



## A Study on “Reverse Innovation” – A Rising Phenomenon from Indian Perspective

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### Abstract

*Discoveries and Innovations are not new to this world and the contribution towards discoveries and innovations are taking place since time immemorial. Man invented “Wheel” which created a history and which resulted in bringing the world together by reducing the distance, expanding the domain of shelter, business, trade and so on. This has paved way for many inventions and today what we are observing is the contribution of manmade achievement in taking the development to higher level and bringing the world nearer to each other with the advent of technology.*

*Innovation in technology, human capital, availability of finance for expansion and growth resulted in the developed countries to export their products and services to the developing countries and growing to great heights. The strategy is initially started in home markets, then export with little changes to address the developing economies needs. This phenomenon gained good momentum for several years in the past. But, now the scenario is different. The economy of many countries is on rise. This strategy will not work anymore. The Global Corporations are recognizing the efforts of emerging markets. The global corporations should motivate the emerging markets to “Innovate” rather than increasing the market of developed countries. In this context, it is imperative to focus on “Reverse Innovation” which is a rare and rising phenomenon, which emphasizes on “flowing downhill” from rich countries to developing countries. This paper focuses on the emerging significance of reverse innovation in developing countries and serving at low-cost price to the western buyers.*

*Key Terms: Discovery, Innovation, Globalization, Economy and Developing Countries.*

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### Introduction

Innovation is relevant to the phenomenon such as upgrade, improvement, creativity and novelty. The importance of innovation is to be felt more in the present context with the growth of business, trade and industry all over the world. The corporate world is changing on a dynamic pace and the globalization of business is on a marathon race. In lexical approach, the term ‘innovation’ is derived from Latin word “*Innovatio*” which means ‘to renew’. In the context of developing economies, it is focused towards implementation of advanced technologies, organizations and institutions. The precursor for innovation in economic sciences was J.A.Scumpeter (1934).

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According to him, innovation and creative destruction activities are two common methods, which allows to reduce the limitations that are arising in the process of development of the economy.

Innovation is not a new concept, it is existing since decades, which is the result of changes taking place in the world wide economy, through the flexible operations of trade, opening the borders for free movement of goods, products, services and capital, up gradation of technology and changes in the enterprises operations and procedures. The world is continuously changing from time immemorial. The innovation is not limited to developed countries, like in the past. Currently the enterprises of the developing economies are also emphasizing on the importance of innovation and putting their efforts towards innovation and are striving hard to expand their domain in the global market.

“Reverse Innovation” has been a recent phenomenon rising to bring into limelight the efforts of developing economies. Reverse innovation is an activity where by

goods developed as an inexpensive models to meet the needs of developing economies such as, battery operated medical instruments in countries with limited infrastructure are then, repackaged as low-cost innovative products for western buyers.

In this context, this paper emphasizes on the emerging importance of reverse innovation in developing countries.

## 2.0 REVIEW OF LITERATURE

Taking into the relevance and growing importance of 'Reverse Innovation', the literature review has been conducted to analyse the views of various researchers on the study conducted by them.

**Zescky et al., (2018)** opined that the reverse innovations as a strong, affordable products that meet the needs of resource-constrained consumers. They have extreme cost advantage compared to existing solutions and are much simpler with limited features. The increased growth rates, huge market size and human resource in emerging countries have ensured sufficient academic focus on 'winning in emerging markets', through region appropriate markets **Khanna.T and Krishna G.P (2016)**. **Flatter and Willmott (2011)** All theories of innovation are subject to redesigning and developing both products and process from scratch to minimum cost, addressing to the region specific needs. It is concluded that the domestic companies compete on price/performance ratios required by emerging markets and endanger the market share of these Western markets **Immelt, Govindarajan et al., (2010)**. The business need to understand the customer needs and how the customer is currently meeting those needs and wants are quite different in kind/or in degree from the needs/wants of more affluent customers **Gollakota, Gupta and Bork (2009)**.

**(Schumpeter 1934)** described innovation and creative destruction as two common methods of overcoming obstacles induced by the cyclical development of economy. For a long time, high-income countries were considered as right economies to foster innovation. But, no longer, the prerogative of high-income countries continued, as countries like India and China are now considered as the practitioners of 'Reverse Innovation' strategy **(Zeng and Williamson 2007)**. The corporations have started to understand the complexities of these new markets and adjusted their local needs and realities in terms of cost, infrastructure, technology, regulatory systems or cultural differences. Soon after, these innovative products flowed back to high-income countries **(Hadengue 2017)**. **(Burger and Helmchen 2013)** viewed that the academic community has largely accepted the conceptualization of 'Reverse Innovation' and the idea has been promoted through influential channels such as *Harvard Business Review* and *Bloomberg BusinessWeek*. Prior to the emergence of this concept of 'Reverse Innovation', **(Brown and Hagel 2005)** proposed the concept of blowback innovation to underline the importance of developed multinational enterprises (DMNEs) not simply adapting their products to emerging market needs but actually rethinking their ways of doing business in those markets.

**(Hart and Christensen 2004)** focused on several factors such as the underserved large markets growing purchasing power and a great talent pool contributed to the shifting the loci of innovations gradually towards emerging markets, and termed it as 'glocalization'.

**(Brikshaw and Hood 2001)** opined that, in an effort to comprehend that the evolution literature in the globalization context, especially occurring in the emerging market conditions and demand in these markets, encouraging MNCs to think of these markets on the lines of new strategies, such as, 'Reverse Innovation'.

From the above literature review, it is concluded that the reverse innovation is a not a new phenomenon to meet the customers needs/wants of a specific region at a low cost price. The result of emerging markets have contributed to the growth of reverse innovation, thereby supplying the products at a cheaper rate from scratch to minimum cost. The need to understand the circumstances of the country and meeting those needs is the need of the hour in this global scenario.

Reverse innovation is aiming at providing goods, services, products and capital at cost advantage to the customer and redesign the definition of innovation.

## 3.0 RESEARCH GAP

The growing need for goods and services at cheaper rate is the necessary for a market to reach the specific region and the literature review revealed that more study is to be brought in to understand the need and significance of reverse innovation in the present scenario.

## 4.0 STATEMENT OF THE PROBLEM

The statement of the problem focuses on the need and relevance of reverse innovation in the present scenario, wherein the world is slowly raising with its economic status, in the post-Covid era. This study emphasizes on the rising phenomenon of reverse innovation taking place in India.

## 5.0 OBJECTIVES OF THE STUDY

Based on the research gap and the statement of the problem, the following objectives are taken into consideration for the purpose of study:

1. To study the rising phenomenon – Reverse Innovation from Indian perspective.
2. To analyze the views of respondents on reverse innovation.

## 6.0 RESEARCH METHODOLOGY

1. Data Collection: Both Primary & Secondary Data
2. Sample Size: 100 respondents, out of which 94 responses are received.
3. Sample Method: Convenience Sampling
4. Primary Data Collection: Through questionnaire in Google Forms forwarded to the respondents.
5. Analysis Method: Respondents views are analyzed based on the responses given as percentage basis using diagrammatic representation such as Pie Charts, Bar Diagrams.

**7.0 REVERSE INNOVATION – FROM INDIAN PERSPECTIVE**

With the implementation of New Industrial Policy 1991, the world’s attention is shifted towards India, the Western Multinational Companies (MNCs) are trying to get their foothold in Indian markets. The Indian companies are developing products from scratch for the local consumers. Our Indian markets are engaging in ‘Frugal & Reverse Innovation’ practices by developing affordable products and solutions with good enough functionalities and minimum frills and later on marketing them in the developed countries.

As these markets are maturing, they are moving from imitation to innovation of their own styles or types. The inherent differences in the local needs and lack of infrastructure and high technology led to newer innovation like “Frugal Engineering” and “Reverse Innovation” and “Constraint-based Innovation”. In order to maintain their competitive position, multinationals are being forced to focus on developing products and solutions locally in these emerging markets.

**SIEMENS ROLE IN –REVERSE INNOVATION**

Reverse Innovation from Indian perspective is illustrated with an example of Siemen Products. The successful products developed by Siemens for India emphasizes its development, acceptance and implications of such products. Siemens products are in active contributing to the economic growth in the emerging markets creating enormous demand for sectors of Siemen’s products. However, there was a threat for Siemens in Indian markets,

1. There was an increase in the local players, competing not only locally, but also globally.
2. Global players had set up their base prior to emergence of Siemens in the market.

To overcome this threat, Siemens started a SMART initiative. Siemens decided to venture and compete in emerging markets with a new product portfolio, specially targeting the needs of these markets. This laid foundation for the ‘SMART’ initiative.

**S- SIMPLE M-MAINTENANCE FRIENDLY A-AFFORDABLE R-RELIABLE and T-TIMELY** to market.

The primary objective of SMART initiatives are

1. Gaining market share in the emerging countries by developing profitable products.
2. Mitigate local competition.

Siemens understood the customers needs in medium and low end market segments in emerging markets like Brazil, China, Russia and India. Electronic Installation Systems, Building Control, Home Automation, Home Appliances and Hearing Instruments are some of the products of Siemens.

**Siemens Human-Machine Interface (HMI)**

Siemens develops Human Machine Interface (HMI) technology to meet the increasingly complex processes of today’s machines and systems. It is highly optimized to

meet the specific human machine interface needs using open and standardized interfaces in hardware and software which allow efficient integration into the systems.

**Multix Select DR**

Multix Select DR machine, a digital X-Ray product, is an another example of SMART initiative, which is also the result of ‘Reverse Innovation’ concept associated with these ‘Frugal’ products.

**Fetal Heart Rate Monitor**

The Siemens Fetal Heart Rate Monitor (FHM), is an another example of ‘Frugal Innovation’ which is exclusively developed for Indian market. The Siemens FHM uses special acoustic microphones, instead, making it significantly cheaper to meet the demand of Indian local markets.

**TATA – NANO**

TATA NANO is another example of reverse innovation in India. By launching NANO car TATA has unlocked a huge untapped market and provided the facility of four wheelers to many middle class Indians. Now, TATA is taking this NANO car to other emerging markets to expand its domain globally from local markets.

**ROLE OF REVERSE INNOVATION - IN VARIOUS PRODUCTS & SERVICES**

Global Business strategist Vijay Govindarajan, in his words, he opined that, reverse innovation seems to be one of the biggest opportunity for a country like India to accelerate its economic growth. Reverse Innovation will transform every industry including energy, health care, transportation, housing and consumer products.

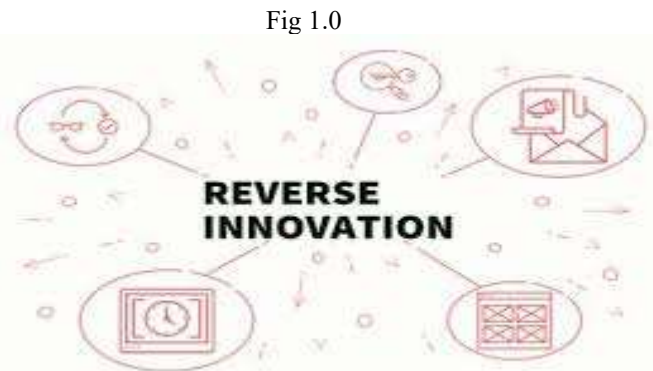


Fig 1.0

Source: Secondary Data

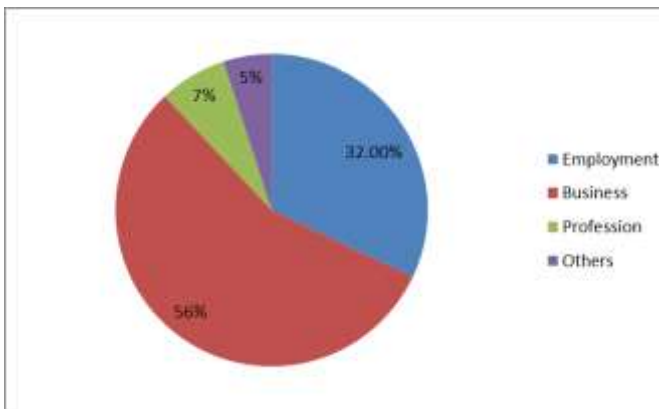
Fig 2.0



**8.0 DATA ANALYSIS**

**1. Occupation of the respondents**

Fig 1.0

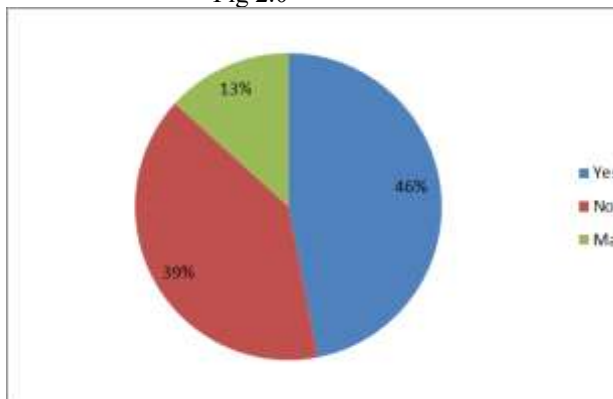


Source: Primary Data

- From the above figure, it is observed that, 56% of the respondents are from business, followed by 32% from employment, while 7% are from profession and remaining 5% are others (students/scholars). It shows that businessmen are having an idea of reverse innovation strategy adopting by few Indian companies.

**2. Are you aware of the term “Reverse Innovation” ?**

Fig 2.0

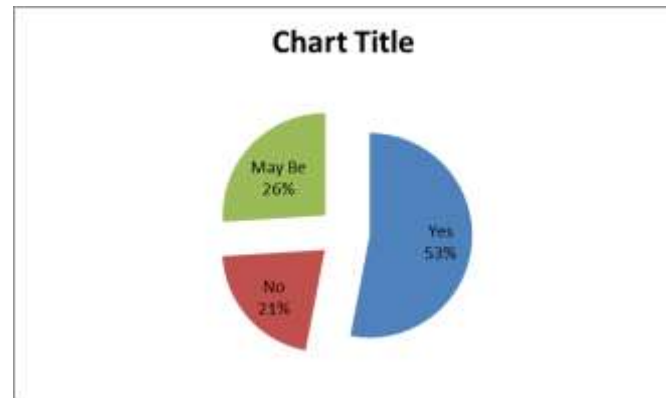


Source: Primary Data

From the above figure, it is opined that only 46% of the respondents are aware of the term “Reverse Innovation”, while 39% are not aware of it, remaining 13% are neutral. This shows that, this strategy should expand its domain to make it more public for a better growth.

- Reverse Innovation strategy is going to accelerate the economic growth of India in the near future. Do you agree with this statement?

Fig 3.0

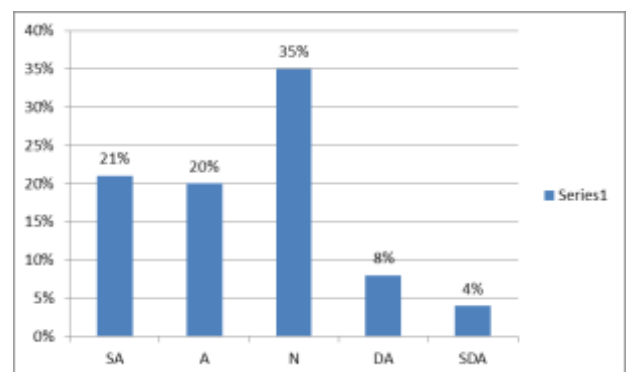


Source: Primary Data

From the above figure, it is emphasized that, 53% of the respondents agree that reverse innovation strategy is going to accelerate the economic growth of India. This shows that, this strategy should expand its domain to make it more public for a better growth.

- Reverse Innovation is providing goods and services at an affordable cost to the middleclass, lower middle class and poorer sections of the society.

Fig 4.0

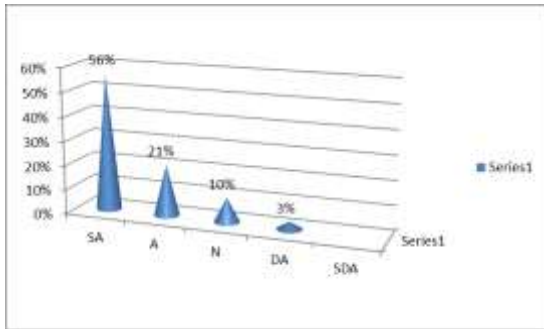


Source: Primary Data

From the above figure, it is opined that only 41% of the respondents agree with the statement, while 35% are neutral and 12% did not agree that reverse innovation is going to provide goods and services at an affordable cost to the middleclass, lower middle class and poorer sections of the society.

- India should introduce reverse innovation strategy in service industry as service market is increasing on a fast pace in millennium.

Fig 6.0

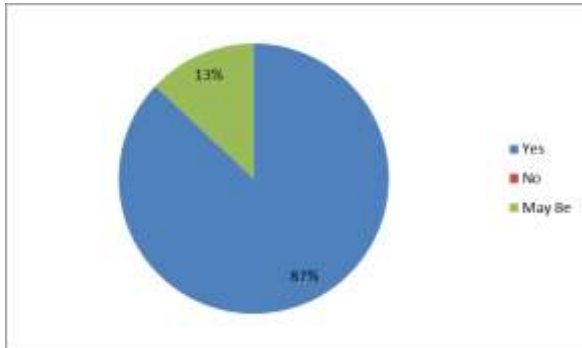


Source: Primary Data

From the above figure, it is emphasized that, 56% of the respondents strongly agree that India should introduce reverse innovation strategy in service industry as service market is increasing on a fast pace in millennium. Followed by 10% respondents are neutral and remaining 3% did not agree with this statement.

- If any trade marks, copy rights and technology know-how is developed by Reverse Innovation strategy in India, all such intangible assets should be brought under the provisions of Intellectual Property Laws.

Fig 7.0

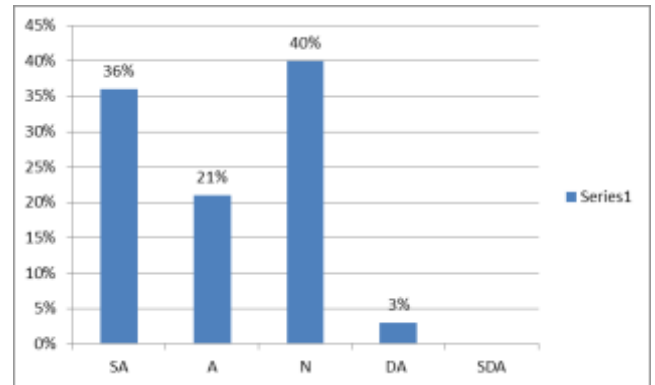


Source: Primary Data

From the above figure, it is opined that, 87% of the respondents agree that any intangible assets developed by reverse innovation in India, should be brought under the purview of IPR Laws.

- An awareness should be created on Reverse Innovation taking place in India through curriculum, Government Policy, Organizations supporting Reverse Innovation, so that the domain of 'RI' may expand, giving opportunity to upcoming entrepreneurs in India.

Fig 8.0

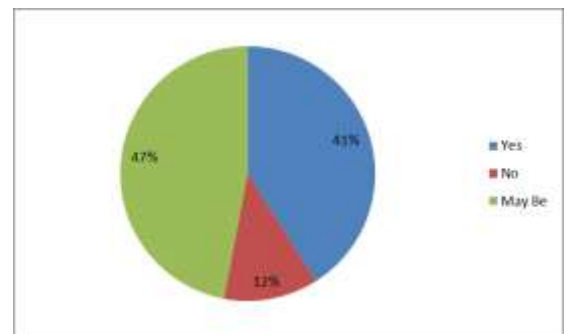


Source: Primary Data

From the above figure, it is observed that only 36% agree with the statement, while 40% are neutral followed by 3% did not agree on bringing awareness towards Reverse Innovation.

- Reverse Innovation is a strategy to build the economy of developing countries. Do you think, 'RI' is a boon or bane to the developing economies ?

Fig 9.0



Source: Primary Data

From the above figure, it is emphasized that, only 41% of the respondents opine that Reverse Innovation strategy is a boon, while 47% of the respondents are neutral on this statement and remaining 12% respondents feel it as bane.

**9.0 CONCLUSION**

Based on the key findings of the study, the following conclusion is drawn.

Historically, reverse innovation is a rare phenomenon, but with the advent of technology, education, awareness on economic status, making one's country self-sufficient and expanding our local markets domain towards global market, made reverse innovation a gradual phenomenon, catching up the rich world class. But this scenario is becoming toxic, as it is resulting in having a blind spot that has the potential to sink a common generating aspiration to enter into developed markets.

To avoid this unsettling outcome, multinational

companies should support the developing economies to adopt reverse innovation strategies with the emerging markets, not only in goods, but also in services, as the service industry in India is growing on a marathon race with the advent of technology, open markets, global business.

Awareness on reverse innovation should be brought among the aspiring entrepreneurs, venture capitalists and funding institutions, so that, financial resources will support entrepreneurs. The quality of the goods and services provided should be taken care by the companies going for 'RI' strategies.

Hence, innovation migrate uphill whenever there is a trend that closes the need gaps. The performance gap also gets closed when technologies, opportunities, man power and funding opens for the developing economies.

If the developing economy leap frogs ahead, the infrastructure gap gets closed and the rules and regulations of the developing countries can be amended, to suit the reverse business strategies.

## 10.0 DISCUSSION

Based on the views analyzed from the respondents, the following are some of the correlating aspects discussed.

1. Most of the businessman are aware of 'RI' strategy. They opine that 'Reverse Innovation' strategy should be introduced into more products, to make them available in the local markets at a minimized or low cost to the consumers.
2. This emerging concept of 'RI' should be made more familiar in the markets of developing economies by entering into service sector markets, which increases its domain in the emerging markets, as well as in developed economies.
3. In the coming era, 'RI' Quality is going to accelerate the economic growth in our country and the study takes into account, the pandemic that has taken place, will result in developing one's own economies to have sustenance to overcome any future calamities. 'RI' plays a vital part in providing goods and services, as making goods in our own markets can be made available at low cost.
4. 'RI' strategy is going to meet the needs and demands of lower-middle class and poor sections of the society. New entrepreneurs should get finance from Development Banks, Financial Institutions. Venture Capitalists should support the reverse innovation to go uphill, by encouraging start-ups and entrepreneurs.
5. Merchant Banks can provide consultancy and project evaluation services to encourage this phenomenon.
6. There should be a balance between 'Direct Innovation' and 'Reverse Innovation' in a country like India, to make a holistic development at present and for future prospects.

7. Government schemes, Industrial Policy should include 'RI' as a new reform and try to bring awareness among entrepreneurs to come up with various strategies to start projects based on 'RI'.
8. This strategy should be implemented to develop one's own market and the global markets thus, balancing the economies of both local as well as global, resulting in "glocalization"

## 12.0 SCOPE FOR FUTHER RESEARCH

Business strategies, technological advancement, economic status of a country provides good scope for the scholars to pursue research. Being an emerging phenomenon, 'Reverse Innovation' gives a wide scope for the research scholars to explore new ideas and bring unique thoughts and develop new insights. Reverse Innovation mechanism can be further analyzed taking into consideration its, SWOT analysis, issues and challenges facing by developing countries applying this strategy and Government assistance and schemes to encourage 'RI'.

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