

INDUSTRIAL SECTOR AND ITS ROLE IN GENERATING EMPLOYMENT AND INCOME FOR ECONOMIC GROWTH IN NEPAL

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ABSTRACT

Industrial sectors support the people in generating employment and income for economic growth of the nation. The objective of this study was to explore the contribution of the industrial sector to generate employment and income for economic growth. The study employed secondary sources of data to collect information and adopted simple statistical tools to analyze the data using descriptive and quantitative research design. The study found that most of the industries were registered under the small industry and involved more people and provide more employment. Under the sector wise description, manufacturing industrial sector involved more people, provided more employment and more income to the employees. Industrial sectors covered only 8.11 percent of GDP whereas manufacturing industrial sector occupied 5.56 percent of GDP of the Nation.

Keywords: industrial sector, employment, generating income, economic growth, establishment

Background of the Study

Industry refers to the application of capital and labour in the extraction and construction of material goods. It produces both goods such as capital goods and consumption goods. Great economic progress is to be possible with the revolution of industrialization. Karla (1997) describes that England is the first country which started the industrial revolution since 1703 in the world. It utilizes useless raw materials, sources of power, skilled labours. In line with this view, Maliwichi et al. (2023) describe that the industrial sector develops management skills and creativity skills of entrepreneurs for business survival. It is a means of well developed transport of communication. It develops banking system and creates goodwill. Industrial sector plays vital role to boost the national economy. It provides employment opportunities, increase income, increase economic growth, fulfill human needs, use unutilized resources and reduce poverty. Department of Labour of South African Government (2011) states that the craft industry plays important role as agent for sustainable livelihood, and for the generation of employment (cited in Abisuga-Oyekunle and Fillis, 2016). Supporting this view, Aremu (2004) states that the small and medium scale industries play significant role to bring economic self-dependence, to generate

employment and income and to uplift the nation's economic status for poverty reduction (cited in Mukaila Ayanda and Sidikat Laraba, 2011). The industries and industrial sectors play the role to collect wastage resources and utilize for producing new goods. It is more powerful economic activities to promote employment and income for the development of the nation. Hassen and Ahmad (2016) describe that micro enterprises are more efficient economic activities to create employment and generate income for the nation's economy employing low income groups with adopting labour intensive technique. It helps the people for poverty reduction by providing job opportunity. Supporting this view, Weldelessie et al. (2019) state the micro, small and medium enterprises are the important sources of economy to promote regional income to balance the development, to reduce poverty and inequality. Industries and industrial sectors play role in every rural and urban areas to increase production by involving unemployed persons and low income groups to enhance the economic status of them. It contributes to minimize the shortage of consumption and capital goods of the nations.

It is the best economic activities which help the nation to upgrade the economy. Oladinrin et al. (2012) view that construction industrial sector contributes more to lead the economy of the nation. Most of the developed countries depend on industrial sectors and underdeveloped and developing countries depend on agriculture sector without any technical knowledge. Melville et al. (2007) view that IT industries produce more adopting new technology with low cost than other industries. Industry develops and applies new technology for production. Most of the developed countries apply modern technologies in the leading industrial sectors. Supporting the view, (Lee et al., 2015 and Wang et al. 2016^a) describe that Industry 4.0 applies digital technology to collect and provide useful information to promote manufacturing system (Frank et al. 2019). Likewise, World Tourism Organization (2018) reports that tourism industry is considered as alternative source of export income and it contribute to manage balance of payment (Manzoor et al., 2019).

In Nepal, cottage industries were established from the ancient period in every house. These industries produced cotton and woolen clothes, paper, food, copper and wooden crafts, pots and others (Dhakal, 2021). Likewise, the industries came into existence during the Rana regime, for example, Biratnagar Jute Mill is the first industry established by the government of Nepal in 1936 (1993 BS). Now, Nepal has eleven industrial zones such as Balaju industrial zone (2016 BS), Hetauda industrial zone (2020 BS), Patan industrial zone (2020 BS), Dharan industrial zone (2029 BS), Nepalgunj industrial zone (2030 BS), Pokhara industrial zone (2031 BS), Butawol industrial zone (2032 BS), Bhaktapur industrial zone (2035 BS), Birendranagar industrial zone (2038 BS), Dhankuta industrial zone (2041 BS) and Rajbiraj industrial zone (2044 BS). Industrial Census of Manufacturing Establishments (CMEs) has been started in Nepal from 1964/65 to calculate the industrial information of the economy. The first census of industrial sectors was started in Nepal from 1965 (2022 BS). According to the industrial survey, 60,185 industries are established in Nepal (statistical year book, 2021, p.303). At

this juncture, my study aims to explore the contribution of industrial sectors on generating employment and income for economic growth in Nepal.

Statement of the Problem

Most of the developing countries are facing the high backwardness of industrialization. These countries are facing the obstacles of industrialization such as high poverty, lack of saving, lack of capital and lack of infrastructure development. In this context, Nepal is introduced as an underdeveloped country in the world and has been facing these problems in industrialization. Nepal Labour Force Survey Report (2018) has shown that about 60.4 percent of Nepalese people are involved in agricultural sector and it has contributed only to 23.95 percent GDP without any agricultural skill (CBS, 2021/22). The industrial survey (2019/20) has shown that only 8.11 percent of GDP is contributed by industrial sectors in Nepal. Nepalese economy has been depending upon the factors other than industrial sectors, for example, remittance and international loan. Poverty, lack of capital and brain drain were obstacles for the development of industry. These factors and the industrial sectors are reciprocal to each other. Very few previous studies have shown concern to this area. Thus, the present study was carried out to investigate the role of industrial sectors and to show how they can support to generate employment and income for economic growth in Nepal.

Objective of the Study

The study aimed to explore the role of industrial sectors to generate employment and income for economic growth in Nepal.

Literature Review

Melville et al. (2007) have analyzed that the impact of IT industries in concentration and dynamism. The main aim of this study was to investigate the contribution of IT industries on growing productivity with competitive environment. For this, the study utilized time series data from 1987-1994 using cross sectional data sets and 5211 firms as sample. The study employed ordinary Least Square Regression and Cobb-Douglass production model. The study revealed that marginal productivity of IT industries was lower than other industries and was more successful in manufacturing sector.

Oyelana and Adu (2015) have explained the small and Medium Enterprises (SMEs) role in creating employment and reducing poverty in South Africa. The objective of this study was to identify how SMEs play role on employment creation and poverty alleviation. For this, the study adopted simple random sampling using questionnaires tool to collect the data and descriptive statistics and percentage to analyze the data. The study found that SMEs play significant role to create employment and to reduce poverty. The study also found that SMEs have been facing various obstacles to regulate the SMEs activities but they have been successful to achieve their goals. The study concluded that industrial development is needed in every country for nation to achieve development goal.

Haddad et al. (2019) have discussed the contribution of Small and Medium Enterprises (SMEs) for employment generation and economic growth. The objective of this study was to investigate how SMEs contribute on employment generation and economic growth. For this, the researcher those chosen marble industry using simple random sampling and a set of questionnaire has used as a tool to collect data. It took 255 employees from Swat Marble Industries. The study showed that SMEs were significantly increased employment and economic growth. The study also showed that 83.5 percent of the response was positive and 16.5 percent response was negative. So, the study concluded that SMEs were successful to generate employment and to increase income level.

Alnegrish (2023) described the role of manufacturing industry to increase economic growth in Jordan. The objective of this study was to compare the efficacy of Kaldor's growth model on growth of industrial sectors and non-industrial sectors. For this, the study employed time series data from 1990-2019. The study shoed that there was positive impact on labour productivity and industrial sector and non-industrial sectors to increase GDP. It confirmed that Kaldor's model was successful to increase economic growth in Jourdan and it was successful to link forward and backward with other economic sectors.

Wang et al. (2023) have described the role of industries to achieve sustainable development goal being conscious of environment. The study aimed was to find out how industries played role to achieve sustainable goal. For this, the study adopted panel data from 1990-2020 using robust panel estimation technique. The study reported that there was negative relationship between financial globalization and environment and renewable energy and environment. The study concluded that industrial growth is harmful for ecological and environmental sustainability.

Zheng (2023) has explained the resource-based industries for economic growth. The objective of this study was to find out the contribution of various industries on economic growth. The study employed decomposition method and input-output table. It found that the contribution of resource-based industries in local economic growth has been seriously overestimated. The local resource-based industries produced intermediate goods for the economic growth. It concluded that resource-based industries have less contributed in regional economic growth.

Research Gap

The study has attempted to analyze the contribution of industrial sectors on generation of income and employment for economic growth. The above studies have not discussed the Nepalese industrial sectors and its role on generation of income and employment for economic growth. The above studies have more emphasized on economic growth, less emphasized on employmopopent and have not included the income generation. Therefore, this study was carried out to fulfill this gap.

Significance of the Study

Nepal is an underdeveloped country and faces the problem of poverty. To upgrade the nation's economy and to reduce the poverty, the industrial sector play significant role in the nation by increasing employment and income for economic growth.

Methodology

The study was regulated to explore the role of industrial sectors on employment and income generation for economic growth after launching the industry in Nepal. The study employed descriptive and quantitative research design using secondary sources of data. The sources of information were national industrial survey 2019/20, statistical year book 2021, economic survey 2022, dissertations, report, articles and books. The data were revealed employing simple statistical tools.

Results and Discussion

In this section, I have discussed the establishment and employment generation in different industries, involvement and employment in different industrial sectors, income of the employees in different industrial sectors and contribution of industrial sectors on Gross Domestic Product (GDP).

Establishment and Employment Generation in Different Industries. In this section, the study describes the establishments of industries and employment generation in various industries in Nepal. Here, the discussion involved the number of different types of industries such as cottage industry, small industry, medium industry and large industry. It also includes the not reported industry which is not identified the type of industry but registered.

Table 1
Description of establishment and employment in industries

Types of industry	No. of Industry	Percentage	No. of persons involved	Percentage	No. of employees	Percentage
Cottage	23,921	39.74%	141,518	28.80%	98,521	25.81%
Small	33,891	56.31%	229,598	46.74%	170,060	44.55%
Medium	697	1.16%	61,149	12.45%	59,205	15.51%
Large	291	0.48%	46,992	9.57%	45,817	12.00%
Not reported	1,385	2.30%	11,970	2.43%	8,083	2.12%
Total	60,185	100%	491,227	100%	381,686	100%

Source: CBS, National Industrial Survey, 2019/20

According to the above table, 39.74 percent of the industries have been registered under the umbrella of the cottage industry. This type of industry involves 28.80 percent people out of total involvement where as 25.81 percent have been working as the employee out of total industrial employee. Likewise, it is reported that 56.31 percent industries have been registered under the small industry. This industry has employed 44.55 percent out

of total industrial employment and involved 46.74 percent of total involvement. Similarly, medium industry occupies 1.16 percent of total number of industries. It has involved 12.45 percent people out of total industrial involvement. It has employed 15.51 percent out of total industrial employment. The large industry occupies 0.48 percent of the total number of industries. It has involved 9.57 percent of people out of total industrial involvement and has employed 12.00 percent out of total industrial employment. Likewise, 2.30 percent industry has not reported but it has involved 2.43 percent of people out of total industrial involvement and employed 2.12 percent of people out of total industrial employment. The data indicate that most of the industries are registered under the small industries and it has involved more people and provides more employment than other industries.

Involvement and Employment in Different Industrial Sectors. National industrial survey has developed four industrial sectors in Nepal such as mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply and, water supply, sewerage, waste management and repairing. The study has described the involvement and employment in different industrial sectors.

Table 2
Involvement and employment of the persons in different industrial sectors

Industrial Sectors	Persons involved	Percentage	Employees	Percentage
Mining and quarrying	6,485	1.32%	5,719	1.50 %
Manufacturing	444,964	90.58 %	346,143	90.69 %
Electricity, gas, steam and air conditioning supply	21,593	4.39 %	17,238	4.51 %
Water supply; sewerage, waste management and repairing	18,185	3.70 %	12,587	3.30 %
Total	491,227	100 %	381,687	100 %

Source: CBS, National Industrial Survey, 2019/20

According to the above table, mining and quarrying industrial sector involves 1.32 percent people and provides 1.50 percent employment out of total industrial sectors. Likewise, it is reported that manufacturing industrial sector involves 90.58 percent people and provides 90.69 percent employment out of total industrial sectors. Similarly, electricity, gas, steam and air conditioning supply industrial sector involves 4.39 percent people and provides 4.51 percent employment out of total industrial sectors. The water supply; sewerage, waste management and repairing industrial sector involves 3.70 percent people and provides 3.30 percent employment out of total industrial sectors. It interprets that manufacturing industrial sector has involved more people and provided more employment than other industrial sectors.

Income of the Employees in Different Industrial Sectors. In this section, the study describes the income of the employees in different industrial sectors in Nepal. Here, the discussion has involved the income of the employees in Rs. in billions.

Table 3
Description of income

Industrial sectors	Income of the employees (in billions)	Percentage
Manufacturing	95.77	88.77%
Electricity, gas, steam and air conditioning supply	6.92	6.41%
Water supply; sewerage, waste management and repairing	3.40	3.15 %
Mining and quarrying	1.80	1.67 %
Total	107.89	100 %

Source: CBS, National Industrial Survey, 2019/20

According to the above table, manufacturing industrial sector's employees are successful to earn 88.77 percent of income out of total industrial sectors. Likewise, electricity, gas, steam and air conditioning industrial sector's employees are successful to earn 6.41 percent of income and water supply; sewerage, waste management and repairing industrial sector's employees are successful to earn 3.15 percent of income out of total industrial sectors. The mining and quarrying industrial sector's employees are successful to earn 1.67 percent of income out of total industrial sectors. It interprets that manufacturing industrial sector has provided more income to the employees.

Contribution of Industrial Sectors on Gross Domestic Product (GDP). In this section, the study discusses the contribution of different industrial sectors on Gross Domestic Product (GDP) of the economy in Nepal.

Table 4
Description of GDP of the different industrial sectors

Industrial Sectors	Percentage covered by the GDP
Manufacturing	5.65%
Electricity, gas, steam and air conditioning supply	1.37%
Mining and quarrying	0.58%
Water supply, sewerage, waste management and repairing	0.51%
Total	8.11%

Source: CBS, National Industrial Survey, 2022

According to the above table, manufacturing industrial sector covers 5.65 percent of GDP and electricity, gas, steam and air conditioning supply covers 1.37 percent of GDP out of total industrial sectors' GDP. Likewise, mining and quarrying industrial sector covers 0.58 % of GDP and water supply; sewerage, waste management and repairing industrial sector covers 0.51 percent of GDP out of total industrial sectors. The total industrial sectors occupy only 8.11 percent of GDP of the economy in Nepal. It shows that manufacturing sector has contributed more in GDP earning than other sectors but

overall contribution of industrial sectors in GDP collection is less which is only 8.11 % in total economy of the nation.

Conclusion

The study aimed to explore the industrial sectors and its role in generating employment and income for economic growth in Nepal. Industrial sectors have promoted the nation's economy by generating employment and income. It has involved and employed the people in different industrial activities to increase production in the nation. The finding has revealed that industries and industrial sectors have successful to involve the people in different industrial activities by promoting employment and to increase economic growth of the nation. It concludes that it is more powerful activities to promote employment and income for the development of the nation. It can facilitate the people for poverty reduction by providing job opportunity. It is recommended that industrial sectors should expand the establishment of industries in every rural area to involve the rural unemployed persons and low income groups to uplift their economic status of them. Industrial sectors can be contributed to minimize the shortage of consumption and capital goods of the people.

Implication of the Study

If industrial sectors remove the industrial obstacles such as lack of credit, sustainability, variation of price, weak administration then industrial sectors can succeed to generate income and employment for economic growth. For this, nation should develop skillful human resources, infrastructure, and strong industrial policy.

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