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UNPLEASANT MIDDLE-INCOME TRAP FOR DEVELOPING WORLD: AN EMPIRICAL SURVEY

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ABSTRACT

According to World Bank Middle income trap is serious concern for the countries and regions who has GDP per capita persisted between $1,000 to $12,000 at constant prices (2011). Three-quarters of world population now live in middle-income economies. Eichengreen.B identifies that economic growth on average falls from 5.6% to 2.1% per capita for middle income countries and regions which is a serious concern. The paper investigates the necessary time period requires for reaching out of the middle income trap for those countries. It also suggests best possible ways for higher economic growth for the middle income countries and regions.

Evidence of a middle-income trap, 1960-2012
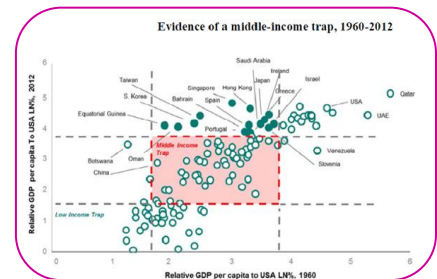
KEY WORDS: *Middle income trap, GDP, Per capita, Countries, Regions.*

INTRODUCTION

The middle income trap, a situation of economic development in which a country or region attains a particular income level gets plunge at that level. The World Bank identifies as the 'middle-income range' countries and regions with GDP per capita that has persist between $1,000 to $12,000 at constant (2011) prices. Im.G.F, Rosenblatt.D(2013) also identifies, infant mortality rate of about 19 to 50 per 1,000 live births, adult literacy rate of about 70 to 93 percent, and life expectancy rate is around 65-72 years is common for middle income trapped countries. (Eichengreen.B 2017) identifies that economic growth on average falls from 5.6% to 2.1% per capita for middle income countries and regions which is a serious concern for those countries and regions. Although some of the developing countries and regions are converging, but the rate is painfully slow. A country and region in the trap of middle income has lost its power of competition to export of manufactured goods due to of rising wages. Besides, the countries and regions are incompetent to keep up in the high-value-added market of more developed economies.

REVIEW OF LITERATURE IN THE STUDY:

Newly industrialized economies also left as the 'middle-income range'. They suffer from slow growth in the secondary industry, low investment, restricted industrial heterogeneity and destitute labor market condition situation. In 2015 Gill.S.I and Kharas.H found that countries and regions of low and other middle-income countries in ASEAN of East Asia, like the Philippines, Malaysia and Thailand and others were uncompetitive with China in labor-intensive products of manufacturing. Foreign direct investment (FDI) was being simply transferred from South-East Asia to China. Prominent Researchers (Gill and Kharas 2007), (Spence 2011), (Eichengreen.B 2013), (Falaen 2014), (Im and Rosenblatt 2014)and major international institutions like World Bank and Asian Development Bank also found

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the severe problems of middle income countries who suffers from persistent trap in middle income for years and years.

Major Problems of middle-income countries and regions of the World is highlighted as:

1.The countries with middle-income and regions with middle income trap is lack of a satisfactory growth that Couldn't confirm development policy for those countries and regions. It is a trap of inexperience about the essence of economic growth in those middle-income countries and regions where endogenous growth theories mark the problem.

2. The middle-income trap means an irregularity of raising income level that does not ensure past success for future success. The trap was warns the policy makers that lack of care could plunge a long run below potential growth rate of the economy.

3. The "middle-income trap" is a short-hand for "a trap that can catch only middle-income countries". It is not a fact that middle-income countries and regions are likely to be closed in other countries.

On this back drop our study leads to enquire the following objectives. The main objectives of our study are:

OBJECTIVES OF THE STUDY:

1.Identifying the time to reach out of the "middle income trap" for the middle income countries and regions as well as the required rate of growth for these countries and regions if they want to reach US like GDP per capita with in 50 yrs.

2.Identifying Low Middle Income Countries(MIC) &Regions and High Middle Income(HMI) countries & regions sample selected in our study.

3. Identifying ways of potential policy implications.

Source of Data:

Disparity in Economic Growth is a "harsh reality" in the economic literature. To measure it, we have focused on the Secondary Data Set published by the World Bank on and from 1996-2018. Here we have included most important economic indicators which affect the economic growth of Nations in recent times. In our study we have taken some crucial factors like capital formation as the indicator of development of Economy and growth, labour force participation as the index of Education and social Developmental progress, Research and Development expenditures by the Govt. as the index of Science and Technological progress, High technology exports as the index of progress of Science & Technology and Trade of a nation, FDI and rate of inflation as the Growth and stability of financial market, Gender Parity Index in School level education is the reflection of equality with educational achievement, GDP per person employed is the signal of sustained and inclusive economic growth and Patent is the index of innovations provide the impetus of economic growth . Ultimately, GDP of nations is the index of the growth of the economies of Nations and regions. It is referred that we have calculated capital stock from the data of capital formation by the particular methodology referred earlier in the article. In our study we have included total 51 Nations and regions of the world among which 19 are Developing Nations and regions and remaining 32 are developed nations and regions. The list of the Nations and regions and listed are as follows according to the availability of the data.

Developed Nations and Regions

Developed/High income Nations -Austria, Belgium, Bulgaria, Czech republic, Germany, Denmark ,Spain, Finland, France, U.K, Hungary, Israel, Italy, Japan, Kyrgyz republic, Korea republic , Kuwait , Lithuania , Netherlands, Portugal, Romania, Singapore , Slovak Republic, Slovenia and U.S. and

Developed Zone- Central Europe and Baltics, Europe and Central Asia, Europe area, European Union, High Income, OECD Members, Europe & Central Asia (IDA & IBRD countries)

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2

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Developing Nations and Regions

Developing Nations - Argentina, Armenia, Azerbine, Belarus, China, India, Kazakhstan, Madagascar, Mexico, Macedonia, Mongolia, North America, Russian federation, Serbia , Turkey, Ukraine, and

Developing Zone- Post-demographic dividend, South Asia, Upper middle income Zone.

METHODOLOGY:

On the basis of Empirical Findings of Fernando Gabriel Im and David Rosenblatt (2013) and years required for reaching out of Middle Income trap is

T=R/(1+gm/1+gh)

Where R is the initial ratio of the high (US) GDP per capita reference to the MIC's GDP per capita, g_m is the MIC's compound rate of growth of GDP per capita, and g_h is the high income country's compound rate of growth of GDP per capita, here US among all Developed countries and regions.

EMPIRICAL FINDING 1

Table 1: Time for reaching out of "middle income trap" and expected Economic growth rate if Years is 50 the US per capita income will be $333194 in 2068 for different countries and regions

Sl. No.	Countries and Regions	If Compound Growth of US GDP$(1+G_h)$=1.03196 as on 2017 then Time(T) required	If Compound Growth of US GDP$(1+G_h)$=1.03404 as on 2018 then Time(T) required	If Time (T)=50Yrs. Then required % growth of GDP (G_m) for Middle income countries
1	Argentina	80.80	81.03	56.19
2	Armenia	40.37	40.48	14.82
3	Azerbine	26.06	26.16	13.11
4	Belarus	52.17	52.32	9.59
5	China	10.56	10.59	5.82
6	**India**	**140.29**	**140.29**	**32.06**
7	Kazagsthan	22.10	22.10	6.14
8	Madagascar	2928.87	1928.87	143.63
9	Mexico	66.85	66.85	5.87
10	North Macedonia	90.09	90.09	9.95
11	Mongolia	49.16	49.16	15.23
12	North America	11.15	11.15	9.92
13	Post Demographic Dividend	17.51	17.51	13.78
14	Russian Federation	29.56	29.56	4.90
15	South Asia	159.54	159.99	33.96
16	Serbia	74.67	74.88	8.21
17	Turkey	50.05	50.19	6.16
18	Ukraine	129.44	129.81	20.15
19	Upper Middle Income region	31.27	31.36	6.24

Source: Author's own calculation on the basis of Data World Bank (1996-2018)

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From the above table 1 we find that years required for coming out of "middle income trap" for different countries and regions falling under middle income trap according to the definition of World Bank if compound rate of growth of US GDP per capita varies from 1.03196 and 1.03404. We have taken US GDP growth as standard growth rate and calculated the years required to come out of the "middle income trap" for the middle income countries and regions in our study, we have also calculated the required rate of growth of GDP for the middle income countries and regions if they want to come out of the trap within 50 years.

The table shows that if compound rate of growth is GDP of US is 1.03196 then maximum middle income countries and regions takes long years up to 2928(i.e Madagascar), if compound growth rate of US GDP is 1.03404 then it goes up to 1928 years to come out of the trap. On the other hand, if they want to achieve US like growth rate within 50 years, then they have to achieve their economic growth rate up to 143.63% per annum, which is almost impossible for a middle income tapped country. Besides, it we carefully observe the situation of India then the country have to run for a long time to achieve US like growth rate up to 140 years and if it wants to achieve US like growth rate within 50 years then India has to achieve 32.06% per annum, which is quite difficult task for the country presently. Only China, Russian Federation, North America, Kazagsthan, Upper middle income region, Post Demographic Dividend and Azerbine has great possibility to achieve US like growth rate with in short period of time and their economic growth rate is quite satisfactory presently for achieving US like growth rate. However countries like Japan, Singapore could manage to some extent to come out of this trap by changing their multiple strategies of economic growth, while most discussed China could not recover the trap due to its aging of population and not significant development in technology.

Finding2
Identification of Lower middle income and upper middle income countries

According to World Bank the countries GDP per capita with below $1000-$4000 is lower middle income countries and the countries above GDP per capita $4000 and above is identified as Upper middle income countries. On that basis of that we have identified different lower middle income countries and upper middle income countries of the World and got the following tables.

Table2: Upper middle income Countries of the World in our study

Sl. No.	Countries and Regions	If Compound Growth of US GDP$(1+G_h)$=1.03196 as on 2017 then Time(T) required	If Compound Growth of US GDP$(1+G_h)$=1.03404 as on 2018 then Time(T) required	If Time (T)=50Yrs. Then required % growth of GDP (G_m) for Middle income countries
1	Argentina	80.80	81.03	56.19
2	Armenia	40.37	40.48	14.82
3	Azerbine	26.06	26.16	13.11
4	Belarus	52.17	52.32	9.59
5	China	10.56	10.59	5.82
7	Kazagsthan	22.10	22.10	6.14
9	Mexico	66.85	66.85	5.87
10	North Macedonia	90.09	90.09	9.95
11	Mongolia	49.16	49.16	15.23
12	North America	11.15	11.15	9.92
13	Post Demographic	17.51	17.51	13.78

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	Dividend			
14	Russian Federation	29.56	29.56	4.90
16	Serbia	74.67	74.88	8.21
17	Turkey	50.05	50.19	6.16
19	Upper Middle Income region	31.27	31.36	6.24

Source: Author's own calculation on the basis of Data World Bank (1996-2018)

Table3: Lower middle income countries of the World in our study

Sl. No.	Countries and Regions	If Compound Growth of US GDP$(1+G_h)=1.03196$ as on 2017 then Time(T) required for Middle income countries	If Compound Growth of US GDP$(1+G_h)=1.03404$ as on 2018 then Time(T) required for Middle income countries	If Time (T)=50Yrs. Then required % growth of GDP (G_m) for Middle income countries
6	**India**	**140.29**	**140.29**	**32.06**
8	Madagascar	2928.87	1928.87	143.63
15	South Asia	159.54	159.99	33.96
18	Ukraine	129.44	129.81	20.15

Source: Author's own calculation on the basis of Data World Bank (1996-2018)

Tables 2 and 3 shows that out of 19 developing countries and regions 15 are upper middle income countries and 4 are lower middle income countries including India. These lower middle income countries are in grave consequences. They are in the middle income trap in one hand; on the other hand they are again lower middle income countries, trapped by the upper middle income countries also. ASEAN of East Asia, like Philippines, Malaysia and Thailand and others were uncompetitive with China in labor-intensive products of manufacturing so they are in double trap. Foreign direct investment (FDI) was being simply transferred to those industrialized Countries. Obviously to achieve US like GDP per capita lower middle income countries takes more than hundred years; Madagascar takes even thousand and thousand years. Again their required rate of growth is extremely high, for Madagascar it is almost impossible to achieve US like GDP per capita with in 50 yrs.

What goes wrong for the Middle income countries and regions?

According to some economists (Cowen.T and Tabarrole.A 2013) and researchers the middle income countries and are going through some incorrect way for which they are not capable to overcome the middle income trap. These are

1.Wage of the workers does not rises appropriately.

2.Migration of the labourers does not runs fast.

3.Slow Demographic transition and problem of aging.

4.These countries can't keep up appropriately moving up value chain.

5. Low investment in innovation by the middle income countries and regions, for which middle income countries and regions are continuously going in the trap of low income.

FINDING3

Possible ways out of middle income trap

What Middle income countries and regions have to do for recovery?

On the basis of different researches we think seven propositions are most important ways for middle income countries and regions to get out of their "middle income trap". These are:

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5

1. *Trade and technology*: Middle-income regions and countries can sustain by export competitiveness in different sectors economies of scale. Economies of scale are necessary in electrical machinery, nonelectrical machinery, scientific instruments, pharmaceuticals and iron and steel. Following this way China's exports has risen by about 30 % since 2000, Malaysia also improved themselves significantly while Indonesia can't grow faster due to their customs bureaucracy.

2. *Ideas and innovation*: Following Howitt and Aghion (1996) the role of competition, specially by opening to markets and investments for a competitive innovative environment. New capital investments and R&D also urgent role for diffusing technology globally and domestically. If there is any goal to focus on science and technology for the Sustainable Development Goals then middle income countries and regions must have to guide on access of diffusion of new technologies. Japan, Korea and OECD countries could escaped a middle income trap following large investment in R&D, while Indonesia and other middle income world could not for their less GDP investment in R&D and in higher education.

3. *Finance and risk:* Middle income countries and regions belief that in global finance followed by supply chains fixed exchange rates are appropriate. But, global financial system works efficiently by balance sheet risk and currency risk in accordance with plentiful external liquidity available for investment in the economy including real estates. Hence, flexible exchange rates are helpful for hedging the forex risk. To improve liquidity, risk management and solvency in the financial sector flexible exchange rate is also helpful. In fact according to the IMF many of the middle income countries and regions are walking in that way recently.

4. *Cities and livability*: Romer and Fuller (2014) argued that "Nothing else [other than the urbanization project] will create as many opportunities for social and economic progress." So, apart from the economic thinking, agglomeration of economies can be significant with "smart cities". The New Climate Economy Report 2014 suggests that cities are vital for sustainable development with low carbon emission. It helps benefits of low transport costs, pooling of efficient labour market, exchange of ideas and ultimately better standard of living.Unfortunately middle income countries pay rare attention to cities, with low life quality and less development.

5. *Cohesion and inequality*: Middle income countries should have to be careful for inequality. Due to higher economic growth and urbanization distribution of income may be unequal, so fiscal policy may be helpful for unequal access of social services and more balanced growth. Middle income countries have to be careful also for the young people with unemployed and blue collar workers.

6. *Corruption and accountability*: Corruption is one of the most important challenge for the Middle-income countries and regions. Tackling corruption may be possible by democracy, decentralization attention to local demands by needy persons. It is helpful for long run development of middle income countries and regions. Middle income countries like India, China, Indonesia challenges for fight against corruption with less effectiveness.

7. *Entrepreneurship and startups*: Lazear and others (2014) have looked at the correlation between demographics and entrepreneurship, younger workers with creativity, needs business awareness and help on the behalf of govt. for start-up nations in the middle income countries and regions. But, in contrast those countries under estimates start-ups with less STEM(Science, Technology, Engineering and Mathematics) students to the process innovation and growth. Global Entrepreneurial Index although shows some slight improvements by few nations to explore start-ups but not enough.

 CONCLUSION:
        In conclusion it can said that there must be great tendency for middle-income and low income regions and countries to grow towards high-income countries. According to Fernández-Arias Daude Middle-income regions and countries with low total factor productivity(TFP) by contrast, "escapees" trying to find new sources of TFP growth recently. Although some middle-income economies are still lacking in it. Middle income countries and regions has to rise their per capita income with the key variables like investment expenditure, government expenditure, human capital, high technology exports, which has positive and important significant effects on per rise in capita income. They have to

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6

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take lessons from countries like Singapore, Korea and Taiwan who have succeeded in promoting their industrialization. These countries enabled high-tech industries to accelerate their economic growth and they aimed their growth strategies at high value added economies. Middle income regions and countries can find the model of economic development which is suitable for them to use the period of transition as high-income countries.

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7