%, which was lower than that of the average wage. The effect of the primary industry on the unbalanced economic progression in the YRB was very small, which was just less than 2%.

Secondly, the impact of the three major industries on the regional and inter-regional imbalances for the economic progression of the three regions in the YRB was consistent with the impact of the abovementioned imbalance in the economic progression in the YRB. The difference originated from the contribution to the regional imbalance that was significantly greater than that to the inter-regional imbalance. Moreover, except for the primary industry, the difference pertinent to the impact of the secondary and the tertiary industries on the region generally showed a downward trend, and the impact on the region showed a fluctuating upward trend. Specifically, the contribution difference between the tertiary industry and regions increased by 13.02% from 2010 to 2020, and the contribution

difference between the secondary industry and the regions did not change a lot. Correspondingly, the contribution difference of the tertiary industry to the region increased by 10.87% from 2010 to 2020, and the contribution difference of the secondary industry to the region decreased by 13.13%.

Thirdly, the impact on the intraregional imbalance was greater than that on inter-regional imbalance when the overall impact of the industry on inter-regional imbalance and intraregional imbalance were under consideration. The gaps of this impact were 72.12%, 78.74%, 71.88%, 51.08%, and 64.22% in 2010, 2013, 2015, 2018, and 2020, respectively. However, the gap was generally decreasing.

Fourth, the impact of the imbalance of the internal economic development in the lower and middle sections was relatively large when the internal industrial difference impact of the regional imbalance was under consideration. The impact of the unbalanced economic progression in the middle sections on the regional imbalance accounted for 38.12%, 37.18%, 43.50%, 33.74%, and 34.06% in 2010, 2013,

2015, 2018, and 2020, respectively. The impact of the unbalanced economic development in downstream areas on the regional imbalance accounted for 36.74%, 40.07%, 34.28%, 51.42%, and 50.41% in 2010, 2013, 2015, 2018, and 2020, respectively, with an increasing trend in a yearly basis.

5. Findings

5.1. Building a New Development Layout for Both Urban and Rural Regions. A more comprehensive approach is needed to tackle the issues mentioned previously. Hence, providing a comprehensive perspective to determine the comparative advantages of the regions, promoting the slimming and fitness of megacities, and building large- and medium-sized cities in a way of orderly manner should be realized. Then, promoting the urbanization of county towns, eradicating the weaknesses, expanding and strengthening the county economy, thus comprehensively implementing the Rural Revitalization Strategy should be done. Eventually, devising a development layout concerning the characteristics of the subregions, urban and rural areas based on their respective positions, collaborative linkage, and organic mutual promotion is a key implementation that is highly required.

5.2. Utilization of Both Characteristics and Advantages to Building a Contemporary Industrial System. Relying on a strong domestic market, accelerating the structural reform of the supply side economy, investing more in both technological and scientific efforts and innovations, strengthening the characteristics of the industries according to regional resources, factor endowment, and development foundation are the first round of implementations that are needed. Besides, by focusing on areas with a strong industrial foundation along the lower and middle sections of the YRB, building a strategic cooperation platform that helps any industry appear with an effective connection between production and supply sides and collaborative cooperation among industries in the upstream, middle, and lower reaches of the region. Thus, a close connection between the industrial innovation chain and supply chain would be constructed that would promote the upgrading of the industrial system and the reconstruction of the basic capacity and hence would result in building industrial clusters with strong competitiveness. Therefore, acceleration and transformation of new and old driving forces would support the manufacturing industry aiming at reaching high-quality end products so the transformation of the resource-based industries would be realized, which would construct a contemporary system that would provide unique characteristics and advantages to the industry.

5.3. Improving the Realization of the Value and Compensation Instrument of the Ecofriendly Goods. To establish a mechanism of value realization based on ecological products in the YRB including the organic combination of both vertical and horizontal dimensions, government and market would need to take the stage that carries out the value accounting and measurement of ecological products, gradually promoting the standardization, and finally provide support for compensations. Besides, the marketization of comprehensive ecological compensation should be devised that make up for the economic losses caused by abandoning large-scale industrial infrastructures since they are the main functions in some areas of the YRB to protect the functionality of the area, and compensation should be provided with those areas with a low environmental carrying capacity that gives up development opportunities for ecological protection to reduce the imbalanced economic progression in the YRB.

6. Conclusions

The research concludes that the imbalanced economic progression in the YRB generically showed a downward trend between 2010 through 2020, especially in 2018, which was mainly due to the national poverty alleviation and rural revitalization plans. However, the degree of the imbalance in the region generally was still high. Besides, the difference between main cities and underdeveloped counties and townships in the region was the main factor that led to the outcomes. Moreover, the imbalanced economic progression in the YRB was mainly caused by the differences between the secondary and the tertiary industries whose contribution rate was more than 98%, and the contribution of the tertiary industry to the imbalanced economic progression tended to expand gradually. The aforementioned conclusion implies that the level of economic development in these three regions of the Yellow River was in obvious contrast. On the other hand, the Shandong Peninsula in the lower section of the YRB has become a dazzling wonderful flower in the YRB, China, and even in the world. However, the upper sections and their resources look like they were almost a forgotten corner. The accumulated economic gap in the basin has been still a very serious issue. Therefore, more serious measures should be taken and implemented in this regard.

Data Availability

The data will be provided upon request to authors.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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