

THE CAPITAL REGION EFFECTS ON THE EMPLOYMENT IN SAUDI ARABIA

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ABSTRACT

This paper investigates capital region effects on employment in Saudi Arabia. With data from 2017 Saudi Arabia Industrial Survey and the Statistical Yearbook 2017, this paper finds that the capital region effects exist in Saudi Arabian labour market, because in Riyadh Region, the number of establishments and workers, as well as the size of establishments are larger than in most other administrative regions. Similarly, workers in Riyadh Region earn significantly higher than in most other regions. It is also observed that, in Riyadh Region, the gender wage gap is the second sharpest among Saudi nationals, which suggests that the capital region still hosts the most amount of male-dominant jobs for Saudi nationals. Capital Region Effects on employment in Saudi Arabia have direct impact on the sustainability of its national and regional labour market and development. The findings generate policy implications its national development strategy, which aims to diversify its economy, increase female workforce participation, and reduce reliance on oil and foreign workers.

Keywords: Saudi Arabia; Employment; Capital region effects; Gender wage gap

INTRODUCTION

Existing studies have investigated a number of different dimensions of employment in Saudi Arabia (e.g. Al-Ahmadi 2011), which laid out solid foundation for further research in Saudi Arabian labour market and employment in countries with similar context. However, due to data limitations, though the economic and demographic disparities between different administrative regions in Saudi Arabia has been observed (Al-Mahmoud et al. 2013), few existing study examines whether and/or how employment in Riyadh Region, as the capital region, is different from other regions in the country. The relationship between sustainability of labour market and capital region effects on employment is also less examined.

Based on evidence from other countries, previous research demonstrates that capital cities or regions often have significant differences from other cities or regions in terms of employment. The mainstream literature believes that the capital regions are usually more prosperous than the rest parts of countries as they have stronger agglomeration of business and population, which create more job opportunities and lead to higher salaries. For example, capital region of the United States is a gateway for immigration, which significantly increases the population of the

capital region. Also, the capital region suffered less in the national recession, and the population in the capital region has good education levels (Greater Washington Research at Brookings 2008). Therefore, the capital region has a strong employment base with significant amount of high-wage and high-skill occupations. Similarly findings are also available based on evidence from other countries. For example, as the capital of the largest developing country, the city centre of Beijing has a significantly higher employment density than the periphery (Huang et al. 2015). This could be partially explained to the relatively easier access to political resources in the city centre of Beijing, where the Chinese central government is located. In Poland, the employment rate and the average are both highest in the capital region (Majchrowska and Zolkiewski 2012), which to a large extent may be caused by the cross-regional differences in productivity.

However, not all studies find the existence and strength of capital region's effects on employment. For example, job market segmentation and difficulty to access proper accommodation in Beijing could become a factor to reduce the incentive of domestic migrants to work in the capital region (Wu and Wang 2002). This may lead to a decrease of the capital regions effects on employment.

In comparison with evidence from other countries, research on capital region effects on employment in Middle East is relatively scarce, and usually not strongly linked with labour market sustainability. Therefore, evidence from Saudi Arabia of capital region effects in employment would enrich academic knowledge of urbanization, industrialisation and labour migration, especially in resource-rich countries. This is because that in Saudi Arabia, unlike many other countries, its capital region is not close to the coast which has good access to maritime transport. Also, the dominant industries in Saudi Arabia, oil and gas, are mainly located in other regions (especially the Eastern Province) rather than the capital region. This unique situation in Saudi Arabia provides more spaces for studies on capital region effects on employment by exploring the labour market sustainability in association with regional disparities. Lack of consensus on capital region effects on employment gives this paper more incentives to study on this topic with evidence from Saudi Arabia, especially from the perspective of sustainability.

Research Questions

This paper explores the capital region effects on employment in Saudi Arabia via the following three research questions:

1. Does the capital region host more and larger industrial establishments?
2. Are there more workers in the capital region, especially those working in medium and large industrial establishments?
3. Do workers in the capital region earn higher, especially if taken gender and nationality into consideration?

The remaining parts of the paper will be arranged as follows. The second section introduces the country-specific context of Saudi Arabia and the data. The third section analyses the capital region effects on employment in Saudi Arabia. The fourth section discusses the findings and provide practical implications based on empirical results in the previous section.

Materials and Methods

The main data source is the 2017 Industrial Survey conducted by Saudi Arabian General Authority of Statistics. This survey covers industrial establishments in all 13 provincial-level administrative regions in Saudi Arabia. The 2017 Industrial Survey has information on industrial establishments by size, location, and economic activity. In this survey, data are collected from a sample of industrial establishments in four industries: mining and quarrying; manufacturing; electricity, gas, steam and air conditioning supply; water supply, sewerage, waste management and remediation. The definition and scope of these four industries are elaborated in United Nations International Standard Industrial Classification Revision 4 (United Nations, 2008). According to the country-specific context, these four industries are the most important and influential in contemporary Saudi Arabia. That is the also a reason of selecting this data source for the study of capital region effects. For example, water supply is decisive for the economic development of a country under tropic desert climate and for clean production.

Data from the 2017 Saudi Arabia Statistical Yearbook is also used in this paper. This is also collected by Saudi Arabian General Authority of Statistics. It provides the general demographic information at both national and regional level, via which it is able to estimate the size of working-age population in each administrative region of Saudi Arabia. The Statistics Yearbook also have salary information by region, gender, and nationality (Saudi and non-Saudi). These information are essential to answer the research questions.

Due to the descriptive nature and the format of the data, this paper uses descriptive and explanatory analysis to answer the research questions. In addition, findings will be further dialogued with existing literature in the discussions. The simplicity of research method brings conveniences for readers to understand the results and connect the findings with practice.

To the best knowledge, this is a pioneering research paper using data from this source. The data source itself, particularly the 2017 Industrial Survey, is also the first of a planned series. Therefore, in the future, when data of other years becomes available, it would be able to conduct time-series analysis.

RESULTS

Industrial Establishments in Riyadh Region

According to Table 1, 27,495 industrial establishments are located in the capital region, which count 24.4% of industrial establishments all over the country (112,785). It ranks 2nd among 13 regions, only behind Makkah which has 27,527 industrial establishments. The difference is negligible.

Turning into the size of industrial establishments, it is able to notice that near 1/3 of large industrial establishments in Saudi Arabia are located in Riyadh Region (32.7%, 209 of 640). The percentage of medium, small, and micro industrial establishments in the capital region are 26.5%, 30.7%, and 22.9% respectively. Riyadh Region has the second highest percentage of large and medium industrial establishments (6.4%), which is only lower than in Medina (10.9%).

Table 1. Industrial Establishments in Saudi Arabia by Region

Administrative regions	Total number of establishments	Large (250+workers)	Medium (50-249 workers)	% of large and medium establishments
Riyadh	27,495	209	1,556	6.42%
Makkah	27,527	156	1,414	5.70%
Medina	7,789	49	802	10.93%
Qassim	6,009	22	227	4.14%
Eastren Region	19,750	155	1,171	6.71%
Asir	6,487	14	128	2.19%
Tabuk	3,087	8	112	3.89%
Hail	2,727	7	82	3.26%
Northern Borders	1,230	3	45	3.90%
Jazan	4,164	6	119	3.00%
Najran	2,381	4	64	2.86%
Baha	2,213	3	64	3.03%
Al-Jouf	1,926	4	85	4.62%
Total	112,785	640	5,869	5.77%

Data Source: Saudi Arabia 2017 Industrial Survey

Table 2. Size of Industrial Establishments in Saudi Arabia by Region

Regions	Average workers per establishment	Average workers per large establishment (250+ workers)	Average workers per medium establishment (50-249 workers)	Average workers per small establishment (6-49 workers)	Average workers per micro establishment (1-5 workers)
Riyadh	12.8	680.5	67.3	12.8	1.7
Makkah	10.9	656.3	64.9	12.2	2.1
Madinah	12.4	503.5	62.8	12.3	1.7
Al-Qassim	7.7	516.5	76.1	13.5	1.9
Eastern Region	14.0	696.5	65.2	14.4	2.0
Asir	5.2	496.8	95.6	12.7	1.8
Tabouk	6.7	400.1	76.3	13.9	2.0
Hail	6.1	441.7	79.3	11.6	1.9
Northern Borders	6.6	430.0	75.8	14.6	1.9
Jazan	5.8	418.0	95.4	12.3	1.8
Najran	6.4	408.3	92.8	14.6	2.1
Al-Baha	4.5	301.7	71.4	13.3	1.6
Al-Jouf	6.6	299.8	74.8	13.8	2.1
Total	10.7	639.7	68.0	13.1	1.9

Data Source: Saudi Arabia 2017 Industrial Survey

Table 2 shows the average sizes of different industrial establishments in the 13 provincial-level administrative regions in Saudi Arabia. The national average size of an industrial establishment is 10.4 workers, and the figure in the capital region is 12.8, which ranks second among the 13 administrative regions (only behind Eastern Region, 14.0 workers). Similarly, a large industrial establishment in Riyadh Region has 680.5 workers on average, which is significantly higher than the national average (639.7 workers), only lower than Easter Region (696.5 workers). 70.2% (246,930) of workers in these four industries in Riyadh are working in large or medium industrial establishments. However, the average sizes of medium (67.3 workers), small (12.8 workers), and micro industrial establishments (1.7 workers) are lower than national average, which are 68.0, 13.1, and 1.9 workers respectively.

A quick overview of industrial establishments in Riyadh Region shows that the capital region hosts near a quarter of industrial establishments in Saudi Arabia. In terms of size, industrial establishments in Riyadh Region is also larger than the most of other regions. The proportion of large and medium industrial establishments in the capital region is also substantial. The larger number and size of industrial establishments demonstrate a higher sustainability of the labour market in the capital region, as they can provide more job opportunities and higher job security. In addition, higher proportion of large and medium industrial establishments in Riyadh Region also indicates higher job security and stronger competitiveness of industrial establishments, which demonstrate higher sustainability of labour market in Riyadh Region.

Workers in Riyadh Region

According to Table 3, there are 351,659 workers in industrial establishments located in the capital region, which is around 29% of the national total in these four industries. Among them, 142,215 workers are in large industrial establishments, and 104,715 are in medium industrial establishments, which count 34.7% and 26.2% of the national total. Riyadh Region has the second largest proportion of workers in medium and large industrial establishments (70.22%), only behind Medina Region (77.62%).

Table 3. Workers in Saudi Arabia by Region and Size of Establishments

Region	Number of workers	Workers in large establishments	Workers in medium establishments	% of workers in large and medium establishments
Riyadh	351,659	142,215	104,715	70.22%
Makkah	300,201	102,383	91,797	64.68%
Madinah	96,663	24,671	50,356	77.62%
Al-Qassim	46,059	11,363	17,271	62.17%
Eastern Region	276,265	107,965	76,319	66.71%
Asir	33,611	6,955	12,241	57.11%
Tabouk	20,558	3,201	8,544	57.13%
Hail	16,683	3,092	6,502	57.51%
Northern Borders	8,176	1,290	3,413	57.52%
Jazan	24,299	2,508	11,350	57.03%
Najran	15,148	1,633	5,937	49.97%
Al-Baha	10,017	905	4,569	54.65%
Al-Jouf	12,643	1,199	6,356	59.76%
Total	1,211,982	409,380	399,370	66.73%

Data Source: Saudi Arabia 2017 Industrial Survey

As shown in Table 4, 6,028,668 working age persons (age 15-64) are in Riyadh Region, which is only smaller than the working age population in Makkah (6,245,563 persons). As the working age population size of Saudi Arabia is 23,462,071, 25.7% of them are in the capital region. This figure is slightly lower than the percentage of workers in industrial establishments in Riyadh Region. This suggests that being the capital region, Riyadh Region labour market benefits from the sufficient base of employment. The sufficient potential workforce supply as reflected by the large working age population also increases the sustainability of labour market in Riyadh Region.

Table 4. Working-age Population in Saudi Arabia by Region in 2017

Region	Working age population	% of Working age population in country
Riyadh	6,028,668	25.70%
Makkah	6,245,563	26.62%
Madinah	1,492,388	6.36%
Al-Qassim	1,028,192	4.38%
Eastern Region	3,616,061	15.41%
Asir	1,520,799	6.48%
Tabouk	624,593	2.66%
Hail	496,513	2.12%
Northern Borders	252,090	1.07%
Jazan	1,076,758	4.59%
Najran	394,308	1.68%
Al-Baha	341,518	1.46%
Al-Jouf	344,620	1.47%
Total	23,462,071	100%

Data Source: Saudi Arabia Statistics Yearbook 2017

Wages and Gender and Nationality Disparities

Table 5(Part-I). Average Monthly Wage of Employed Persons (Age 15+) in Saudi Arabia by Region, Gender, and Nationality in 2017 (in Riyals)

Region	Saudi nationals			Non-Saudis nationals			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Riyadh	7,778	4,466	6,664	2,061	2,799	2,087	2,949	4,000	3,053
Makkah	6,489	4,224	5,680	2,114	4,028	2,161	2,721	4,181	2,852
Madinah	6,489	3,818	5,696	1,188	3,625	1,241	1,924	3,770	2,058
Al-Qaseem	4,160	3,346	3,910	770	3,109	819	1,097	3,271	1,224
Eastern Region	8,548	4,591	7,731	2,369	4,373	2,409	3,526	4,536	3,588
Asir	4,984	3,799	4,702	909	2,427	955	1,458	3,269	1,574
Tabouk	5,203	4,228	4,872	948	2,985	977	1,514	4,032	1,703

Table 5(Part-II). Average Monthly Wage of Employed Persons (Age 15+) in Saudi Arabia by Region, Gender, and Nationality in 2017 (in Riyals)

Region	Saudi Nationals			Non-Saudis Nationals			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Hail	4,179	3,350	3,828	708	2,728	746	1,001	3,210	1,164
Northern Borders	4,619	3,794	4,384	781	2,109	798	1,189	3,428	1,304
Jazan	4,291	3,364	3,948	795	3,017	830	1,197	3,304	1,356
Najran	4,396	3,257	4,025	661	2,114	680	1,012	3,016	1,121
Al-Baha	4,100	3,716	4,029	795	2,967	822	1,261	3,522	1,354
Al-Jouf	4,227	4,169	4,215	663	1,624	676	1,081	3,416	1,173
Total	7,297	4,302	6,382	1,897	3,309	1,935	2,712	4,044	2,822

Data Source: Saudi Arabia Statistics Yearbook 2017

Table 5 shows that on average, workers in Riyadh Region earn higher than in most other regions except Eastern Region. For example, average monthly wage of employed person in Riyadh Region is Riyals 3,053, while the national average is Riyals 2,822. The average monthly wage in Eastern Region is Riyals 3,588.

In consideration of nationality and gender disparities, it is able to find that although average wage of Saudi nationals (Riyals 6,664) and non-Saudi nationals (Riyals 2,087) both rank second among the 13 regions (following Eastern Region). However, the situation is different for foreign workers in Riyadh Region, where they earn significantly less than in some other regions (Riyals 2,709, ranks 8th in all 13 regions), and also lower than the countrywide average (Riyals 3,309).

It is beyond the popular belief that in all administrative regions of Saudi Arabia, females earn more than males on average. This adverse- gender wage gap is the smallest in the capital region (around Riyals 1,051 per month). However, such an adverse- gender wage gap must be considered together with the nationality disparities. For example, among Saudi nationals, the gender wage disparity still shows strong male dominance. In the capital region, on average the Saudi females earn Riyals 3,312 less than their male compatriots, which ranked second (following Riyals 3,985 in Eastern Region). To the contrary, the adverse- gender wage gap among non-Saudi nationals is the smallest in Riyadh Region (females earn Riyals 738 more than males). The high gender wage gap in Riyadh Region among Saudi nationals and the low adverse-gender wage gap among non-Saudi nationals suggest that in the labour market of the capital region, there are still a lot of male-preferential jobs, which may reduce the incentives for females to participate into the workforce. Nevertheless in Riyadh Region, Saudi females still can earn much higher average salary than in the most of other regions. The significant earning gap between Saudi and non-Saudi nationals maybe caused by their different job types and tenures, which will not be discussed in this paper.

DISCUSSION

The results above demonstrate the existence of capital region effects on employment in Saudi Arabia. For example, it is able to notice that the capital region of Saudi Arabia has more industrial establishments than most other regions. The size of industrial establishments is also larger than in the most of other administrative regions. Since usually the size of industrial

establishments is positively associated with the sustainability of establishments and the job security of workers, it may be implied that industrial establishments in the capital region have higher sustainability and can provide higher job security than in many other administrative regions. This is somewhat supported by the evidence that workers in Riyadh Region earns more than in the majority of other administrative regions and also the national average.

However, in consideration of the regional distribution of working-age population, and the relatively high level of urbanization in Riyadh Region, such capital region effects are not disproportionately strong. This is caused by a number of reasons. Firstly, some other regions have strong economic capability to compete with the capital region in employment. As shown in the above tables, Makkah has more industrial establishments and larger working-age population size than Riyadh Region. This is possibly because Makkah has the country's main port city, Jeddah, and the Islamic holiest city, Mecca. The economy of Hajj and Umrah becomes a major contributor of revenues and job opportunities (Bokhari 2018). Secondly, industrial establishments in Eastern Region are generally larger in size and provide higher wages than in Riyadh Region. This is not only due to its coastal location which benefits its economic development and labour market, but also because of the majority of oil fields are located in this administrative region. Oil establishments are usually large in size and offer attractive remunerations to its workers due to the need of large number of workers for and tremendous profits generated by oil production. Therefore, the capital region effects on employment have been reduced by other economic competitive regions. This is similar to situations in some large countries such as China and Australia, which have regions with very strong economic performance that can compete with the capital region. Secondly, geographical location also reduces the capital region effects on employment in Saudi Arabia. Locating in the central part of the Arabian Desert, Riyadh Region has less favourable climate and transport conditions for population residence and economic development, which is negative for employment especially in these labour intensive industries. This is similar to some other countries whose capitals do not have most favourable locations. Fourthly but not least important, as the capital region, Riyadh Region has higher level and longer history of urbanization than many other regions, which could be a reason of the attraction of its labour market, particularly a higher salary (Lu, 2016; Lu and Yao, 2018).

The capital region effects on employment in Saudi Arabia have impact on the sustainability of the region and country's labour market, as well as the national development strategy. The of capital region effects on employment may expand the existing regional disparities, which may contradict to the country's strategy to diversify its economy as set out in its national development strategy. The significant male-dominance in the labour market of the capital region, especially for Saudi nationals, may reduce the incentives for females to participate into the workforce, which is negative for the region and country's sustainable development, and also has conflicts against the country's efforts in promoting women's socioeconomic status (Altoaimy, 2018). As a pioneering research of capital region effects on labour market in the Middle East, this paper also generates more thoughts and implications for research and practice of female empowerment in this area.

However, on the other hand, the existence of capital region effects on employment also have advantages for the region and the country. For example, the relatively less developed administrative regions may benefit from the 'demonstration effects' and 'spill-over effects' of the successful experience in the capital region, which is especially important for countries in the

early stages of industrialization and marketized reform (Ash 2006). Such capital region effects may also bring more job opportunities for migrant workers in developing countries. That is particularly important for Saudi Arabia, which has a large migration workforce. For a country under hot climate in desert, suitable concentration of employment in the capital region can boost the social and environmental sustainability by increasing the ‘economy of scales’.

ACKNOWLEDGEMENT

The author appreciates comments and encouragement from colleagues at United Nations Industrial Development Organization and Zhongnan University of Economics and Law. The paper does not reflect any official stance of United Nations and its subordinate agencies.

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