

IMPROVING THE COLLECTION AND USE OF LABOR FORCE DATA IN THE UAE BASED ON INDIA AND KOREA'S BEST PRACTICES

Louise Patterson, Dubai Women's College, Higher Colleges of Technology
Bharti Pandya, Dubai Women's College, Higher Colleges of Technology
BooYun Cho, Dubai Women's College, Higher Colleges of Technology; Jeju National University

ABSTRACT

In the United Arab Emirates (UAE), policymakers and other stakeholder groups need access to robust data to comprehend how changes in the labor force participation rates can affect the workforce dynamics, evaluate the effectiveness of labor force policies, and to develop an adequate supply of local workers. The current concern in the United Arab Emirates (hereby referred to as the UAE) as to the collection and use of labor force data needs to be improved especially as the government having implemented its 2020 Emiratization Policy whereby 40% of the labor force must be composed of Emiratis (UAE Nationals). The purpose of this paper is, through an analysis of the labor force data collection by India and the Republic of Korea, to provide recommendations for the UAE government as to the collection of robust labor force data to develop labor market policies and programs.

Keywords: Labor Force Participation Rate Data Collection Methods, Labor Force Policies, Labor Statistics, Emiratization Policy, United Arab Emirates, India.

INTRODUCTION

In 2015, a report was released by the Gulf Research Center (De Bel-Air, 2015) on the demography, migration, and labor market in the UAE whereby it stated, despite their objective to draw a sketch of the UAE's population and migration dynamics, it was severely restricted due to the scarcity of data available from the federal and emirate-level statistical bureaus. In the data collection section of this report, it states that:

"In contrast to other GCC countries which have set up a population registry like Kuwait and Oman, in the UAE, population figures and demographic characteristics of the resident population (Emiratis and foreigners) are not yet disclosed to the public in real time" (De Bel-Air, 2015).

Furthermore, the report cautions the intercensal population data including post-2005 figures are estimates and that the population projections and estimates in the UAE must treat with caution, for two sets of reasons. First, the scale of irregular sojourn and labor cannot be overlooked, given the speed of population growth in the country, and especially in Dubai, partly due to the dependency of UAE's economy on labor-intensive sectors such as the construction sector. Second, the methodology used to project population figures since 2010 was recently

questioned, as it led to the release of extraordinary rates of demographic growth. Therefore, with any labor market data released to the public has to be treated with caution and, in some cases, for a time series analysis, data for some years are unavailable. The data market data collection, during 2008 to 2010 was not publicized for unknown reasons.

In the UAE, policymakers and other stakeholder groups need access to robust data to comprehend how changes in the labor force participation rates can affect the workforce dynamics, evaluate the effectiveness of labor force policies, and to develop an adequate supply of local workers. The current issue in the United Arab Emirates (hereby referred to as the UAE) as to the collection and use of labor force data needs to be improved, especially as the government has implemented its 2020 Emiratization Policy whereby 40% of the labor force must be composed of Emiratis.

The purpose of this paper is to examine the labor force data collection methods of three countries, India, the Republic of Korea (hereby referred to as Korea), and the UAE whereby a comparison will be conducted on these three systems of data collection. India and Korea will act as role models for the UAE government in the data collection methodology.

Three countries were selected based on the different situations and data collection needs of those three countries. The three countries have dissimilar labor structures and therefore the objectives of human resource management might be unlike.

Korea can be considered as an industry model due to its rapid industrialization and currently has shifted the knowledge-based society. When focused on the knowledge-intensive industry, Korea has been sourcing its human resources in Korea. India has seen limited success in the structured manufacturing sector but has accounted a powerful human resource base, but it is not being effectively utilized except in the IT industry. Thus, India is experiencing the outflow of human resources, so-called brain-drain. Considering that the UAE depends on foreign human resources in the technology sector, the UAE's labor data management approach should also reflect these characteristics. In addition, various stakeholder groups will then have access to historical data, from the time of the foundation of the UAE to its current labor force data. It identifies strategies that can fulfil the improvement of labor force data collection.

Literature review, interviews, multiple documents, and websites will be examined to identify the extent to which India and Korea have developed the labor force data collections. A comparison will be conducted if there are any differences between these three countries as to their data collection methodology. This preliminary research will contribute towards building a new labor force data collection framework for the UAE government.

The International Labor Office (ILO) (2015) published a guide for gathering analysing labor market data. It gives examples of how countries are using indicators and data analysis and briefly discusses how to analyse data from single and multiple indicators for a policy position. The guide points out that data gathered from labor force surveys and national censuses by various agencies can be limited and too general in nature, quite often due to resource limitations. Papola (2014) stated that:

“Labor statistics are collected, compiled and disseminated in a country to meet the requirements of different goals and objectives sought to be achieved by different stakeholders and interest groups. These groups and uses to which they put the statistics could broadly be grouped into the following four categories:

1. *Planners, policymakers and administrators: For planning and monitoring socioeconomic development and formulation and implementation of policies, laws and rules for overall development and welfare of labour.*
2. *Research workers, media, civil society and the public at large: Seeking to improve understanding, awareness and knowledge about labor and related subjects.*
3. *Workers organizations and employers' associations: To analyse, represent and lobby for their respective constituencies, namely, workers and industry.*
4. *International agencies: For presenting international perspective and comparisons and monitoring progress in the well-being of labor and assess the labor situation for utilization as part of the assessment of the overall socio-economic situation of the country from the view point of their own mandate. (Papola, 2014)*

Western Countries

Beginning in 1960, the members of the then European Community began collecting comparable data on employment and unemployment through the means of a labor force survey (Eurostat, 1998). Nowadays, the EU Labour Force Survey is universally recognized as a tool for observing labor market demographic developments and for taking appropriate policy measures. It provides data that is truly comparable as it is independent of national administrations and legislative frameworks.

Anker (1983) wrote a critique of the data methods being used at that time to collect female labor force participation data where they were inaccurate or incomplete; especially in developing countries where women were shown as economically inactive members of society despite their labor being important to the economic survival of the household. The author recommended that the female labor force data be improved by showing their economical role through statistics.

In 2015, the ILO released a report providing guidelines on the gathering and analysis of labor market data specifically referring to national policies (ILO, 2015). The ILO's principal objective is to achieve "*full productive employment and Decent Work for all, including for women and young people*". In the analysis of labor market data, the report points that it is important for three major reasons (ILO, 2015):

1. To identify and understand issues in the labor market regarding employment policy.
2. To inform decisions about national employment policy with objective empirical foundations.
3. To evaluate the costs and benefits of policies, measures and programmes.

The US Bureau of Labor Statistics (BLS) produces several statistical series for the United States and has developed a statistical series for foreign comparisons (Handbook of Methods Chapter 12 International Comparisons, Capdevielle and Sherwood, 2002). The BLS uses a conceptual framework for its comparative purposes whereby it obtains foreign data and documentation from numerous sources worldwide, does translation if necessary into English and performs analyses of sources and method for quality and comparability, and adjusts the statistical series. The BLS program of international comparisons is unique as the data collected is adjusted for comparability by the other agencies.

In 2018 the Australian Bureau of Statistics released a fact sheet regarding the concepts, sources and methods of labor force statistics, specifically international comparisons. The report pointed out that is essential to acquire a global context to economic analysis, social research, and policy formation and evaluation. Consideration must be taken regarding the differences in how

labor concepts are measured. The ILO developed a measure of international labor standards for countries to follow to allow a similar basis for cross-country comparisons to happen. The fact sheet outlined the key labor force statistics to collect for this comparison: population with the working population given as well, followed by the labor force participation by gender, employment to participation ratio, the unemployment rate by gender, and underemployment rate by gender based on the ILOSTAT Database.

Asia

On the Asian continent, in Thailand, data for a study (Adhikari et al., 2011) was drawn from the 2007 Survey of Older Persons, a nationally representative survey conducted by the National Statistics Office (NSO). The NSO has conducted three nationally representative household surveys of older persons in 1994, 2002 and 2007 to fulfill the need for adequate information to develop appropriate policies and programs to ensure the well-being of the Thai elderly. These surveys collected information on socioeconomic conditions and living arrangements, employment and income, health status and health behaviour, etc. of the elderly in Thai society. In Malaysia, an article (Franck and Olsson, 2014) argues that common methods to collect data on women's labor force participation frequently result in under-reporting and under-recording of their work. Based on fieldwork in Malaysia's Penang state, this article presents some of the difficulties associated with recording women's informal work. It contributes to theorization on the under-reporting of women's remunerative activities in official surveys by arguing that while women's work is often devalued, under-reporting may also be the result of women making strategic and pragmatic choices. By reporting themselves as "*housewives*", for example, they may avoid questioning their society's gendered norms while securing their own interests in work outside the home.

In India (Papola, 2014), an assumption is made that labor market data has special importance due to the socio-economic development of the country which is managed through a system of economic planning. The Indian Ministry of Labour and Employment and some other welfare ministries and departments are responsible for making labor policy and laws and their implementation that are the users of labor statistics, but agencies engaged in planning socioeconomic development, particularly, the Planning Commission, become other major users of data on different aspects of labor. The Commission uses data on employment and unemployment extensively in its assessment and projections and for setting targets for employment generation and strategy for their achievement in every Five-Year Plan. Importance of such data has increased over the years with greater emphasis in plans on employment generation and poverty reduction. Nowadays, the subject of skill development has emerged as another important area of planning for which the Commission needs detailed data on demand and supply of skills among worker. In 2017, the Indian government, announced it had set up a task force to recommend a methodology to generate timely and reliable employment data (Hirway, 2017). The government had globally respected sources for employment statistics, including Employment and Unemployment Surveys (EUS) conducted by the National Sample Survey Office (NSSO) every five years but with a small sample size. Since 2011, annual and semi-annual EUS by the Labor Bureau (2018), the Census of India every ten years, and an Economic

Census for agricultural and non-agricultural at intervals. The government believes there is a need for change as gaps exist in the collection of data such as informal workers, the need to reduce the lag time between the survey and release of the data, and the need to conduct short-term surveys for the rapid assessment of the impact on different reemployment policies. There is an absence of data on district-level employment for decentralized planning, data on circular migrant workers, the working and living conditions for female workers.

In Korea, the main bodies for gathering labor force data (Shin, 2015) are the Ministry of Employment and Labor (MOEL), Statistics Korea, local governments, government institutions, and private institutions. The types of labor market information come from various survey types: General Labor Market Survey (mainly cross-sectional data collected by the government); In-depth Longitudinal Labor Market Survey (panel data collected by various research institutions); and Administration Collections Statistics (National Employment Insurance statistics, National Pension Insurance, National Health Insurance statistics, etc.). The Labor Market survey is conducted by the (2018) where it surveys establishments, the labor cost of enterprises, labor demand, and labor conditions by type of employment. Labor market information data collected by Statistics Korea using surveys: Economically Active Population survey is conducted monthly using a sample size of 32,000 households and the Local Area Labor Force Survey, which is a sample size of 199,000 households, is conducted bi-annually. Other surveys are conducted by government research institutions and private institutions.

Middle East and Africa

In 2011, the African Development Bank published a report as to how data is collected for their labor survey. Variables are derived and classifications are produced such as these variables are related to occupation, industry, and Status in Employment (SE). It then describes the socio-demographic characteristics of the population, including age, sex, geographical location, educational attainment, and sometimes migration status.

Regards to the Middle East, in 2011, a framework was developed to study the Saudi labor force (Flynn, 2011) using data from the national labor market model designed by the United States Department of Labor in the 1940s and applied to the Saudi labor force using data from the Saudi Arabian Central Department of Statistics and Information. The findings give the first comprehensive statistical outline of the Saudi labor force and a baseline to systematically track expected increases in labor force participation, especially women and youth. This framework was designed to overcome issues of the existing data collection method such as conflicting information provided by various government agencies, varying definitions, and the lack of uniformity in reporting cross-sectional and longitudinal statistics.

In the UAE, there is great variability where most of individual labor force data collection methods are not reliable, and the labor force data is difficult to access. Dubai Emirates is considered to be the most reliable Emirati state as a source for labor market data, but it does not publish all of its historical time series data. The Bulletin of Labor Force Results 2015 was released in April 2016 by the Population Statistics Sector. During the design and implementation, the latest methodologies and international standards were followed where the International Labor Organization (ILO)'s guidelines were followed as to the sample group being

15 years and older. The sample of the survey included the Emirati Households, non-Emirati Households, collective household and communities of workers. The report states that the data collected through different time periods is used as the base to monitor current trends and changes in the labor market and the status of employment. The Dubai Statistics Centre (2016) provides the statistical support to implement the Dubai Strategy Plan 2021 with this statistical data on economic, social, and demographic types stated as being accurate and correct timing. This specialized survey was conducted in 2015 using these series and utilizing the latest methodology and international standards. The sample size is 3,000 households including Emirati households, non-Emirati households, collective and communities of workers. However, the link available to the public does not give access to the report.

Abu Dhabi Emirates collects labor market data through its Labor Force Survey (2016). It is a key component of the integrated survey program-General, Multi-Purpose Households Survey. It produces baseline labor market information for the Emirate of Abu Dhabi, and each of its regions. The LFS reports estimates of the size of the workforce, current levels of employed and unemployed citizens and non-citizens, monitors change and identifies trends. The LFS collects information annually from a sample of people present and/or usually resident in the Emirate at a specific point in time. The results support decision-makers in formulating and monitoring labor market policies across the Emirate of Abu Dhabi and within its regions.

When looking at having an adequate workforce for the future, concern has been expressed over the need for timely, accurate, and comprehensive data to support any effective policy-making in this area (Spetz et al., 2016). The authors identified the need for robust data and information systems for professionals to identify and remedy current and future labor shortage in their field but also evaluate the role of a specific group of workers in the effectiveness of financing and delivery innovations in their field. Therefore, the research question is:

“How can UAE, being founded in 1971, can develop its framework for labor force data collection and dissemination from established frameworks of India and Korea?”

METHODS

Qualitative methodology was followed in the paper. Considering that the comparison requires the understanding of the philosophical perspectives and assumptions of different countries in gathering the data, this research needs to render the “*comparatively*” open to analysis, critique, replication, repetition, and/or adaptation (Vaismoradi et al., 2013). In addition, as this paper investigates a case of resource-rich energy-exporting country, in particular the UAE by using qualitative methodology, a comparison can be made to another resource-rich energy-exporting country, Kazakhstan, who has faced the similar challenges in data collection methods (Karatayev et al., 2016). Moreover, this research should be the step stone for the next stages of data comparison.

The initial steps of thematic analysis had been used in this research. Thematic analysis is qualitative research methods have been useful to constructivist epistemologies and research questions. This method is strongly used for identifying, analysing, organizing, describing, and

reporting themes from a dataset (Nowell et al., 2017). While Maguire and Delahunt (2017) recommended six steps of a step-by-step approach, but was limited by step 4 in this study.

Table 1 SIX-STEP APPROACH FOR THEMATIC ANALYSIS	
Step 1	Become familiar with the data
Step 2	Generate initial codes
Step 3	Search for themes
Step 4	Review themes
Step 5	Define themes
Step 6	Write-up

Source: (Maguire & Delahunt, 2017).

Table 1 shows Braun & Clarke's (2006) six-phase framework for doing a thematic analysis. In the first step, researchers in this study tried to read and re-read the questionnaires of individual survey projects. By coding the individual questions in a general category, those questionnaires was organised in the systematic way. Then, tried to compare the similarity and differences across the nations in order to find some theme for the survey and the structure of data collection philosophy of individual countries. Finally, review was done by modifying and developing the preliminary themes that was identified in previous steps.

It would be hard for us to move onto step 5, as it was not so sure about the "*essence*" of what each theme is about (Braun and Clarke, 2006). This research is the preliminary effort to understand the differences of the data collection framework across the various cultural and industrial development stages of countries.

RESULTS AND DISCUSSION

Country Comparison of Labor Market Framework

For the three countries comparison, the UAE, India and Korea, the literature review has found similarities and differences in the labor force data collection and methodology. The UAE's current labor force data is incomplete for certain time periods, not allowing a proper analysis for the labor force historical data trends and prediction of future trends (De Bel-Air, 2015). This has been attributed to the lack of transparency for various stakeholders to access accurate information.

In conducting cross-country comparisons of labor participation rates, a recent article (Dvorkin and Shell, 2015), which compares Canada, the United Kingdom, Spain, Sweden, Japan, France, and Germany, stated that international comparisons are not a simple matter due to labor market variables and statistical methods varying across countries. The authors use adjusted Organisation for Economic Co-operation and Development (OECD) data to allow the comparison across these countries for analysis purposes. For their analysis, the authors focus on the population 16 to 64 year of age for Spain, the United Kingdom, and the United States and 15 to 64 years of age for the other countries. In conducting a comparison of countries retrospective

and panel data collection methods to assess labor market dynamics, a report by the IZA on Egypt (Assad et al., 2017) found that one can collect information on labor market dynamics from retrospective data. However, the authors cautioned that researchers about which information to trust and at what level of detail.

For Korea (Shin, 2015), the main bodies for gathering labor market information are the Ministry of Labor, Statistics Korea (Bureau of Statistics), local governments, government institutions, and private institutions. There are several different types of labor market information gathered by these various agencies. Cross-sectional data is produced by the government providing general labor market survey data types. In-depth longitudinal labor market data survey data type information is collected through panel type data by various research institutions. Administration collection statistical information is collected through such means as the National Employment Insurance Statistics, the National Pension Insurance, National Health Insurance, etc. The MOEL labor market survey data is collected through the Labor Force Survey at Establishments, Survey on the Labor Cost of Enterprises, the Labor Demand Survey, and the survey on Labor Conditions by type of employment. The Labor Force Survey at Establishments provides basic data to analyze employment trends and labor conditions (wages and working hours) on the demand side of the labor market, and this data is then used to develop policies. The sample size is 25,000 establishments with one worker or more across all industries excluding agriculture, forestry and fishing sectors and is conducted on the last business day of each month. Statistics Korea conducts the Economically Active Population Survey (Survey on Labor Market Participation) and the Local Area Labor Force Survey. The purpose of the Economically Active Population survey is to provide basic data for macroeconomic analyses and the establishment of human resource development policies and establishing and evaluating employment policies by the government. It is conducted monthly. The sample size is 32,000 households using the results of the 2010 Population Census. The interviewing methods are Computer Assisted Self Interviewing (CASI) and Computer Assisted Telephone Interviewing (CAT). The type for the Local Area Labor Force Survey is designated and sample statistics where basic data on detailed employment situation of cities and counties is utilized to make regional employment policies. It is reported bi-annually. The sample methods and unit is where the primary sampling units are Probability Proportional to Size of the National Census and Ultimate Sampling Unit (simple random sampling of households). The sample size is 199,000 households of the 1,000 Primary Sampling Units. The Labor Market Survey data from government institutions is collected from the Korea Employment Information Service (KEIS), Korea Labor Institute (KLI) (Korea Labor & Income Panel Survey, Workplace Panel Survey), and the Korea Research Institute for Vocational Education Training (Korean Education & Employment Panel Survey).

For India, a recent report was released by McKinsey stating that the employment and unemployment surveys conducted by the Indian Labor Bureau from 2013 to 2017 are a robust set of sample surveys. The authors analysed the annual data from these surveys based not on their publication dates but on the reference period for which the data were collected in each round, to more closely map labor market trends to economic trends happening at the same time. The report stated that there are limitations as to the standard data and assessment frameworks. The authors point out that the current sources of data fulfil their main purpose of assessing some labor market trends, particularly labor force participation rate and employment shifts, but are not really

designed to assess the wellbeing of the workforce or the extent of change in gainful employment. These data limitations existed in the past, too (DeLeeuw et al., 2002). However, they assume significance in the light of global trends-also mirrored in India-that favor more independent work, flexible or part-time jobs, and supplementary income generation activities which are not captured by surveys and frameworks currently.

For this paper, various surveys were evaluated and conducted to collect labor statistics by the Korean Government and Indian Government. The comparison is made to understand the purpose of the survey, the coverage of the survey, the frequency of the survey, and the items included in the survey.

The primary purpose of the governments of all the nations including Korea, India, and UAE is to collect, compile, analyze, and disseminate the labor related data to build competitive and sustainable economies (Bayanat, 2018; Labour Statistics OECD, 2018; Hira, 2009). All three governments have different mechanisms to collect the labor related data. While analyzing the different surveys used by the UAE government, the Korean government and the Indian government, it was found that the key difference attributes to the coverage of survey and the sampling units. The Korean government collects the data through surveying the workplaces while Indian government covers households as well as industrial sectors. Furthermore, the Indian government also collate the labor statistics provided on regular basis by different state governments. The UAE government's data collection organization, Federal Competitiveness and Statistics Authority (FCSA), is in its nascent stage. Being established in 2015, the open data available depicts that the labor data is mainly collected through various government agencies like Ministry of Human Resources & Emiratization, Federal authority for Government human resources; and the Directorates of residency and foreigners affairs (Bayanat, 2018). The organizations responsible for labor data collection in India, Korea, and UAE is depicted through Figure 1 that summarizes above discussion.

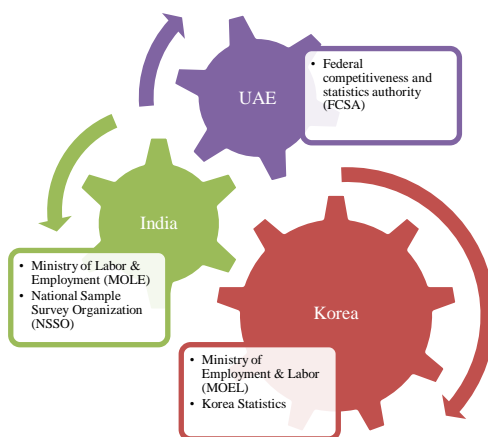


FIGURE 1
NATIONAL ORGANIZATIONS RESPONSIBLE FOR LABOR FORCE DATA
COLLECTION IN KOREA, INDIA AND UAE

Studying the survey instruments used by the government of Korea to collect labour related data, four major surveys are conducted. The Labor Force Survey is performed on monthly basis to provide basic data needed to analyse employment trends and labor conditions on the demand side of the labor market. The data like number of workers, number of job openings, and number of hires, number of separations, wages, and working hours are collected from 25,000 establishments randomly sampled from all the industries except the agriculture, forestry and fishing sectors. The Enterprise Labor Cost Survey is conducted to find the types and amounts of employment expenses to create and amend labor policies and to promote workers' welfare. This annual survey samples 3,525 workplaces to collect data about the total cash wages; retirement pay; recruitment expenses; education and training expenses; legal welfare expenses; and non-legal welfare expenses and similar items. The Occupational Labor Force Survey collects, from a sample of 32,300 workplaces, the data related to the current number of employees, number of recruited, number of hired, number of non-hired, number of vacancies, scheduled number of employees to be hired, and reasons for non-hired. This bi-annual survey feeds data to design employment policy measures for resolving labor market demand-supply gap. The final survey conducted by the Korean government is on the Labor Conditions by Employment Type. Data related to gender, education, age, employment date & year, years of work experience, employment type, contract period, working type, working days and hours, wages, social insurance status etc. is collected from around 32,000 workplaces on a yearly basis (MOEL Survey Data, 2018).

Analyses of the surveys and data collection conducted by the Indian government have similarities as well as dissimilarities with the Korean labor statistics collection. On the similarity front, both countries have assigned the responsibility of data collection to the Ministry of Labor and the National statistics organizations. Though nomenclated differently, the aim of these organizations remains same collection, compilation, and dissemination of labor workforce data. In Korea, these organizations are named as Ministry of Employment & Labor (MOEL Survey Data, 2018) and Statistics Korea (Statistics Korea, 2018). In India, the Ministry of Labor & Employment and National Sample Survey Organization (NSSO) are commissioned to collect the labor data. The scope of data collection by the Statistics Korea (in Korea) and the NSSO (in India 2017) is very wide. The labour force data management is only one facet of their scope. The NSSO collects the data related to employment and unemployment through a survey conducted on the Quinquennial basis. The survey unit is households and the purpose of the collection is to find the overall level and structure of employment and unemployment in India. The NSSO covers the whole population through random sampling method. The sampling size is retained to 100,000 households.

The specialized organizations to collect, analyse, and disseminate labor related data in Korea as well as in India are their respective Ministry of Labor & Employment. However, the Indian ministry has delegated this task to the Labor Bureau whose scope of data collection is very wide as the data is fed to formulate national and state level policies; and to enhance the working conditions of the workforce from different segments.

The Labor Bureau of India conducts several surveys to collect labor statistics, but the purpose; frequency; and the coverage is unlike the surveys conducted in Korea. For instance, the wage rate survey is conducted to ensure the proper implementation of the Minimum Wages Act,

1948. This monthly survey covers 20 states and households in 600 sample villages are included. Likewise, surveys about consumer price index are conducted on monthly basis but are divided into two sectors. The first consumer price index survey is conducted for the industrial workers in urban areas wherein data is collected monthly for several workers, number of job openings, number of hires, number of separations, wages, working hours etc. Similar items are covered through consumer price index for rural laborers in the agricultural sector. The items covered under the consumer price index in India are covered through labour force survey and occupational labour force survey in Korea. Though the Statistics Korea calculates consumer index, there is no evidence of its association with the labor market (Statistics Korea, 2018). The Indian government uses the Consumer Price Index (CPI) data to revise and fix the minimum wage; to determine the cost of living allowance; to measure the trends of inflation, and to formulate the policies regarding wages.

Table 2
LABOR SURVEY ITEMS COVERED BY KOREA AND INDIA

Labor Survey Items	In Korea		In India	
	Data Instrument	Coverage	Data Instrument	Coverage
Number of workers; Wages; Working hours	Labor Force Survey at Establishments	25,000 establishments	Employment and non-employment survey by NSSO	From whole of the Indian Union with exception of two districts in Jammu & Kashmir and few villages in Andaman & Nicobar islands.
Labor costs	Enterprise Labor Cost Survey	3,525 workplaces	Wage rate Survey; Occupational wage survey	20 states with a sample size of 600 villages; 37 industries
Number of employees, recruited, hired, not-to-hired, vacancies	Occupational Labor Force Survey	32,300 workplaces	Consumer Price Index for industrial workers and Consumer Price Index for rural laborers	Urban Sector; Agricultural sector in 20 states
Workforce demography, work experience, employment duration, contract details, working conditions	Labor Conditions Survey	32,000 workplaces	Employment and non-employment survey by Labor Bureau	156,563 households

Source: Labor Bureau (2018), Ministry of Labour and Employment (2017), MOEL Survey Data (2018).

Like the Korean Government survey on labor conditions, the Labor Bureau of India conducts Contract Labour survey to study the problems faced by the contract labor and to formulate and revise policies to improve the working conditions (Table 2). The only difference between the two countries is the frequency of data collection. The frequency of Contract Labour

survey is not defined and is conducted upon the discretion of the bureau. The Employment and non-employment survey is conducted in India by both NSSO and the Labor Bureau and the objective is same, to calculate the labour force participation rate, worker population ratio, and to calculate the unemployment rate. While Labor Bureau's frequency is on annual basis; the NSSO collects it on a quinquennial basis. Unlike Korea, the data related to gender, earnings, savings, workforce participation, occupation, leave status, job contract status, paid leaves, work location, availability of social security benefits, earning from self-employment etc. are collected through sampling the households. The Labor Bureau generally covers over 150,000 households from rural and urban sector from all over India with the exception of few difficult to access locations. The labour survey items and their respective coverage are depicted in Table 3.

Table 3 LABOR DATA COLLECTION INSTRUMENTS AND THE FREQUENCY OF DATA COLLECTION IN KOREA, INDIA AND UAE					
Republic of Korea		India		UAE	
Instrument	Frequency	Instrument	Frequency	Instrument	Frequency
Labor force survey	Monthly	Wage rate survey	Monthly	Workforce gender survey	N/A
Enterprise Labor cost survey	Annually	Consumer price index survey	Monthly	Distribution of workforce	N/A
Occupational Labor force survey	Bi-Annual	Contract Labor Survey	N/A	Labor force by skill, age, gender, and job level	N/A
Labor conditions by employment type	Annually	Employment and non-employment survey	Annually	Actual work hours	N/A
		Occupational Wage survey	Once in 10 yrs.	Earnings by sector and occupations	N/A

Source: Labor Bureau (2018), Ministry of Labour and Employment (2018), MOEL Survey Data (2018); Bayanat (2018).

The data collection methods in both India and Korea have similar purposes but India covers more facets as opposed to Korea. Some surveys conducted in India have either undefined frequency or are conducted once in a decade. A survey like Occupational Wage Survey, which aims to study the earnings in different industries, is conducted once in 10 years. Papola (2014) proposed India to embrace Time-use Surveys to add to the labor force surveys to reduce the under-estimation of the labor force, eliminate under-reporting of workers due to the biases of investigators or respondents, and allow the collection of the data on simultaneous activities.

UAE's dedicated organization, FCSA, may be in the nascent stage, but some labour related data is openly available. The workforce gender distribution in different professions, distribution of workforce, and total labor force by skill, age, gender, and job level is available. There is also an availability of data related to actual work hours and earnings by sector and occupations (Bayanat, 2018). However, the purpose, coverage, source, and the sampling method is not readily available. The labor data collection instruments and frequency of data collection is depicted in Table 3 wherein data collection instruments used by all three countries have been

tabulated along with the frequency of data collection. It is noted that the frequency of data collection in UAE is not clearly defined. Furthermore, the available data is disjointed in terms of continuity and rigour. Knowing that the MOEL of Korea was established in 1945 and the Labor Bureau of India has been in action since 1940 (Labor Bureau n.d.); suggested UAE to reconsider its labor data management framework and design a robust framework to collect and analyze the data and thereafter amend the policies to achieve the target rate of Emiratization.

Implications of the Findings

It has become evident that the UAE is in the nascent stage of developing a framework to collect labor force data. Due to absence of robust data, the holistic view for sustainable labor market has not been considered. The findings of the study would provide parameters to the UAE authorities to collect labor data while basing it on the data collection framework used by Indian government as well as Korean government. The suggestions made by Papola (2014) to collect labor data for various items and to collect the data in timely and orderly fashion is applicable to UAE data collection authorities like FCSA.

It is noted that the UAE collects the labor market data but has provided limited access to public due to which external stakeholders and the governments of other countries could not include UAE in designing policies regarding export and import of the workforce. Assuming Korea meeting its labor requirement through domestic labor supply and India exporting its labor force, UAE needs to review its data collection framework to develop its domestic workforce and to implement wise labor import policies. This study would assist UAE in framing its data collection framework and labor market policies by considering Korea's labor data collection framework as a baseline for optimizing domestic workforce and India's labor data collection framework as a guiding tool for monitoring labor force export and regulate labor force import. Therefore, the research question answered whereby the objective of the Emiratization Policy 2020 to have 40% of its locals being employed in the private sector can be meeting.

Limitations and Future Research

This study analyzed the labor force data collection framework of India and the Republic of Korea. Even though it was recommended to the UAE government to improve their labor force data collection, the limitation of this research calls for the further research to enhance the practical and academic contribution on labor data management framework.

In this study, the usage of the collected data was not discussed while comparing the data collection methods. The Labor Data Survey is one of the largest research projects collected in a time series, which has been used to estimate a country's productivity improvement and quality of labor. In Korea, human resources data by industry has been widely used in policy-making process. Considering that data collection is considering future use, it is needed to study the usage of labor data in academic and policy formulation. Moreover, data characteristics comparison among countries had not been tried in this study. While the data collection framework is the important foundation, however, it is necessary to understand how well the statistics of the collected sample data reflect the parameter of the population. It is essential to confirm the quality

of survey research processes such as sampling method and survey execution. Thus, the call for the future studies to be expanded to reflect the quality management of labor data.

CONCLUSION

Through the comparison of three countries, India, Korea and the UAE, robust labor force data collection methodologies were found in India and Korea where systematic data collection takes place on pre-determined frequency intervals. The data is collected from various sectors and as well as generic population and later shared through publications in government reports. The labor data is made public which can be used by relevant stakeholders to make necessary policies and for general applications. It is recommended to the UAE government to develop a labor force data collection and sharing framework as a Nation and implement it with consistency and transparency for various stakeholder groups. This paper will allow future research into the UAE as to the labor force data collection and where the government can successfully achieve its goal of the Emiratization Policy by 2020.

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