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Industrial development and economic growth

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ABSTRACT

This article is concerned with the industrial development of Nepal. It shows the correlation between the industrial establishment, investment, and employment. The article describes industrial relations and slow process of industrialization in Nepal. Industrial policies followed by the government in different periods are presented and literature regarding Nepalese and outside Nepal are also presented. This article is based on secondary data and information. This paper also examines the contribution of the industrial sector to GDP. Some other GDP scenarios of SAARC countries with respect to their GDP growth rate of industrial sector are also presented in the tabular form. The paper concludes that the rapid industrialization is required to create more employment opportunities and to shift the agriculture labor to an industrial sector along with to solve the problem of increasing unemployment and disguised unemployment. Some policy options are also suggested to increase industrial production in a sustainable manner and with comparative advantage.

Keywords: *Economic development, Employment, Capital, Industry, Industrialization*

1. INTRODUCTION

Industrialization is regarded as an essential part for the rapid economic development of the country, especially since the industrial revolution. The countries which merely depends on agriculture have remained in less developed category whereas on the other hand which has developed industrial sector achieved high rates of economic growth. The industrialized countries started the process of industrialization on large scale and transferred the economy by utilizing advantages of industrial development to agriculture. They achieved a higher level of growth in various sectors of the economy. Starting with a nominal industrial base, some countries gained remarkable industrial development and economic growth within a short period of time.

In industrialization, there is an optimum utilization of scarce resources available at local level. It increases the manufacturing sector, national income and employment opportunities within the country. Industrial sector increases the production of goods and services. The labor receives higher wages. The level of income of workers increases and their living standard also improves. When industrial production increases that create an environment for the promotion of export and increases revenues of government. Industrialization provides machinery like tractors, threshers, harvesters and spray machines to increase the production of the agriculture sector. As the industrial sector expands, its production increases with large-scale operation and cost of production decreases. The quality of products improves due to use of modern technology.
Industrialization increases the supply of goods for domestic and international market. The government receives revenue in the form of custom and excise duties, sales and income taxes from the industrialists due to to which government revenue increases.

The few industries, which were set up in Nepal's south border of Biratnagar, Birgunj, and Bhairahawa; have contributed to creating employment opportunities and increasing revenue. The infrastructure required for the rapid growth of industries is inadequate. The supply of labor, capital, transport, and communication facilities are not sufficient. This has created a barrier to the growth of industrial sector.

The amount of capital required in the capital-intensive industries like steel, iron, chemical, and automobiles are quite high. Huge capital is also required to establish and expand industries like textile, carpet, sugar, and paper.

Nowadays due to inflation people have a low level of income and they demand less industrial goods, which obstructs industrial development. There is a less foreign investment in the country due to political and policy-level instability and some local obstruction in the establishment of an industry which is also the main hurdle in industrial development.

On one hand, there is less awareness to invest in large-scale industries due to lack of industrial education and information. On the other hand, the capital-intensive industries require highly qualified professionals that are not easily available in Nepal.

Nepal has extreme geography where about 83 percent of the total land is covered with high mountains and hills. Sometimes the drought, heavy flood occur, especially in the rainy season.

Firstly, more and more people are seeking work outside agriculture and urbanization is accelerating. For the Least Developed Countries as a group, the decade 2000-2010 is the first decade in which the growth of the economically active population outside agriculture is predicted to be greater than the growth of the economically active population within agriculture (UNCTAD, 2006).

If productive employment opportunities do not expand sufficiently for the growing labor force in non-agricultural activities, there will be increasing pressure for international migration from the country and high levels of extreme poverty will persist due to lack of economically active manpower. The development of productive capacities is also necessary to secure the fiscal basis for good governance and to ensure effective economic growth. Without the development of their productive capacities more and more Least Developed Countries will face recurrent, complex humanitarian problems.

"Productive capacities are defined as the productive resources, entrepreneurial capabilities and production linkages which together determine the capacity of a country to produce goods and services and enable it to grow and develop" (UNCTAD, 2006).

Nepal needs not just lower tariffs or improved market entry but also enhanced supply capacities in order to benefit from the open, global economy through producing and trading competitive goods and services. New international initiatives under discussion, such as "aid for trade", recognize that without productive capacities there will be little to trade and that these capacities will not emerge automatically from the workings of market forces alone, but from the interplay of entrepreneurship, public policy and international action.

2. LITERATURE REVIEW

The industrialization strategy approach began primarily as an empirical literature but has developed as a theory to help explain why an interventionist strategy toward export can accelerate growth and improve development outcomes more than a strict free-trade approach. The theory is focused on identifying and redressing market failures encountered in the process of industrialization (Torado and Smith, 2016).

Industrial development started late in Nepal. It started after the establishment of Industrial Council in 1936. The Gharelu Prachar Illam Adda was established in 1940. The cigarette, match, cotton, paper industries were established (Pant, G.D, and Joshi, S, 2005). The planned process of industrialization started with the launching of the first five-year plan in 1956, and thereafter a number of cottages, small, medium and large scale industries were established. Cigarette, sugar Cotton, Cement, Bricks, and Paper industries were established in public sector. However, the process of industrialization in Nepal is at a slow rate. The industry is regarded as the secondary sector of the economy after agriculture. It produces both consumer goods and capital goods. Industries create various forms of utilities. England was the first country in the world to bring industrial revolution at the beginning of the Eighteenth Century.

Regarding the theoretical framework different researchers have reviewed large number of research works, they have studied with empirical data in different context. Reviews are based on research on performance of personnel management, education, training and regional disparity. Upadhyaya (1981) has analyzed the practices of personnel management is manufacturing public enterprise in Nepal. He found that the method used to estimate the manpower requirement in Nepal were not sound as per his version. Recruitment and selection were based on the principles of public service commission and placement was decided by management without consultation with employees; there were no well managed training strategies and centers. Promotion system were also guided by Public Service Commission's principle based on four-fold criteria of academic qualifications, seniority, and experience and job performance. Agrawal (1983), studied a case study on innovative human resources management of Nepal Ratna Feed Industry and Shree Textile Company and found that management have given proper attention to the improvement of employees' performances through on-the-job training and suggested that the management of private sector should be more professional to meet new social requirement. Adhikari (1992) studied on human resource management for public enterprises and concluded that the existing technology and the level of education has limited the extent of requirements needed for workers on the shop floor. He found that in some industries the main reasons for a difference in attitude between supervisors and non-supervisors were due to a variation in demographic factors. The more similar the demographic factors the similar was the attitude of whether the workers supervisors or non-supervisors. He has concluded that while creating jobs, the management should take into account the basic needs of the workers and make plan for the future. Pant (1983) studied on industrial relation in Nepal. He found that the system of industrial relation in Nepal was dualistic in nature which was based on custom and practice. The recruitment and promotion system of workers were guided by loyalty. There was lack of delegation of authority to lower level of managers and supervisors. The analysis of disputes revealed that there were political conflicts marked by large number of strikes in the industrial sector.

Regmi (1991), has studied Nepalese industrial growth pattern and regional dimension in Nepal. The study has included the industrial growth, regional pattern and industrial policies of the country. He has shown the picture of regional disparity in the industrial sector. Bhattarai (2004), has studied the pattern of manufacturing industries on the basis of national and regional analysis and has concluded that the Nepalese manufacturing industrial sector is dominated by traditional industrial pattern where consumer goods industries and agro-based industries are in operation in a small scale and industrial establishments are centralized more in developed areas.

3. INDUSTRIAL POLICY FRAMEWORK

Governments were concerned with the division of economies between industry and primary production; the less industrialized countries tried to encourage the growth of the domestic industry, whereas more industrial countries protected their agriculture and mines. In recent years emphasis has been given on trying to encourage the rise of high-tech source sectors using advanced technology, policies have included using tax rules and government budget to encourage research and development, intervention in financial markets to direct investment funds into favored sectors and intervention in the mergers market to try to obtain firms large enough to gain economies of scale.

Industrialization is an integral part of national plans of Nepal to accelerate the process of economic development. It is imperative, therefore, to create a situation in which industrial investment is encouraged and on which private sector can be persuaded to play an important role (NIDC, 1981). Considering the vital role of industrialization in the process of rapid development Nepal has formulated industrial policies.

The government of Nepal has given provided priority to the development of the manufacturing sector since the 1950s. During the 1950s and 1960s, the government received aid commitments especially from the Soviet Union and China to develop some industries in the public sector. Most of these industries used agricultural products like Jute, Sugar, and Tea as locally based raw material. Other industries were dependent on various inputs imported from outside. Most of the industries of that time were developed with government protection and regulation (CBS, UNIDO, 2014). During this period emphasis was given to create the base of industrialization.

During the 1980s, the government laid emphasis on industries such as lumber, plywood, paper, cement and bricks, and tiles, which made use of domestic raw materials by its import substitution. The government has also revised the industrial licensing and foreign investment procedures since the mid-1980s. The government took various policy measures to expand manufacturing sector. In 1987/88, the government introduced Bonded Warehouse (BW) and Duty Drawback (DD) systems to increase the export of manufacturing sector.

The industrial policy of 1992 made drastic changes to the licensing system and created a favorable environment to encourage private investment. The 1992 Industrial Policy emphasized deregulation, competition, and build confidence in the market forces for resource allocation in the manufacturing sector. The policy also emphasized on strengthening linkages between the manufacturing and agricultural sectors, promoting export-oriented industries, and providing better incentives to attract investment. This policy was enacted as Industrial Enterprise Act 1992. Under this act, license requirements were imposed mainly in the manufacturing establishments regarding security, public health, and environmental sector. Industries with foreign direct investments are entitled to all the facilities and incentives, such as tax incentives provided to the domestic investors. All provisions regarding permit, registration, land, electricity, and water would be provided under the One Window Service (OWS) for the industries to be established with foreign investment.

In 2010, a new Industrial Policy was introduced with the objectives of promising easy exit to the investors, recognizing subcontract of manufacturing, and promising tariff protection to local industries with high-value addition, incorporating intellectual property rights protection provisions, and emphasizing employment creation and reducing poverty. Ensuring balanced industrial growth, backward as well as forward linkage, protection and state support to the industries.

In the Industrial Policy of 2010, there is the provision of government support to the development of infrastructures to industries on a priority basis and special tax holidays were provided for industries in rural and less industrialized areas. It is expected to accelerate manufacturing growth through rules, regulations, and laws. Further, it has many new provisions that would help to create friendly relations between government and private sector, and also help the economic growth of the national economy by promoting the industrial sector. The objective of the policy is to develop industrial infrastructures having the potential for manufacturing and processing. The policy provides additional incentive packages to export-oriented industries, particularly the small and medium enterprises. It promises 25 percent income tax concessions to small, medium and large industries that employ 100, 300 and 600 persons respectively.

The policy has categorized the geographical regions of the country into three groups as per their development status-extremely undeveloped, underdeveloped and developing industrial regions- and pledged holidays in income tax and excise duties for the industries in those regions for 12 years, 7 years and 5 years, respectively.

The high priority sectors are IT, cement, hydropower, vehicle & motor parts, chemical fertilizers, biotechnology and adventure tourism. It has also listed agriculture, forest-based industries, Ayurveda & homeopathic medicine manufacturing, minerals and handicrafts as priority industries. The other provisions of the policy include no-work no-pay, business incubation center and industrial investment protection funds to compensate the ailing industries. Similarly, the policy envisages special package program to develop the Karnali industrial corridor and new industrial villages.

Overall Nepal has been adopting liberal, open and market-oriented economic policy since the 1990s. With this new open liberal industrial environment of the country, after 1990 economic reform is oriented to liberalization through legal institutional and policy change framework. Trade policy 1992, Industrial Policy 1992, Privatization Policy 1992 along with other sectoral policies were formulated and enacted. State enterprises were privatized and government followed continuous disinvestment policy. Foreign investors are allowed to hold cent percent ownership in industries, except the cottage and some restricted as security-related ones. Similarly, the country became a member of WTO and BIMSTCE in 2004. Nepal Rastra Bank, Central Bank assured full convertibility of foreign currency in the current account. Share market also has been liberalized and incentive for investors are assured by facilitating tax policy and tax law.

With the view to attract foreign as well as domestic investment to grow the economy, the government has formed a high-level Investment Board, chaired by the Prime Minister.

4. OBJECTIVES

The general objectives of this article are to analyze the growth of industrial sector in Nepal. However, the specific objectives are:-

1. To assess the contribution and trend of the industrial sector to GDP.
2. To analyze prospect of industrial development in Nepal.
3. To review Nepal's industrial policy.
4. To discuss the problems faced by the industrial sector and suggestions for future measures for resolving these problems.

5. METHODOLOGY

This research article is based on secondary data. The data source is the publication of Department of Industry and the Economic Survey of Fiscal Year 2016/17 of Government of Nepal. Regarding the methodology used to show the association between industrial establishment and employment, and investment and employment, the Karl Pearson Correlation is used.

The correlation coefficient:

$$r = \frac{S_{xy}}{\sqrt{S_{xx}}\sqrt{S_{yy}}}$$

$$S_{xy} = \sum xy - \frac{\sum x \sum y}{\mathrm{n}}$$

$$S_{xx} = \sum x^2 - \frac{(\sum x)^2}{\mathrm{n}}$$

$$S_{yy} = \sum y^2 - \frac{(\sum y)^2}{2a}$$

6. GROWTH SCENARIO OF INDUSTRIAL SECTOR

The contribution of manufacturing sector alone to GDP was 6.35 percent in fiscal year 2012/13 and then continued to fall thereafter which is 6.2 percent in fiscal year 2013/14. Similarly, the contribution of the industrial sector to GDP in fiscal year 2014/15 is 6.03 percent and in fiscal year 2015/16 it is 5.72 percent and finally, the estimated contribution of industry to GDP of fiscal 2016/17 is 5.67 percent as presented in table 1.

Overall industry plays a significant role by export proportion and substitution especially at present in reducing the trade deficit by transforming import based current economy to production and export-oriented one. This sector helps to utilize local physical and human resource technologies and makes goods and services available and creates employment opportunities and income generation. The contribution and this sector to GDP that stood at 16.24 percent in Fiscal Year 2007/08. Then it was 15.32 percent in Fiscal Year 2008/09. Then it is stable till Fiscal year 2014/15. The contribution is expected to remain at 14.01 percent by the end of current Fiscal Year 2016/17. This sector shrank in Fiscal Year 2015/16 due to the impact of the earthquake and then border obstruction (MoF, 2017) which is presented in table 1.

Table 1. The composition of GDP by ISIC Division (at Current Prices) in percentage

Fiscal Year	Industries			Total
	Manufacturing	Electricity gas and water	Construction	
2007/08	7.34	1.95	6.95	16.24
2008/09	6.97	1.56	6.79	15.32
2009/10	6.34	1.36	6.91	14.61
2010/11	6.24	1.24	6.93	14.41
2011/12	6.34	1.22	6.86	14.42
2012/13	6.35	1.30	6.93	14.58
2013/14	6.20	1.17	6.93	14.30
2014/15	6.03	1.12	7.06	14.21
2015/16R	5.72	1.02	6.82	13.56
2016/17P	5.67	1.16	7.18	14.01

P = Preliminary, R=Revised

Source: Central Bureau of Statistics, quoted from Economic Survey 2017, P5

7. INVESTMENT AND EMPLOYMENT

7.1. Investment

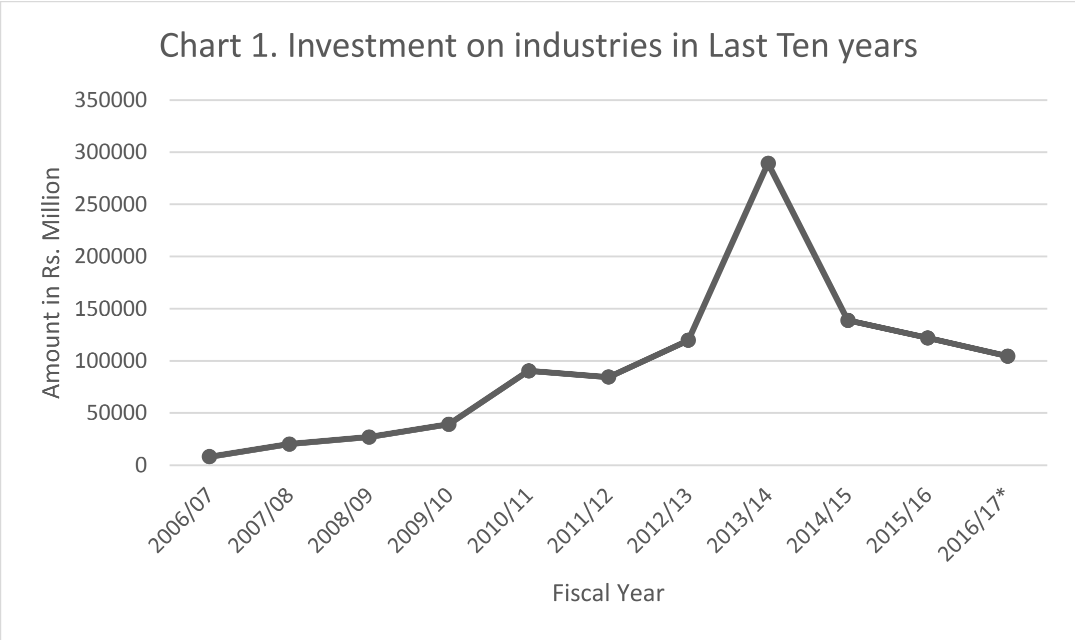
Regarding the capital investment scenario of licensed industries operating since last ten years, there is a growing trend since fiscal year 2006/07 to 2010/11 and it has decreased in 2011/12 and increased until 2013/14 and then continuously decreasing which is shown in table 2 and also chart 1 as follows:

Table 2. Licensed industries operating in last ten years

Fiscal Year	No of Industries	Total Capital (in Rs. Million)	Average investment per Industry(in Rs. Million)	Number of Employment	Average Employment per Industry
2006/07	177	8124	45.9	9232	52.2
2007/08	227	20126	88.7	12844	56.6
2008/09	301	26961	89.6	20359	67.6
2009/10	256	39193	153.1	14228	55.6
2010/11	242	90416	373.6	13727	56.7

2011/12	279	84427	302.6	16960	60.8
2012/13	446	119601	268.2	28535	63.9
2013/14	371	289308	779.8	21538	58.1
2014/15	466	138751	297.7	22785	48.9
2015/16	410	122007	297.6	18960	46.2
2016/17*	309	104536	338.3	14264	46.2
Total	**3484**	**1043450**	**299.5**	**193432**	**55.5**

Source: Department of the industry. Quoted from Economic Survey of fiscal year 2016/17. p 148
* First eight months



7.2. Employment

The employment scenario is increasing from fiscal year 2006/07 to 2008/09 and it has decreased continuously in fiscal year 2009/10 and 2010/11 and is rising in fiscal year 2011/12 and 2012/13 and then again decreasing in fiscal year 2013/14 and increasing in 2014/15 compared to a previous fiscal year and the continuously decreasing. Overall there are vast fluctuations in the employment scenario.

The correlation between a number of industries and employment is (r = 0.904). There is a positive association between a number of industries and employment. Similarly, the correlation between investment and employment is (r = 0.568). There is also a positive association between investment and employment which is shown in the following the chart.

8. SAARC SCENARIO OF GDP GROWTH RATE

Nepal has the lowest GDP growth rate by the last of 2015 i.e., 0.77 among the SAARC countries. Nepal's GDP growth rate is less than one and the GDP growth rate of Afghanistan is 2.78 times higher than Nepal, the GDP growth rate of Pakistan is 5.51 times higher than Nepal, GDP growth rate of Bangladesh is 8.45 times higher than that of Nepal and GDP growth rate of Bhutan is 7.14 times higher than that of Nepal's GDP growth rate. Which is given in Appendix.

9. PROBLEMS

There is the significant role of the industrial sector in our economy. However, Nepal has been facing different problems regarding industrial development. Lack of capital is one of the basic problems that hinders industrial establishment. Most of the people have a low level of income due to this reason they cannot save or if they can save their saving is almost negligible and so the investment. Market competition is high due to the liberal policy in import sector followed by the government. Domestic product cannot compete with foreign goods and services which are produced in large scale with low cost and high quality. Lack of raw materials is another problem faced by Nepalese industries.

Raw materials for metal industry, cotton for cloth industry and leather for shoe factory are not sufficient to supply within the country. Similarly, Nepal has a small size of the internal market even for the domestic production. Nepal has a difficult geographical situation that has 83 percent of the land area covered by hill and mountain and only 17 percent is the plain area where few large-scale industries are located. The geographical difficulty has also been a barrier to industrial development. Due to lack of industrial education, the entrepreneurial capacity is low and people do not take a risk in establishing industry, rather than they use their capital in the purchase of land, share and precious metal.

Industrial relation is another factor that affects industrial development. In Nepal, industrial relation is not well established between the employer and employee. There is an industrial obstruction due to the demand put forward by the trade union for higher remuneration and other benefit. There is conflict between these two groups which is continuously going on as an never ending issue.

10. CONCLUSION

The industrial development process in Nepal is of recent origin. As a least developed country, Nepal faces critical challenges and questions, especially in the role of government in the Nepalese case. Due to low industrial production and weak export trade, the export is estimated only 7.1 percent in total trade. This indicates a very serious condition of production and export in this era of economic globalization. The economy highly depends on import and our economy has been an import economy. For import substitution, export promotion and employment generation, Nepal should create a strong industrial base with a view of comparative advantage and sustainable development and should take the benefit from the large international market geographically connected with us. The industrial sector is considered as the keystone of economic development which contributes to creating employment opportunities, value added of the goods and services, and export promotion and import substitution. Roles of industrial development is essential for graduating the country as a developing status by 2022 and the status of the middle-income country by 2030 through the high and sustainable growth of industrial sector along with agriculture sector. Furthermore, Nepal can achieve double-digit growth rate through the maximum utilization of available resources as industrial raw materials. Nepal can use the domestic labor force through more and more use of the labor-intensive technique of production to create more employment opportunities and income generation from industrial sector by creating the industrial friendly environment.

Policy Option

First, Nepal should follow the policy of rapid industrial development suitable to labor-oriented technique. This will be beneficial to three-dimensional import substitution, export promotion, and employment generation.

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APPENDIX

Table 3: GDP growth rate of SAARC countries

Country	Date/Period	Frequency	GDP Growth Rate
Afghanistan	12/2015	Yearly	2.10
Bangladesh	12/2015	Yearly	6.51
Bhutan	12/2015	Yearly	5.50
India	06/2016	Quarterly	7.10
Maldives	03/2016	Quarterly	4.80
Nepal	12/2015	Yearly	0.77
Pakistan	12/2015	Yearly	4.24
Srilanka	09/2016	Quarterly	4.10

Source: SAARC Group of Statistics, 2016

