



Global
SME Policy Network

منشآت
monsha'at
الهيئة العامة للمنشآت الصغيرة والمتوسطة
Small & Medium Enterprises General Authority

IMPACT OF COVID-19 PANDEMIC ON SME EMPLOYMENT IN SAUDI ARABIA



WHITE PAPER 01

MAY 2020

رؤية
2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA

جامعة الامير سلطان
PRINCE SULTAN
UNIVERSITY



جمعية الاقتصاد السعودية
Saudi Economic Association



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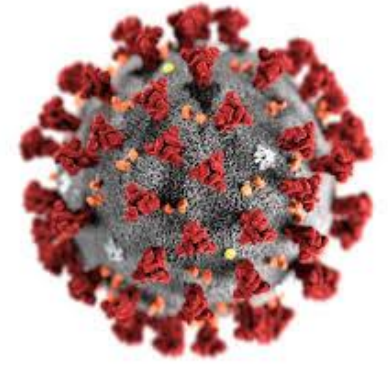
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Saudi Arabia

The second lowest
clinical attack rate in
the GCC

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COVID-19 pandemic in Saudi Arabia



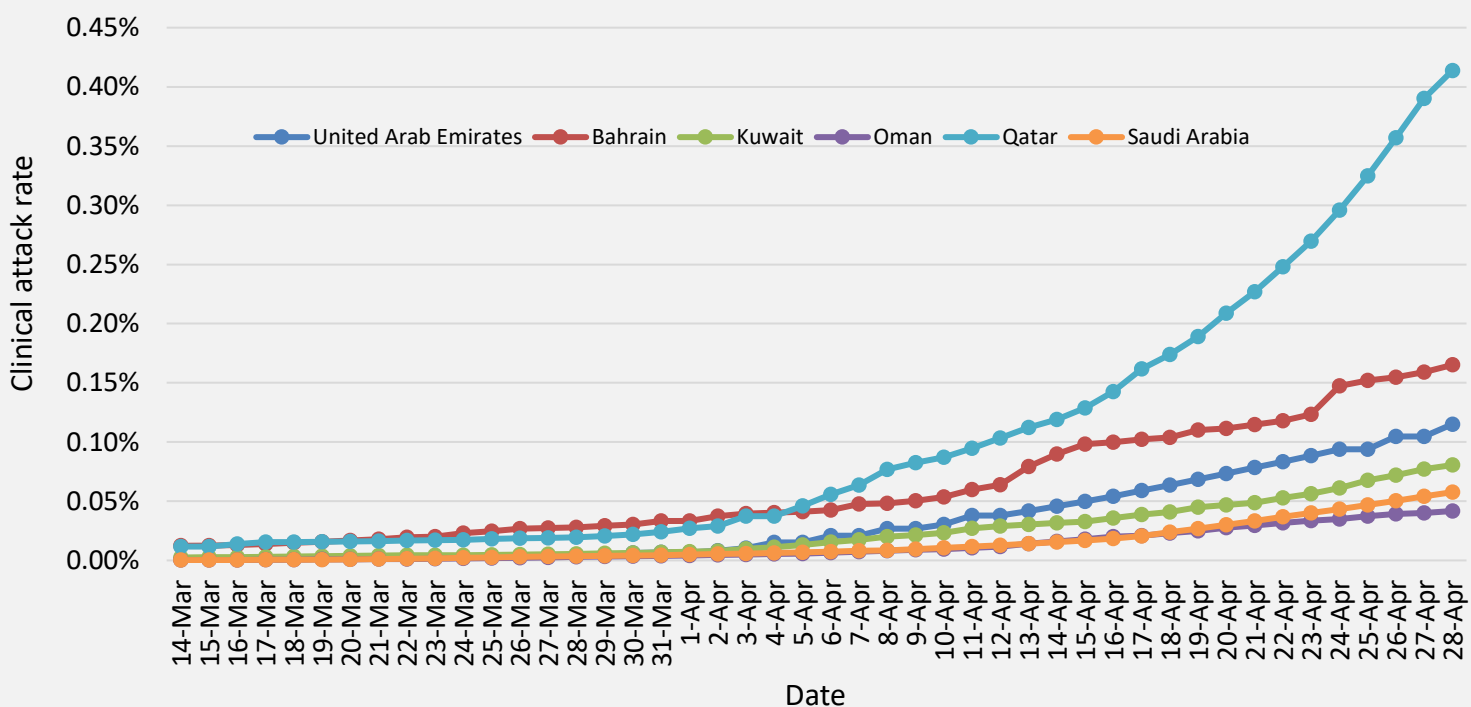
The ongoing Coronavirus (COVID-19) pandemic has had far-reaching consequences in both social and economic impact. The COVID-19 pandemic has resulted in over 4.99 million confirmed cases and over 300,000 deaths globally. This defining health crisis caused the largest global recession in history.

On March 2, 2020, Saudi Ministry of Health confirmed the first case of the COVID-19 disease. The clinical attack rate of GCC (Gulf Cooperation Council) countries is higher with respect to the world average as of April 28. GCC countries' average is 0.15%, while world average is 0.06%.

Considering GCC countries on April 28, the worst scenario is occurring in Qatar, with 0.41%, while the lowest being Oman (0.04%) and Saudi Arabia (0.06%).

The curves of clinical attack rate have skyrocketed during April, as it happened in the rest of the world, but at the end of April, the curve starts to flatten.

Fig.1. Clinical attack rate (infected/total population)



Source: WHO (2020)

SMEs in Saudi Arabia

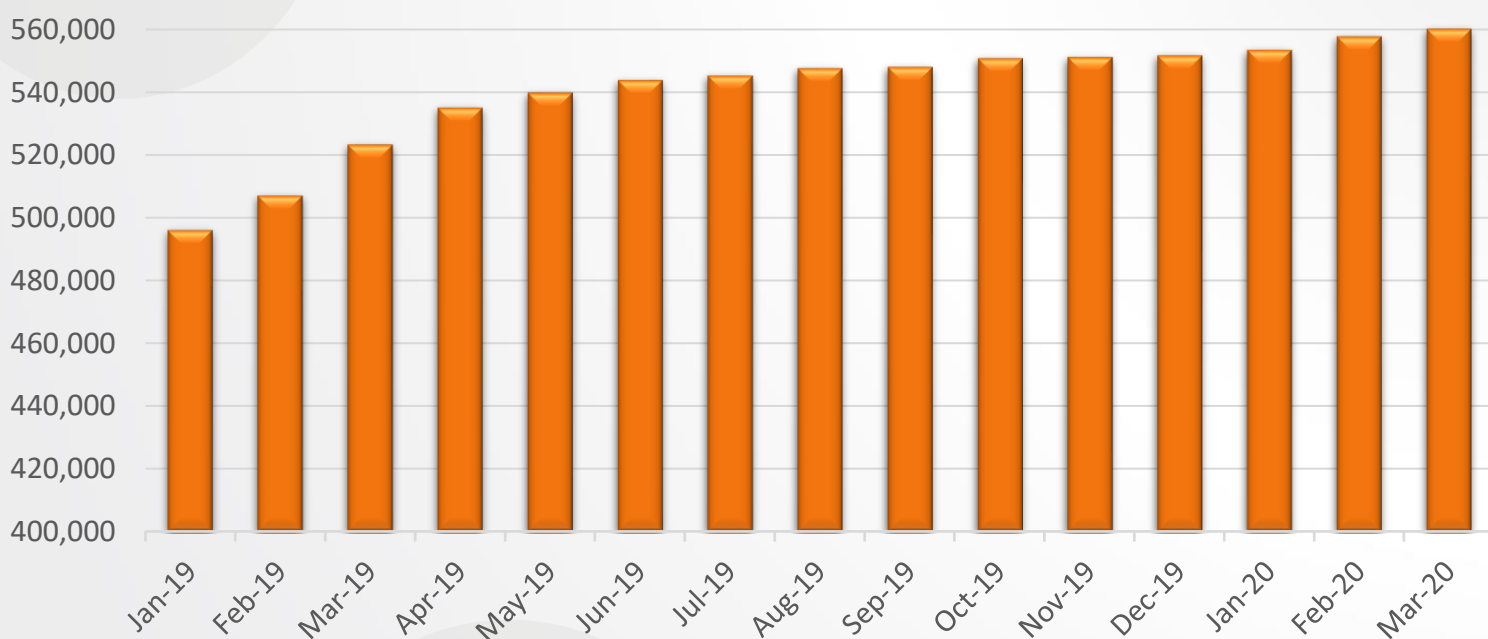
No. of firms in **March 2020**

560,083

No. of firms in **Feb 2020**

557,610

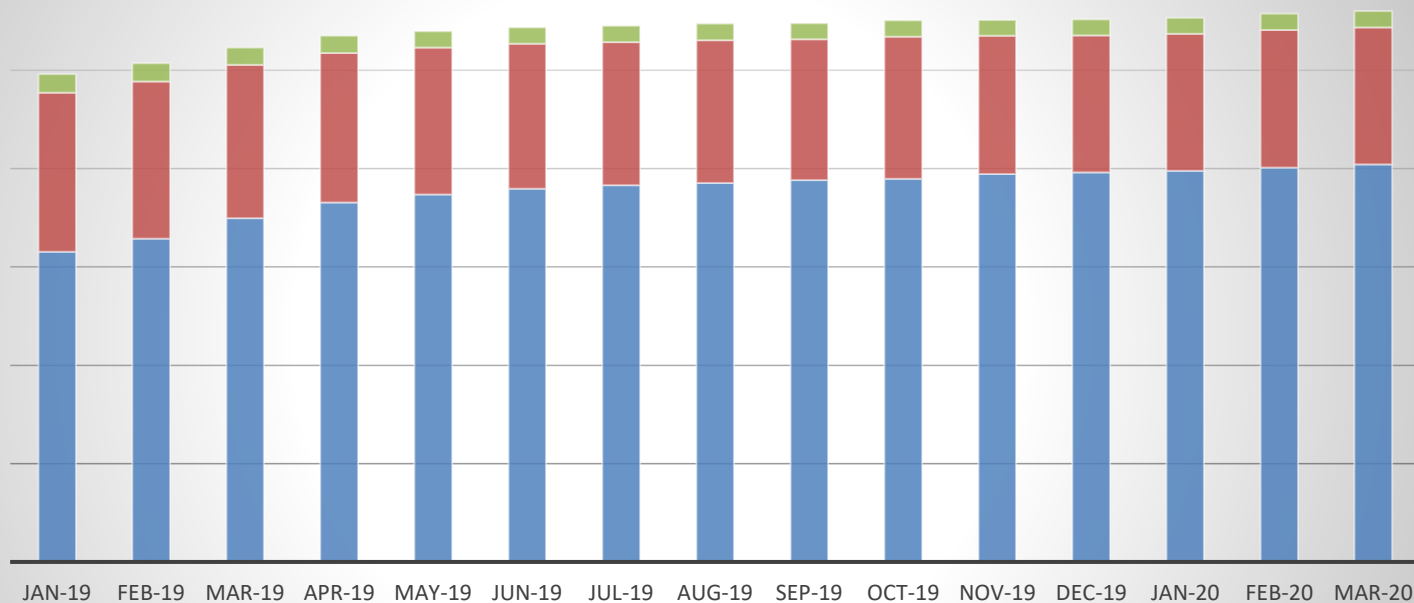
Fig. 2. Total Number of MSMEs in Saudi Arabia (2019-2020)



Source: Monshaat (2020)

SMEs in Saudi Arabia

Fig. 3. Micro, Small, and Medium Enterprises in Saudi Arabia (2019-2020)



	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Medium	18944	18468	17757	17280	16843	16630	16435	16805	16299	16390	16065	16015	16223	16460	16393
Small	161842	159620	155787	152225	149370	147495	145596	145402	143405	144581	140675	139604	139238	140198	139492
Micro	315275	328936	349729	365524	373597	379665	383128	385313	388276	389754	394381	396038	397847	400952	404198

Source: Monshaat (2020)

MICRO (1-5 EMPLOYEES) FIRMS **INCREASES** IN MARCH 2020 BY **0.81%**

SMALL (6-49 EMPLOYEES) FIRMS **DECREASES** IN MARCH 2020 BY **-0.50%**

MEDIUM (50-250 EMPLOYEES) FIRMS **DECREASES** IN MARCH 2020 BY **-0.41%**

Employment in SME

EMPLOYMENT OF SME AT A GLANCE JAN -MAR 2020

MICRO	Jan 2020	Feb 2020	Mar 2020	Increase/Decrease*
Saudi Employees	87,427	87,363	88,338	975
Non-Saudi Employees	1,039,263	1,085,135	1,130,004	44,869
Total	1,126,690	1,172,498	1,218,342	45,844

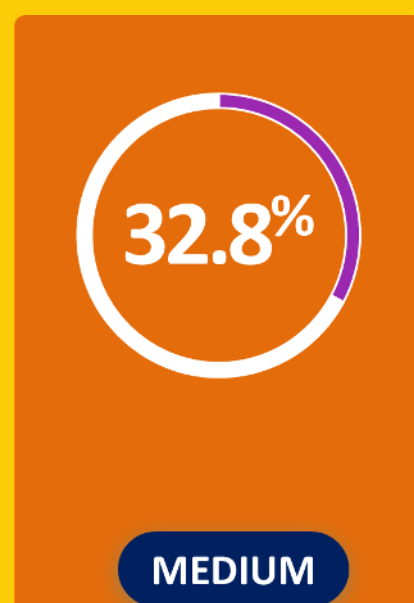
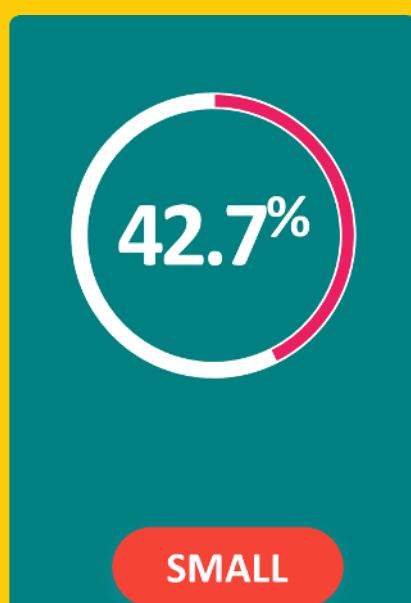
SMALL	Jan 2020	Feb 2020	Mar 2020	Increase/Decrease*
Saudi Employees	384,063	386,024	383,298	-2,726
Non-Saudi Employees	1,721,547	1,737,743	1,734,784	-2,959
Total	2,105,610	2,123,767	2,118,082	-5,685

MEDIUM	Jan 2020	Feb 2020	Mar 2020	Increase/Decrease*
Saudi Employees	356,030	362,458	361,153	-1,305
Non-Saudi Employees	1,250,186	1,270,254	1,268,832	-1,422
Total	1,606,216	1,632,712	1,629,985	-2,727

*Increase/Decrease: The comparison between the number of employees between February and March 2020.

Source: Monshaat (2020)

EMPLOYMENT BY SME in MARCH 2020



INDUSTRY-WISE EMPLOYMENT JAN -MAR 2020

INDUSTRY	Jan 2020	Feb 2020	Mar 2020	March-Feb (%)
Activities of households as employers	168,950	171,268	170,545	0.00%
Other service activities	53,685	97,046	144,424	-0.42%
Other personal service activities	124,576	126,276	125,749	48.82%
Human health and social work activities	10,955	11,070	11,051	-0.42%
Electricity, gas, steam and air conditioning supply	9,124	9,058	9,127	-0.17%
Water supply; sewerage, waste management and remediation activities	29,209	29,276	29,487	0.76%
Real estate activities	16,109	16,390	16,230	0.72%
Financial and insurance activities	73,192	75,152	75,417	-0.98%
Professional, scientific and technical activities	33,213	33,500	33,331	0.35%
Public administration and defense; compulsory social security	1,315,784	1,323,584	1,317,148	-0.50%
Construction	31,202	31,510	31,343	-0.49%
Mining and quarrying	91,548	93,479	92,577	-0.53%
Education	510,365	517,681	518,120	-0.96%
Administrative and support service activities	53,796	57,196	57,857	0.08%
Agriculture, Forestry and Fishing	502,673	506,512	507,880	1.16%
Manufacturing	20,180	20,336	20,278	0.27%
Arts, entertainment and recreation	37,083	37,672	37,420	-0.29%
Information and Communication	359	363	366	-0.67%
Activities of extraterritorial organizations and bodies	137,719	139,404	139,674	0.83%
Transportation and storage	1,289,391	1,297,693	1,293,513	0.19%
Wholesale and retail trade; repair of motor vehicles and motorcycles	329,399	334,505	334,866	-0.32%
Accommodation and food services activities	168,950	171,268	170,545	0.11%
Total	4,838,516	4,928,977	4,966,409	0.76%

Source: Monshaat (2020)

INDUSTRY-WISE SAUDI EMPLOYMENT JAN -MAR 2020

INDUSTRY	Jan 2020	Feb 2020	Mar 2020	March-Feb (%)
Activities of households as employers	-	1	1	0.00%
Other service activities	25,893	26,428	26,193	-0.89%
Other personal service activities	793	818	872	6.60%
Human health and social work activities	44,725	45,209	44,765	-0.98%
Electricity, gas, steam and air conditioning supply	2,560	2,604	2,616	0.46%
Water supply; sewerage, waste management and remediation activities	1,818	1,692	1,688	-0.24%
Real estate activities	8,499	8,552	8,542	-0.12%
Financial and insurance activities	8,969	9,120	9,029	-1.00%
Professional, scientific and technical activities	20,392	20,855	20,950	0.46%
Public administration and defense; compulsory social security	12,700	12,778	12,705	-0.57%
Construction	154,331	155,315	154,053	-0.81%
Mining and quarrying	7,690	7,821	7,671	-1.92%
Education	48,475	49,860	49,082	-1.56%
Administrative and support service activities	51,902	52,430	51,984	-0.85%
Agriculture, Forestry and Fishing	6,024	6,078	5,902	-2.90%
Manufacturing	91,884	93,262	93,734	0.51%
Arts, entertainment and recreation	5,163	5,106	5,102	-0.08%
Information and Communication	11,627	11,615	11,491	-1.07%
Activities of extraterritorial organizations and bodies	197	195	194	-0.51%
Transportation and storage	21,251	21,549	21,839	1.35%
Wholesale and retail trade; repair of motor vehicles and motorcycles	245,472	246,511	246,343	-0.07%
Accommodation and food services activities	57,155	58,046	58,033	-0.02%
Total	827,520	835,845	832,789	-0.37%

Source: Monshaat (2020)

INDUSTRY-WISE NON-SAUDI EMPLOYMENT JAN -MAR 2020

INDUSTRY	Jan 2020	Feb 2020	Mar 2020	March-Feb (%)
Activities of households as employers	4	5	5	0.00%
Other service activities	143,057	144,840	144,352	-0.34%
Other personal service activities	52,892	96,228	143,552	49.18%
Human health and social work activities	79,851	81,067	80,984	-0.10%
Electricity, gas, steam and air conditioning supply	8,395	8,466	8,435	-0.37%
Water supply; sewerage, waste management and remediation activities	7,306	7,366	7,439	0.99%
Real estate activities	20,710	20,724	20,945	1.07%
Financial and insurance activities	7,140	7,270	7,201	-0.95%
Professional, scientific and technical activities	52,800	54,297	54,467	0.31%
Public administration and defense; compulsory social security	20,513	20,722	20,626	-0.46%
Construction	1,161,453	1,168,269	1,163,095	-0.44%
Mining and quarrying	23,512	23,689	23,672	-0.07%
Education	43,073	43,619	43,495	-0.28%
Administrative and support service activities	458,463	465,251	466,136	0.19%
Agriculture, Forestry and Fishing	47,772	51,118	51,955	1.64%
Manufacturing	410,789	413,250	414,146	0.22%
Arts, entertainment and recreation	15,017	15,230	15,176	-0.35%
Information and Communication	25,456	26,057	25,929	-0.49%
Activities of extraterritorial organizations and bodies	162	168	172	2.38%
Transportation and storage	116,468	117,855	117,835	-0.02%
Wholesale and retail trade; repair of motor vehicles and motorcycles	1,043,919	1,051,182	1,047,170	-0.38%
Accommodation and food services activities	272,244	276,459	276,833	0.14%
Total	4,010,996	4,093,132	4,133,620	0.99%

Source: Monshaat(2020)

WHERE

WE ARE NOW

The current crisis has affected SMEs disproportionately, and has revealed their vulnerability to the supply and demand shock (in particular with regard to their liquidity) with a serious risk that over 50% of SMEs will not survive the next few months [OECD, 2020]

The number of job creation in Saudi Arabia for SME in March 2020 has been decreased by 59%. However, the net employment (job creation) in March 2020 is 37,432. However, the number of Saudis is losing their net jobs by -0.37% whilst number of non-Saudis are gaining net jobs by 0.99%. Particularly, 11 of 22 industries negatively affected:

- Construction
- Wholesale and retail trade; repair of motor vehicles and motorcycles
- Education
- Other service activities
- Human health and social work activities
- Information and Communication
- Public administration and defense; compulsory social security
- Mining and quarrying
- Financial and insurance activities
- Arts, entertainment and recreation
- Electricity, gas, steam and air conditioning supply

WHERE

WE ARE NOW

No. of Saudis net jobs lost

due to **COVID-19** are

3,056

Construction and Wholesale and retail trade; repair of motor vehicles and motorcycles are the two most affected industry. The total job lost for these two industries are **10,616**

37,432

JOB CREATION

MARCH 2020

90,642

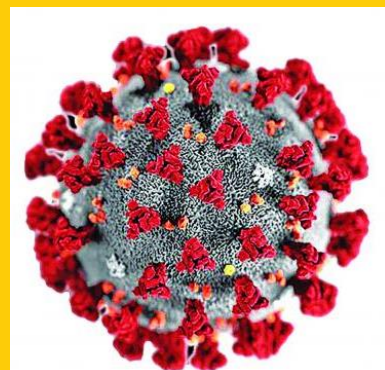
JOB CREATION

FEB 2020

-59%

JOB CREATION
DECREASED BY

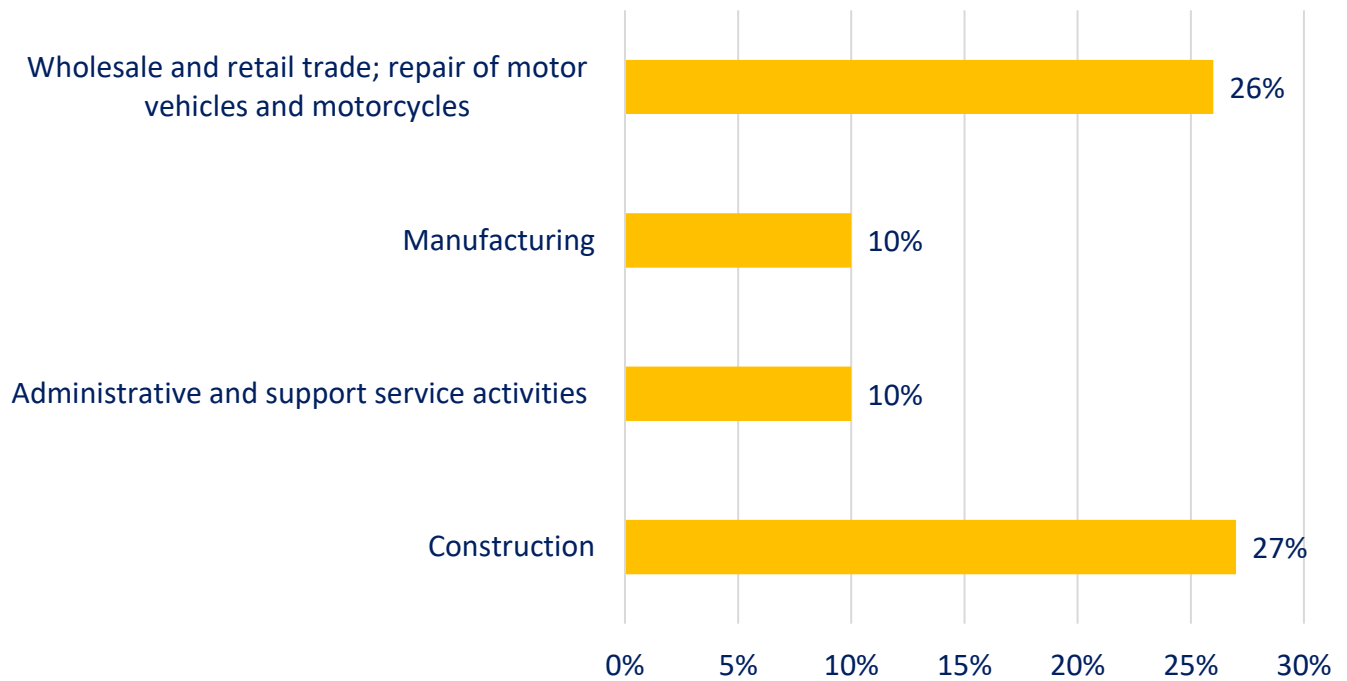
COVID-19 Impact on
March 2020
Employment



FUTURE EMPLOYMENT OUTLOOK – INDUSTRY

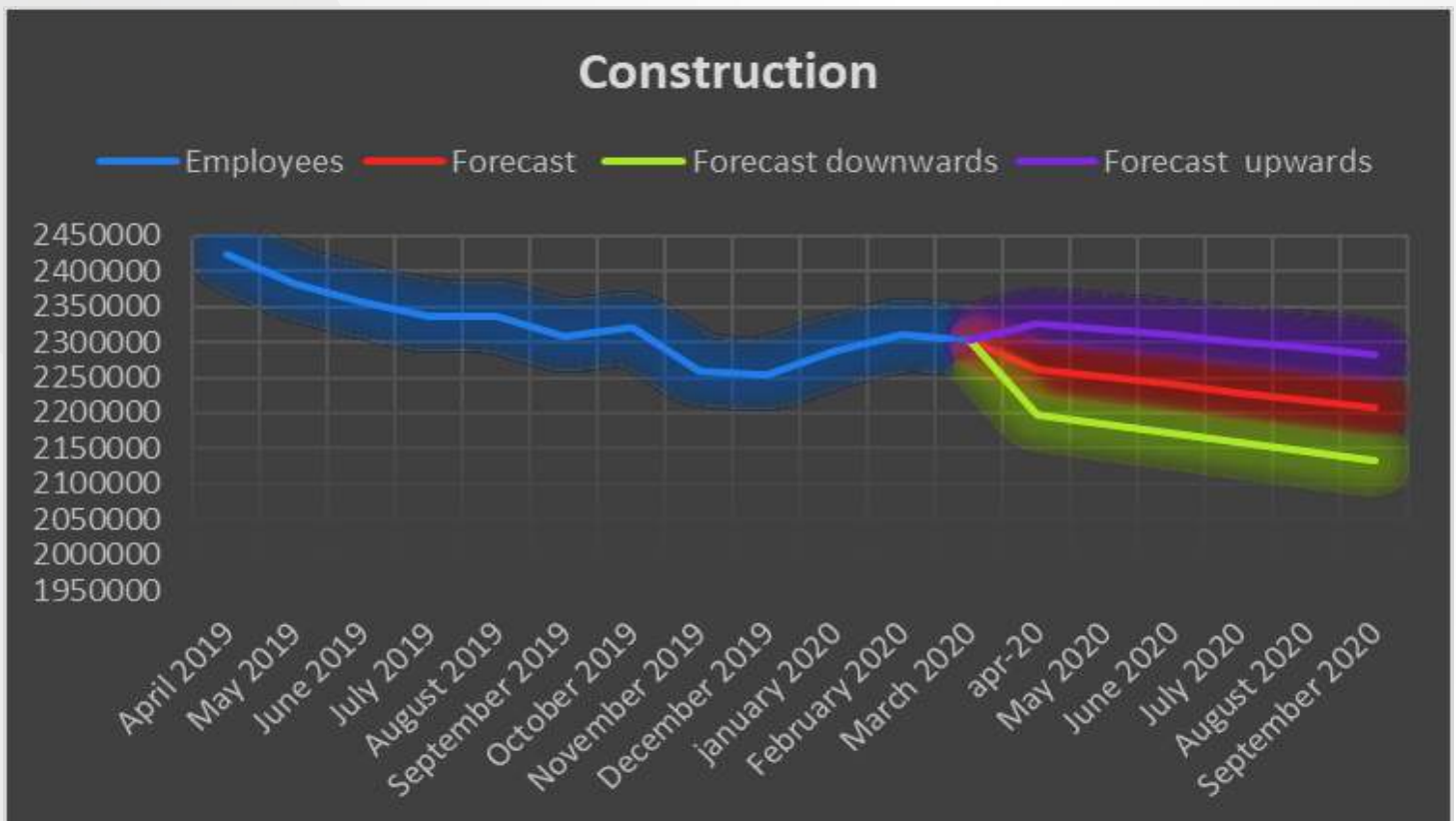
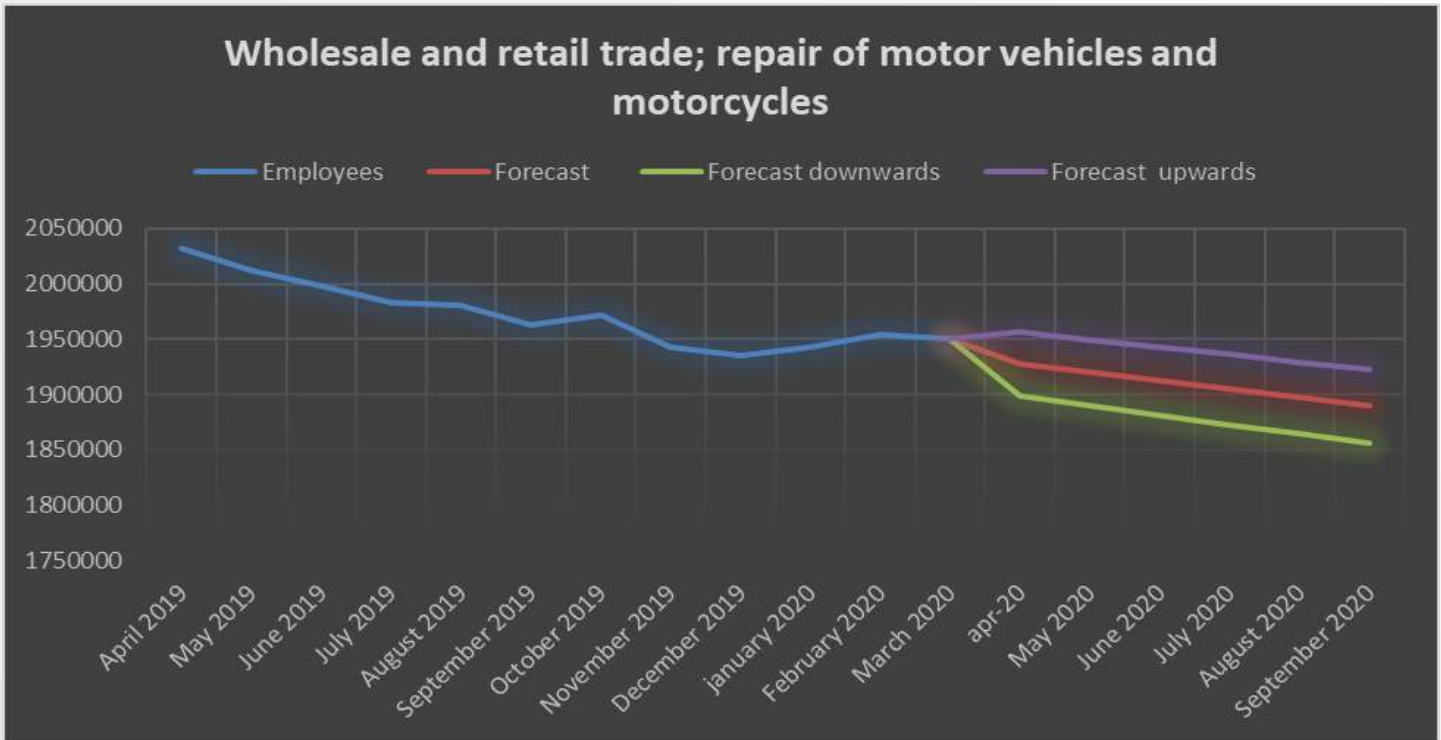
4 Industries are employing more than **73%** of SME employment in Saudi Arabia (3,636,661) in March 2020.

Fig. 4. Employment Percentage by Industry



Source: Monshaat (2020)

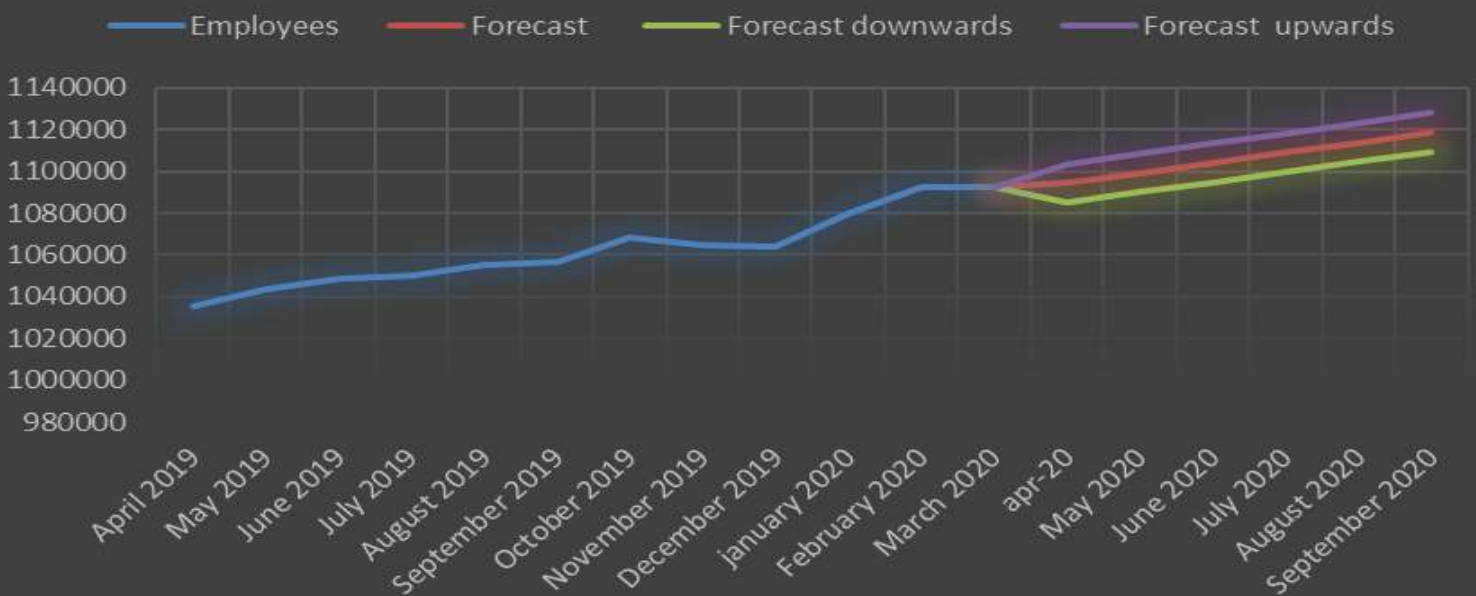
Construction and Wholesale and retail trade; repair of motor vehicles and motorcycles are **most unlikely to create jobs** over the next quarter.



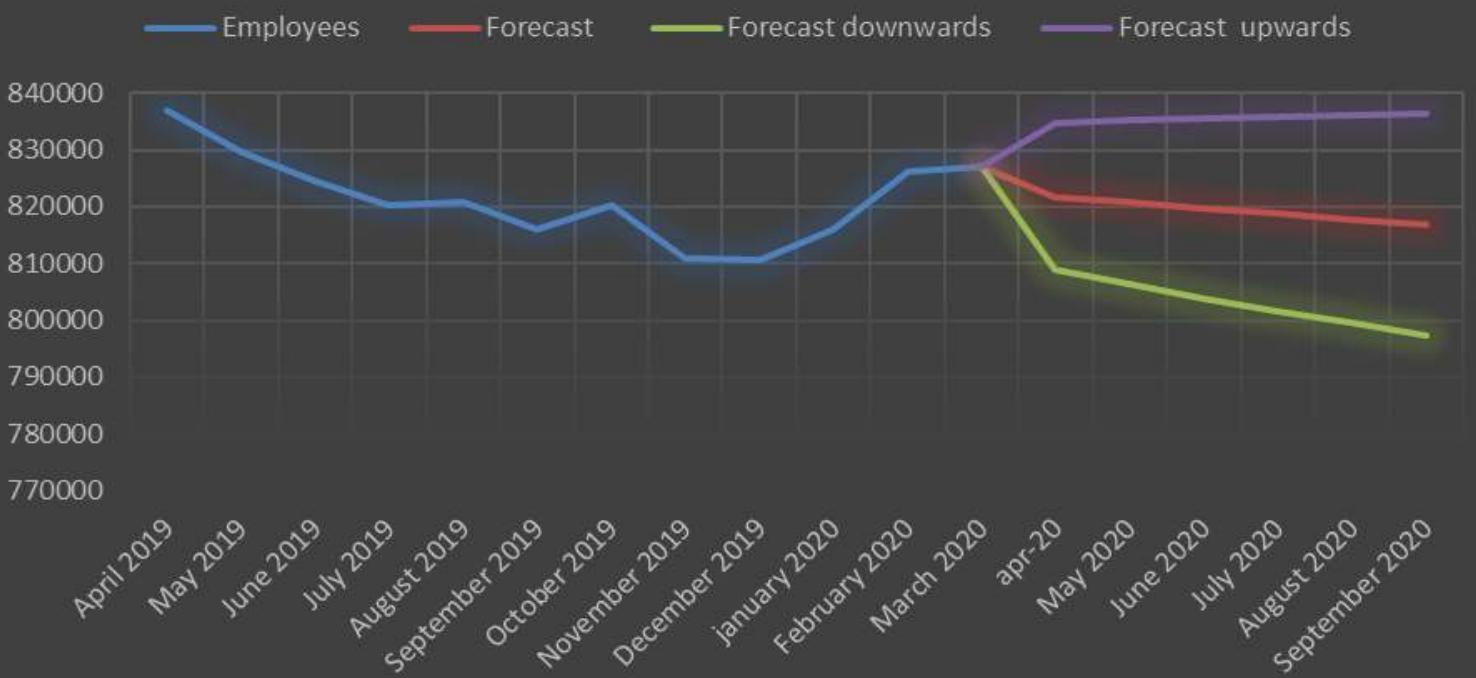
Source: Authors' own depiction (2020)

Administrative and support service activities is **most likely to create jobs** over the next quarter whilst and Manufacturing Industries is in more complex scenario.

Administrative and support service activities



Manufacturing



FUTURE EMPLOYMENT OUTLOOK – MICRO, SMALL & MEDIUM

Dynamic Panel Data

The DPD (Dynamic Panel Data) approach is usually considered the work of Holtz-Eakin, Newey and Rosen (Econometrica, 1988). Arellano and Bond (AB) (Rev. Ec. Stud., 1991), popularized their work based on the notion that the instrumental variables approach does not exploit all of the information available in the sample. By doing so in a Generalized Method of Moments (GMM) context, we may construct more efficient estimates of the dynamic panel data model. A key aspect of the AB strategy, is the assumption that the necessary instruments are 'internal': that is, based on lagged values of the instrumented variable(s). The estimators allow the inclusion of external instruments as well.

The AB approach, and its extension to the 'System GMM' context, is an estimator designed for situations with:

- 'small T, large N' panels: few time periods and many individual units
- a linear functional relationship one left-hand variable that is dynamic, depending on its own past realisations
- right-hand variables that are not strictly exogenous: correlated with past and possibly current realisations of the error
- fixed individual effects, implying unobserved heterogeneity heteroskedasticity and
- autocorrelation within individual units' errors, but not across them and fits to our case given the available dataset.

We consider the following equations:

$$y_{it} = X_{it}\beta_1 + W_{it}\beta_2 + v_{it}$$

$$v_{it} = u_i + \epsilon_{it}$$

where X_{it} includes strictly exogenous regressors, W_{it} are predetermined regressors (which may include lags of y) and endogenous regressors, all of which may be correlated with u_i ,

the unobserved individual effect.

In our case:

y_{it} vector has units $i = 1, 2, \dots, 21$, and k time $t = 1, 2, \dots, 12$ months

X_{it} is the matrix of exogenous instruments (macroeconomic variables). It is common for each sector i .

W_{it} , which are the lags of the dependent variable

The AB estimator sets up a generalized method of moments (GMM) problem in which the model is specified as a system of equations, one per time period, where the instruments applicable to each equation differ (for instance, in later time periods, additional lagged values of the instruments are available).

Then the system is

$$Y = c(0) + c(1) * Y(t-1) + \sum_t X_t + u(t) \text{ for each sector } i, 1, 2, \dots, 21 \text{ with orthogonal residuals.}$$

We only consider one lag (L1) for the dependent variable y_{it} and not of X_{it} . This is because we are interested to check for the current effect of the exogenous variables while having a trend in the endogenous as panel interactions.

Panel VAR

The panel VAR framework is a coherent approach to estimating interdependencies by treating all the variables as endogenous and allowing time lags across the variables. It is useful to address a variety of issues, such as the transmission of shocks across units and time, and for that reason is chosen in our case study.

Without loss of generality, we illustrate the specification of our panel VAR framework, assuming one lag. Let y_{it} be the $k_i \times 1$ vector of endogenous variables for each unit $i, = 1, 2, \dots, N$.

The $k_i \times 1$ vector of endogenous variables takes the form

$$Y_{i,t} = [y'_{i,t}, \dots, y'_{N,t}]'$$

The panel VAR is written as:

$$Y_{i,t} = A_{i,0} + A_i(l)Y_{i,t-1} + u_{i,t}$$

where $A_{i,0}$ is the vector of all the deterministic common components of the data for all units i , t denotes the time parameter, where $t=1, 2, \dots, T$, coefficients $A_i(l)$, and $u_{i,t}$, is the $G \times 1$ vector of contemporaneously correlated random disturbances with zero mean and the non-singular variance–covariance matrix Σ_u .

The dynamics of the model can be investigated by impulse response analysis (IRF). The IRFs are informative for the shocks and interactions arising between the endogenous variables of the system. The standard errors of the impulse response functions and confidence intervals are generated using Monte Carlo simulations. The impulse response function is derived to one standard deviation shock to equation j corresponding to variable k at time t on the expected values of Y at time horizon $t+h$.

In this context, there are two main advantages using the panel VAR approach when addressing the research question associated with this study. First, we obtain KSA employees' dynamic responses to shocks because of the model's ability to approximate complicated, interdependent adjustment paths with the time-series information. Panel VARs are particularly suited to analysing the transmission of idiosyncratic shocks across units and time. In addition, we can control for individual heterogeneity and specify the time-varying relationships between dependent and independent variables.

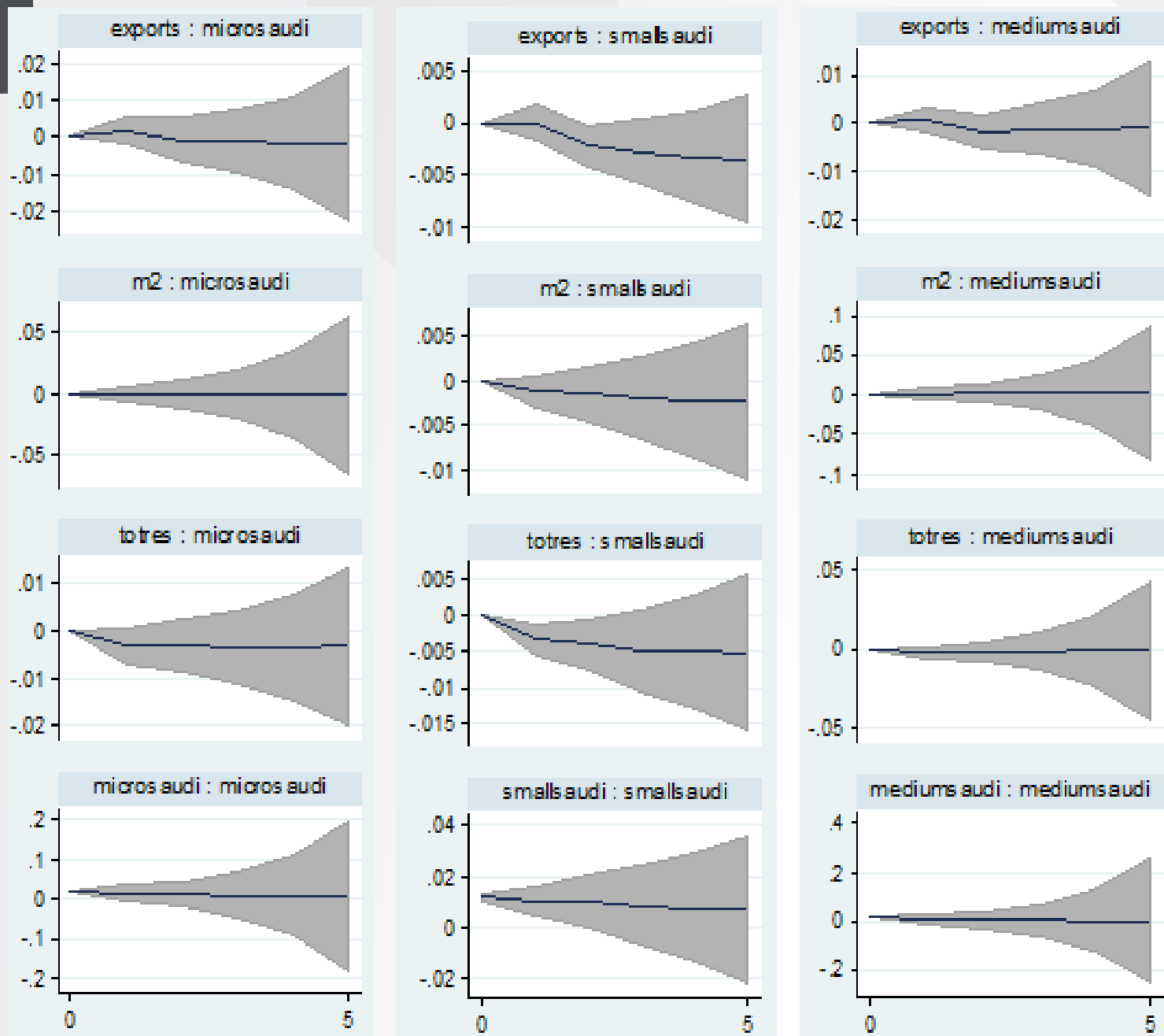
In the graphs:

Impulses of macro-variables to the number of employees. The blue line represents the median estimate of the response. The shadow grey area around the median estimate line of the response represents the statistically significant 95% confidence bands generated from 5000 Monte Carlo bootstrap resampling.

MICRO - SAUDI

SMALL - SAUDI

MEDIUM - SAUDI



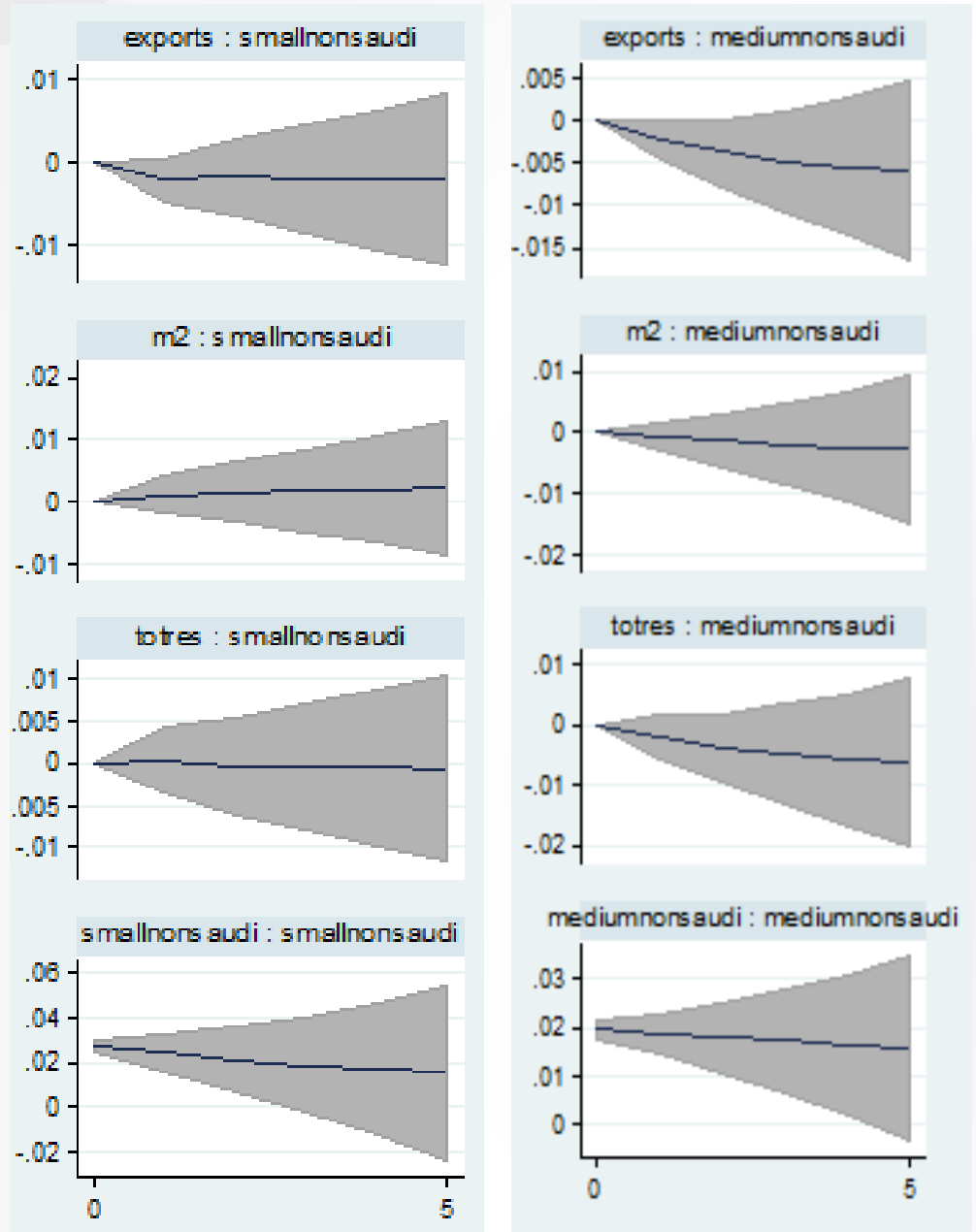
Source: Authors' own depiction (2020)

MICRO – NON-SAUDI

SMALL – NON-SAUDI

MEDIUM – NON-SAUDI

NO RESULT



Source: Authors' own depiction (2020)

FINDINGS

1

There is apparent that in the economy the largest sector is Construction. The big difference between the mean number of employees and the median number of employees shows that if this sector is hurt, then there will be a problem in the employability;

2

Macro variables do not affect employability of Saudi and non-Saudi in Medium enterprises;

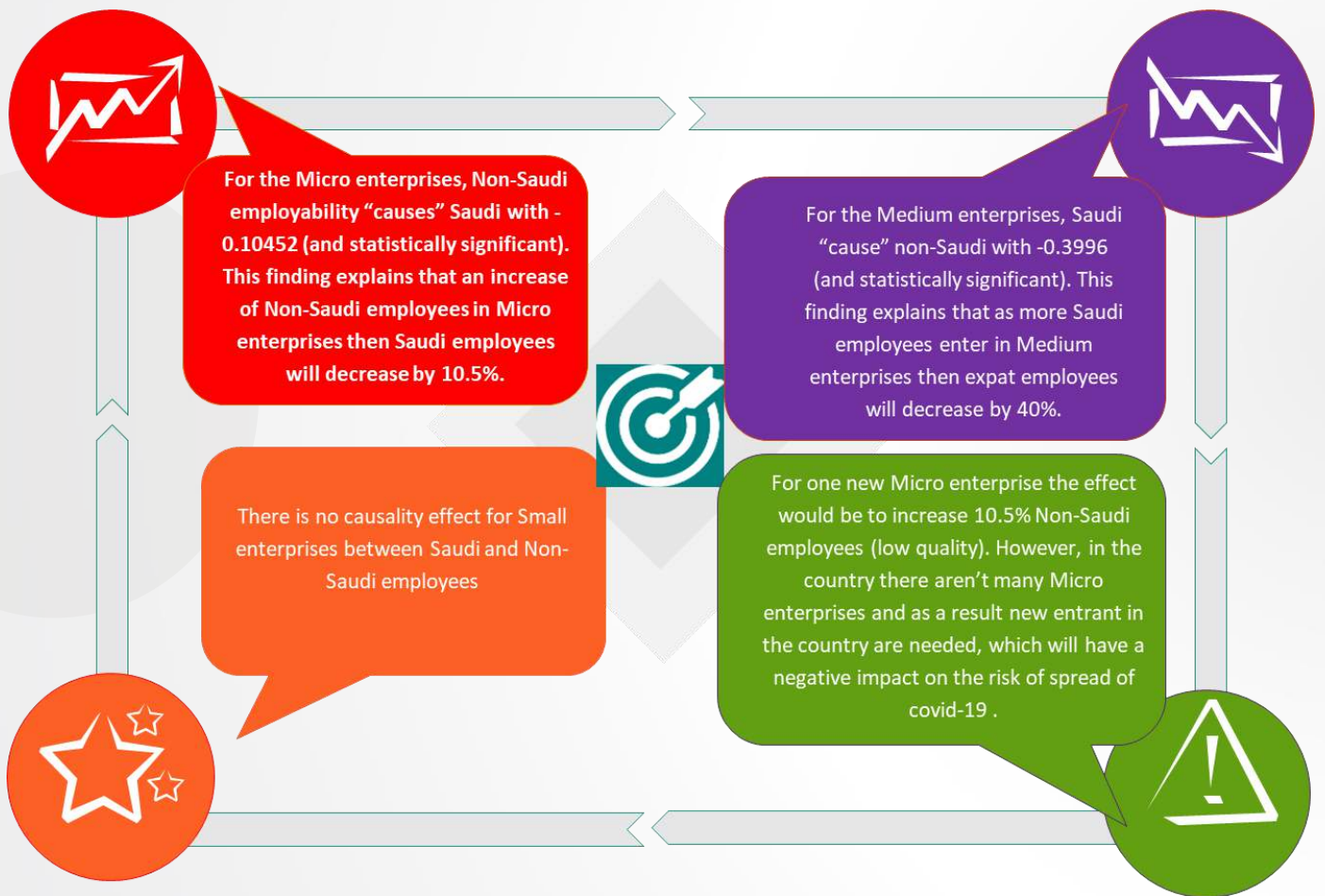
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Medium enterprises won't use Saudi employees;

4

For increasing Saudi employability more Micro enterprises are needed;

POLICY IMPLICATIONS



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63%

23%



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