
SKILL DEVELOPMENT POLICY FOR KARNATAKA

**Department of Skill Development, Entrepreneurship and Livelihood
Government of Karnataka**

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Contents

1. INTRODUCTION.....	1
2. BACKGROUND FOR SKILL DEVELOPMENT IN KARNATAKA.....	2
DEMOGRAPHIC DIVIDEND IN KARNATAKA.....	3
SIZE OF LABOUR FORCE IN KARNATAKA	4
SIZE AND LABOUR FORCE PARTICIPATION AMONG YOUTH (16 - 35 YEARS) IN KARNATAKA	4
OCCUPATIONAL DISTRIBUTION OF YOUTH (16 – 35 YEARS) IN KARNATAKA.....	5
FORMAL AND INFORMAL EMPLOYMENT AMONG YOUTH IN KARNATAKA.....	6
EDUCATIONAL LEVELS AMONG YOUTH (16 – 35 YEARS) IN KARNATAKA	7
FORMAL AND INFORMAL SECTOR EMPLOYMENT BY GENERAL EDUCATION AMONG YOUTH IN KARNATAKA.....	7
SKILL LEVELS AMONG YOUTH.....	8
DEMAND AND SUPPLY OF SKILLED WORKFORCE BY 2022	9
DISTRICT-WISE SECTOR SKILL DEMAND	10
3. TARGET SEGMENTS	11
ESTIMATED NUMBER OF TARGET GROUP	12
YEAR-WISE ESTIMATES (2017 TO 2030).....	12
4. AIMS AND OBJECTIVES OF THE SKILL POLICY.....	14
VISION	14
GOAL	14
MISSION.....	14
AIMS	14
OBJECTIVES	14
5. POLICY INTERVENTIONS FOR PROMOTING SKILLS AMONG YOUTH.....	15
5.1 INFORMATION, AWARENESS AND MOBILISATION.....	16
5.2 ASPIRATIONS AMONG YOUTH.....	17
5.3 STANDARD CURRICULA AND COURSES	18
5.4 POLICY INTERVENTIONS FOR SKILL TRAINING.....	18
6. ENTREPRENEURSHIP DEVELOPMENT AND LIVELIHOOD PROMOTION POLICIES.....	22
SKILLS FOR ENTREPRENEURSHIP DEVELOPMENT.....	22
LIVELIHOOD PROMOTION POLICIES	23
CLUSTER DEVELOPMENT.....	23
7. INSTITUTIONAL FRAMEWORK.....	24
8. FINANCING.....	30

LIST OF FIGURES AND TABLES

<i>Figure 1: Population pyramid of Karnataka in 2011</i>	3
<i>Figure 2: Labour force participation among youth (16 – 35 years) in Karnataka</i>	4
<i>Table 1: Occupational Distribution (%) of youth (16 – 35 years) in Karnataka</i>	5
<i>Figure 3: Formal and informal sector employment among youth (16 – 35 years) by gender groups</i>	6
<i>Figure 4: Formal and informal sector employment among youth (16 – 35 years) by social groups</i>	6
<i>Figure 5: General education among youth (16 – 35 years) in Karnataka</i>	7

<i>Figure 6: Formal and informal employment by general education among youth (16 – 35 years) in Karnataka</i>	8
<i>Figure 7: Formal sector employment among youth (16 – 35 years) in Karnataka by gender and educational categories</i>	8
<i>Figure 8: Proportion of youth (16 – 35 years) receiving formal and non-formal vocational training by gender and social groups</i>	9
<i>Figure 9: Proportion of youth (16 – 35 years) in labour force receiving formal and non-formal vocational training by gender and social groups.</i>	9
<i>Figure 10: Incremental demand and supply of skilled human resources in Karnataka (2012 - 22)</i>	10
<i>Chart 1: Target Group for the Skill Policy of Karnataka government</i>	13
<i>Chart 2: Organisational Structure</i>	27
<i>Annex 1: Karnataka State Policy of Skill Development, 2008</i>	33
<i>Annex 2: Distribution of the total workforce in Karnataka by sectors</i>	34
<i>Annex 3: Population pyramid of youth (16 - 35 years) in Karnataka in 2011</i>	35
<i>Annex 4: Incremental demand in Karnataka, 2012 - 2022</i>	36
<i>Annex 5: Major employment sectors as per skill development by 2030</i>	37
<i>Annex 6: Sectors and districts with concentration of incremental demand</i>	38
<i>Annex 7: Educational infrastructure in Karnataka</i>	39
<i>Annex 7a: Training programmes</i>	40
<i>Annex 8: Year-wise estimates of target groups (in Lakhs) for the period of 2017-2030</i>	41
<i>Annex 9: Apprenticeship programme in Karnataka</i>	41
<i>Annex 10: Year-wise estimates of number of youth to be provided with existing government training programmes</i>	42
<i>Annex 11: Estimated expenditure (Rs. crores) on short and long-run skill training in Karnataka</i>	43
<i>Annex 12: Innovative Funding Models for Sustainable Skill Development</i>	44

Preface

The government of Karnataka has set up the Skill Development, Entrepreneurship and Livelihood Department (SDEL) to help the youth to acquire necessary skills and expertise for employment. The main objectives of the new Department are to enhance employment generation and bring all skill development programmes under one department. This Department will enhance skill development among youth in mission mode and ensure coordination among various departments. It also proposes to undertake the functions of regulation, standardisation, promotion, implementation and monitoring of all skill development initiatives in the state.

An important task undertaken by the newly formed Department was to prepare a policy on skill development for the state. For this purpose a committee consisting of representatives from the government, industry, multilateral and bilateral agencies, civil society organisations and academicians was constituted. Prof. D Rajasekhar, Institute for Social and Economic Change (ISEC), Bangalore, has been appointed as a member of the Committee and requested to take major responsibility of drafting the policy on Skill Development, in consultation with the committee members. I place on record my sincere thanks to Prof. Rajasekhar for his efforts.

I also would like to thank all the members of the Committee for their suggestions and inputs towards the preparation of the policy. My special thanks are to Sri. Sameer Shukla, IAS, Commissioner, Department of Employment and Training (DET), Sri. Anil Bhandari, Team Leader, Karnataka German Multi-Skill Development Centre (KGMSDC), GIZ-IS, Smt. Neeti Sharma, Senior Vice President, Team Lease, and Sri Jeya Chandran, United Nations Development Programme (UNDP). Thanks are due to Dr. Indrajit Bairagya, ISEC, for his estimations pertaining to youth (16-35 years) in this policy paper.

A number of persons have provided comments and suggestions on the draft policy. I would like to place on record my sincere thanks to Dr. K P Krishnan, Secretary, Ministry of Skill Development and Entrepreneurship, Prof. Nayanatara, Indian Institute for Management, Bengaluru, Prof. Abdul Aziz, Prof. Gopal Kadekodi, Dr. S S Mantha, Sri Gabriel Boradado, International Labour Organization (ILO), Sri Balasubramanyan, JANA group, Mr. Steven Shaun, E & Y, Mr. Mahesh, Head, Corporate Strategy & New Initiatives State Government & Citizen Engagement, NSDC and Mr. Clement Chauvet, Chief Skill Development from UNDP, Ms. Namerta Sharma, GIZ Bengaluru, Dr. R Manjula and Ms. Andrea Zinto, ISEC and also the participants in the workshop on Karnataka Skill Policy held on January 27, 2017.

I also place on record my thanks to Mr. S A Katarki, Mr. B S Hiremath and Ms. Manika Ghosh, Consultants, SDEL department, for their support to the entire process of policy preparation, and to Ms. Tanushree Sengupta for her excellent copy editing of the policy document.

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Additional Chief Secretary, Department of Labour

Abbreviations

IT&ITES	Information Technology & Information Technology Enabled Services
NSQF	National Skills Qualifications Framework
PPPs	Public Private Partnerships
B.A.	Bachelor of Arts
KVTSDC	Karnataka Vocational Training and Skill Development Corporation
SC	Scheduled Castes
ST	Scheduled Tribes
NSSO	National Sample Survey Organisation
OBC	Other Backward Castes
NSDC	National Skill Development Corporation
ITI	Industrial Training Institutes
BE	Bachelor of Engineering
B.Tech	Bachelor of Technology
B.Arch	Bachelor of Architecture
DET	Department of Employment and Training
LMIS	Labour Market Information System
SECC	Socio-Economic Caste Census
UGC	University Grants Commission
NSDA	Non Self Destruct Alternative
CSR	Corporate Social Responsibility
B.Ed	Bachelor of Education
MSMEs	Micro, Small and Medium Enterprises
MSDE	Ministry of Skill Development and Entrepreneurship
SDC	Skill Development Centres
VTP	Vocational Training Providers
NGO	Non Governmental Organization
ICT	Information and Communication Technology
E-Hubs	Entrepreneurship Hubs
RPL	Recognition of Prior Learning
KSM	Karnataka Skill Mission
NRLM	National Rural Livelihoods Mission
NULM	National Urban Livelihoods Mission
CEDOK	Centre for Entrepreneurship Development of Karnataka
RUDSETI	Rural Development and Self Employment Training Institute
NCVT	National Council for Vocational Training
DGET	Directorate General of Employment and Training
GOI	Government of India
MES	Modular Employable Scheme
SCVT	State Council of Vocational Training
GTTC	Government Tool Room and Training Centre
SHG	Self Help Group
DC	District Commissioner
UID	Unique Identification
DSERT	Department of State Educational Research and Training
DRDA	District Rural Development Agency
GDP	Gross Domestic Product

GSDP	Gross State Domestic Product
MoU	Memorandum of Understanding
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
SPVs	Special Purpose Vehicles
KASE	Kerala Academy for Skill Excellence

Executive Summary

The government of Karnataka set up the Department of Skill Development, Entrepreneurship and Livelihood in 2016 to enable the state's youth to acquire necessary skills for employment, and to promote livelihood. The new Department has prepared a Skill Development Policy for Karnataka to address issues confronting skill development in the state, such as market failure, information asymmetry, coordination failure and exclusion of marginalised groups. The Policy also intends to ensure the success of the national policy at the state level.

Karnataka's policy focuses on 2.12 crores youth in the age group of 16 to 35 years. An analysis of youth participation in the labour force, occupational distribution, participation in the formal and informal sectors, and general education and skill levels by gender and social groups leads to the following policy suggestions:

- i) Skill provision is urgently needed to promote employment among youth and bring them into the labour force;
- ii) The Policy needs to be gender sensitive and give priority to women in provision of skills and promotion of employment;
- iii) Focus is required on providing employable skills among younger women, especially young homemakers to enable them to take up gainful employment;
- iv) Vocational training institutions should be sensitive to the needs of women candidates;
- v) Appropriate skills should be provided to the physically challenged so that they are enabled to take up employment;
- vi) There should be focus on workers in the informal sector, especially those belonging to SC and ST categories and women, to address social and gender disparities in the access to employable skills and thereby, to decent work;
- vii) Since the threshold for formal employment is vocational and higher education, vocational skills should be introduced from the eighth standard, as this will ensure that dropouts have some skill for gaining employment;
- viii) There should be changes in the curricula of higher secondary education in favour of vocational skills to improve employment prospects in the formal sector.

An examination of the skill gap by sectors and districts in Karnataka leads to the following policy conclusions: i) an aggressive strategy of larger coverage of youth in the next half decade is needed to address the shortage of skilled and highly skilled people; ii) priority should be given to a) IT&ITES; b) health care services; c) education and skill development, d) building, construction industry and real estate, e) tourism, travel, hospitality and trade; f) agriculture and allied activities; g) transportation, logistics, warehousing and packaging; and h) textiles and garment. These sectors have potential for greater labour absorption, regional development, and gender inclusion.

The institutional infrastructure for skill provision in Karnataka is impressive, but their capacity is not fully utilised. It is therefore imperative to fully utilise the existing capacity in Industrial Training Institutes (ITIs) and polytechnics to reduce the skill gap in the state. These institutions need to be upgraded to assess the demand for skills in local areas and design courses as per industry demand and in alignment with the National Skill Qualifying Framework (NSQF).

The number of youth requiring vocational education from 2017 to 2030 is projected at 1.88 crores, comprising of 75 lakhs of the workforce existing in 2016 and 113 lakhs of fresh

entrants. These two groups consist of informal workers in agriculture and non-agriculture, school dropouts, those completing secondary and higher secondary education and young homemakers (women). Those completing higher education and formal vocational training are excluded.

The goal of the skill development policy is to *annually* skill 13.4 lakh existing members of the workforce and new entrants who yearn to achieve a sustainable livelihood either through wage employment or self-employment options.

The provision of skills to 1.88 crore youth (both stock and fresh entrants) is a gigantic task, which can only be successfully undertaken through concerted efforts by multiple stakeholders in a coordinated manner. Policy strategies and roles of different stakeholders are therefore outlined:

- i) The focus will be on providing vocational training to fresh entrants by fully utilising the existing formal vocational training institutions;
- ii) For vocational training to fresh entrants, the private sector will be encouraged to expand vocational training facilities through Public Private Partnerships (PPPs);
- iii) The higher education system will be strengthened, as it has the potential of gradually reducing the number of youth requiring vocational education in the future;
- iv) The existing skill courses will be reoriented to make them employment-oriented;
- v) Most of the youth in the existing workforce will be provided with skills for undertaking new livelihoods or strengthening existing ones by the various relevant government departments, while the Skill department will support them in the development and standardisation of curriculum, certification and so on; and
- vi) The Department will take the lead role in building awareness and aspirations amongst the youth, support career guidance and placement, and act as a nodal agency to provide industry interface, quality benchmarks, national/ international best practices, monitoring and impact evaluation.

Policy interventions for promoting skills among youth are:

- a. Providing information, awareness and mobilisation;
- b. Promoting skill aspirations among youth;
- c. Introducing standard curricula and courses;
- d. Improving the quality of training infrastructure;
- e. Improving the quality of training and capacity of teachers;
- f. Strengthening industry engagement in skill development;
- g. Forging strong links with Karnataka's Industrial Policy for the success of both the policies;
- h. Promoting and incentivising apprenticeship training;
- i. Promoting career guidance, placement support services and overseas employment;
- j. Providing vocational skills to students pursuing higher education, especially for general courses (such as B.A.), which have limited employment opportunities;
- k. Expanding skill training for school dropouts;
- l. Promoting skills for entrepreneurship and livelihoods; and
- m. Upgrading skills, reskilling and recognition of prior learning for informal sector workers.

An elaborate institutional framework is suggested for the implementation of the skill development policy.

Of the total target youth of 188 lakh, about 150 lakh youth will be provided vocational training with the help of existing infrastructure and schemes. The financing strategies to cover training for these 150 lakh youth include encouraging and incentivising private sector investment to start new vocational training institutions through PPP arrangements, providing incentives to industries to participate in apprenticeship training, fully utilising the existing capacity of formal vocational training institutions and converging training programmes with livelihood activities. For providing short and long term vocational training to the remaining 38 lakh youth, the total funding required is Rs. 15,759 crores during the period 2017 – 2019 at an average of Rs. 1,126 crores per year. The government is a major contributor to the funding on vocational education; at the same time, efforts such as private sector participation will be initiated to sustain vocational education in the long-run.

SKILL DEVELOPMENT POLICY FOR KARNATAKA

1. Introduction

Hon'ble Chief Minister of Karnataka, Sri Siddaramaiah, while presenting the budget for 2016-17, has rightly pointed out that since the “*youth are the light of hope of our future, they should be equipped with necessary skill and capabilities to enable them in availing the employment opportunities.*” The government of Karnataka set up the Department of Skill Development, Entrepreneurship and Livelihood in 2016 to enable the state's youth to acquire necessary skills for employment and livelihood promotion. The new Department aims to: i) provide skills to youth in mission mode for new and better employment; ii) converge all skill-related programmes/schemes under one department for better coordination; and iii) act as a nodal agency to provide industry interface, quality benchmarks, national/international best practices, monitoring and impact evaluations. This Department undertakes the functions of planning, regulation, standardisation, promotion, implementation and monitoring of all skill development initiatives in the state. An important activity that the new Department has taken up is to prepare the Skill Development Policy for Karnataka.

Context for Skill Development Policy

Sustainable Development Goals

The skill development policy becomes important in the context of the Sustainable Development Goals, which call upon governments to substantially increase the number of youth and adults having relevant skills, including technical and vocational skills for employment, decent jobs and entrepreneurship by 2030¹.

Constitutional Provisions

The policy is in line with the Constitution of India, which places the education, including technical education, vocational training and technical training of labour in the Concurrent List (Article 246). The policy is also in line with the National Apprenticeship Act of 1961.

Lessons learnt from Karnataka Policy on Skill Development, 2008

The Karnataka government prepared a ‘State Policy on Skill Development’ in 2008, well before the first national policy on skill development was launched by the Central Government in 2009. Introducing skill development as a new policy priority for Karnataka, the 2008 document formulated objectives and focus areas of skill development for the state for the five-year period beginning with 2009. The Karnataka Vocational Training and Skill Development Corporation (KVTSDC) was formed to provide short-term training and facilitate job fairs. Implementation of the skill policy depended heavily on KVTSDC. Other key stakeholders were not fully involved. There was not much emphasis on quality training and monitoring, and the amount invested was small. The outcome achieved was much less than the target (Annex 1).

The lessons learnt from the implementation of the 2008 policy are:

- i) The provision of short-term training will not result in desired outcomes. The emphasis should be on introducing educational reforms, long-term measures aimed at institutional strengthening towards the provision of employable skills, and the provision of quality training;

¹ Consequently, this policy projects the number of youth requiring skill training and funds for the period 2017 to 2030.

- ii) Substantial investment in skill development is needed;
- iii) The involvement of different stakeholders (relevant government departments, industry, civil society, training institutions, academic institutions, donor agencies, etc.) is key to successful skill building;
- iv) Mechanisms for the identification of training providers, standardisation and certification of curricula, monitoring, capacity development, and so on, should be in place and working;
- v) Skill missions at the district level and below are required for coordination; and
- vi) There is need for an institutional framework that not only identifies the roles of different stakeholders but also makes provision for the identification of beneficiaries, dynamic information on the labour market including skills required, monitoring and evaluation, and impact assessment of the policy.

Issues confronting skill development in Karnataka

The new policy seeks to address the following issues confronting skill development in Karnataka:

- i) **Market failure** leading to under-investment on skills by individuals and employers, adversely affecting long-term economic prospects. Additionally, wages paid are not equivalent to skills that a person possesses. This requires policy responses such as corrections in the ratio of wages paid to investment in skill acquisition, expansion of post-compulsory education, demonstrating that investment in skills leads to higher wages and labour productivity, and government ensuring minimum level of certified skill training.
- ii) **Information asymmetry** implies lack of information among potential skill aspirants on employable skills and employers. It is also possible that employers may be aware of specific skills required for improved productivity, but they may not have information on where such skills are available.
- iii) **Coordination problem** arises because of the lack of shared information between job-seekers and employers. Workers invest on skills depending upon the investment by industries on technology requiring these skills. At the same time, returns to industries on investment in new technology depend upon the existence of adequate supply of skilled workers. This implies that there should be good coordination between those interested in new skills, industries and training institutions. Apart from this, the government has started several schemes relating to the provision of skills; there is need for coordination and convergence of these schemes.
- iv) **Inclusion of marginalised groups.** Given women, workers in the informal sector and those belonging to Scheduled Castes (SC) and Scheduled Tribes (ST) in Karnataka have relatively low skills, there is need to follow an inclusive skill policy.

2. Background for Skill Development in Karnataka

India is poised for a demographic dividend for the next 25 years, due to an increase in the proportion of young and working age group in the total population. Such a rise in the youth population is a window of opportunity as it reduces the ratio of dependents to total workers, leading to higher rates of savings, investment and growth. This change in the age structure, if properly utilised, will result in a demographic dividend, which provides immense growth opportunities to the nation. The provision of employable skills to youth remains an important challenge on the path to reap opportunities of the demographic dividend.

Despite the policy focus on skill development from the 11th Five-Year plan onwards, India still faces the dual challenges of paucity of skilled workforce as well as non-employability of large

sections of youth who are educated, but lack employable skills. Data provided by the National Sample Survey Organisation (NSSO) show that only 2.4% of the Indian workforce has undergone formal skill training and another 8.6% have received non-formal vocational training. This indicates that only a fraction of the youth will be entering the labour force with vocational training. The National policy for Skill Development and Entrepreneurship was formulated to provide adequate and qualitative skills to the workforce.

The Karnataka policy on skill development has been formulated to ensure the success of the nation’s policy at the state level. The skill policy provisions of the Government of India have been adopted in the state policy in one form or the other. An institutional mechanism will be set up for convergence between the objectives and initiatives of the Central and state governments in skill development.

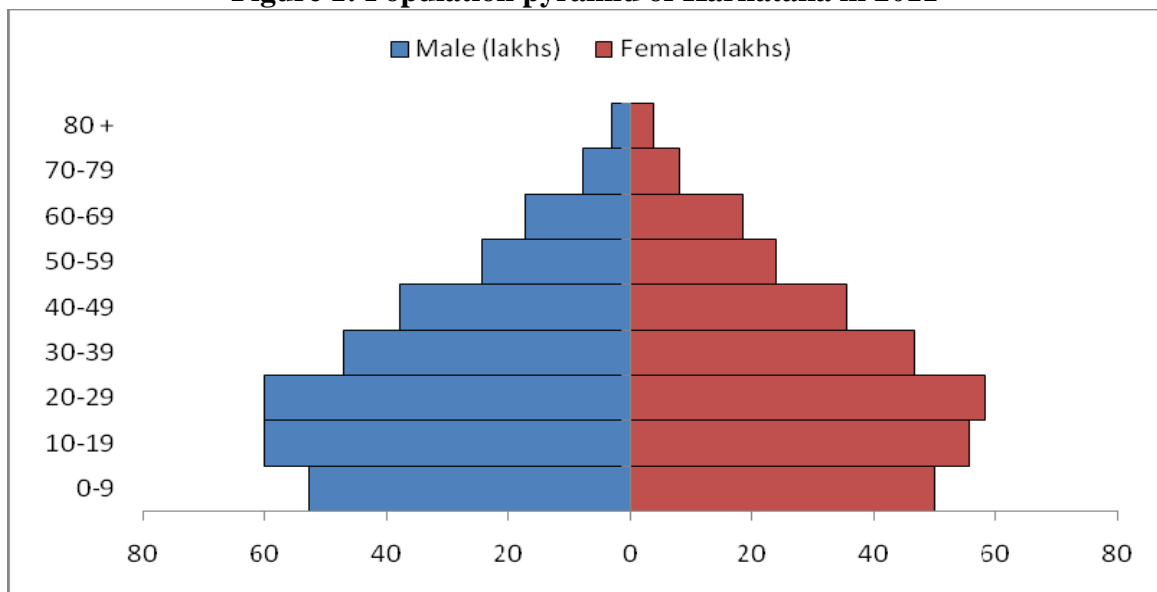
Karnataka

Karnataka is a leading state in the establishment of knowledge-based industries such as Information Technology, biotechnology and engineering, and also in the exports of electronics and computer software. The Gross State Domestic Product (GSDP) of Karnataka grew at the rate of 6.2% in 2015-16 and reached Rs. 780,000 crores at constant prices. The per capita state income in 2015-16 was estimated to be Rs. 145,799. Nearly two-thirds (64%) of GSDP came from the services sector, followed by 24% from industry and 12% from agriculture. However, as per the 2011 census, 49% workers (26% cultivators and 23% agricultural labourers) in agriculture contributed only 12% GSDP, thus indicating the need to provide appropriate skills to enhance their income.

Demographic dividend in Karnataka

With 55% of the population in the working age group of 20 to 59 years (Figure 1), Karnataka has the opportunity to achieve faster economic growth through a favourable demographic dividend, provided that appropriate skills are imparted to the working population in general and youth in particular. Skilled persons will then be able to find employment in the state as well as outside (including other countries), where there is demand for them.

Figure 1: Population pyramid of Karnataka in 2011



Source: Computed from Census 2011

Size of labour force in Karnataka

According to the Economic Survey of Karnataka, 2.44 crore persons out of its 6.11 crores population are registered as workers (Annex 2). Agriculture and allied sectors account for nearly 56% of the total workers in the state, while the rest are in the non-agricultural sector. Key sub-sectors of non-agricultural sector are manufacturing and mining (11%), shops, establishments and trade (9%) and construction (7%). Services account for the remaining 17%.

Three-fourths of 2.44 crore workers in Karnataka are estimated to be in the informal sector. Workers in the informal sector consist of agricultural labourers and those in the sub-sectors of non-manufacturing such as shops, establishments & trade, construction, real estate & business activities and hotels & restaurants. Most of the workers in the formal sector are found in manufacturing & mining and information technology & biotechnology.

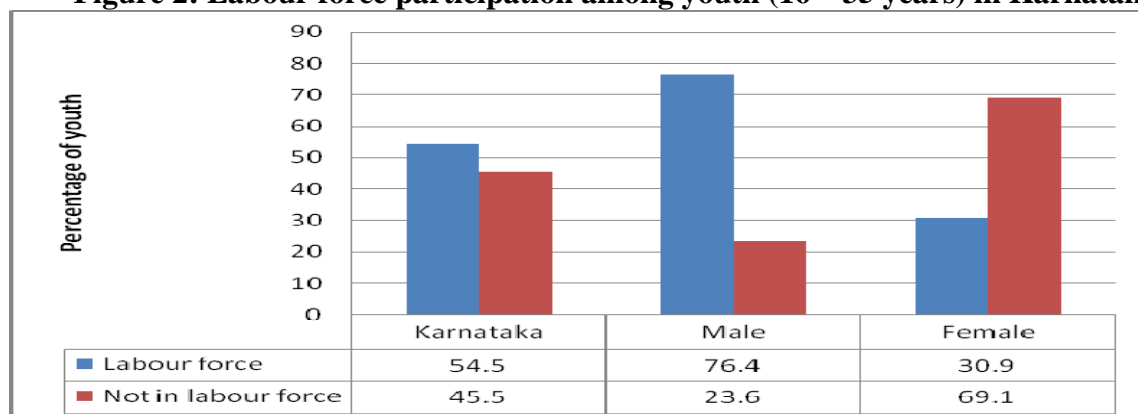
Size and labour force participation among youth (16 - 35 years) in Karnataka

Karnataka’s policy focuses on youth in the age group of 16 – 35 years. It is estimated that 2.12 crore persons in Karnataka are in this age group. The population pyramid of youth in Karnataka is provided in Annex 3.

Over 45% of the 2.12 crores youth population is not in the labour force (Figure 2). ***Skill provision is therefore urgently needed to promote employment among youth and bring them into the labour force.***

About 52% of the youth population is male, while the rest are female. Over 76% males are in the labour force; but, the corresponding proportion among females is only 31%, thus indicating a huge gap in the male and female labour force participation rates (Figure 2). ***The policy will therefore be gender sensitive and give priority to women in skill provision and promotion of employment.***

Figure 2: Labour force participation among youth (16 – 35 years) in Karnataka



Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

About 54% youth in the age group of 16 – 35 years belong to Other Backward Castes (OBC), 23% to general category, 17% to Scheduled Caste (SC) and 6% to Scheduled Tribe (ST). The

labour force participation was low among youth from general castes and higher among those belonging to SC and ST categories.

Occupational distribution of youth (16 – 35 years) in Karnataka

There are significant differences in the occupational distribution of youth by gender and social groups. Over 53% of females are engaged in domestic (unpaid) work in their households as against 0.1% of males (Table 1). This clearly indicates that the *policy focus should be on provision of employable skills to younger women, especially those involved in unpaid work, and enabling them to take up gainful employment*. Again, the proportion of women taking up self and salaried employment is low as compared to men due to, among others, low enrolment in vocational educational institutions. *The policy should therefore strive to make institutions providing vocational training sensitive to the needs of women candidates*.

About 3% of the total youth are not part of the labour force because of reasons such as physical disability. Against this background, *the policy will focus on the provision of appropriate skills to the physically challenged so that they are empowered to take up employment*².

Table 1 shows that a significant proportion of youth from SC and ST categories, especially from rural areas, are employed as wage labourers. On the other hand, a relatively larger proportion of youth from general and OBC categories (including minorities) are engaged in salaried employment and attending educational institutions. *The policy will address this social disparity by focusing specifically on SC and ST category of youth*.

Table 1: Occupational Distribution (%) of youth (16 – 35 years) in Karnataka

	In labour force			Not in labour force			Total
	Self-employed	Salaried	Wage worker	Attending edn. Instn.	Attending domestic duties	Others	
Karnataka	22.03	14.84	16.03	18.84	25.59	2.67	100
Gender							
Male	30.98	20.69	22.52	22.11	0.10	3.60	100
Female	12.39	8.53	9.02	15.30	53.11	1.65	100
Social groups							
ST	29.09	7.32	22.51	13.62	26.14	1.32	100
SC	11.74	11.52	31.82	17.04	24.50	3.38	100
OBC	24.34	15.00	13.18	19.05	26.03	2.40	100
General	22.42	18.96	9.22	21.05	25.21	3.14	100
Location							
Rural	25.36	9.46	20.94	17.46	24.46	2.32	100
Urban	16.91	23.14	8.46	20.96	27.33	3.20	100

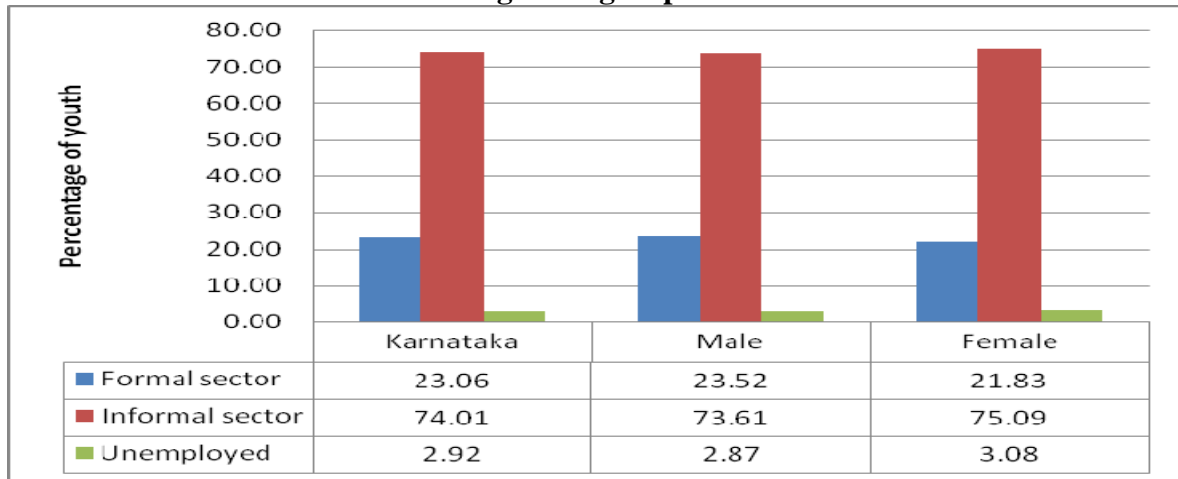
Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

² In addition, the Department will make efforts to facilitate the provision of a support system to enable skilled physically challenged persons to take up jobs.

Formal and informal employment among youth in Karnataka

Nearly three-fourths of the youth in Karnataka are employed in the informal sector which is characterized by insecure employment, low wages, lack of decent work and inadequate access to social security benefits. The employment of women in the informal sector employment is marginally higher than that of men (Figure 3).

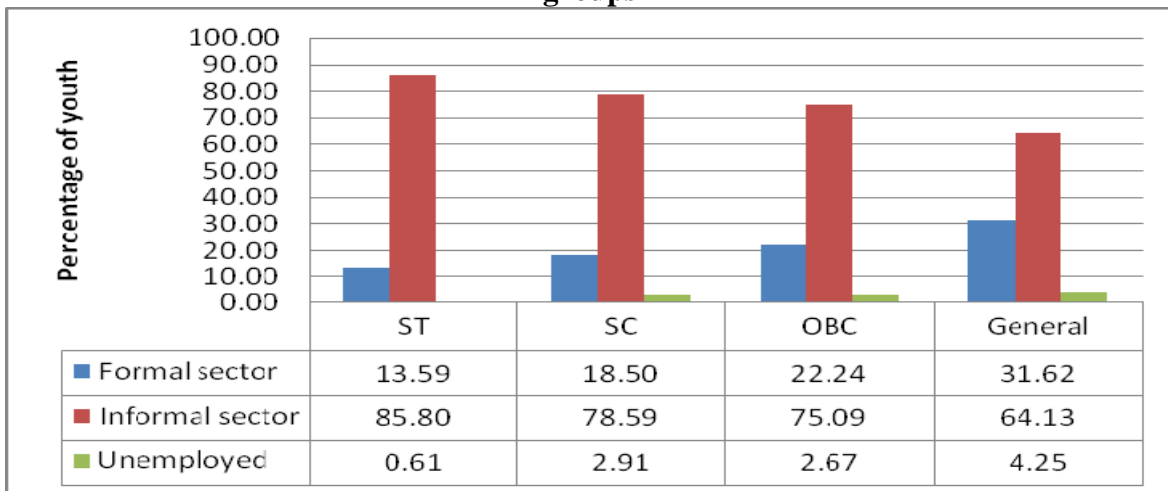
Figure 3: Formal and informal sector employment among youth (16 – 35 years) by gender groups



Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

Formal sector employment is relatively high among workers belonging to general caste category, while informal sector employment is prominent among those belonging ST, SC and OBC (minorities) categories (Figure 4). *The policy thrust will be more towards workers in the informal sector, especially those belonging to SC, ST and OBC (minorities) categories and women, to address social and gender disparities in the access to employable skills and, thereby, to decent work.*

Figure 4: Formal and informal sector employment among youth (16 – 35 years) by social groups

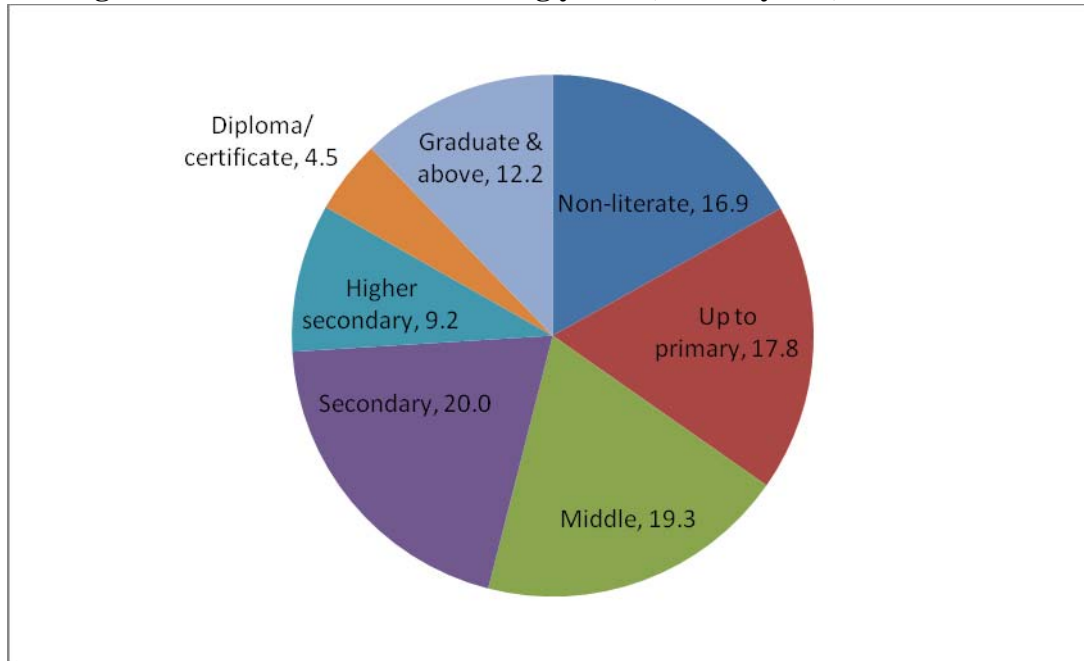


Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

Educational levels among youth (16 – 35 years) in Karnataka

The distribution of youth by educational level shows that 54% are non-literate and those completing primary and middle level education, and 29% are those completing secondary and higher secondary education (Figure 5). The proportion of youth completing diploma and graduation and above is 17%.

Figure 5: General education among youth (16 – 35 years) in Karnataka



Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

Formal and informal sector employment by general education among youth in Karnataka

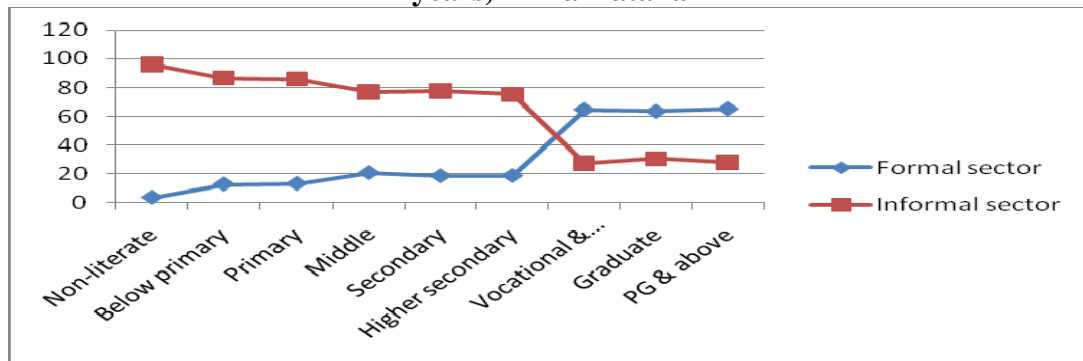
Formal sector employment increases along with general education of youth (Figure 6). Up to the level of higher secondary education, the proportion of youth taking up informal employment is substantially higher than those taking up formal employment.

The general education up to higher secondary level does not significantly contribute to youth getting employed in the formal sector. Two pertinent policies in this context are:

- ***The threshold for formal employment is vocational or technical education & beyond.***
- ***Therefore there is need to introduce vocational skills from the eighth standard (in collaboration with the Department of Education) as this will ensure that dropouts will have some skill to gain employment.***
- ***Changes in the curricula of higher secondary education are required in favour of vocational skills to improve employment prospects in the formal sector.***

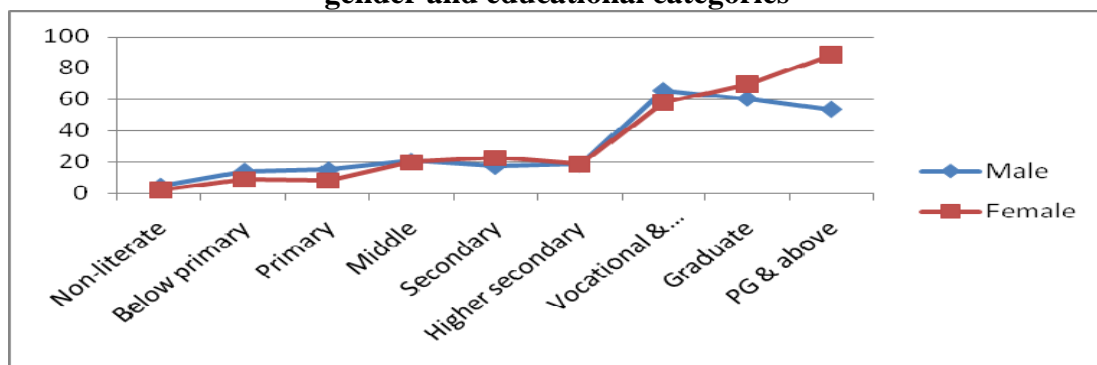
This pattern (i.e., general education up to higher secondary level not having significant impact on formal sector employment) does not differ across gender or social groups. However, formal sector employment among women completing graduation and post-graduation is significantly higher as compared to their male counterparts (Figure 7).

Figure 6: Formal and informal employment by general education among youth (16 – 35 years) in Karnataka



Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

Figure 7: Formal sector employment among youth (16 – 35 years) in Karnataka by gender and educational categories



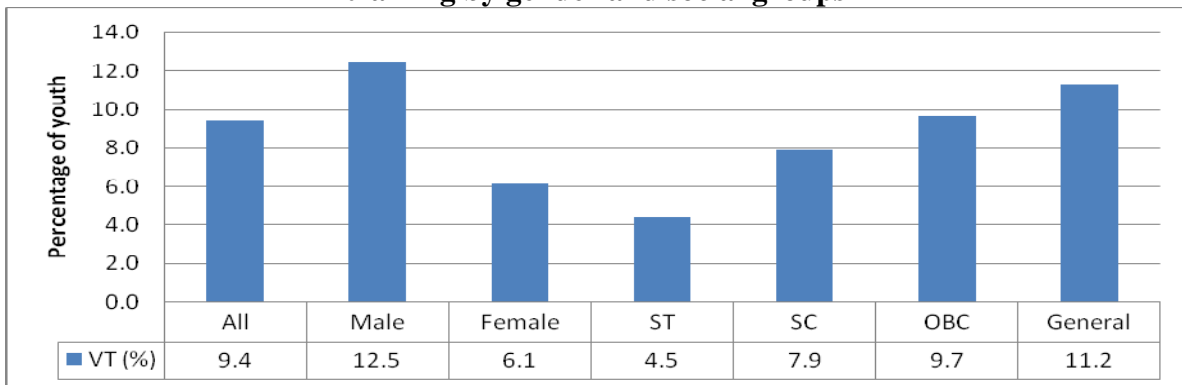
Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

Skill levels among youth

Given that the prospects of formal employment improve when a young person has technical education, there is need to examine the extent to which vocational skills are provided to youth in Karnataka. The NSSO data for the year 2011-12 shows that only 7% of youth received skills in Karnataka – 3% formal skills and 4% informal training.

About 9% of youth in the age group of 16 – 35 years acquired skills (Figure 8). Skilling is better among men and those belonging to general and OBC categories as compared to women and those belonging to ST and SC categories.

Figure 8: Proportion of youth (16 – 35 years) receiving formal and non-formal vocational training by gender and social groups

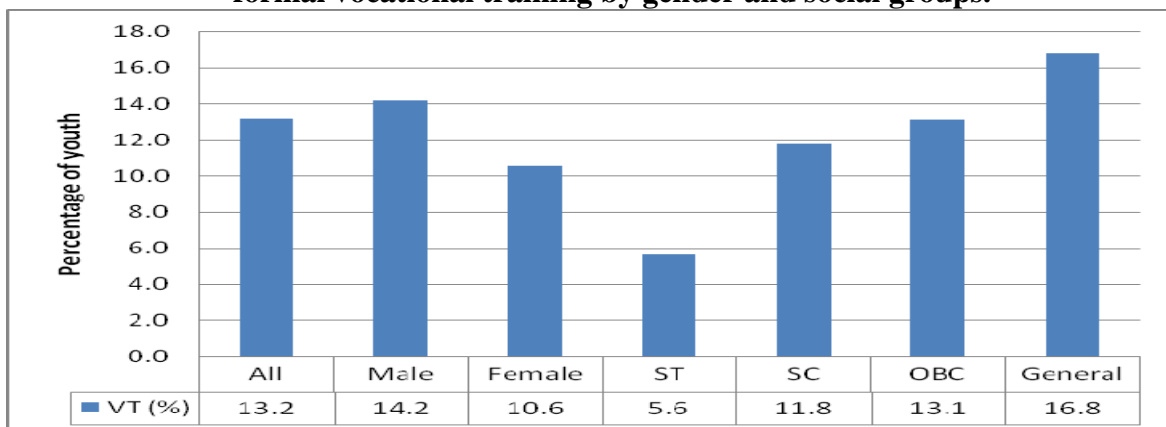


Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

The possession of skills among youth (16 – 35 years) already in the labour force is even better, with 13.2% of them having formal and non-formal vocational training (Figure 9). Percentage of women receiving vocational training is significantly lower than of men. Similarly, the proportion of youth receiving vocational training is low among those belonging to ST and SC castes as compared to other castes. The proportion of youth receiving vocational training is close to 17% in the case of those belong to the general category!

Skill provision policies are to be introduced for the youth, especially younger women and those belonging to SC/ST categories.

Figure 9: Proportion of youth (16 – 35 years) in labour force receiving formal and non-formal vocational training by gender and social groups.



Source: Estimated from the 68th Round of NSSO survey on `Employment and Unemployment Situation in India, 2011-12

Demand and supply of skilled workforce by 2022

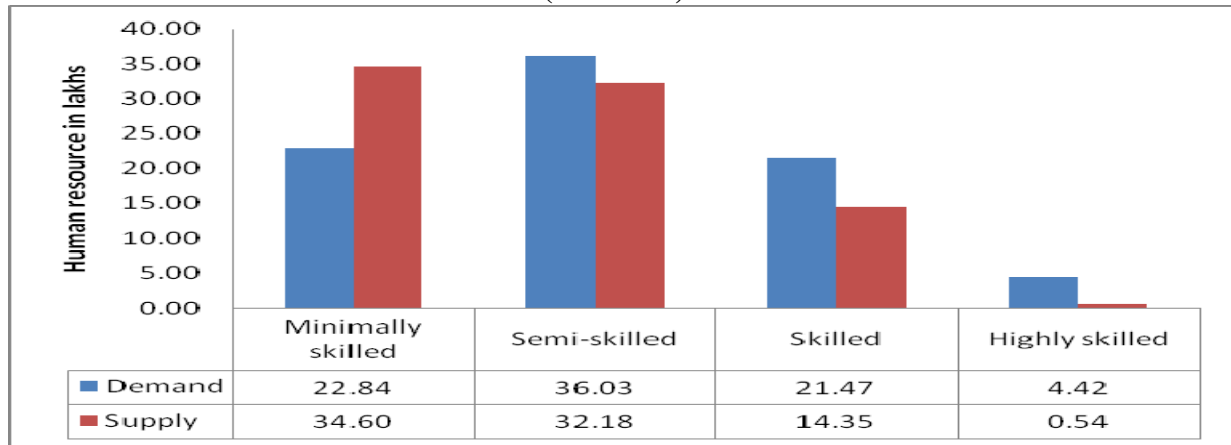
The National Skill Development Corporation (NSDC) estimated that the incremental demand for workforce in Karnataka during the period 2012 to 2022 is 84.76 lakhs (Annex 4); of them, 27% are minimally skilled, 43% are semi-skilled, 25% are skilled and 5% are highly skilled.

NSDC estimates show that there is a mismatch between the demand and supply of skilled and highly skilled workers in Karnataka (Figure 10). If efforts to provide skills are not taken up in

the coming years, there will be a shortage of 7.12 lakh skilled and 3.88 lakh highly skilled people in the state by 2022. At the same time, there will be excess supply of minimally skilled people during this period. **Therefore there is need to follow an aggressive strategy to widen coverage in the next six years.**

The data provided by the Karnataka Knowledge Commission shows that the three sectors that provide most of the employment to the skilled workforce are: i) Tourism; ii) Information technology, biotechnology and environmental sciences; and, iii) construction (Annex 4).

Figure 10: Incremental demand and supply of skilled human resources in Karnataka (2012 - 22)



Source: District-wise Skill gap study for the state of Karnataka

Column 3 in Annex 6 shows that the five sectors that will employ about 75% of the skilled workers are: a) Information Technology and Information Technology Enabled Services (IT & ITES); b) health care services; c) education and skill development, d) building, construction industry and real estate; and e) tourism, travel, hospitality and trade. **The skill policy will give priority to these sectors.**

District-wise sector skill demand

The six sectors that are projected to absorb over 83% of the incremental employment in Karnataka during 2012-22 are (Column 2 in Annex 6): i) agriculture and allied; ii) IT & ITES; iii) Building, construction industry and real estate; iv) Tourism, travel, hospitality and trade; v) Transportation, logistics, warehousing and packaging; and vi) Health care services. **There will be focus on these six sectors.** There will also be focus on sectors such as (a) garments and textiles, (b) wholesale and retail trade, and (c) repair and assembly works, in view of their potential to employ less educated women and informal workers.

Since agriculture & allied sectors, tourism, travel, hospitality and trade have the potential to benefit workers in almost all districts of Karnataka (Annex 6), **the skill policy will assign priority to these sectors in the provision of skills for regional development.**

Institutional infrastructure for skill provision in Karnataka

The education infrastructure of Karnataka is impressive. The number of students enrolling in secondary and higher secondary education is 8.87 lakhs and 5.17 lakh, respectively (Annex 7). The gap between enrolment capacity and actual enrolment is not significant in the courses at the graduation level. However, the gap is considerable in the case of BE/B.Tech/ B.

Architecture courses. The same is the case with medical courses. On the other hand, there is no gap between the actual capacity and enrolment in the Arts, Sciences and Commerce degree courses.

The enrolment capacity for formal vocational education in Karnataka is 215,667 persons. The actual enrolment is, however, only 160,901. The percentage of actual enrolment to capacity is about 75%. Polytechnics and ITIs account for the major component of formal vocational education. In Karnataka, 1,777 public and private ITIs (258 government, 196 aided and 1,323 private) provide skill training to 106,000 youth. However, the percentage of actual enrolment to total capacity is low at 68.9% (Annex 7). Around 290 polytechnics, with seating capacity of 75,000, have achieved enrolment capacity of 80%. ***It is, therefore, imperative to fully utilise the existing capacity in ITIs and polytechnics to reduce the skill gap in the state. The capacity of these institutions will be built to assess the demand for skills in local areas and design courses as per industry demand in alignment with NSQF.***

The Department of Employment and Training (DET) implements the Apprenticeship Training Scheme. Currently over 4,232 establishments in the state have been covered under this scheme and over 39,610 seats [now revised upwards to 43,000] have been allocated for trade apprentices, out of which 24,992 seats have been utilised. Under the Modular Employability Scheme, about 800 Vocational Training Providers are active in Karnataka, implementing 500 courses under 68 sectors. DET figures show that about two lakh persons have been trained since 2012 in the state.

There is shortage of institutional infrastructure for skill training in the sectors that are projected to employ bulk of the workers in the coming years, such as agriculture & allied, building, construction and real estate, tourism, travel, hospitality and trade, transportation, logistics, warehousing and packaging, and health care services. ***The policy will therefore focus on improving institutional infrastructure for vocational education in construction, tourism, travel, hospitality, transportation and health care in the coming years.***

Annex 7a shows the number of persons to be covered by the training programmes directly implemented by the Department of Skill Development, Entrepreneurship and Livelihood and other departments in 2017. It is anticipated that 4.6 lakh persons would be trained by these departments.

3. Target segments

The policy on skill development in Karnataka will primarily focus on youth in the age group of 16 – 35 years. However, those who are more than 35 years are not excluded from the purview of this policy.

The target group of youth in the age group of 16 – 35 years will consist of:

- Students completing secondary or higher secondary education and interested in the acquisition of skills in technical or non-technical trades through ITIs, polytechnics and other formal institutions.
- Drop outs from school before completing secondary education, who are interested in acquiring skills in technical or non-technical trades through informal and formal institutions.

- Informal workers and young homemakers interested in acquiring new skills, re-skilling or up-skilling through formal or informal institutions, depending on their educational qualification.
- Formal workers interested in re-skilling and up-skilling for new or better employment, and Arts degree students interested in skills for obtaining jobs.

Estimated number of target group

With the help of Census and NSSO data, the number of young persons (16 – 35 years) who require skills in Karnataka has been projected for the period 2016 to 2030³. These estimates are of two types:

Those persons who are in need of skills in 2016: Stock

Fresh entrants for skill training during the period 2017 – 2030: Flow

Stock

The estimates on the stock include the following three groups.

- All persons in the labour force who have not completed higher education (including technical education) are included because potentially they are all interested in the acquisition of skills for new or better employment.
- Since the above exclude those attending to domestic work in their households (most of whom are women), young homemakers (in the age group of 16 – 25 years) are included.***
- Physically challenged youth, to promote appropriate skills amongst them.***

In all, the total number of persons to be covered is 75 lakhs – stock (Annex 8).

Flow

The estimates on the flow include the following two groups.

- It is estimated that 71 lakh persons will be fresh entrants into the labour force during the period 2017 – 2030 without any skills. This group includes dropouts before the completion of secondary education and those completing secondary and higher secondary education, and excludes those completing higher education.
- Those attending to domestic work (mostly women) are included, as the policy seeks to make additional effort to encourage and motivate young homemakers to participate in the workforce.

The total number of fresh entrants is estimated at 113 lakhs – flow (Annex 8).

The total number of youth to be trained during the period 2017 – 2030 is thus 188 lakhs – both stock and flow (Chart 1).

Year-wise estimates (2017 to 2030)

Year-wise estimates for the period 2017 to 2030 (Annex 8) are based on the following considerations.

- An aggressive strategy of covering 50% of the stock in the next six years will have beneficial impact on employment, income and poverty. For this, the Skill Development

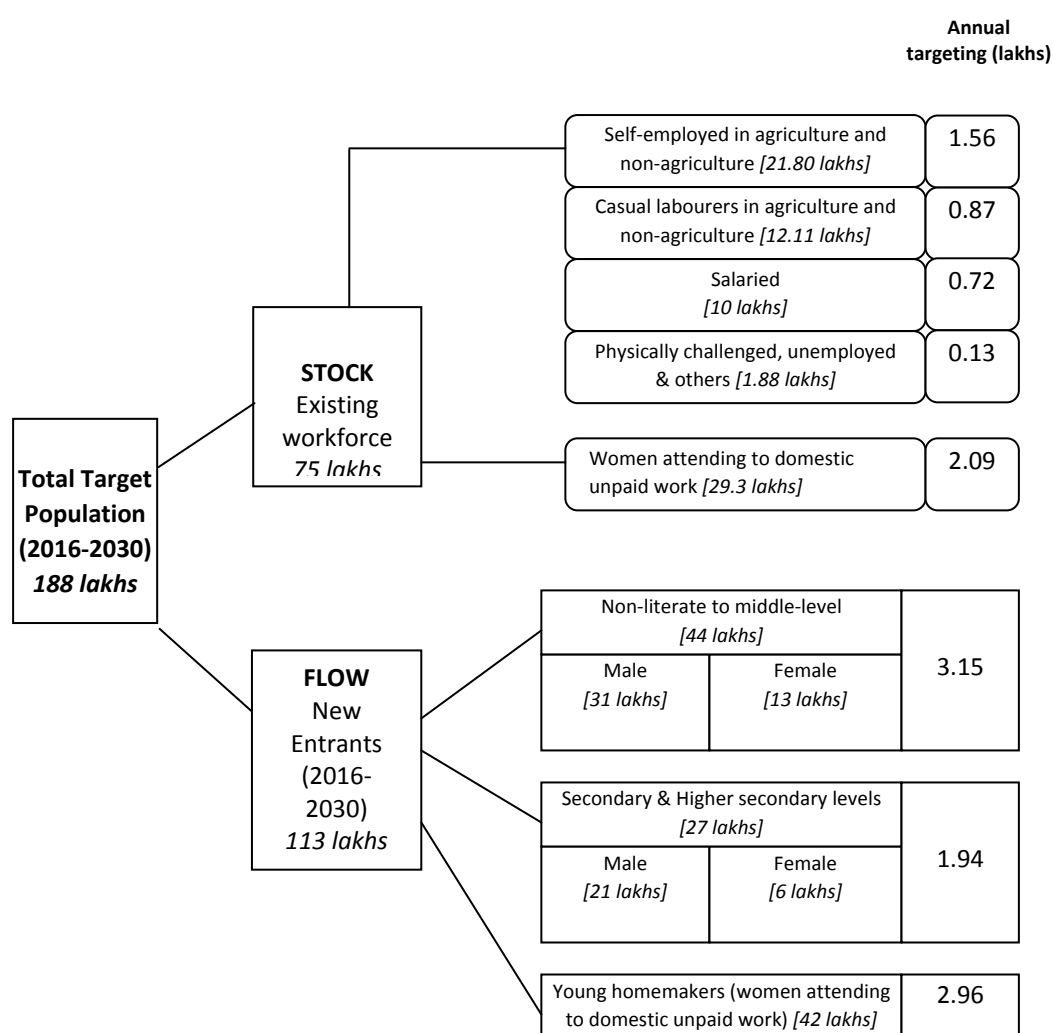
³ Methodology for this is the same as adopted by the National Policy for Skill Development and Entrepreneurship, 2015 to estimate the number of persons in the workforce requiring skills by 2022.

department will handhold other departments, by offering training and other services for providing new livelihoods and strengthening the existing ones.

- It is assumed that there will be an improvement in the number of persons completing secondary and higher secondary education. This is likely to reduce the number of illiterates and dropouts before secondary education.
- With improved awareness and employment opportunities, the number of persons attending to domestic work is expected to come down.
- The number of persons seeking higher education is also assumed to increase in the next decade. This is likely to reduce the number of those aspiring for skill education.

Because of the above, the annual target, which is 14.6 lakhs in 2017, gradually declines to 12.4 lakhs by 2030 (Annex 8).

Chart 1: Target Group for the Skill Policy of Karnataka government



4. Aims and objectives of the skill policy

The Karnataka government aims at a skill policy framework that is inclusive as well as learner and gainful employment centric in its approach.

Vision

Internationally acceptable skilling for all to reap the maximum possible demographic dividend for rapid balanced sectoral growth and inclusive development, leading to decent employment opportunities for all.

Goal

The goal of the skill development policy is to provide skills **annually** to 13.4 lakh existing workforce and new entrants (Chart 1) who yearn to achieve sustainable livelihood either through wage employment or self-employment options.

Mission

Empower all individuals through improved skills, knowledge, and nationally and internationally recognised qualifications to gain access to decent work and gainful employment, and ensure the state's competitiveness in the global market.

Aims

The aim of the policy on skill development in Karnataka is to:

- design and implement skill development, entrepreneurship and livelihood activities on a mission mode, converging all the relevant schemes and programmes under the Skill Development, Entrepreneurship and Livelihood Department;
- achieve the economic and social integration of target groups by enabling them to acquire employable skills by developing a skill ecosystem in close coordination with industries and industry bodies, sector skill councils, civil society and bilateral/multilateral agencies;
- standardise the curriculum in line with quality parameters and market demands, and improve certification norms for improving employability and free movement of the workforce;
- set cross-sectoral and internationally acceptable standards of skilling, with a sound quality assurance and qualification framework;
- ensure speedy provision of qualitative skills to harness the demographic dividend and meet industry needs;
- strengthen the quality as well as ensure the long term sustainability of the skill development infrastructure – both in the government and private sector; and,
- provide skills to strengthen livelihoods and promote entrepreneurship with increased emphasis on innovation, and provide adequate support and conducive environment to them.

Objectives

In order to achieve the above aims, the skill development policy of Karnataka government has formulated the following objectives.

1. Provide information to youth, entrepreneurs and workers in the informal sector on employable skills and institutions providing such skills, and mobilise them for acquiring the skills.

2. Make vocational training aspirational to both youth and employers so that youth perceive vocational training as a career choice and employers, realising the productivity potential of skills, offer remunerative employment to skilled workers.
3. Standardise the curriculum in line with quality parameters and market demand, and improve certification norms to promote quality, employability as well as facilitate free movement of workers.
4. Strengthen and enhance the capacity of training infrastructure and trainers at all levels to provide high quality and relevant training.
5. Ensure equitable and easy access to skill training programmes for every needy person in the state.
6. Ensure vocational training to those completing school education, informal sector workers, low paid workers and young homemakers, to enable them to improve their employability and access to growth opportunities through skilling, re-skilling and up-skilling.
7. Facilitate mobility between vocational and general education by aligning degrees with the National Skill Qualifying Framework.
8. Provide suitable skills to improve entrepreneurship and promote livelihood security.
9. Provide an institutional base and set up a Labour Market Information System (LMIS), which enables the potential workforce to articulate, represent and secure their interests for wage employment and self-employment options, and to use this information in the preparation of curriculum for skill training.
10. Achieve convergence of existing state and non-state initiatives, provide clarity of roles of all stakeholders in the ecosystem, including the government, so that they can all contribute to the achievement of goals relating to skill development for wage and self-employment based on their comparative advantage.
11. Achieve improved supply and quality of the workforce for industry, contributing to increased productivity.
12. Provide services on career guidance and placement, and facilitate overseas employment of skilled persons.

5. Policy interventions for promoting skills among youth

Any marketable skill, acquired through formal or certified informal means, to perform a job or a certain task competently is considered as skill. Skills are both generic⁴ and domain specific⁵. The former are to be imparted as part of general education, while the latter will specifically be addressed by the policy. As the major target group is outside the formal education system, the policy will promote curricula that blend both domain and generic skills. For skill development, the Department will undertake the functions of providing awareness on marketable skills and institutions providing such skills, monitoring the government and private vocational education courses and informal training programmes, standardising the curricula, improving certification norms, setting up the NSQF, providing placement services, improving overseas job opportunities, and so on.

Entrepreneurship is defined as *the capacity and willingness to develop, organise and manage a business venture along with any of its risks in order to make a profit.* The most obvious example of entrepreneurship is starting a new business. The main function of the department is empowerment of entrepreneurs through skills. It needs to be noted that skills required for a person to become an entrepreneur are different as compared to a person taking up a paid job

⁴ These are abilities that are necessary across all job sectors and essential for continued employment. They include soft skills, work ethics, etiquette, integrity and life skills.

⁵ These are job-specific or vocational skills that are required for different job sectors.

after obtaining skills. If a person is to become a successful entrepreneur, she/he should be provided with support such as credit, expertise, infrastructure, skills and official environment conducive to the business. The department, however, focuses mainly on skills and, to some extent, linking entrepreneurs with banks, and so on.

Livelihood, which is a means of making a living, encompasses people's capabilities, assets, income and activities required to secure the necessities of life. A livelihood is sustainable when it enables people to cope with and recover from shocks and stresses (such as natural disasters and economic or social upheavals) and enhances their well-being and that of future generations without undermining the natural environment or resource base. The activities to be undertaken to promote livelihoods are, in addition to providing skills, organisation and mobilisation of youth into Self-Help Groups, initiating measures towards their financial inclusion, facilitating marketing linkages and so on.

Policy intervention strategies

The provision of skills to 1.88 crore youth (both stock and fresh entrants) is a gigantic task, which can only be successfully undertaken through concerted efforts by multiple stakeholders in a coordinated manner. Policy intervention strategies and roles of different stakeholders therefore need to be outlined.

- The focus will be on providing vocational training to fresh entrants by fully utilising the existing formal vocational training institutions. The Department will be directly involved in this.
- The private sector will be encouraged to expand vocational training facilities through Public Private Partnerships (PPPs) for vocational training to fresh entrants.
- Strengthening of the higher education system has the potential of gradually reducing the number of fresh entrants. Introducing skill courses from the eighth standard will also have an impact on the number of persons seeking skill provision from the Department. The task of reforms in the school and higher education will primarily be undertaken by the Department of Education.
- The tasks of reorientation of the existing skill courses and making them employment-oriented will be undertaken by the Skill Development Department.
- As far as the 75 lakhs strong existing workforce is concerned, it is envisaged that most of the youth in this target group will be provided with skills for undertaking new livelihoods or strengthening the existing ones. This task will be primarily undertaken by the various relevant government departments. The Skill Development department will support these departments in the development and standardisation of curriculum, certification and so on.
- The Department will take the lead role in building awareness and aspirations amongst the youth, offer career guidance and placement, and act as a nodal agency to provide industry interface, quality benchmarks, national/international best practices, and monitoring and impact evaluation.

In line with the above policy intervention strategies and roles of different stakeholders, the following policy interventions are formulated to improve the eco-system of skill development for the identified target group in Karnataka.

5.1 Information, awareness and mobilisation

- Development of an ***Information Education and Communication strategy along with modules and tools in Kannada***, to promote awareness on the role of skills as well as

choices available in terms of sectors, modules and training-providers with better career opportunities. These will address youth, parents, teachers and other stakeholders to develop a pro-skilling environment.

- **Information and awareness** on advantages of skills, returns on skill education, marketable skills in the technical and non-technical trades and institutions providing courses on such skills will be provided to students completing secondary and higher secondary education, school drop outs, and informal workers.
- The state government will create (or utilise the existing) **web portal for youth** interested to go for skill training. Mobile technology will be used for better social networking, and better engagement and collaboration with prospective candidates.
- Institutional arrangement will be made for those in secondary and higher secondary schools to spend a couple of days in an innovative experience of programmes on campuses of ITIs, polytechnics, industries, specialised training facilities and others in order to discover the relevance of vocational education. This will focus on hands-on experience in manufacturing, office and service skills required in the real world.
- **Gram panchayats and urban local bodies** will provide information on skill opportunities as well as mobilise the youth through Self-Help Groups and other community-based organisations. These local bodies will also identify and enrol youth interested in obtaining skills and facilitate the connection between youth interested in obtaining skills and institutions providing employable skills. The existing database such as Socio-Economic Caste Census (SECC) 2014⁶ will be utilised for identification and mobilisation of youth.
- **Grama panchayats⁷, urban local bodies and civil society organisations** will be involved to provide counselling and guidance to youth, not only to create aspirations, but also to reduce attrition rates during training.
- Skill missions at the *grama panchayat*, *taluk* and district levels will work as multipliers and facilitate counselling and guidance to the youth about various skilling programmes and opportunities.

5.2 Aspirations among youth

- Vocational education is equated with blue-collar low status jobs and hence income prospects of skill education are undervalued. The structure of vocational education in India is such that it does not give an option to students to pursue general education possibilities at a future date, thus lowering the likelihood of youth aspiring for vocational education.
- Youth also lack information on job opportunities available for specific types of training. Weak labour market links between vocational education providers and employers undermine the willingness of students to commit the resources for vocational education.
- Therefore high quality vocational education options will be made available to students.
- In addition, a premium in wages for skilled workers who have gone through formal vocational education courses will be institutionalised in collaboration with the industry. Minimum wages will be revised upward to make vocational education aspirational for the youth as well as the industry.

⁶ SECC has collected data pertaining to gender, age, educational qualification and occupation for each person in a household. This information can be utilised for the purposes of identification, mobilisation and selection of youth for various skill programmes of the Department.

⁷ Local government may have to be provided with the necessary capacity building inputs in order to take up this role.

- Efforts will be made to make NSQF-aligned skills mandatory for government procurement. Vocational education will be recast as a profession, with skills that need periodic upgrading and that command respect as any professional.
- For any vocational course (one semester or above), *equivalence to general education* will be notified.
- Pathways between vocational education and general higher education will be created through mechanisms such as *equivalence through a credit framework and bridge courses*.
- The state government will initiate necessary *reforms in the education system* at the middle and secondary school levels and in technical training in a phased manner to achieve seamless integration of vocational education into the formal education system. It will also facilitate seamless mobility from work to formal education and vice versa in order to make vocational education a continuous and lifelong learning, so that young people aspire for vocational education and skill training programmes. Exposure to different skill streams and mapping the skills through aptitude tests will be introduced to make better choices. The assessment and certification bodies will support the Boards of School Education to carry out reforms.
- The government will make efforts to bring *skill training at par with the general education* system. Courses offered under skill development will have both theoretical and practical frameworks so that workers have complete knowledge. This will help them to seek the same promotion and pay packages as regular jobs offered in the private and public sectors.
- Courses such as Bachelor of Vocational Studies will be started to introduce skilling as a subject at college and university levels to enable students to have trans-disciplinary vertical mobility into those courses where the entry qualification is a bachelor's degree. Such a course, as decided by the UGC, will have multiple points of entry or exit and appropriate content of general education along with skills relating to a profession.
- Those youth who have gone to private schools, performed well academically, and whose parents are relatively well-educated are likely to assign low status to vocational education. Customised awareness campaigns directed at this group and skill competitions will be undertaken to address the negative perception associated with vocational education.

5.3 Standard curricula and courses

- The Karnataka Skill Development Agency will be set up to focus on skills regulation and quality assurance, and will have close links with the National Skill Development Agency (NSDA).
- The Karnataka government will adopt the NSQF framework and focus on quality implementation and integration of skill courses in accordance with national standards.
- The skill courses will be adapted or adjusted according to market demands, and needs and preferences of trainees in the state.

5.4 Policy interventions for skill training

5.4.1 Training infrastructure

- The quality of infrastructure within the existing ITIs, polytechnics and other such institutions will be improved and the current infrastructure will be put to good use for delivering training to large number of youth.

- The government will standardise and institutionalise private sector capacity by increasing the number and mix of skill training courses through means like public-private partnership, equity, grant and loan support from the Government of India. Private sector and Corporate Social Responsibility (CSR) initiatives in skill training will also be encouraged.
- Industries will be encouraged to earmark funds for periodic skilling and up-skilling of employees by utilising the space and infrastructure available in the government ITIs and polytechnics.
- Efforts will also be made to encourage *industries to start training centres*.
- Space available in community centres, schools, youth hostels, polytechnics or shop floors of industries will be utilised for practical training.
- **Community schools and e-learning platform** will be created to address the issue of scaling up and capacity constraints in the infrastructure to provide formal vocational training. Civil society organisations will be encouraged to set up community schools. In so far as an e-learning platform is concerned, some portion of the curriculum of vocational education, mostly theoretical, will be delivered through the internet.
- In order to reduce gender disparity, basic workshop subjects such as metal work, woodwork, technical drawing, and basic electricity will be made compulsory for both girls and boys.

5.4.2 Improving quality of training and capacity of teachers

- In line with the central government policy on the quality assurance framework, the state government will develop the quality criteria and align it with the National policy, when it is finalised. The quality framework will set minimum standards and provide guidance for effective, valid, reliable, fair and transparent assessment in the context of NSQF. This would also facilitate certification and thereby improve the status of skills training. Guidelines for accreditation of training providers based on training capabilities, infrastructure, and availability of trainers, ties with industry, etc., will be notified.
- To promote accountability of ITIs and assess their performance, ratings based on the outcome-linked parameters will be applied.
- Curriculum which is in sync with emerging market demands and aligned to latest NSQF will be prepared. Qualification packs will be recommended by the sector mentor committees. The latest teaching aids will be promoted to disseminate quality training on a large scale. The curriculum will be revised once in every three years, and in consultation with the industry, to accommodate changes in the market.
- The policy envisages a pool of skilled and certified teachers so as to provide qualitative skills to students in Karnataka.
- A dedicated course for teachers of vocational education, along the lines of B.Ed., will be started.
- Training and retraining programmes will be periodically organised for the teachers of ITIs and polytechnics, so that they can update their expertise on curriculum that is in demand in the labour market. A focused and restructured teacher training programme will cover certification, continuous skills upgradation, performance monitoring, rewards and recognition.
- Teachers will be deputed to the industry to upgrade their skills and keep abreast of the technological advances made in the industry. ITIs and polytechnics will be encouraged to avail the services of those working in the industry as guest speakers from time to time.

5.4.3 Industry engagement

- Strong linkages with the industry are to be established for skill development, especially in the mobilisation of candidates, development of course content and curriculum, training of trainers, establishing a placement support system, overseas employment, and so on.
- Industries will be involved in the assessment and provision of information on marketable skills on a regular basis.
- Industry and industry associations will be encouraged and incentivised to actively participate in designing curricula and standards for skill training courses, depute their industry members as faculty, make the shop floor available for practical training and institutionalise paid apprenticeship. Workplace training will be promoted as part of the overall skill curriculum aligned to NSQF and embedded in an appropriate credit framework.
- For effective skill development, the link between demand for skills by employers and supply of quality skills is crucial. The government will provide incentives to those industries which are successful in establishing such a link.
- Partnerships with industries successful in setting up of training centres will be established to learn from such experiences as well as to replicate them on a larger scale.

5.4.4 Link with the Industrial Policy (2014-2018)

- The Skill Policy will be aligned with the State Industrial Policy (2014-2018) for ensuring successful implementation of both the policies.
- The Industrial Policy states that MSMEs and industrial clusters will be developed in sectors such as information technology, electronics and advanced manufacturing. The Skill Policy will address the skill gaps in these industrial sectors.

5.4.5 Career guidance and placement support services

- **An Employment Exchange and Career Guidance Bureau** will be set up for improving the employability of skilled youth.
- A strategy on career guidance and placement support services will be put in place. A booklet on career opportunities will be periodically brought out to help skilled youth to obtain jobs.
- Industries will be encouraged and incentivised to provide in-house training and placement of trainees.
- The focus will be on providing employable skills. Most of the jobs require **life and soft skills** such as knowledge of English language, basic IT and financial literacy. Efforts will be made to provide these skills to youth.
- The focus of the policy will be on placements, since the most critical outcome of skill training is wage employment, or self-employment. Handholding, placement and post-placement support are critical. Employment tracking of individuals for at least one year after skill training will be made mandatory under all vocational training programmes.
- A **Labour Management Information System** will be set up to pool data from industries (both big and small) to assess demand from time to time. Skilled workers will be placed appropriately with the help of this data.
- Career guidance and placement services will be provided in a phased manner to 1.5 lakh youth in 2017, three lakh youth in 2018 and six lakh youth by 2020.

5.4.6 Overseas employment

- The Karnataka government will set up an *Overseas Employment Cell* to tap the potential for overseas employment opportunities for skilled persons.
- In order to promote overseas employment, the government will make efforts to ensure that the curriculum of vocational education and content of skill training match international standards. Transnational standards will be promoted in partnership with destination countries.
- Skilled workers interested in taking up overseas employment will be provided support in bridging their existing skills with those required. They will be provided information on socio-economic conditions in the destination country, supported in sending their remittances to their families, and so on.

5.4.7 Apprenticeship programme

- Apprenticeships will not only accelerate skill development, but also help to tackle low employability of youth.
- Apprenticeship programmes all over the world have gained from increased productivity and higher incomes for those completing an apprenticeship.
- Despite this, the apprenticeship programme in the state is still at the nascent stage (Annex 9), thus implying that fresh efforts are needed for its promotion.
- Efforts aimed at making apprenticeship training a part of regular curricula and certificate courses will be initiated.
- Efforts will be made to adapt the German dual system of vocational training and industry apprenticeship into the ITI system, where a trainee is given a chance to spend more time in the industry.
- The Karnataka government will link with the National Apprenticeship Promotion Scheme of Ministry of Skill Development and Entrepreneurship (MSDE), where the central government will reimburse 25% of the cost of apprenticeship training to the industry.
- The government will facilitate in a phased manner 50,000 apprenticeships in 2017, one lakh in 2018, three lakhs in 2019 and 3.5 lakhs in 2020.
- Efforts will be made to include more industries such as telecom, insurance, banking and finance, information technology, civil aviation and retail trade.

5.4.8 Skill training for students pursuing general education

- Students pursuing general education (such as B.A.) are perceived to be unsuitable for employment by the industries, despite shortage of skilled human resources, mainly because these students do not possess matching skills.
- In order to address this, a basket of related courses will be identified in consultation with the industry and experts in the field, so that students can opt for a course of their choice.
- Students pursuing general education will be imparted a certified skill training course during their regular studies, in line with the finishing school concept.
- Three lakh students pursuing general education will be covered in a phased manner, starting with 50,000 in 2017, one lakh in 2018, and so on.

5.4.9 Vocational training for school dropouts

- Vocational training will be provided through various **private Skill Development Centres (SDC) or Vocational Training Providers (VTPs)**. The policy envisages the promotion of SDCs or VTPs through: i) NGOs; ii) private engineering/polytechnic/ ITI colleges; iii) corporate houses directly, or through CSR; iv) Public Sector Undertakings; v) religious trusts or organisations; and vi) private skill experts.
- For girls, **decentralised training arrangements** will be made if required.
- The policy will promote **training capacity** by identifying at least one SDC or VTP in each of the 176 *taluks* in Karnataka for imparting training in the identified trades.
- The policy sees a **strong interface between DET and SDCs/VTPs**, where the former provides necessary support to the latter in (i) making the standard curricula and courseware available to all regularly; (ii) developing and using monitoring tools; (iii) arranging development of SDC/VTP trainers so as to improve the quality of delivery; and (iv) assessment of certification of the trainees.
- DET, Government of Karnataka will assess the skills imparted and award certificates to those trained by SDCs or VTPs for their career advancement, in line with NSQF-equivalent certification⁸.

6. Entrepreneurship development and livelihood promotion policies

Policies to provide skills for entrepreneurship and livelihood require a different focus and strategy, and hence these are discussed separately below.

Skills for entrepreneurship development

- Efforts will be made to **identify potential and early stage entrepreneurs** from amongst those attending formal skilling courses, as well as others. In order to educate and equip them, entrepreneurship education curricula will be developed.
- The Department will **provide entrepreneurship curriculum to aspiring entrepreneurs with the help of ICT**. Tracking of those learning through web-based entrepreneurship training will be done to monitor and include those belonging to socially and economically marginalised groups. These groups will be prioritised in the provision of training inputs.
- **Colleges and universities, both public and private, will be encouraged to start entrepreneurship courses.**
- **Web- and mobile-based platforms** will be used to connect the students and budding entrepreneurs with the ecosystem of entrepreneurship, and opportunities for skill training and other services such as extension of credit.
- The Karnataka government will encourage the **creation of new incubators** and scaling up of the existing incubators through appropriate support.
- **A state-wide network of Entrepreneurship Hubs (E-Hubs)** will be set up (or the existing ones used) to provide guidance and extend support services to entrepreneurs as part of the state programme on entrepreneurship.
- The government will undertake steps to **rationalise business procedures and regulations to improve ease of doing business**. The government will constitute a committee to formulate the procedures and regulations.
- **Access to institutional finance** is key for the success of business. The government will initiate steps to ensure the flow of adequate and timely credit to budding entrepreneurs

⁸ As per new NSQF guidelines, those who have dropped out from school and are informally skilled can approach Sector Skill Councils (SSCs).

by strengthening coordination between entrepreneurs and banks/other financial institutions.

Livelihood promotion policies

- The identified vocational training courses can be provided through private VTPs, NGOs, religious and charitable organisations and by the industry through CSR initiatives. Mobile training services will also be used wherever it is necessary.
- ***Training capacity*** will be improved by identifying adequate training providers for all the villages and localities in Karnataka to impart training, re-skilling or up-skilling in the identified trades. The government also envisages use of mobile training services and Learning Network approaches for improving the training capacity.
- The government will make the standard curricula and courseware, and monitor the training providers. It will also assess the process of certification of the trainee.
- The government will adopt a mobile training service approach because such an approach: i) makes vocational education and training available where the trainees work and live; ii) is suitable particularly for target groups in remote rural areas; iii) makes it possible to organise in terms of time and place so as to best suit the needs and constraints of the target group in the informal sector; iv) can offer both formal and non-formal and further training courses; and, v) benefits women, girls and other disadvantaged groups so they do not have to travel and incur transaction costs.
- A LearnNet approach⁹ will be adopted where necessary, as it empowers disadvantaged people. In order to minimise barriers as a result of distance or social restrictions, it will be adopted where people live and work, such as worksite of construction workers.
- The government will introduce measures to impart ***green skills***¹⁰ for sustaining the livelihoods of workers in the informal sector so that they can work their way out of poverty and contribute to a greener planet.

Skill upgradation, reskilling and RPL

- The skill policy emphasises fresh skill training, skill upgradation and reskilling for the existing workforce of 75 lakh persons (including those over 35 years) for improving their livelihoods.
- The government will introduce the ***Recognition of Prior Learning (RPL)*** for informal workers to strengthen and certify their skill base. The government will facilitate formal recognition of skills/competencies acquired through non-formal and informal channels among workers in the informal sector by institutionalising it and giving wide publicity. Policies to include women and those belonging to disadvantaged groups for RPL will be introduced.

Cluster development

- Many youth in Karnataka work in agriculture, livestock and small manufacturing, including handicraft activities. However, they do not have a sustainable livelihood.

⁹ The Learning Networks Approach (LearnNet) is a solution-led approach that seeks an appropriate group learning solution to an existing problem or need. The objective of learning networks is to increase participants' social and human capital. LearnNet is designed to offer everyone access to organised learning.

¹⁰ Green skills will promote resource efficient technologies and expansion in the use of renewable energy. Green jobs help to protect ecosystems by reducing energy, materials and water consumption through high-efficiency strategies. Examples of green skills are a rural person practising sustainable farming, or a plumber installing water-recycling systems.

- In view of this, the government will take up vocational clusters for the development of agriculture, livestock rearing, handicrafts and arts to secure the livelihoods of the poor. The vocational clusters will be regional entities bringing together public and private training providers active in such field to meet the skill needs of the cluster.
- The policy envisages the provision or upgradation of skills for workers in such clusters. The skilling will focus on improving the productive capacity of the workers, modernisation of their activities, modernising the market, and linking the workers with outside, including overseas markets.
- Pilot projects will be initiated on the above for learning and scaling up.

7. Institutional framework

Chart 2 outlines the structure for the Karnataka Skill Mission (KSM).

7.1 Governing Council

The Karnataka Skill Mission will be constituted with a Governing Council and Empowered Committee to support the Chief Minister in ensuring convergence of skill development activities and capacities of the various departments at the apex level. The Governing Council will be headed by the Hon'ble Chief Minister and the Empowered Committee will be headed by the Chief Secretary.

The main functions of the Governing Council are to: i) Provide overall guidance and policy direction; ii) Decide on Sub-Missions in high priority areas; iii) Review overall progress and development of Mission activities; iv) Oversee convergence of all skill development initiatives/ schemes across Ministries/Departments with Mission objectives; and v) Select beneficiaries and supervise any of the Skill Development Programmes in the state run by any department.

The Governing Council will be supported by *Technical Advisory Group(s)* consisting of individuals with expertise in the field to advice and handhold the setting up of the new Skill Development, Entrepreneurship and Livelihood Department for the first two years.

7.2 Empowered Committee

The main functions of the Empowered Committee are to: i) Ensure implementation as per Governing Council decisions or directions; ii) Set targets and approve Annual Mission Plan; and iii) Review overall progress of the Mission activities on a quarterly basis.

7.3 Mission secretariat

The Additional Chief Secretary, Principal Secretary or Secretary, Skill Development, Entrepreneurship and Livelihood Department will act as State Mission Chief and will be supported by a Secretariat and three Commissionerates/Organisations. The National Rural Livelihoods Mission (NRLM), National Urban Livelihoods Mission (NULM) and Karnataka Vocational Training and Skill Development Corporation (KVTSDC) staffing pattern will be merged to provide a unified backbone to this secretariat, linking the functions and activities from the state to the *Grama Panchayat* levels. NRLM and NULM will function as two sub-missions. The functions of the Mission Secretariat are to: i) implement and monitor Mission activities; ii) coordinate implementation of Governing Council and Empowered Committee decisions; iii) coordinate state efforts and sub-missions; and iv) coordinate implementation of skill programmes.

7.3 Karnataka Skill Mission Fund

A Karnataka Skill Mission Fund will be created and have accruals from the Government of Karnataka, Government of India, Corporate Social Responsibility Funds and any other donations. The fund will be operated jointly by the Commissioner, Employment and Training and Director, Employment and Training. The Karnataka Skill Mission Fund will be used as per rules and regulations approved by the Governing Council. Initially the resources available with KVTSDC will be transferred to the Fund, leaving some portion necessary for administrative expenses of KVTSDC.

7.4 Skill Policy Cell

The Skill Policy Cell, consisting of experts in the field, will assist the Mission Secretariat and act as a think tank for taking policy decisions. The skill policy experts have to formulate action plans and midterm corrections to the Skill Policy. With the help of various Technical Advisory Groups, the Cell will draft concept notes, terms of reference, agreements, memoranda, cabinet notes, policy briefs, and other relevant documents to establish new institutions and functioning of the Mission.

7.5 Karnataka Skill Development Agency

The Karnataka Skill Development Agency, consisting of three persons with wide-ranging experience in the government, industry and vocational education, will deal with subjects like standardisation, certification, assessment, curriculum development, training of trainers, National Skill Qualification Framework, National Council for Vocational Training, etc. The Sectoral Skill Council, State Apprenticeship Council, etc. will be brought under this regulatory authority.

7.6 Commissioner for Industrial Training and Employment

The Commissioner for Industrial Training and Employment will administer and manage Industrial Training Institutes, other skill development institutes, the Skill Procurement Cell, state Skill Information Unit, Employment Exchange, Career Guidance Bureau and Overseas Employment Cell.

7.7 Commissioner for Entrepreneurship and Livelihood

A Commissioner for Entrepreneurship and Livelihood will be created by re-organising and shifting National Rural Livelihoods Mission and National Urban Livelihoods Mission. Centre for Entrepreneurship Development of Karnataka (CEDOK) and Rural Development and Self-Employment Training Institute (RUDSETI) will also provide support in the Entrepreneurship Department. The functions of the Commissioner are entrepreneurship development, incubation centre, banking and finance interface, backward-forward linkages, outreach and publication, livelihood development, collectivisation and empowerment, and informal sector skilling.

7.8 Karnataka Skill Qualification Framework and State Council for Vocational Training Board

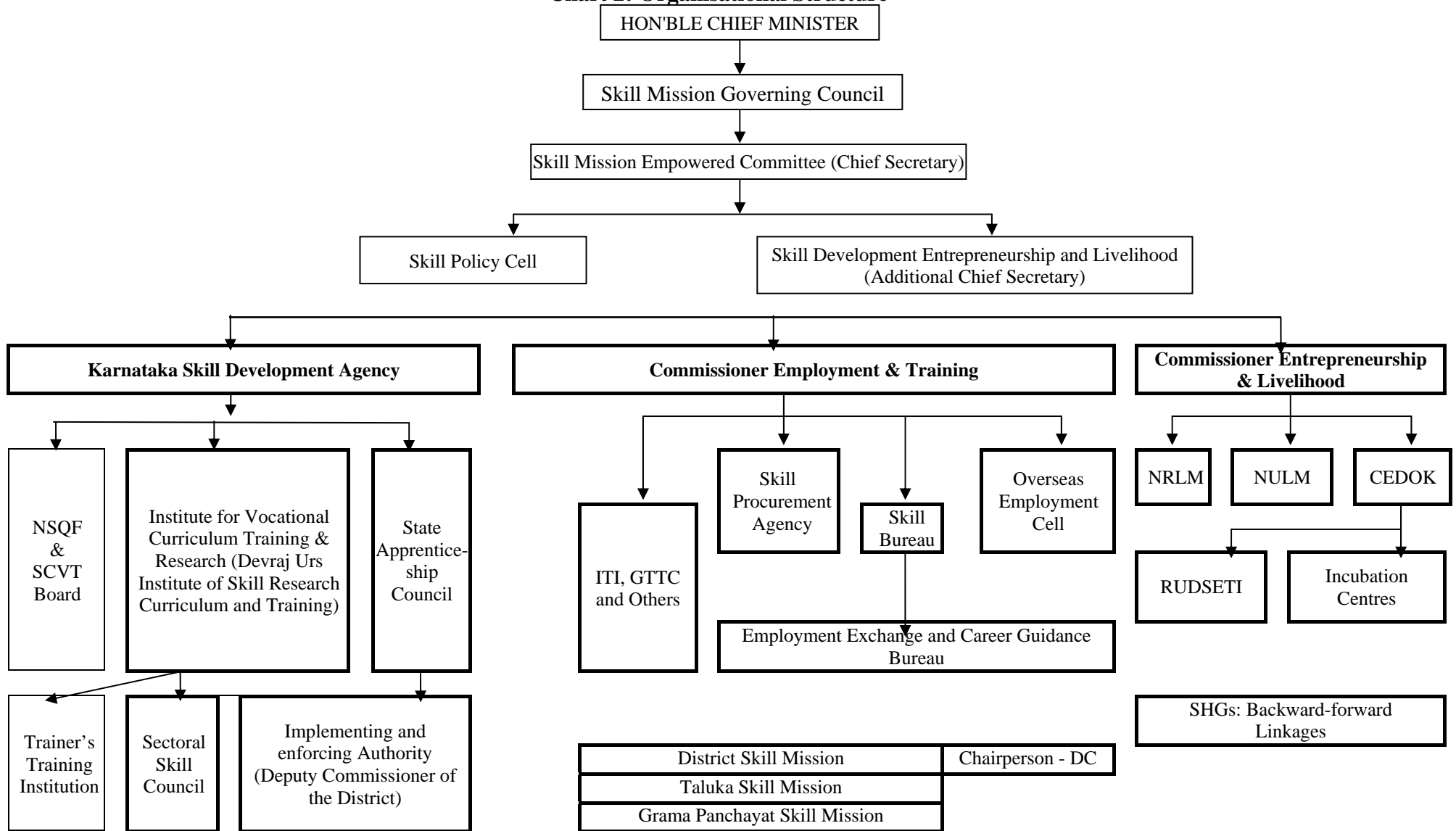
Currently, the Department of Employment and Training conducts examinations for ITI students. For trades or courses at ITIs that are affiliated to NCVT, the exams are conducted under a semester scheme with the schedule of examination and question papers being printed and issued by DGET, Government of India (GOI). The Department provides all logistics support in terms of examination centres, deployment of examination personnel and conduct of examination as per the schedule. Evaluation of papers (objective type) is done by agencies

appointed by DGET, GOI. The practical examination marks papers are evaluated by Departmental officers and the marks uploaded on the Examination Portal of Government of India. The department takes care of these tasks for ITIs affiliated and functioning under the State Board.

In case of short term/Modular Skill Training courses taken up under the Modular Employable Scheme (MES), assessment is done by agencies empanelled by the Government of India, and National Council on Vocational Training (NCVT) certificates are issued.

A separate *NSQF* and *SCVT* Examination Board will be set up to conduct independent examinations in respect of all skill training undertaken in the state and for issue of necessary certification. This will be developed as an International Level Institute. This Board will also provide capacity development on National Skill Qualification Framework and facilitate its compliance and implementation in the state. The Board will also undertake affiliation of *SCVT* recognised institutions. In due course, it will become financially self-reliant by charging a fee for *SCVT* affiliation, *NSQF* trainings and conducting various examinations and certification courses.

Chart 2: Organisational Structure



7.9 State Skill Information Bureau

The *State Skill Information Bureau* will collect information on skill infrastructure available under public and private sectors to utilise them fully and avoid investment under infrastructure by the public sector. This bureau will forecast skills needed by collecting data through skill surveys and determining skill gaps. It will also develop data collection methodology and its processes in respect of all subjects related to demand and supply of skilled human resources.

The objectives of Integrated Statistical Information System are to:

- Establish Statistical Business Framework and Architecture, and Statistical Infrastructure
- Suitably design, build and develop a system to collect, process, analyse and disseminate information
- Establish a web-based online system for collection, processing, analysing and disseminating data/ information.
- Establish an ICT environment that will drive and guide the department's future ICT strategy in respect of above activities
- Establish a Business Intelligence, Analytics and Enterprise Data Warehouse System
- Improve statistical quality and operations
- Improve the management and development of human resources in a changed environment
- Undertake monitoring and evaluation of the activities of the Department.
- Establish hassle-free online registration of government and private entities involved in education, skilling and placement under legal framework to be established (under State Business Register).
- Undertake Gap Analysis, i.e. skills available vs skills required as per the industrial requirement, skill development agencies vs capacity vs skill development, etc.
- Forecast skill and infrastructure requirements.

7.10 Monitoring Skill Development, Entrepreneurship and Livelihood activities

A unified system will be put in place for monitoring activities of the Skill Development, Entrepreneurship and Livelihood Department. To avoid duplication and exclusion and inclusion errors, a UID-compliant system will be built. Selection of beneficiaries for all the skill development programmes of all the departments will be through the *Grama / Ward Sabha*. A web-based monitoring system will be in place under an Integrated Statistical Information System. The flow of information will be from grassroots level (village level) to the state level and vice versa. A system will be evolved to provide every eligible aspirant in the state at least one opportunity for skill development in the programme. A second round of training for any aspirant will be possible only after the first round of training for everyone else is completed. A concurrent evaluation system will be put in place to ensure every aspect of the skill development programmes are evaluated exhaustively.

7.11 Skill Research, Education and Training Institute

There is a need to establish a separate Skill Research, Education and Training Institute on the lines of DSERT in the Education Department, to develop curriculum, pedagogy, books, training tools, and teaching-learning material and to undertake research in vocational education. This becomes particularly important since hardly any department or institution in the Government of Karnataka conducts research or curriculum development for skill

development. In the long term, these capacities are required for developing new curriculum and training modules from time to time, based on the changing needs of the industries.

The Devaraj Urs Institute of Skill Research, Curriculum and Training is established for this purpose under Public Private Partnership (PPP) mode. It will set up advanced centres in certain industries willing to partner for development of Centres of Excellence on any specialised sectoral skill at their premises. Resources of this institution will be augmented by Public Private Partnership and corporate social responsibility endowments.

7.12 Skill procurement agency

A skill procurement agency will be set up for procurement of goods and services required by the state in this sector. The agency will assess the skill infrastructure, training quality and expertise of private Vocational Training Providers (VTP) and select those in Karnataka meeting certain benchmarks and with domain expertise and adequate infrastructure. The services of VTPs will be utilised for providing modular/short term skill training programmes.

7.13 Sub-state level skill missions

At sub-state level, there are three missions: *District Skill Mission, Taluk Panchayat Skill Mission and Grama Panchayat Skill Mission.*

The *District Skill Mission* will be constituted under the Chairpersonship of the Deputy Commissioners of districts. The district-level officers of concerned Departments and District Lead Bank Managers will be members of the Mission. The Project Director, District Rural Development Agency (DRDA) or Deputy Secretary (Development), *Zilla Panchayat* of the concerned district will be the Member Secretary. The functions of the District Skill Mission are: i) Planning, monitoring and implementation of activities of the Department of Skill Development, Entrepreneurship and Livelihood; ii) Establishment of backward-forward linkages; iii) Inter-departmental coordination; and iv) Any other subject pertaining to the Department of Skill Development, Entrepreneurship and Livelihood assigned by the Karnataka Skill Mission.

The *Taluk Panchayat Skill Mission* will be constituted under the chairpersonship of the Executive Officer, *Taluk Panchayat* of the concerned *taluk*. The *taluk*-level officers of concerned departments will be members of the Mission. The Assistant Director, *Taluk Panchayat* of the concerned *taluk* will be the Member Secretary. The functions of the *Taluk Panchayat* Skill Mission are: i) Planning, monitoring and implementation of activities of the Department of Skill Development, Entrepreneurship and Livelihood at the *taluk* level; ii) Establishment of backward-forward linkages; iii) Inter-departmental coordination; and iv) Any other subject pertaining to the Department of Skill Development, Entrepreneurship and Livelihood assigned by the Karnataka Skill Mission and District Skill Mission of the concerned district.

The *Grama Panchayat Skill Mission* will be constituted under the chairpersonship of the *Adhyaksha* of the *Grama Panchayat*. The village level/Sub-*taluk* level officers of concerned departments will be members of the Mission. The Panchayat Development Officer, *Grama Panchayat* of the concerned *panchayat* will be the Member Secretary. A district-level officer will be nominated by the District Commissioner to facilitate the functioning of the *Grama Panchayat* Skill Mission as per their guidance. The main functions of the *Grama Panchayat* Skill Mission are: i) Planning, monitoring and implementation of activities of the Skill Development, Entrepreneurship and Livelihood at the village-level; ii) Establishment of

backward-forward linkages; iii) Inter-departmental coordination; iv) Selection of beneficiaries for various schemes and maintenance of a unified database; and v) Any other subject pertaining to Skill Development, Entrepreneurship and Livelihood Department assigned by the Karnataka Skill Mission and District Skill Mission of the concerned District.

The Missions established under other schemes by the agencies concerned will come under the Karnataka Skill Mission. The other Missions already created or functioning at various levels with regard to Skill Development, Entrepreneurship and Livelihood will merge under respective Skill Missions at that level as a sub-mission.

7.14 Selection of beneficiaries

The data of SECC, after adjustments of inclusion and exclusion, will be adopted to select the beneficiaries for schemes on skill development, entrepreneurship and livelihood. The criteria on inclusion are: Households without shelter, destitute/living on alms, manual scavengers, primitive tribal groups and legally released bonded labourers. The criteria for exclusion include: i) Motorised two/three/four wheeler/ fishing boat; ii) Mechanised three/four wheeler agricultural equipment; iii) Kisan Credit Card with credit limit of Rs. 50,000 and above; iv) Household with any member as a government employee; v) Households with non-agricultural enterprises registered with the government; vi) Any member of the family earning more than Rs. 10,000 per month; vi) Paying income tax; vii) Paying professional tax; viii) Three or more rooms with all rooms having *pucca* walls and roof; ix) Own a refrigerator; x) Own landline phone; xi) Own 2.5 acres or more of irrigated land with at least one irrigation equipment; xii) Five acres or more of irrigated land for two or more crop seasons; and xiii) Owning at least 7.5 acres of land or more with at least one irrigation equipment.

7.15 Monitoring and impact evaluation

The department will undertake regular and rigorous monitoring and impact evaluation of initiatives of the government or other stakeholders such as industry, international agencies and so on, for the purpose of scaling up of the best practices and introducing periodic corrective measures. Such a mechanism will aim to assure all the stakeholders of speed, transparency and growth, and will use ICT extensively. An exclusive monitoring unit will be set up to review the progress of various initiatives. This unit will be mandated to analyse the reports received from the field and provide feedback to all the stakeholders with suggestions for improvements. The impact of the policy will be assessed through a concurrent evaluation study. In addition, the government can also hire reputed research organisations to undertake impact evaluation with the help of rigorous research methodology.

8. Financing

The policy envisages skill development for 188 lakh youth to enable them to obtain decent employment, start entrepreneurship and secure their livelihood. The financing strategies to provide training to these youth are the following.

- It is assumed that during the period 2017 to 2030 about 47.9 lakh youth will be provided formal vocational training by the existing government institutions and the new ones to be created by the private sector in the years to come. As shown in Annex 7, formal vocational training is provided by polytechnics, ITIs and other institutions. The current capacity of these institutions is about 2.88 lakhs per annum. Efforts will be made to fully utilise the existing capacity of the formal vocational training institutions. In addition, the private sector will be encouraged and incentivised to start new vocational training institutions through PPP arrangements. It is foreseen that

through these efforts the capacity to provide vocational training will go up to 400,000 per annum by 2030. The additional capacity of formal vocational training institutions to cover about 1.2 lakh youth in 2030 will be entirely created by the private sector (Annex 10).

- The policy document envisages the provision of vocational training to 43 lakh youth during the period 2017 to 2030 through apprenticeship training. In view of its importance to acquire employment-oriented skills, the government will encourage and incentivise industries to provide apprenticeship to 50,000 youth in 2017, and this will gradually go up to 350,000 by 2030 (Annex 10). Again, vocational training to 43 lakh youth will be provided through the private sector.
- Currently, the Department of Skill Development, Entrepreneurship and Livelihood is directly implementing vocational education programmes, which are expected to cover 320,000 persons in 2017. The policy document projects that these programmes would serve about 37 lakh youth during the period 2017 to 2030 (Annex 10). They will cover youth interested in taking up new livelihoods or strengthening the existing ones. It is, however, anticipated that the need for these training programmes will gradually come down from 320,000 in 2017 to 215,000 in 2030.
- Other government departments and corporations such as Agriculture, Horticulture, Karnataka Milk Federation, etc., also provide training for livelihood activities. It is anticipated that these training programmes will cover about 20 lakh youth during the period 2017 to 2030.

Thus, about 148 lakh youth will be provided vocational training with the help of the above. It needs to be noted that the strategy gradually reduces the role of the government in the provision of training to the youth, and enhances the involvement of private sector and industries in the provision of training.

However, there will be a balance of about 40 lakh youth who need to be provided with short and long term training. In other words, the Karnataka Skill Mission will have to make efforts to provide vocational training to 40 lakh youth. Considering the estimates of NSDC on sector-wise incremental demand, it is estimated that 17 lakhs youth will need long-run (i.e., six-month) skill training, while 23 lakhs will need short-run (i.e., three-month) skill training (Annex 11). At the rate of Rs. 50,000 for long-run skill training per person, the total fund required is Rs. 8,506 crores for the period 2017 to 2030. At the rate of Rs. 35,000 for short-run skill training per person, the total fund required is Rs. 7,941 crores. ***Thus, the total funds required to provide skill training (both short and long-run) is Rs. 16,447 crores (Annex 11). On an average, Rs. 1,175 crores of funds per year are required to provide both short and long-run training (Annex 11).***

The skill development policy recognises that the government is a major contributor to the funding on vocational education and skills, and will use funding available in the state and central government sponsored schemes. The international norm is to allocate 6% of GDP on general education, and 1% on vocational education and training, given the immense importance that this education has on employability of the workforce. The government will allocate 0.5% of its GSDP (current prices) on vocational education and training, which amounts to Rs. 3,600 crores per year. This will be utilised for providing skill training to all,

including youth, and also meeting the expenditure on curricula development and quality, monitoring, administration and so on.

It will, however, initiate efforts (Annex 12) to move away from a subsidy-driven to a market-driven policy. Towards this, it will explore the following:

- Private sector will be encouraged and incentivised to invest in the creation of formal vocational training institutions and provide apprenticeship training.
- The government will encourage industry to spend their CSR funds on skill development.
- The government will explore the possibility of introducing levies for creating a special fund, from which resources are spent only for skill development activities.
- The policy will also explore the possibility of vocational training funds, which are an instrument for reforming initial and further education and training systems with the objective of making these more demand-oriented and creating incentives for industries.
- There will be an effort to make employment in the manufacturing and services attractive by facilitating an increase in the minimum wages in the state, as this will positively influence the payment of fees and attract private investment in the creation of training infrastructure.
- The government will encourage students to avail bank loans in line with the philosophy of 'learn, earn and pay' and facilitate the necessary enabling environment.
- The government will explore the possibility of financing vocational education by providing study loans, vouchers, and training credits. It will also explore end-user funding model or a basic fee-paying model for funding training activities.
- In order to enable the poor and disadvantaged to obtain formal skills, the government will promote grant of scholarships and vouchers.
- The government will encourage ITIs and other institutions to undertake activities such as conducting training programmes for private companies, renting out space for skill development programmes, and so on for internal resource generation.
- Financial support from international (multilateral and bilateral) agencies for skill development initiatives will be explored.
- Multilateral and bilateral aid agencies will be approached to start pilot projects based on the innovative policies suggested.

Annex 1: Karnataka State Policy of Skill Development, 2008

The government of Karnataka prepared the State Policy of Skill Development in 2008, before launch of Government of India's first national policy on skill development in 2009. Introducing skill development as a new policy priority for Karnataka, the 2008 document aimed to: i) ensure adequate availability of skilled manpower; ii) converge various employment schemes; iii) set up training and placement mechanism; iv) optimally utilise the government and private training infrastructure; v) enter into MoUs with overseas employers, and so on. The policy aimed to provide placement service to 10 lakh youth in the five year period, and provide one lakh jobs in 2009.

Key features of the policy are: i) demand driven short-term training programmes to match modular employable skills; ii) provision of training by the State Government Institutes and departments, private sector, industries and their associations; iii) flexible delivery in the training period; iv) development of need-based curricula; v) training to match needs; vi) uniform testing and certification; and vii) focus on providing employment after training.

We do not however have much information on outcomes of the policy, probably because there were no rigorous impact studies on the policy. The available information shows that the Skill Commission formed as per the policy suggested the formation of the Karnataka Vocational Training and Skill Development Corporation (KVTSDC). The main purpose of the Corporation was to enhance the employability of unemployed/untrained professionals through proper skill training, and provide a common platform for employers and job seekers by holding job fairs (large ones at the state level and mini fairs at the district level).

Figures show that the total expenditure incurred by KVTSDC was Rs. 2,590 lakhs during the period 2008-09 to 2014-15. The total number of persons trained through the corporation was 150,345 during this period. 135,985 job fairs were organised. 462,117 persons were placed during the period 2008-09 to 2015-16 – much less than the target figure of 10 lakh youth in the five-year period after the policy was framed.

Discussions with the officials revealed that the implementation of the skill policy of 2008 depended heavily on KVTSDC. The policy was restricted to DET, and other departments were not involved. Efforts at institutional strengthening for skill provision and quality assurance were almost absent. The policy also suffered from lack of mechanisms to identify vocational training providers, supervision, certification and standardisation. The institutional mechanism to implement and supervise skill development activities at the district level and below was not incorporated.

The lessons that can be learnt from the implementation of the 2008 policy are:

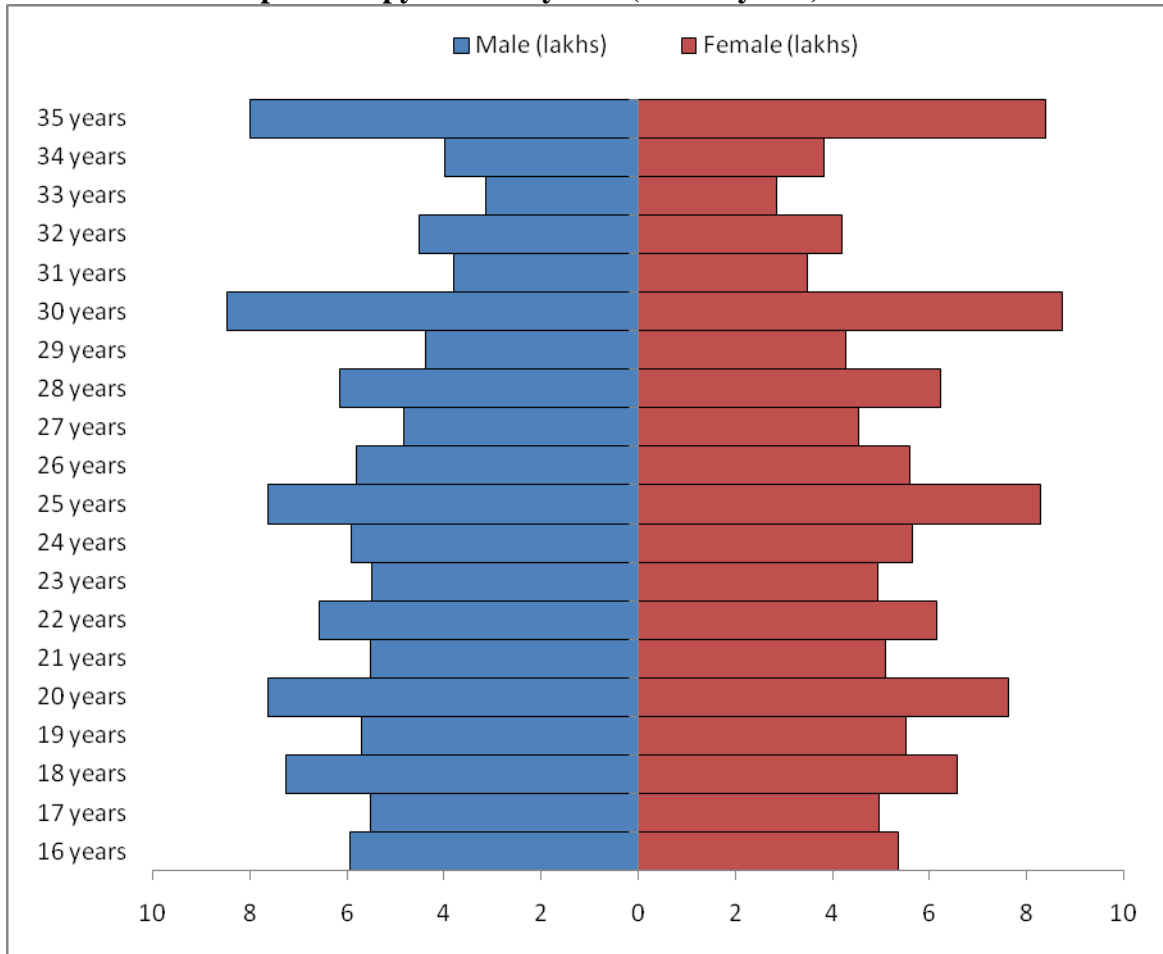
- i) The involvement of different stakeholders (relevant government departments, industry, civil society, training institutions, academic institutions, donor agencies) is required;
- ii) Mechanisms for the identification of training providers, standardisation and certification of curricula, monitoring, capacity development and so on are required;
- iii) There is need for skill missions at the district level and below; and
- iv) There is need for an institutional framework that not only identifies the roles of different stakeholders but also makes provision for the identification of beneficiaries, dynamic information on labour market including skills required, monitoring and evaluation, and impact assessment of the policy.

Annex 2: Distribution of the total workforce in Karnataka by sectors

Sectors	Workforce in crores	Percentage
Agriculture & Allied	1.36	55.7
Manufacturing & Mining	0.27	11.1
Shops & Establishments / Trade	0.22	9.0
Construction	0.17	7.0
Information Technology / Biotechnology	0.10	4.1
Real Estate, Renting & Business Activities	0.06	2.5
Hotels & Restaurants	0.05	2.0
Others	0.21	8.6
Total	2.44	100.0

Source: Karnataka Economic Survey, Department of Labour & Employment

Annex 3: Population pyramid of youth (16 - 35 years) in Karnataka in 2011



Source: Computed from Census 2011

Annex 4: Incremental demand in Karnataka, 2012 - 2022

	Incremental employment, 2012-22	Minimally skilled	Semi-skilled	Skilled	Highly skilled
Agriculture and Allied	1,618,503	1,347,995	201,480	36,658	32,370
Auto and Auto Component	58,298	5,830	37,893	11,660	2,915
Banking, Financial Services and Insurance (BFSI)	269,636	-	161,782	80,891	26,964
Building, Construction Industry and Real Estate	1,364,835	409,450	682,417	204,725	68,242
Chemicals & Pharmaceuticals	9,634	1,927	2,890	2,890	1,927
Construction Materials and Building Hardware	95,760	9,576	62,244	19,152	4,788
Education and Skill Development	379,100	-	-	341,190	37,910
Electronics and IT Hardware	15,535	1,554	7,768	5,437	777
Food Processing	41,417	12,425	12,425	12,425	4,142
Furniture and Furnishings	22,125	8,850	8,850	3,319	1,106
Healthcare Services	619,975	-	61,998	433,983	123,995
IT & ITES	1,430,938	-	715,469	643,922	71,547
Media and Entertainment	68,052	13,610	40,831	10,208	3,403
Organised Retail	234,536	23,454	164,175	35,180	11,727
Textile and Clothing	149,250	29,850	89,550	22,387	7,462
Transportation, Logistics, Warehousing and Packaging	639,702	127,940	371,027	127,940	12,794
Tourism, Travel, Hospitality & Trade	1,356,186	271,237	922,206	135,619	27,124
Unorganised	90,129	18,026	52,275	18,026	1,803
Mining	12,523	2,505	7,514	1,252	1,252
Total	8,476,134	2,284,229	3,602,794	2,146,864	442,248

Source: District wise skill gap study for the State of Karnataka.

Annex 5: Major employment sectors as per skill development by 2030

Sectors	Number	Percentage
Tourism	50,00,000	30.12
Information Technology/ Biotechnology, Environmental Science	40,00,000	24.10
Construction	20,00,000	12.05
Human Resource exports	15,00,000	9.04
Education	10,00,000	6.02
High-Tech Industries (Small and Medium)	10,00,000	6.02
High-Tech Agriculture/ Gardening, Animal Husbandry and Food Processing	10,00,000	6.02
Health care	5,00,000	3.01
Banking, Finance, Insurance, etc.	3,00,000	1.81
Textiles	3,00,000	1.81
Total	166,00,000	100

Source: Karnataka Knowledge Commission, Vision 2030.

Annex 6: Sectors and districts with concentration of incremental demand

Sector	Incremental employment 2012-22	(%)	Name of the district			
Agriculture and Allied	1,618,503	19.09	1.Bagalkot 2.Bangalore (R) 3.Belgaum 4.Bellary 5.Bidar 6.Bijapur 7.Chamarajanagara	8.Chikkaballapura 9.Chikkamangalore 10.Chitradurga 11.Davanagere 12.Dharwad 13.Gadag 14.Gulbarga & Yadgir	15.Hassan 16.Haveri 17.Kodagu 18.Kolar 19.Koppal 20.Mandya 21.Mysore	22.Raichur 23.Ramanagar 24.Shimoga 25.Tumkur 26.Udupi 27.Uttara Kannada
IT & ITES	1,430,938	16.88	1.Bangalore (R)	2.Bangalore (U)	3.Mysore	
Building, Construction Industry and Real Estate	1,364,835	16.10	1.Bangalore (R) 2.Bangalore (U)	3.Dakshina Kannada	4.Haveri	5.Mysore
Tourism, Travel, Hospitality & Trade	1,356,186	16.00	1.Bagalkot 2.Bangalore (R) 3. Bangalore (U) 4.Belgaum 5.Bellary	6.Bidar 7.Bijapur 8.Chamarajanagara 9.Chikkamangalore 10.Dakshina Kannada	11.Dharwad 12.Kodagu 13.Koppal 14.Mandya	15.Mysore 16.Shimoga 17.Udupi 18.Uttara Kannada
Transportation, Logistics, Warehousing and Packaging	639,702	7.55	1. Bangalore (R)	2.Bangalore (U)	3.DakshinaKannada	
Healthcare Services	619,975	7.31	1. Bangalore (R)	2.Bangalore (U)	3.Dakshina Kannada	4.Mysore
Education and Skill Development	379,100	4.47	1. Bangalore (R) 2.Bangalore (U)	3.Dakshina Kannada 4.Dharwad	5.Mysore	6.Udupi
BFSI	269,636	3.18	1.Bangalore (R)	2.Bangalore (U)	3.Dakshina Kannada	4.Mysore
Organised Retail	234,536	2.77	1.Bangalore (R)	2.Bangalore (U)	3.Dakshina Kannada	4.Mysore
Textile and Clothing	149,250	1.76	1.Bagalkot 2.Bangalore (R) 3.Bangalore (U) 4.Belgaum	5.Bellary 6.Chikkaballapura 7.Chitradurga 8. Gadag	9.Gulbarga & Yadgir 10.Hassan 11.Haveri 12.Kolar	13.Mandya 14.Mysore 15.Ramanagar 16.Tumkur
Construction Materials and Building Hardware	95,760	1.13	1.Bellary	2.Chitradurga	3.Gulbarga & Yadgir	4.Koppal
Unorganised	90,129	1.06	1.Bagalkot 2.Bangalore (R)	3.Bangalore (U) 4.Bidar	5.Dakshina Kannada	6.Gulbarga & Yadgir 7.Mysore
Media and Entertainment	68,052	0.80				
Auto and Auto component	58,298	0.69	1.Bangalore (R) 2.Bangalore (U)	3.Belgaum 4.Dharwad	5.Kolar 6.Mysore	7.Ramanagar 8.Shimoga
Food Processing	41,417	0.49	1.Bangalore (R) 2.Bangalore (U) 3.Belgaum 4.Bidar 5.Bijapur	6.Chikkamangalore 7.Chitradurga 8.Dakshina Kannada 9.Davanagere 10.Gulbarga & Yadgir	11.Hassan 12.Haveri 13.Kodagu 14.Kolar 15.Koppal 16.Mandya	17.Mysore 18.Raichur 19.Ramanagar 20.Udupi 21.Uttara Kannada
Furniture and Furnishings	22,125	0.26	1.Bangalore (R)	2.Bangalore (U)		
Electronics and IT hardware	15,535	0.18	1.Bangalore (R)	2.Bangalore (U)		
Mining	12,523	0.15	1.Bellary	2.Chamarajanagara	3.Gulbarga & Yadgir	4.Tumkur
Chemicals & Pharmaceuticals	9,634	0.11	1.Bangalore (R)	2.Bangalore (U)	3.Mysore	
Total	8,476,134	100.0				

Source: NSDC, District-wise Skill Gap Study

Annex 7: Educational infrastructure in Karnataka

	No. of institutions	Enrolment capacity	Enrolment	Pass
SCHOOL EDUCATION				
Secondary School Leaving Certificate (SSLC)	15,140	17,74,264	8,87,132	6,85,152
JUNIOR COLLEGES				
Pre-University Course (PUC)	4,789	6,43,532	5,16,506	3,69,479
DEGREE LEVEL COURSES				
BE/ B. Tech/ B. Architect	206	93,365	69,974	50,834
BA	732	1,38,893	1,38,893	77,284
B.Sc.		30,344	30,344	21,451
B.Com./ BBM		1,20,175	1,20,175	77,395
Agriculture/ Veterinary doctor/ Horticulture	29	2,921	2,680	2,231
MBBS/ Nursing/ Dental doctor/ AYUSH/ Pharma	512	32,551	24,063	16,670
Total	1,479	4,18,249	3,86,129	2,45,865
FORMAL VOCATIONAL TRAINING				
Polytechnic	295	75,000	60,000	49,000
ITI	1777	1,06,000	73,000	59,000
D.Ed./D.Ped/Pre-Primary Trg / Hindi <i>Shikshak</i>	78	16,986	16,986	7,404
Commerce / Arabic / Open School / Computer	140	19,957	19,957	11,861
Drama/Film Acting / Music	53	11,152	11,152	9,356
Drawing	241	38,914	38,914	38,914
Nursing/ Health/ Pharma	783	13,886	10,548	7,027
Agriculture/ Horticulture	13	50	50	36
Leather/Plastic/ Others	2	2,065	1,947	418
Government Tool Room and Training Centre (GTTC)	21	1,210	843	682
KGTTI (Karnataka German Technical training)	4	2,456	2,456	659
Total	3,407	287,676	235,853	184,357
SHORT TERM VOCATIONAL TRAINING (INFORMAL)				
Textiles	36	19,523	19,523	19,523
Technical education	91	40,000	15,000	15,000
Karnataka Vocational Training and Skill Development Corporation (MES Centres)	213	25,000	16,000	16,000
National Rural Livelihood Mission (NRLM), Deen Dayal Upadhyay Grameen Kaushal Yojane (DDUGKY)	77	17,500	2,322	2,322
National Urban Livelihood Mission (NULM)	323	45,000	22,000	8,336
Women Development Corporation		6,590	3,833	3,833
Construction Academy Centre	12	30,000	3,000	3,000
Leather	1	564	564	564
Motor vehicle driving	176	401	401	401
Total	929	184,578	82,643	68,979

Source: Department of Skill Development, Entrepreneurship and Livelihood, Karnataka Government.

Annex 7a: Training programmes

Department/ programme	Number of persons to be trained
<i>Programmes implemented directly by the Department of Skill Development, Entrepreneurship and Livelihood</i>	
Programmes of skill development	105,000
Karnataka Vocational Training and Skill Development	26,000
Deen Dayal Upadyay Grameen Koushalya Yojane (NRLM)	39,000
Employment through Skill training and placement (NULM)	50,000
Karnataka Building Construction Workers Academy	30,000
Pradhan Mantri Kaushal Vikasa Yojane (PMKVY)	70,000
Total	320,000
<i>Informal training programmes implemented by other departments</i>	
Information technology and biotechnology	6,000
Handlooms and textile	43,200
Technical education	582
Leather industries	50
Youth services	500
Tourism	7,000
Energy	10,000
Transport	10,000
Karnataka Milk Federation	20,000
RUDSETI	29,000
CEDOK	17,000
Total	143,332

Source: Department of Skill Development, Entrepreneurship and Livelihood

Annex 8: Year-wise estimates of target groups (in Lakhs) for the period of 2017-2030

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Stock	6.30	6.30	6.30	6.30	6.30	6.30	4.65	4.65	4.65	4.65	4.65	4.65	4.65	4.65	75.00
Non-literate & below secondary	3.36	3.32	3.29	3.26	3.22	3.19	3.16	3.13	3.10	3.07	3.04	3.01	2.98	2.95	44.06
Secondary & higher secondary	1.81	1.83	1.85	1.87	1.89	1.91	1.93	1.95	1.97	1.98	2.00	2.02	2.04	2.07	27.13
Attending domestic duties	3.16	3.13	3.10	3.07	3.04	3.01	2.98	2.95	2.92	2.89	2.86	2.83	2.80	2.77	41.50
Total	14.63	14.59	14.54	14.49	14.45	14.41	12.71	12.67	12.63	12.59	12.55	12.51	12.47	12.44	187.68

Source: Estimates based on NSSO and Census data

Annex 9: Apprenticeship programme in Karnataka

Year	Number of industries	Number of trades	Number of identified apprenticeships	Apprentices gaining admission (Number)	Apprentices taking the exam	Number of apprentices passing the exam	Pass percentage
2014-15	3126	93	36022	5553	8511	2679	31.5
2015-16	3163	89	38383	6731	6249	2112	33.8
2016-17	3385	95	39605	3039	3097	766	24.7

Source: Department of Skill Development, Entrepreneurship and Livelihood, Karnataka Government.

Annex 10: Year-wise estimates of number of youth to be provided with existing government training programmes

Sl. No	Training programmes	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
1	Formal vocational Training	288,000	295,488	303,171	311,053	319,141	327,438	335,952	344,686	353,648	362,843	372,277	381,956	391,887	402,076	4,789,615
2	Apprenticeship training	50,000	100,000	300,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	4,300,000
3	Programmes implemented directly by the Department of Skill Development, Entrepreneurship and Livelihood	320,000	310,400	301,088	292,055	283,294	274,795	266,551	258,555	250,798	243,274	235,976	228,896	222,030	215,369	3,703,080
4	Informal training programmes implemented by the other Departments	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	143,332	2,006,648
5	Grand total	801,332	849,220	1,047,591	1,096,440	1,095,766	1,095,565	1,095,835	1,096,573	1,097,778	1,099,449	1,101,585	1,104,185	1,107,249	1,110,777	14,799,343
6	Number of persons to be covered by department	270,000	270,000	270,000	270,000	270,000	280,000	280,000	280,000	290,000	290,000	300,000	300,000	300,000	300,000	3,970,000

Source: Estimates based on NSSO and Census data

Annex 11: Estimated expenditure (Rs. crores) on short and long-run skill training in Karnataka

Sl. No.	Number of persons to be trained and amount required	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
	Number of persons															
1	Six month skill training (number of persons)	115,695	115,695	115,695	115,695	115,695	119,980	119,980	119,980	124,265	124,265	128,550	128,550	128,550	128,550	1,701,145
2	Three month skill training (number of persons)	154,305	154,305	154,305	154,305	154,305	160,020	160,020	160,020	165,735	165,735	171,450	171,450	171,450	171,450	2,268,855
3	Total	270,000	270,000	270,000	270,000	270,000	280,000	280,000	280,000	290,000	290,000	300,000	300,000	300,000	300,000	3,970,000
	Amount Required															
4	Six month skill training (Rs. Crores)	578	578	578	578	578	600	600	600	621	621	643	643	643	643	8506
5	Three month skill training (Rs. Crores)	540	540	540	540	540	560	560	560	580	580	600	600	600	600	7941
6	Total (Rs. Crores)	1,119	1,119	1,119	1,119	1,119	1,160	1,160	1,160	1,201	1,201	1,243	1,243	1,243	1,243	16,447

Source: Estimates based on NSSO and Census data

Annex 12: Innovative Funding Models for Sustainable Skill Development

Financing the provision of skills is a major challenge. Karnataka government alone cannot fund all the activities related to skill development. In this regard, the following models are presented.

Corporate Social Responsibility can mitigate the challenge. Karnataka government, in consultation with large and medium industries/companies, can agree upon a percentage of funds earmarked for skill development. The state government and interested companies can agree in advance upon the purpose for which the funds can be put to use and formalise the cooperation through MoUs.

Kerala model

The Government of Kerala has set up the Kerala Academy for Skill Excellence (KASE). It is a non-profit public company for all skill-related activities of the state. This company is managed by an advisory council headed by the Chief Minister as Chairperson. This company has set up a single window web-based approval system. It establishes a sustainable relationship with international organisations, industries, industrial clusters and experts to seek finance and expertise from them. It is mandated to set up *Kaushal Kendras* as community skill centres, accreditation programme, and issuance of skill training certificates to those who attain skills at the state level. The state government has also proposed to set up special purpose vehicles (SPVs) using the PPP model under an apex body. KASE is already managing another SPV set up for Smart City Kochi.

Voucher scheme (demand-side financing)

A skill voucher is an instrument given to an individual or an enterprise enabling the recipient to sign up for VET from any educational institute accredited with the provider of the voucher. Payment for tuition is made with the vouchers with top-up contributions made by the student/learner. Once training is completed, the accredited institution redeems the voucher. Countries such as Kenya and Paraguay have implemented the skill vouchers scheme successfully.

The skill vouchers programme can be adopted as an alternative to the current framework of supply-side, public sector interventions. However, there is need to specify the target group so that the possibility of deadweight loss (ensuring that non-needy individuals are not included) is minimised and the possibility of fraud is reduced. To give the beneficiaries a feeling of ownership of vouchers it is also advisable to require trainees to pay a small amount of top-up money for VET.

Skill vouchers programmes around the world have demonstrated the potential of demand-side interventions in stimulating the supply of VET services. Adoption of the skill vouchers programme tailored to local conditions in Karnataka could provide a much-needed boost to urgently-required vocational education and training.