The Relevance of Skill Development in the Indian Context

** D. Subramaniam*
*** John Ben*

Abstract

India is a diverse country and many initiatives of the Government of India are aimed at achieving an economic growth that is also inclusive. While aiming to accelerate the economic growth to a sustainable level, the emphasis has also been on achieving a growth which was inclusive. India opted for liberalization in 1990-1991 and subsequent to that, irrespective of the political party in power, there has been some amount of continuation of such initiatives. This paper aimed at deliberating the salient initiatives of the Government of India in the last few years in a critical way with a focus on skill development, and it captured the implications of such initiatives on the society and also on business. The paper also brought out the course corrections needed on the basis of likely deviations of the intended impacts. Though a lot of research material is available on the need for an inclusive growth for a country like India, a comprehensive research was needed to understand what the challenges were for such an approach. This paper aimed to identify such gaps and deliberated the same and suggested possible course corrections. Such a body of knowledge would ignite thinking at all levels with the sole objective of making India great. A relevant comparison of India was made with China to understand and explore adopting similar approaches that enabled China to taste success or desist from approaches that did not help.

Keywords : economic growth, inclusive, liberalization policies, skill development

JEL Classification : J24, J46, J82, J88, M54

Paper Submission Date : December 1, 2017 ; Paper sent back for Revision : February 2, 2018 ; Paper Acceptance Date : February 27 , 2018

India in the earlier days and pre-liberalization period was adopting an inward looking import substitution policy instead of focusing on foreign trade as a leveraging factor for the country as a whole. Consequently, India realized this approach was taking it nowhere as it was leading to inefficiencies in production and technological backwardness. India opted for liberalization policies in 1991 and since then, it has been able to realize sustainable economic development. By that time, China was much ahead as it had already adopted the liberal open policies in 1978 as it wanted to join the World Trade Organization. This delayed hampered India and the gap continued to exist. Post liberalization, India continued to sustain the growth. A slew of new initiatives have been recently announced by the Government of India, all with the objective of improving the standard of living of the common man. All these initiatives make an impact on business and society. This paper attempts to discuss a few of the initiatives like skill development in depth and others in general.

Literature Review

Demographic dividend has been described by various bodies as a strong positive for India. Policies centering

* *Assistant Professor,* Symbiosis Institute of Business Management (SIBM), Bangalore, #95/1, 95/2, Electronics City, Phase-1, Hosur Road, Bengaluru - 560 100. E-mail: subramaniam.d@sibm.edu.in
** *Assistant Professor,* Symbiosis Institute of Business Management (SIBM), Bangalore, #95/1, 95/2, Electronics City, Phase-1, Hosur Road, Bengaluru - 560 100. E-mail: john.ben@sibm.edu.in

around this demographic dividend are fundamental tenets supporting the pillars of growth in the Indian context. At the same time, population ageing and a shrinking workforce is a concern for several developed and developing economies. Several Asian countries, including Japan and China may observe the window of opportunity closing during the next few decades (Fong, 2017). Some simple implementation approaches by governments included encouraging the working population to continue economic activity post the age of 60 years to reduce pension deficits; this also led to better impact on growth indicators in the economy (Barrel, Hurst & Kirby, 2009 ; Pereira, Karam, Muir, & Tuladhar, 2010).

Research work in this area has also looked at the rapid induction of employable age population into the workforce. This would subsequently result in partial compensation for the sheer quantum of workforce that would forego gainful employment on account of its crossing 60 years of age; this is expected to occur two to three decades from now. Suitable skill sets would ensure employment irrespective of age. Here, the role of skill development can be seen. Malik and Venkatraman (2017) reiterated that unless adequate efforts are directed towards skill development, India may face jobless growth. The formal industry provides enough opportunities for skilled workforce at different levels. Moreover, the Ministry of Skill Development plays a critical role in the identification and subsequent dissemination of appropriate skill sets to the workforce. Therefore, for the economic progress of the nation, skill development is taken up for study in this paper.

Skill development has multi-pronged objectives. Nag and Das (2015) explored the role of skill development among micro and small enterprises; they developed a framework to articulate training needs. Micro enterprises are tiny businesses wherein the owner or founder takes on the role of employee as well (Schreiner & Woller, 2003) ; these enterprises provide employment and hence, act as a source of income generation in the absence of other alternatives (Otero & Rhyne, 1994). Damodaran (2008) argued that markets and informal agents failed to meet the requirement of skilled workers. Developing countries were observed to be in the "low - skill - bad - job" (Asian Development Bank, 2004) catch-22 situation that keeps economies in the vicious cycle of low productivity, poor investment, and low growth.

Skill development has been mainly directed at improving the employment prospects in the informal sector. However, the overall goal is to have more people equipped for the formal sector. Informal employment in India has been a source of intense research interest among scholars and policy experts. Studies have shown that the Indian workforce in the informal sector moves seamlessly between jobs and there are no restrictions to informal employment (Narayanan, 2015) ; early researchers stated that the informal workforce consists of people awaiting employment in the formal sector (Harris & Todaro, 1970). Maloney (2004) posited the desirable features of the informal economy wherein he observed the freedom of mobility of labor. Studies also elicited support for the bargaining power of the formal market (Ashenfelter, Farber, & Ransom, 2010) which wields its strength over the informal sector. Relating these observations to our paper, we may say that skill development seems to have promising solutions for the informal economy, especially in the Indian context. A Confederation of Indian Industry (CII) study highlighted the predominance of the informal employment. According to its study, 90% of India's informal workforce are working as self-employed and casual workers. The study also indicated that 50% of the national income evolves from the informal sector (Srija & Shirke, 2014).

A supportive policy environment is equally important if any of the initiatives in skill development have to succeed. The National Manufacturing Policy was expected to support industry in a big way (Kulkarni, 2013). Several research studies stressed the relationship between policy environment and skill development (Kaptan & Jagtap, 2016; Mishra, 2015) and explored this fertile area. While the availability of the necessary quantum of workforce, also referred to as demographic dividend, is an advantage from the Indian context (Chandrasekhar, Ghosh & Roychowdhury, 2006), the provision of the right skill sets becomes equally important for economic progress.

India ranks second in the world with a population of 1.2 billion people; this works out to 18 % of the world's population which by itself is a positive factor when viewed in the context of availability of productive man power.

Added to this fact is that 30% of this population is below the age of 15 years, which ensures that this population is young and is going to be productive if their knowledge and skills are properly channelized. The other advantage is that the country is also maintaining a consistent growth rate of 6 - 8%, which ensures that this highly productive and young population is going to be utilized to fuel the high demand arising out of such a growth.

Policymakers in India cannot ignore the fact that the informal sector is contributing more to the growth than the formal sector and this paper focuses on how these large personnel are going to be equipped with skills to sustain and improve growth.

Other studies that focused on assessing women labour availability worked out as Labour Force Participation Rate (LFPR) reveals a grim picture. Against the international range of 21% on the lower side and 71% on the higher side for a typical developing country, India has 40% LFPR out of which the female labour force is only 22.5%, which is pathetic. The study attributes the cause to education and income effect.

Though there have been many literatures available focusing on inclusive growth and literature on several studies of select areas like employment or unemployment or economic growth etc., there hasn't been specific studies carried out on the government initiatives in these areas as they are of recent initiatives and hence this paper tries to bridge this gap.

Government of India Initiatives

Skill Development, Make in India, Smart Cities, Digital India, and Start-up India are some of the initiatives of the Narendra Modi Government aimed at making India an economic powerhouse. The Make in India program is aimed at positioning India as a preferred location for manufacturing intensive companies across the world (Sharma, 2016). Global corporations are encouraged and incentivized to set up their manufacturing hubs in India. This mandates an investment friendly environment in each of the 29 states in the country. Studies showed overwhelming support for policy initiatives aimed at expanding the manufacturing sector (Tariyal, 2017). The government has overhauled the regulatory and institutional mechanisms and has attempted to make investments easier.

A long term view also takes note of expected development of ancillary units for various prime industries; multinational companies had already mastered the art of integrating global know-how with local resources and value chains (Mudambi, Saranga, & Schotter, 2017). India is also keen to promote faster development of micro, small, and medium enterprises (MSMEs) which would get a fillip from the Make in India implementation (Balamurugan, Dinesh, & Jithin, 2016). Only the active participation of the MSME sector can bring about the targeted objectives of making the contribution of manufacturing to 25% of the GDP by the year 2022; the current level is about 14%.

Smart cities have been promoted for the welfare of citizens and for better governance. This would entail the provision of internet assisted functioning of various public utilities. Cities were positioned to be the engines of growth leading to India's economic progress (Bholey, 2016). Smart cities are being planned with adequate physical infrastructure and cyber infrastructure. Access to internet along with internet enabled services is expected to streamline daily business transactions in several emerging cities and townships.

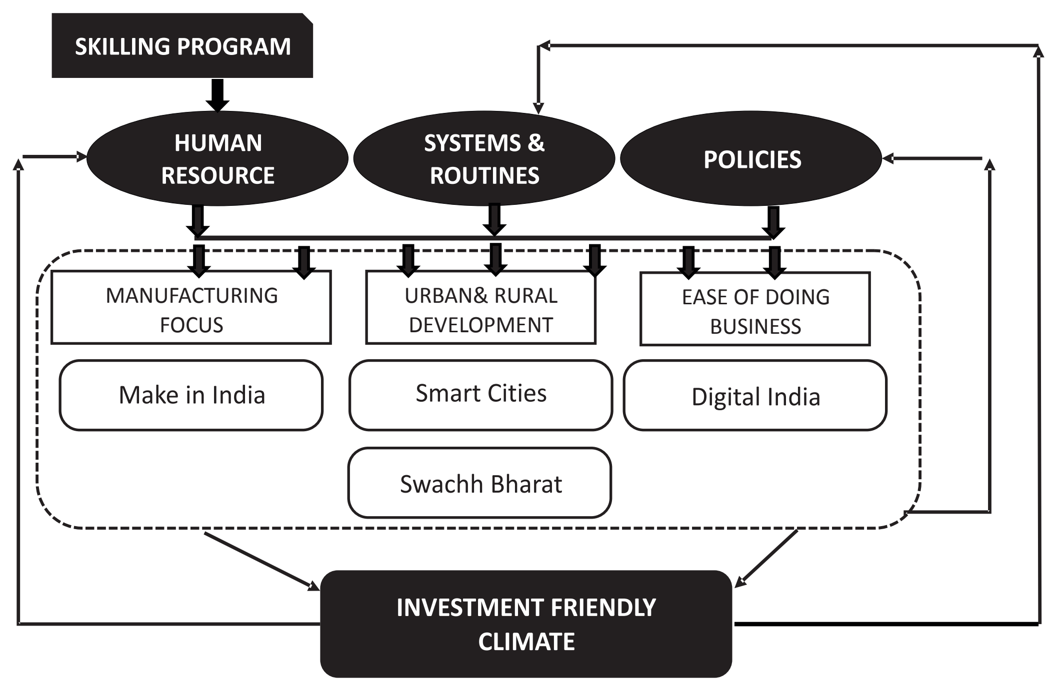
In alignment with this initiative is Digital India which seeks to make payments digital. Currently, the cash transactions for individuals across the country is inordinately high - they stand at levels close to 95%. IT enabled payment mechanisms are expected to foster better transparency (Arora & Rahman, 2017). For the smooth and seamless functioning of the Government machinery, however, digital payments have to be enabled. Moreover, to widen the tax base and increase revenues for the government, such measures become critical. This called for a revamp of public sector banks' payment mechanisms, special mobile applications, and other internet enabled architecture. Beyond the enabling mechanisms, the government also sought to educate the public through various forums on national media. Education also has been gradually shifting to online modes of delivery - various e-learning platforms had been launched by the Government (Deori, 2017) in alignment with institutes of national repute.

While all these initiatives look attractive on paper, a robust foundation is needed for the implementation of the aforesaid initiatives. This foundation calls for a fairly trained workforce in addition to the enabling mechanisms provided by the various regulatory bodies. The importance of human capital cannot be downplayed if India were to succeed in this ambitious drive. With this in mind, skill development was taken up as a key agenda for this paper.

Development of a Framework

Having reviewed some of the developments in the field, the relevance and criticality of a need for a suitable framework is realized. The framework needs to draw upon the overarching objectives which would ultimately attract investment in various sectors, leading to economic growth. A virtuous cycle can be visualized as one assesses the positive effect of the proposed agenda – people, processes, and policies impacting the development of 'Make in India' 'Smart Cities,' and 'Digital India,' which in turn would attract investments from domestic and foreign investors. In turn, a positive influence would be felt on people, policies, and processes; the cycle can be expected to sustain. In the 'People' component, the 'Skill India' initiative is expected to play a critical role. Keeping all the above factors in mind the following framework can be envisaged with all the leading initiatives depicted in Figure 1.

Figure 1. Framework – A View of Government Initiatives



Skill Development

The preceding literature review briefly indicated the importance of skill development in the Indian context. The government's progressive thinking on this front has led to a slew of initiatives in this area. Hence, the paper seeks to probe some of them from the view point of action areas fundamental to economic progress. Why is skill development of critical importance to the nation? One of the reasons is that skill deficit is worse than infrastructure deficit. Skills deficit starts to create social unrest. If the deficit can be addressed through technology interventions and innovations, it could turn out to be a huge force multiplier for economic growth. An equally important question arises as to why it is important in the Indian context.

Based on records from the National Policy for Skill Development and Entrepreneurship 2015, Ministry of Skill Development & Entrepreneurship, it is observed that the percentage of population in the age group of 15-59 years is 62%; the percentage below the age of 25 years is 54%.

It is also estimated that the young workforce in India is approaching 800 million now compared to 600 million in China (Economic Survey, 2007-2008). By the year 2020, the expected shortage of working people in the world is 47 million going by the Boston Consultancy group report for PHD Chamber of Commerce and Industry. While the world has a shortage of working people, India would have a surplus of 56 million people. Consequently, the country presents a substantially different facade to the global scenario in terms of the quantum of workforce and their potential skills and competencies.

This is where the initiative of "Skilled Human Capital" by Government of India assumes significance. The importance of this initiative was realized in 2009 and a policy framework was prepared with a provision to review it once in 5 years. The review in 2015 resulted in creation of a separate Ministry for Skill Development. The focus of this Ministry is to provide such skills to leverage the demographic advantage that India has. The ministry has created the following agencies to help achieve the objective of skilling :

(i) National Skill Development Agency (NSDA),

(ii) National Skill Development Corporation (NSDC),

(iii) National Skill Development Fund (NSDF) and 33 Sector Skill Councils (SSCs) as well as 187 training partners registered with NSDC

Lessons to be Learnt from Chinese Policies

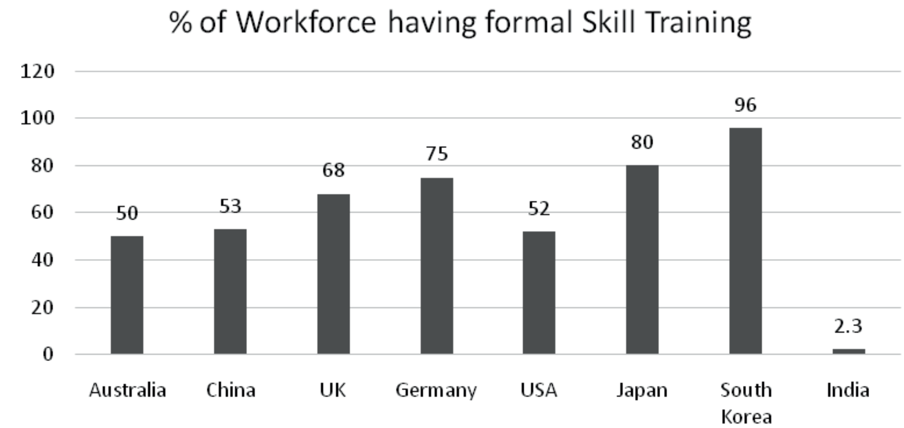
Demographic transitions have occurred in other countries as well. China is one such country where the phenomenon had a profound impact on economic development. China introduced a population policy, widely known as 'one child' policy and successfully implemented and practiced it for nearly three decades; only in recent times, this policy has changed. Implementation of the policy affected the demographic processes (Du & Yang, 2014) and in turn the labour market, leading to shortage of unskilled workers and their rising labour costs. Post 2003, the labour costs in China were growing fast, which has weakened China's competitiveness in labour intensive industries. The above experience of China should serve as a lesson for India as what is considered at present as a source of strength will become a source of liability when this workforce gets aged in about 30 years from now.

Analysis

(1) Policy : A policy basically aims to equip this workforce with the appropriate skills as the skills needed are heterogenic in nature.

(2) What is the Challenge in Skill Development? : The Figure 2 gives a picture of the gravity of the challenge India faces.

Figure 2. Country Wise Percentage of Workforce Having Formal Skill Training



Source: NITI Aayog (2017)

Table 1. Worker Classifications and Volume

Status	2004-05 -in million	2011-12-in million
Self Employed	257.16 (60.34%)	244.97 (56.22%)
Regular wage/salaried	36.19 (8.49%)	48.79 (11.19%)
Casual Worker	132.81 (31.16%)	141.91 (32.57%)
Total informal workforce	426.16 (92.73%)	435.66 (91.78%)

Source : Reproduced from A. Srija and S. V. Shirke (2014). *Special feature : An analysis of the informal labour market in India.* Confederation of Indian Industry (Table 7, p.45). Retrieved from http://www.ies.gov.in/pdfs/CII%20EM-october-2014.pdf

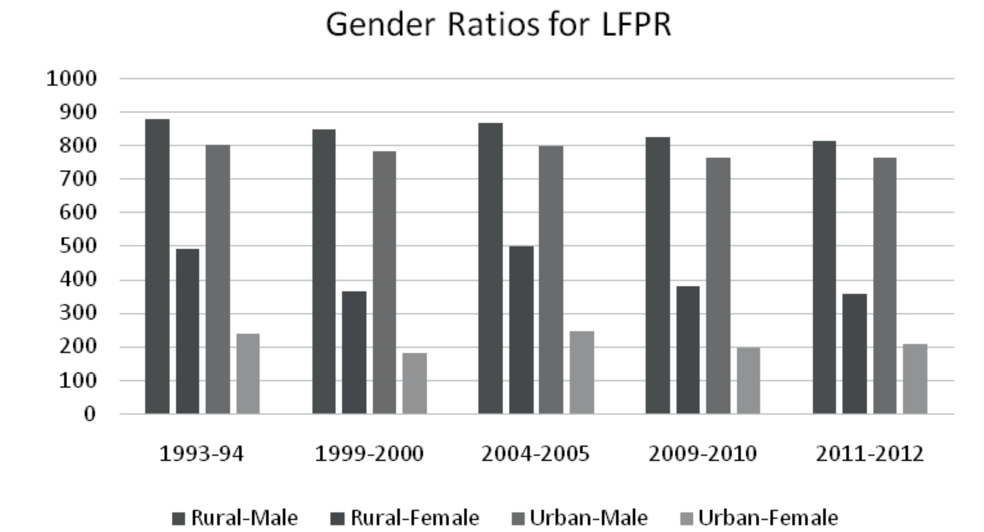
An NSDC study conducted over the period of 2010-2014 predicted that there would be an additional net incremental requirement of 109.73 million skilled manpower by 2022 in 24 key sectors. In the informal sector, 90% of the workforce is not skilled. Providing appropriate skill for the entire 90% is a daunting task because the informal sector is highly heterogeneous and varying skills are needed for each of the sectors; providing such skills is very difficult as is evident from the Table 1.

(3) Characteristics of Formal and Informal Workforce : Based on research publication data from Indian Economic Service, we found that there is an increase in organized sector's employment from 13% to 17 %, but the increase was informal in nature (48% in 2004-2005 increasing to 55% in 2011-2012). Also, there was a decrease in formal employment in the organized sector (52% in 2004 - 2005 decreased to 45% in 2011-2012).

In the unorganized sector, the share of formal employment marginally increased from 0.3% to 0.4 % for the above period and the informal employment declined marginally from 99.7% to 99.6%. Overall, the number of formally employed increased from 33.41 million to 38.56 million, while the informal employment increased from 426.20 million to 435.66 million.

The informal workers are those who are engaged in the informal sector or households excluding the regular workers with social security benefits provided by employers and workers in the formal sector without any employment and social security benefits provided by employers as defined by National Commission for Enterprises in the Unorganized Sector (NCEUS). It is evident that unorganized or the informal sector accounts for more than 90% of workforce in the country and there is an urgent need for formalization of employment even in the informal sector for which appropriate skills need to be imparted.

Figure 3. Rural Male vs Female Ratios for LFPR



Source : Reproduced from S. Sanghi, A. Srija, & S. S. Vijay (2015). Decline in rural female labour force participation in India: A relook into the causes (Figure, p. 260). *Vikalpa - The Journal for Decision Makers, 40*(3), 255 - 268.

Majority of employment in the informal sector is self-employment as is evident from the Table 1. It is likely that low skill level is reason for keeping them out of regular employment and forcing them to start on their own. The review of the initiatives/schemes reveals that the kind of skill training imparted are sub-standard and also not meeting the actual industry needs. The Ministry is now engaging reputed institutes like IIM-B for inputs to improve the quality of the schemes and to plug the loopholes in these schemes.

The next challenge is lack of infrastructure for undertaking such a huge task of training a large number of youth. The current skill development landscape is highly fragmented both in terms of institutions imparting training/skill development and also by way of various government interventions. The availability of good quality trainers is also an area of concern.

To some extent, the creation of a separate Ministry for Skill Development with various ministries is getting coordinated through this ministry; yet, the issues remain unaddressed. The ITIs are the institutions through which vocational education and training takes place but most of the curriculum seems to be outdated and the infrastructure has not kept pace with the times. Trainers have not been trained adequately.

Sanghi, Srija, and Vijay (2015) in their study stated that the female labour force participation in India, especially in the rural side of India, is declining. The study revealed that this was again due to lack of skill or education and also lack of opportunities in their home turf, that is, rural areas.

According to the National Sample Survey Organization (NSSO) for Employment and Unemployment Survey (EUS), the rural female labour force participation rate (RFLFPR) is on a decline as seen in the Figure 3 (Sanghi et al., 2015). A declining trend of female workforce participation in rural India is possibly due to lack of skill and lack of opportunities in rural India, even though this must also be seen in the backdrop of agriculture where the female workforce is engaged to a large extent.

Discussion

Labor force refers to the number of persons actually working or willing to work. However, workforce refers to the number of persons actually working. Thus, workforce does not account for those who are willing to work. The difference between labor force and workforce is the total number of unemployed persons. The earlier part of the analysis clearly shows that skills development need not be confined to formal, structured courses of training, but may also take place in unstructured and unplanned contexts. There is a need to stress the importance of non-formal learning.

There is a rush for a formal training as it leads to a Certificate or Diploma which is given weightage and importance in the employment market. This is regrettably absent in the case of non-formal training. If this is addressed by way of provisioning of a recognizable experience certificate in the workplace, where skills are imparted as part of work, there will be substantial improvement in the recognition of non-formal learning as well. Such an arrangement will lead to getting an employment by recognizing that an individual has spent considerable time in this non-formal learning and in that context, it may be worthwhile to consider giving a certificate giving details like time spent on various activities etc.

Findings and Suggestions

It is evident that unorganized or the informal sector accounts for more than 90% of the workforce in the country and there is an urgent need for formalization of employment even in the informal sector for which appropriate skills need to be imparted. It is likely that low levels of skills are reasons for keeping people out of regular employment and for forcing them to start on their own. Besides, there is not much of an incentive in the form of wage differential by way of skilled and unskilled wages leading to lack of interest of the unskilled worker to acquire required skills and earn higher wages or to get into formal employment with benefits.

A declining trend of female workforce participation in rural India is due to lack of skill and lack of opportunities in rural India. To overcome this, the suggestion is to have policy initiatives to make them economically active. The initiatives should focus on microfinance - supported self-help group-centered activities, which will make them economically active along with handling domestic duties. A formal vocational training may be of much use so that they can acquire some skills and engage themselves in a productive way and support their families economically as well. This also facilitates inclusive growth.

Conclusions and Directions for Future

The analysis thus far has identified and listed the relevance of various initiatives of the Government of India to make India a progressive country but without exclusions. When growth takes place, the fruits of such growth should benefit everyone, especially the people at the bottom of the pyramid. India currently enjoys the demographic dividend advantage and to leverage the same, it has to focus on three areas namely employment, employability, education ; hence, skilling the workforce is the only way out.

This is possible only with initiatives at the governmental level. There has to be a conceptual framework to integrate various policies of the programs as has been stressed so far. But when it comes to tasting success, it mainly depends on the implementation. When policies are developed, it is worthwhile to look at global best practices as well and fine tune or customize them to suit the local culture. Moreover, the current trend is the reversal of globalization as is evident from the actions of many developed countries like the U.S. in trying to restrict the H1B visas or Brexit initiative of UK, etc., which reveals that most of the countries are switching over to protectionism rather than liberalization as they all want to protect employment opportunities of their citizens.

To summarize, the policies of the government should establish a clear vision, and such policies should take care of and address exclusions. The policies should facilitate multilateral cooperation and should involve both domestic and international policies and outcomes. The Government alone cannot solve such a gigantic task and hence should involve private and other voluntary agencies as well as tabulated in the Table 2.

Table 2. Summary of Suggested Action Plan

Narrative	Priority	Actions
Goal	Improved standard of living	Not to be limited to achieving improved GDP, but go beyond. It also needs to be sustainable.
Obstacle	Exclusion	Focus on • Inclusive growth and productivity. • Investing in economic, human, social, and natural capital. • Address wealth concentration. • Create opportunities.
Tools and Enablers	Coordination of all agencies both government and non-government.	Policy integration, coordination, and maintaining global standards.

Implications

This study has captured some of the best practices happening in isolation. A lot of these have been initiated by the Indian Government in line with expectations of the industry. The paper emphasizes the need to bring those practices together and to channelize all these strategies at the governmental level so that inclusiveness is ensured while experiencing growth and such improvement will not only benefit the country, but also spur sustained economic progress.

(1) Contribution to Policy Formulation : This study has highlighted the shortcomings, expectations, and gaps in the existing systems and policies and recommends the scope for improving the policies for the betterment of the Indian workforce as a whole as well as for improvement in the standard of living of people. We suggest that the government develop more formal mechanisms of developing skills that can translate into better employment for people from the lower classes of society. The policies need to be framed such that the participation of organizations from the private sector is also encouraged. Policies have to also carefully assess the results (a) the ability of a skill development program to result in absorption/employment; and (b) ability of a program to result in creation of a better standard of living - a qualitative factor that may call for further study. Other key performance indicators can also be developed and monitored.

(2) Contribution to the Body of Knowledge : This study has listed various initiatives and also analyzed the challenges and emphasized the need to have a coordinated effort of various agencies involved and focus on better implementation. By developing a framework, the study has identified key actors in the program. It is expected that academicians and policy makers would utilize this to emphasize key actions. For academicians, the study can help direct studies in specific areas such as (a) identifying antecedents for success of a skill development program; and (b) identifying key attributes for conducting skilling programs.

Directions for Future Research

The study has vast scope and opens enough opportunities for further research. Skill development in particular depends upon various other factors. It is observed in this study that there are many constraints within which an individual has to aspire for his or her career growth. Future research can look at more micro aspects such as the results of skill development in a particular geography. For instance, research can focus on linking skill development initiatives and employment in industry clusters such as Chennai and Pune. This study can be juxtaposed against a similar one undertaken in a lesser developed cluster such as Indore or Bhopal. Research can also focus on the attributes necessary for trainers and training institutes. This would ultimately decide the success of skill development programs.

References

Arora, B., & Rahman, Z. (2017). Information technology capability as competitive advantage in emerging markets: Evidence from India. *International Journal of Emerging Markets, 12* (3), 447 - 463. doi: https://doi.org/10.1108/IJoEM-07-2015-0127

Ashenfelter, O. C., Farber, H., & Ransom, M. R. (2010). Labour market monopsony. *Journal of Labour Economics, 28*(2), 203 - 210.

Asian Development Bank. (2004). *Improving vocational education and training strategies in Asia.* Manila : Asian Development Bank.

Balamurugan, R. N., Dinesh, B. J., & Jithin, J. N. (2016). Make in India – A prospect of development for micro, small and medium enterprises. *Journal of Contemporary Research in Management, 11*(1), 23 - 30.

Barrel, R., Hurst, I., & Kirby, S. (2009). *How to pay for the crisis or macroeconomic implications of pension reform* (Discussion Paper). London : National Institute of Economic and Social Research.

Bholey, M. (2016). India's urban challenges and smart cities: A contemporary study. *Scholedge International Journal of Business Policy and Governance, 3*(3), 17-38. doi: http://dx.doi.org/10.19085/journal.sijbpg030301

Chandrasekhar, C. P., Ghosh, J., & Roychowdhury, A. (2006). The demographic dividend and young India's economic future. *Economic & Political Weekly, 41* (49), 5055 - 5064.

Damodaran, S. (2008). Demand-supply mismatches and the role of markets in skill development: Uncovering the dimensions in India's informal sector. *The Indian Journal of Labour Economics, 51*(4), 803 - 811.

Deori, M. (2017). Technology mediated media education: A case study of e-learning initiatives in India. *International Journal of Communication Research, 7* (2), 95 - 100.

Du, Y., & Yang, C. (2014). Demographic transition and labour market changes: Implications for economic development in China. *Journal of Economic Surveys, 28* (4), 617 - 635.

Fong, J. H. (2017). Extending demographic windows of opportunity. *Asia Pacific Journal of Risk & Insurance Management, 11*(1), 1 - 23. doi: https://doi.org/10.1515/apjri-2016-0022

Harris, J. R., & Todaro M. P. (1970), Migration, unemployment and development: A two-sector analysis. *The American Economic Review, 60* (1), 126 - 142.

Kaptan, S. S., & Jagtap, V. K. (2016). Reaping the benefits of demographic dividend: Some issues in India. *Journal of Commerce & Management Thought, 7* (3), 576 - 585. doi: 10.5958/0976-478X.2016.00032.X

Kulkarni, Y. M. (2013). National manufacturing policy: A fresh look. *Arthshastra Indian Journal of Economics & Research, 2* (2), 31 - 37. doi: 10.17010/aijer/2013/v2i2/54513

Malik, G., & Venkatraman, A. (2017). The great divide: Skill gap between the employer's expectation and skills possessed by employees. *Industrial and Commercial Training, 49* (4), 175 - 182. doi: https://doi.org/10.1108/ICT-11-2016-0071

Maloney, W. F. (2004). Informality revisited. *World Development, 32* (7), 1159 - 1178. doi: https://doi.org/10.1016/j.worlddev.2004.01.008

Mishra, S. K. (2015). Skill development: A way to leverage the demographic dividend in India. *Proceedings of the 5th Annual International Conference on Innovation & Entrepreneurship.* DOI : https://dx.doi.org/10.2139/ssrn.2875382

Mudambi, R., Saranga, H., & Schotter, A. (2017). Mastering the make-in-India challenge. *Sloan Management Review, 58* (4), 59 - 66.

Nag, D., & Das, N. (2015). Development of various training methods for enhancing the effectiveness and skill development among micro-entrepreneurs in India. *Journal of Entrepreneurship Education, 18* (1), 1 - 18.

Narayanan, A. (2015). Informal employment in India: Voluntary choice or a result of labor market segmentation? *Indian Journal of Labour Economics, 58* (1), 119 - 167.

NITI Aayog. (2017). *India Three Year action agenda 2017-18 to 2019-20.* Retrieved from http://niti.gov.in/writereaddata/files/coop/IndiaActionAgenda.pdf

Otero, M., & Rhyne, E. (1994). *The new world of micro enterprise finance.* West Hartford, CT: Kumarian Press.

Pereira, J., Karam, P. D., Muir, D. V., & Tuladhar, A. (2010). *Macroeconomic effects of public pension reforms* (Working Paper No. 10/297). Washington, DC : International Monetary Fund.

Sanghi, S., Srija A., & Vijay, S. S. (2015). Decline in rural female labour force participation in India: A relook into the causes. *Vikalpa - The Journal for Decision Makers, 40* (3), 255 - 268. doi: 10.1177/0256090915598264

Schreiner, M., & Woller, G. (2003). Microenterprise development program in the United States and in the developing world. *World Development, 31* (9), 1567-1580. doi: https://doi.org/10.1016/S0305-750X(03)00112-8

Sharma, Y. (2016). Make in India: An ambitious project to revive the Indian economy. *International Journal of Research in Commerce and Management, 7*(8), 47 - 50.

Srija, A., & Shirke, S. V. (2014). *Special feature : An analysis of the informal labour market in India*. Confederation of Indian Industry. Retrieved from http://www.ies.gov.in/pdfs/CII%20EM-october-2014.pdf

Tariyal, P. (2017). A study on intersectoral linkages in Indian economy. *Arthshastra Indian Journal of Economics & Research, 6* (1), 23 - 34. doi: 10.17010/aijer/2017/v6i1/111020

About the Authors

Dr. D. Subramaniam is working as an Assistant Professor with Symbiosis Institute of Business Management, Bangalore affiliated to Symbiosis International University, Pune. Before coming to academics, he worked for various industries covering Textile, Machinery Manufacture, Automobile, Sugar, and Fertilizer sectors.

Dr. John Ben is working as an Assistant Professor with Symbiosis Institute of Business Management, Bangalore which is affiliated to Symbiosis International University, Pune. He is a Fellow from Indian Institute of Management, Lucknow. Before coming to academics, he worked in various industries like Apparel, Retail, and Automobile sectors.