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The effect of Corona (Covid-19) pandemic on the productivity of small workshops in craft districts.

By

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Abstract

The purpose of this study is to determine the influence of Corona (Covid-19) on the productivity of small workshops in artisanal regions of urban communities, as well as how the virus affects the workshops' productivity and income, as well as the income of their employees. The qualitative technique was used with 15 craft project owners in a semi-structured interview, and the quantitative approach was used with a questionnaire to a sample of (100) craft workshop owners and workers, culminating in a conclusion and recommendations. All participants appear to concur that the spread of the Corona virus has impacted small artisan enterprises in their three sectors, resulting in reduced working hours and output, as well as low income for the enterprise and its personnel. The data analysis revealed that the field study results may have been more accurate if they had not been constrained by geographical constraints (Cairo governorate).

Keywords: COVID-19 pandemic, small workshops, artisanal districts

Introduction

Small-scale industrial projects are receiving a lot of attention, both academically and practically, as the importance of industry in the economic development efforts of various countries increases. healthy food as well as the use of local raw materials, which reduces imports and generates hard currency (dollars) for developing countries, especially emerging economies.

On 30 January 2020, Covid-19 was declared an emergency by the International Health Regulations Emergency Committee of the World Health Organization, and all countries took action and financial support during the Corona pandemic to prevent a collapse of the economy, which in turn affects the social, environmental and health lives of citizens [1].

Small industrial enterprises, especially workshops in the craft districts of the new urban settlements, were among the first to suffer production losses due to the spread of the Corona pandemic (Covid-19).

Small craft enterprises play an important and growing role in the industrialised and developed world, as they diversify the economic structure through their many and varied activities. Unemployment as a result of the rapid development of technology in many sectors of the economy [2]. In addition, developing countries see modest industrial facilities as an opportunity to catch up with developed countries, increase national income, diversify income sources and raise the standard of living of citizens [3]. Many factors contribute to the desire to establish and develop small industries, including:

1. Easier establishment compared to large enterprises 2- Flexibility in production with vertical integration to meet the needs of large industries 3- Maximum use of locally available materials 4- Absorption of surplus labour and dealing with unemployment 5- The ability to meet the basic needs of the population, thus reducing the amount of imports while allowing individuals to achieve self-fulfilment and meet their material and social needs [4]. In Egypt, the number of small and medium enterprises, including micro enterprises, exceeds 2.5 million projects. They account for about 99 per cent of non-agricultural private sector projects, generate about 80 per cent of GDP, are responsible for about 90 per cent of capital formation and provide about 75 per cent of employment. Every year, 39 thousand new production projects are launched. Small industrial projects contribute about 13% of the value of industrial production, medium enterprises about 46% and large projects about 41%. [5].
2. Despite the importance of this sector, at the beginning of 2020 the world faced one of the most difficult crises in history at all social, economic, political and even legal levels, with the outbreak of the Covid 19 epidemic, classified by the World Health Organisation as a pandemic with serious consequences, requiring concerted efforts by all countries to combat it and limit its terrible consequences [6]. The coronavirus pandemic COVID -19 has caused significant loss of life and terrible human suffering worldwide. One of the worst health disasters in modern history, the pandemic has also triggered a huge economic crisis as production in the affected countries came to a halt and consumption and confidence declined [7]. As a result of the pandemic, all countries, especially those where the virus has spread, have taken a number of precautionary and preventive measures, including disrupting economic life and closing production facilities, to prevent the epidemic from spreading and reaching a stage that is difficult to control [8].
3. The Egyptian government has also taken measures to stop the spread of the (Covid-19) pandemic, including suspending international and commercial passenger flights, closing schools and clubs, and imposing a nationwide night curfew [9]. Given the impact of the pandemic on all components of the state, which undeniably affects the social and economic levels, and given the crucial role that small productive enterprises play as key actors in the social and economic system because they are involved in a network of contractual relationships with their partners through which they are obliged to provide a service or sell a product. Or the execution of work or supplies within certain deadlines and during a health emergency that resulted in restrictions on movement, the closure of places and facilities and the cessation of many commercial activities, while maintaining the necessary activities under strict conditions to prevent the spread of Corona. As a result, workers' wages fell and the productivity of the workshops decreased due to the lack of full-time workers. In addition, many workers lost their jobs because the workshops were closed or restricted during the Corona period [10]. The current study therefore seeks to determine the impact of the Morona Pan Demy (Covid-19) on the productivity of small workshops.
4. The current study aims to determine the impact of the Corona Pandemic (Covid-19) on small industrial workshops. This results in the following sub-objectives:
5. To recognise the impact of COVID -19 on the number of work shifts within the small workshop before and after the pandemic, 2- To recognise the impact of COVID -19 on the income of a small workshop before and after the epidemic, 3- Identify the impact of Corona pandemic on the production rate of the small workshops before and after the Covid 19 pandemic 4- Identify the impact of Corona pandemic on the income of the employees of the small workshops before and during the Covid 19 pandemic 5- Identify the impact of Corona pandemic on the energy consumption in the small workshops before and after the Covid 19 pandemic.

2. The impact of the COVID-19 crisis on the productivity of small businesses in Egypt

2.1 COVID-19 influence in small businesses.

Many studies have found that the Covid 19 problem has had economic and social impacts on the productivity of small industries and the workers involved in these projects:

The study by Shafi et al. (2020) to quantify the impact of the Corona virus outbreak on creative enterprises in Pakistan showed how the Corona virus affected the Pakistani economy and that the most affected sector was small and medium enterprises. The aim of the study was to examine the impact of the epidemic on this sector and look for solutions to help them reduce their losses and survive. Many studies have found that the Covid 19 epidemic also has an economic impact. For this research, an online survey was conducted among 184 Pakistani SMEs. According to the results of the survey, most businesses in Pakistan were significantly affected, with many financial, distribution and supply chain problems leading to lost profits and sales. ic and social impacts on small business productivity [11].

The findings of Alexander et al. (2020) also suggest that the Corona crisis led to mass layoffs and the closure of many businesses. Due to their precarious financial situation, these establishments also faced financial problems [12]. The study also confirmed the findings of the Bartik study (2020), which examined the impact of the epidemic on small businesses through a survey of 5800 small and medium-sized enterprises in the United States of America. According to the study's findings, Corona has caused the closure of 43 per cent of small businesses since January 2020. The results of the study also show that the financial situation of these small businesses is precarious [13]. The study (Barha and Duricin, 2020) also showed the impact of the epidemic on the work of small and medium-sized enterprises in Serbia and discussed the main problems they faced in times of the epidemic. The methodology used in this study consisted of an online survey in the months of March and April 2020. According to the survey results, the crisis has negatively affected small and medium-sized enterprises in different ways and with different impacts. 20 % of employees of companies in Serbia have decided to work online from home, leading to a decrease in the use of trade and supply chain capacities. Other problems faced by around 10% of SMEs include limited working hours, lack of resources, salary payments and inefficient production [14].

The study by Mansour, 2021, conducted in the Kingdom of Saudi Arabia, found that the Covid 19 pandemic had a direct impact on the country's revenue and expenditure and that project owners, especially small and medium enterprises, did not pay taxes. Health promotion [15].

The study by Zeinab and Doaa (2020) seeks to understand how the epidemic is affecting small and medium enterprises in Egypt and how these start-ups are generally coping with this dangerous situation. Always be adaptable and invest in new ideas [16].

On the other hand,the 2021 study by Ronen Hare found that despite the long-term impact of Covid-19 in all aspects of life, the revenues of most small businesses in the sector have not been negatively affected and most of them have not adapted or changed their business activities [17].

Study Gitanjali Goswami (2021) pointed out that the COVID -19 pandemic and the lockdown announced in March 2020 led to an economic downturn in India, which had a

negative impact on various sectors of the economy. The industrial sector, especially the handicraft sector, was also hit hard by the epidemic. The study was conducted through a field survey in Nalbari district of Assam through telephone interviews and analysis through descriptive statistics. The study found that the economic condition of handicrafts is not good and the spread of Corona virus has also led to shortage of labour, capital and raw materials, decline in demand for the product, lack of market and reduction in working hours, restriction in transportation and lack of storage facilities. The timing of the closure was particularly unfavourable for the jabi industry. As a result, artisans were forced into a miserable situation [18].

As indicated by a study (Henry Nosih, 2021): That the Corona virus has affected micro and small enterprises more than large enterprises due to their limited resources, the study conducted a survey of 100 micro, small and medium enterprises in the Pekalongan region. The results indicated that micro, small and medium enterprises suffered from a decrease in their sales volume and a decrease in employment [19].

Study (Andi Amei, 2020), The objective of this study was to identify and analyse the impact of the coronavirus pandemic on MSMEs in Indonesia. The method of analysis used in this study is a qualitative descriptive method. The loss of turnover of MSME actors and cooperatives due to COCOID-19 was very significant since its release at the end of 2019. The study's findings also point to a significant decline in sectors such as tourism, manufacturing, carpets and timber, and small and medium industries also suffered a decline in revenue and production. The reason for this is the shortage of raw materials and the decline in the labour force [20].

The findings of the study (Shahriar, et al., 2021) show the negative impact of COVID -19 on the economy of Bangladesh by affecting the lives of millions of people and hampering their sources of income. The Covid-19 outbreak has increased pressure on the labor market as most companies have stopped the hiring process to reduce their operational costs, increasing the unemployment rate of graduates in Bangladesh. Skill development program, improving labour market flexibility, introducing credit schemes to create employment opportunities and developing entrepreneurship ecosystems in Bangladesh [21].

According to the results of a study by the Egyptian Ministry of Planning and Economic Development, the Corona virus had a negative impact on micro, small and medium-sized enterprises. Three quarters of the enterprises suffered a decrease in their business activity and about 9 % ceased operations. Regarding the impact of the pandemic on employment, the results showed that the number of employees in micro, small and medium-sized enterprises decreased by 15 % after the pandemic. The study also showed that small businesses were most affected by the drop in sales and orders, as well as cost increases due to high energy prices [22].2.2 The role of the Egyptian government in supporting small industrial facilities during the Corona pandemic

In Egypt, the small and micro enterprise sector is regarded as a major driver of the Egyptian economy and one of the fastest expanding sectors, contributing to economic growth and regional development. These projects play a key role in producing job possibilities in the Egyptian market and are one of the most essential variables that the Egyptian government focuses on in order to assist strengthen its economy and achieve long-term development goals.

Despite the importance of this sector in Egyptian society, the Corona crisis had an impact on small initiatives because to their vulnerability and inability to resist. Its consequences

and impact on bankruptcy and total closure [23].

In light of the problems that have afflicted the industrial sector in general, and the small sector in particular, there have been calls for the government to intervene to mitigate the effects of this pandemic, including encouraging lending to small projects and developing mechanisms to deal with financial stumbling in an appropriate manner. Indeed, the government announced a series of measures to mitigate the impact of the Corona pandemic on small-scale projects:

1. Allocating loans of up to one million pounds for industrial projects and half a million pounds for service projects to deal with limited liquidity, difficulties in paying workers' wages or operating expenditures, and multiple financial obligations.
2. The Central Bank of Egypt also established a resolution to postpone small and medium-sized business instalments for six months, to postpone the deduction of loan instalments provided to individuals for six months, and to postpone credit card dues for six months.
3. To facilitate the assumption, the payment of payments owed to borrowers from the Ministry of Development's Local Development Fund would be postponed for three months, from April 1, 2020 to July 1, 2020. 2020 [24].

However, the government's initiatives to assist the owners of small industrial workshops are insufficient in the owners' opinion, because the problem is not one of borrowing, but of a drop in sales. Fields of Marketing, Operations, and Production

3. Methodology of Study

This study is classified as a descriptive study because it attempts to identify the characteristics of a particular phenomenon (the impact of the pandemic COVID -19 on the productivity of small industrial enterprises).

A sociological sample survey was conducted among a number of workers and workshop owners in the Cairo artisan and Ain Shams areas who met the criteria and agreed to participate in the study. The social sampling method was used to achieve the objectives of the study and to answer their questions.

3.1 Study tools

The following instruments were used for the study:

1. A questionnaire administered to a sample of (100) small business owners and employees.
2. Semi-standardized interviews with a sample of owners of small industrial enterprises operating in the area designated for the study. Interviews are conducted mainly when the researcher finds that he has crucial questions that cannot be adequately answered without more open-ended questions. In addition, these interviews helped the researcher to get thorough answers about the productivity of the workshops and their influence during the Corona (Covid-19) period as well as more in-depth answers on the topics of the study and the interview lasted between one and one and a half hours.
3. Statistical processing methods:
4. The study data will be processed using the statistical analysis programme (SPSS) and the following statistical methods:
5. Frequencies and percentages to determine the personal characteristics of the study sample members and the attitudes of their members towards the main and subtopic sentences included in the study instrument.
6. The Pearson correlation coefficient was used in the study to check the validity of the instrument.

7. The Cronbach's alpha coefficient was used in the study to confirm the stability of the instrument.
8. The standard deviation was used to determine the extent of deviation of the study participants' responses from their arithmetic mean for each of the phrases of the study variables and each of the main axes.

3.3 Interview results

Interviews were conducted with (15) experts and owners of small industrial workshops in various fields to answer the questions of the study:

1. Interviews were conducted with the owners of car mechanics workshops, and they were asked about the impact of the workshop's work during the Covid-19 period. In this period, rates of up to 50% of the monthly revenue, and the income of workers in the workshops in which they work was affected by almost the same percentage. The owners of the workshops also confirmed that more than 50% of the workers in the workshops were working temporarily and according to the needs of the work.
2. And by asking them about the production of the workshops during the Corona period, they confirmed that they were greatly affected by high rates of up to 50% due to the total or partial closure.
3. When asked about government support during this period, most of the answers were that they did not receive government support, and the majority of them con-firmed that they did not obtain loans because they were unable to pay them.
4. 2- Interviews were also conducted for the owners of metal-forming workshops, and the results did not differ much from the owners of the car workshops, but they added that the nature of their work is to produce in the workshops and then go to the customer's house to install the material. Due to the closure, their production was affected by up to 70% during the pandemic, as well as installation work, and the owners of these workshops indicated that the rate of energy consumption had decreased as well as the rate of raw materials supply decreased due to the closure and lack of im-port.
5. As for the income, it decreased by the same percentage, as well as the high price of raw materials has increased in the market, with the customer not being able to buy. They also indicated that the worker's income decreased significantly, in addition to the loss of about 40% of workshop workers during the pandemic period. The majority of metal installation workshop owners also confirmed that they did not obtain govern-ment loans due to the inability to pay.
6. 3-In the interviews that were conducted with the owners of the carpentry work-shops, their answers were not very different from the other sectors, which affected their production during the Corona period by large percentages of up to 50%, as well as the decrease in the production and income of the workshops with approximately the same percentages.
7. With regard to the income of workshop workers, they confirmed that the income decreased due to the lack of permanent production during this period due to the clo-sure. Also, a number of them changed their activities during Corona to other food and commercial activities.
8. In the end, the owners of the previous three workshops (auto mechanics - metal forming - carpentry) confirmed that they reduced product prices to customers so that they can produce more, and despite that, production and income were greatly affected due to customers' fear of the Corona virus.

4. Results and discussion

4.1 The effect of the COVID-19 epidemic on the number of working shifts

According to table (1), the majority of workshops, whether in auto mechanics,

carpentry, or carpentry, work two shifts before Corona, while 18% work one shift and 4% work three shifts in second place. It is also discovered that there is no statistically significant difference between the three labor sectors.

Table (1) *Number of work shifts before the Corona pandemic*

variable	Categories	car workshops	%	Metal forming workshops	%	carpentry workshops	%	R	%
number of shifts	One shifts	7	23.3	6	15	5	16.7	18	19
	two shifts	22	73.3	32	80	24	80	78	78
	three shifts	1	3.4	2	5	1	3.4	4	4
	the total	30	100	40	100	30	100	100%	100

Following the Corona pandemic, the number of work shifts completely reduced, with the majority of people working just one shift during the day, a reduction of 75%, as seen in Table 2. This is unquestionably a result of the people's dread of leaving their homes during this time and the partial ban that was imposed on the nation to stop the spread of the Corona virus. he study's conclusions agreed with those of Gitanjali Goswami's study from 2021, which found that the spread of the Corona virus resulted in a lack of labor, capital, and raw resources as well as a reduction in working hours.

It also concurred with a research conducted in 2020 by Alexander et al. that demonstrated how the Co-rona crisis resulted in the liquidation of numerous small enterprises.

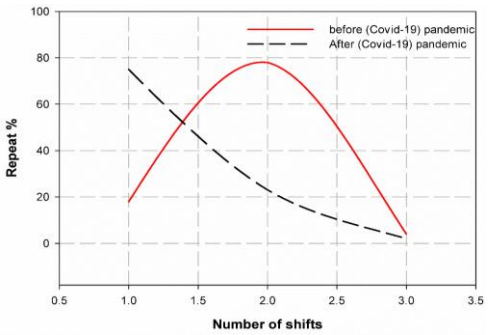

Fig. 1 *% Repeat and number of shift variation with the pandemic*

Table (2) *Number of works shifts after the Corona pandemic.*

variable	Categories	car workshops	%	Metal forming workshops	%	carpentry workshops	%	R	%
number of shifts	One shifts	22	73.3	30	75	23	76.7	75	75
	two shifts	8	27.7	8	20	7	23.3	23	23
	three shifts	0	0	2	5	0	0	2	2
	the total	30	100	40	100	30	100	100%	100

4.2 The impact of the Corona pandemic (Covid-19) on workshop revenue

4.2.1 The decline in workshop income, broken down by workshop type

The findings in Fig. 2 demonstrate that the spread of the Corona virus had an impact on the revenue of auto repair shops because (70%) of the sample members responded "yes," indicating that they were impacted following the spread of the Corona virus as opposed to (13.3%) only prior to the spread of the Corona virus.

According to the figure's findings, just 15% of respondents said their income had been impacted by the Corona virus, while 65% of respondents said they had not been. This indicates that the income of metalworking companies had not been significantly impacted prior to its

spread. On the other hand, following the virus's propagation, (90%) of the study's participants said that the income of the workshops had been impacted, while (0%) said that it had not.

The results of the figure, when applied to the carpentry workshops, demonstrate that their revenue was not significantly impacted even prior to the spread of the Corona virus. Roughly 66.7% of the sample items were determined to be unaffected, while only 10% indicated that their revenue was impacted. On the other hand, following the virus's propagation, (80%) of the study's participants said that the income of the workshops was impacted, while (10%) said that it had not.

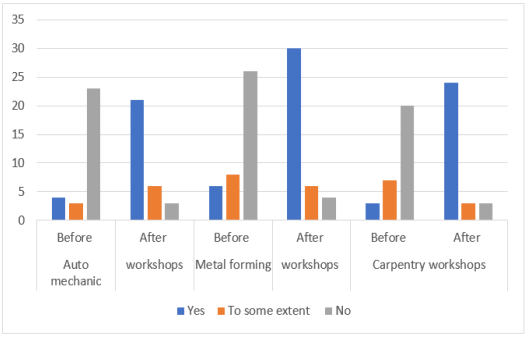

Fig. 2 *shows the income decline for workshops before and after the Corona epidemic, broken down by workshop type (Covid-19)*

4.2.2 Income decline overall and, in the carpentry,, metal forming, and automotive workshops before and after Corona (Covid-19)

With an arithmetic mean of (2.65) and a standard deviation of (0.657), the graph above shows that the drop in artisan workshop income after the spread of the Corona virus arrives first, as opposed to the decline in income prior to the virus's spread. The percentage of workshop owners and employees who indicated that their income was impacted by the virus increased to about (75%) from (13% prior to the infection's spread). This clarifies that in addition to the precautions taken at the time by the Egyptian government, the low number of visitors to the workshops, the brief working hours, and people's fear of getting the virus are some of the causes for this sudden decline in income.

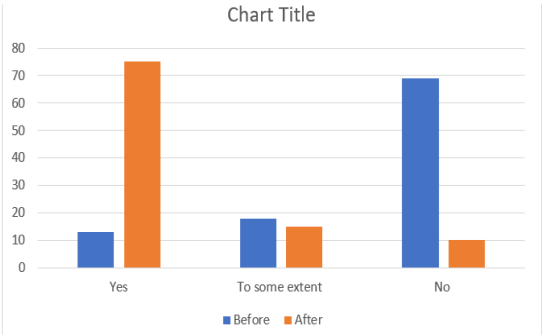

Fig. 3 *shows the difference in the income of the automotive, metal forming, and carpentry workshops before and after Corona (Covid-19).4.3 The percentage of low income for craft workshops*

4.3.1 The percentage of decrease in the income of car mechanics workshops

The data in Fig. indicate that, according to 66.7% of the study sample, the spread of the Corona virus caused a fall in the income of the workshops of more than 30%, while for 20% of them, the decrease was between 21% and 30%. On the other hand, prior to the virus's spread, no decline in income was seen.

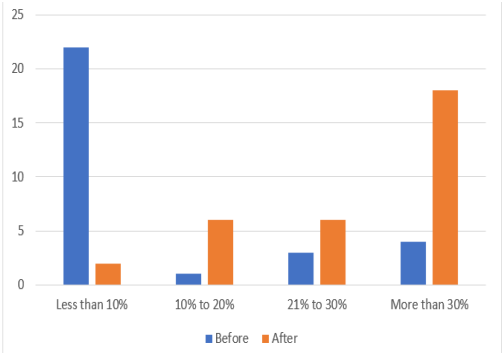

Fig. (4) *Percentage of decrease in the income of car mechanics workshops before and after the Corona virus (Covid-19). N=30*

4.3.2 The percentage of decrease in the income of metal forming workshops:

The current data demonstrates that before the Corona virus spread, income for around 87% of the sampled goods and aluminum workshops was only impacted by less than 10%. On the other hand, during the Corona virus outbreak, 90% of the workshop owners and employees claimed that their income had decreased by more than 30%.

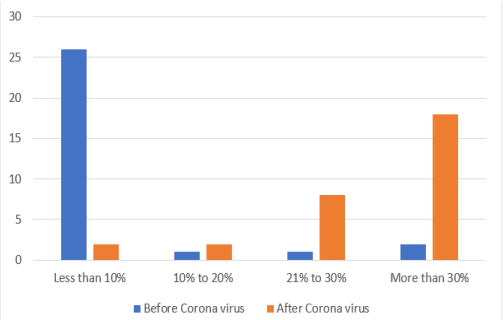

Fig. 5. *Percentage of decrease in the income of metal forming workshops before and after the Corona virus (Covid-19). N-40*

4.3.3 Reduction in revenue at the carpentry workshop:

The findings in Fig. (6) for the carpenters indicate that before the Corona virus spread, roughly (87%) of the sample had their vocabulary in carpenters, and their income was only impacted by less than (10%). However, following the Corona virus outbreak, roughly (60%) of the workshop owners and employees claimed that their income had decreased by more than 30%.

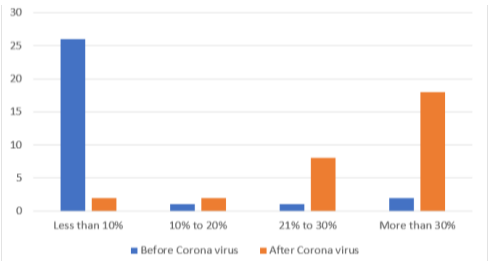

Fig. 6. *Percentage of decrease in the income of car mechanics workshops before and after the Corona virus (Covid-19). N=30*

4.3.4 The proportion of income decline for the three sectors' handcraft workshops:

According to the findings of Fig. 7, (83%) were only marginally impacted by 10%. On the other hand, in 72% of the sample members, the virus's ability to spread has diminished by more than 30%.

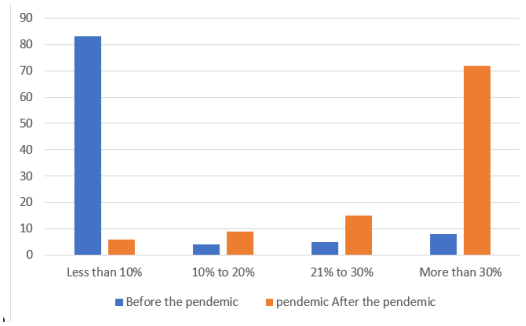

Figure 7. *Percentage of income decline for the three sectors' handicraft workshops, n = 100*

This shows that the work of the workshops has been impacted by the Corona virus, people's anxiety about stepping outside, the rising number of workers who lost their employment during this time, especially temporary workers, as well as these factors.

This is consistent with the conclusions of studies by Shafe et al. (2020), Alexander et al. 2020, and Mansour 2021, which found that the Corona crisis resulted in a drop in firm and manufacturing revenues as well as the firing of employees.

4.4 Concerning the decline in the number of craft workshops produced,
4.4.1 The decline in workshop productivity based on workshop type:

The current Fig. demonstrates that the spread of the Corona virus has resulted in a decline in the production of auto repair shops since more sample items (73.3%) were marked "Yes," indicating that they were impacted after the virus's spread, as opposed to just 13.3% before the virus's spread.

Regarding the metalworking shops, the findings revealed that aluminum workshop production also fell after the Corona virus spread, as indicated by the fact that (67.5%) of the sample members checked that their production fell in comparison to (12.5%) before the Corona virus.

When it comes to the production rate of carpentry workshops, the outcomes during the Corona virus outbreak were approximately 70%, as opposed to only approximately (13%) of workshops whose production declined before to the pandemic.

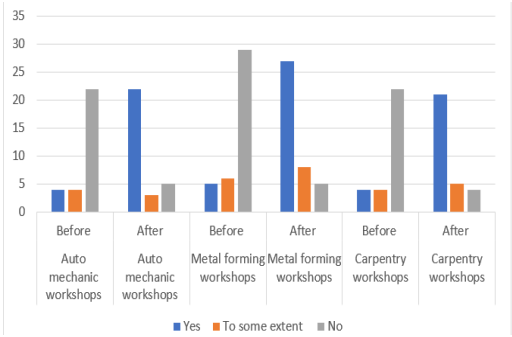

Fig. 8 *shows the reduction in production of several workshop types before and after the Corona pandemic (Covid-19)*

4.4.2 A decline in the combined output of the automotive, metal-forming, and carpentry workshops:

According to the data in the previous Fig., production in the workshops decreased dramatically after the Corona virus spread, by 70%, with an arithmetic mean of 2.55 and a standard deviation of 0.709, but output prior to the virus's spread was not significantly impacted.

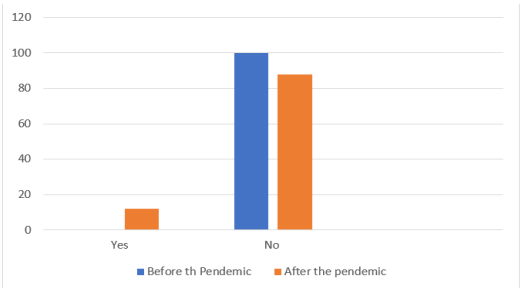

Figure 9 *shows a decline in overall workshop production (cars, metal forming, and carpentry) both before and after Corona (Covid-19), with n=100.*

The current findings support the findings of Gitanjali Goswami (2021), Henry Nosih, 2021, and Andi Emei (2020), who found that the Corona virus significantly reduced production and the amount of raw materials required.

4.5 Lower employee income

4.5.1 The decline in workshop workers' pay based on the type of workplaces.

The findings in Fig. demonstrate that, in contrast to the absence of income before to the spread of the virus, earnings of workers in vehicle mechanic workshops declined by (50%) following the spread of the Corona virus, with an arithmetic mean of (2.23) and a standard deviation (0.859).

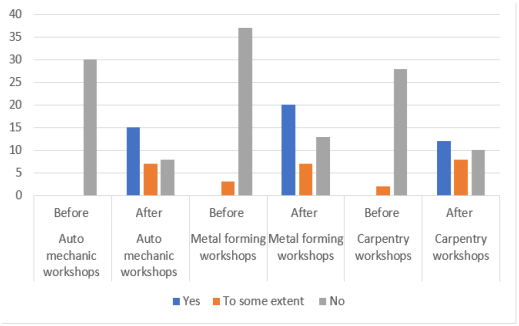

Fig.10: *Before and during the Corona Covid-19 epidemic, workshop workers' income decreased (Fig. 10).*

The results of the current figure also demonstrate that, in contrast to the absence of income before to the spread of the virus, the earnings of workers in the Aluminum workshops reduced by (50%) after the spread of the Corona virus, with an arithmetic mean of (2.17) and a standard deviation of (0.903). This suggests that decreased production and thus lower income have been caused by the Corona virus and accompanying preventative measures. The table's findings demonstrate that the salaries of carpentry workshop employees fell by 40% after the Corona virus spread, while roughly 94% of study participants said that their income was unaffected prior to the virus's spread.

4.5.2 The decrease in the income of workers in craft workshops:

The results of the Fig. show that (47%) of the workers confirmed the decline of Delkham after the spread of the virus as a result of the decline in working hours and the decline in the production rate, while the majority (92%) of the sample stated that their income was not affected before the spread of the Corona virus.

The percentage decrease in the income of workers in industrial workshops in the three sectors before and after the spread of the virus.

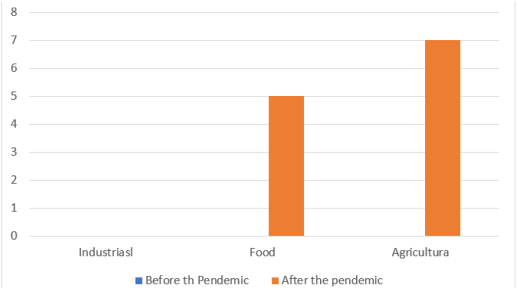

Fig. 11. *Describe the earnings of craft workshop employees, n = 100.*

The study's conclusions concur with those of Andi Amie's, Shakir's, and Robert Fairlie's research from 2020, 2021, and 2020, respectively. Those whose research suggested that the Corona crisis was the primary factor behind pay reduction and job losses.

4.5.3 The percentage of workers' wages in the three sectors' handicraft workshops that have decreased

According to the findings of Fig. 12, the earnings of the employees in the various handicraft firms declined by less than 10% (42%) and by 10 to 20% in 35 of them, while 12% of the respondents reported that their income decreased by (21% to 30%). On the other hand, before the Corona virus spread, workers' wages did not decline.

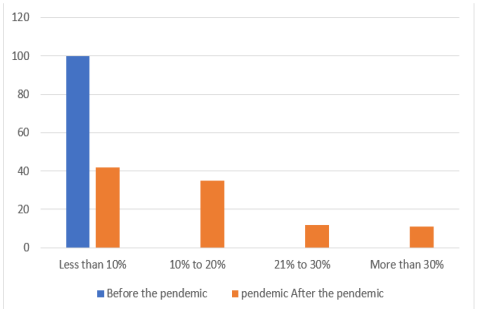

Fig. 12 *shows the percentage decline in the wages of those employed in the three sectors' handcraft workshops, with n = 100.*

4.5.4 Regarding the energy usage in workshops prior to and following the Corona epidemic (Covid-19):

According to the findings of Fig. 13, energy consumption decreased by up to (100%) following the spread of the Corona virus (Covid-19) as a result of lower production and shorter working hours, as opposed to before the virus spread, when it increased by up to (73%), and they fall under the crossed yes and somewhat categories.

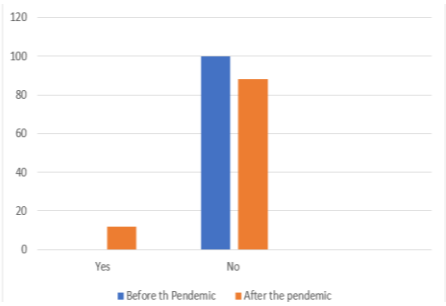

Fig (13) *shows energy consumption in workshops before and after the Corona pandemic*

4.6 Getting government financing both before and after the virus spread:

The findings of this Fig. 14 demonstrate that despite the relief provided by the Egyptian

government to workshops and small businesses following the spread of the Corona virus, there is no significant difference in the increase in the percentage of use of government loans (20% versus 15%). This is because workshop owners are afraid of an increase in the debt rate and insolvency as well as their future fears due to the virus' protracted nature. The survey's findings support a study by Al-Mal newspaper that stressed the state's responsibility in providing businesses with facilities and loans with simple interests in order to resolve the Corona problem, despite the fact that the majority of enterprises did not acquire loans.

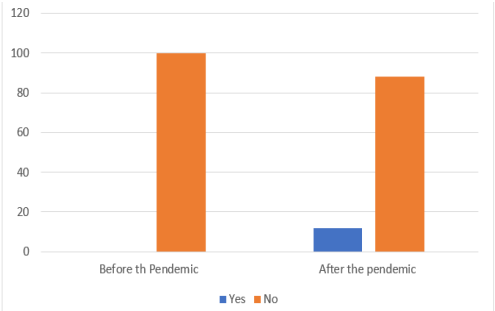

Fig.14 *demonstrates that government loans were received by the handicraft workshops both before and after the Corona Virus (Covid-19)*

4.7. During the period of -19, switching the workshop activity to an other, more profitable activity and its nature

According to the data in this table, only 12% of the study sample confirmed that they switched to a more lucrative activity as a result of the interruption of production or cessation of workshop activity following the spread of the Corona virus, while the remaining 88% claimed that they did not switch because they lacked the necessary skills for a different activity.

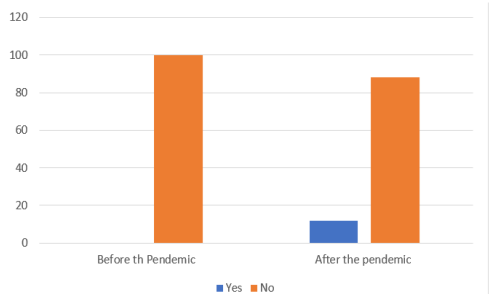

Fig. 15 *displays During COVID-19, switching the workshop activity to an other, more lucrative activity of the same kind4.8.1 The activity change type*

Table (16)'s findings indicate that by the time the infection had passed, 41% of individuals who changed their activity had switched to another, transitory food activity, while 58% had switched to a different, more lucrative industrial industry.

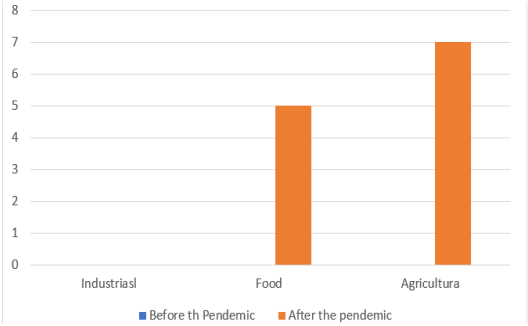

Fig. 16. *The sort of activity to which it was transformed is depicted in Fig.*

5. Conclusion

The current study's findings indicate that the Corona virus has had a detrimental impact on the artisan (small and micro) industry sector. The study's sample revealed the following key findings:

- One shift per day is becoming the standard for working hours for 75% of craft businesses.
- 72% of craft businesses saw a drop in revenue during the Corona pandemic, with the percentage of the decline exceeding 30% of the revenue prior to the virus.
- The study's findings also show that the income of workers (69%) declined by up to 10% to more than 30%.
- The study's findings also imply that cutting back on working hours or going part-time reduced energy use.
- The study also revealed that 20% of the workshops got government loans to help with business, pay employees, and purchase supplies for manufacturing.
- - The survey also found that 12% of the artisan workshops changed their business models following the Corona pandemic to include the selling of food, masks, and alcohol, all of which are considered profitable at the time.

6.Recommendations

In order to help small and medium-sized businesses and artisans out of the crisis, the government should undertake surveys and make contact with them.

Craft, medium-sized, and small industrial businesses need to keep their employees' physical and mental health in check or create a contingency plan for employees who might be affected so they can get the physical and mental help they require. Additionally, they must provide their staff with the tools need to fight the pathogen.

Large datasets that have been deposited in a publicly available database should be identified in research articles that report on them, together with the appropriate access numbers. Please state that the accession numbers will be made accessible during the review if they are not yet available at the time of submission. They have to be given prior to publication.

Interventional research involving humans or animals, as well as any other study requiring ethical permission, must state the appropriate ethical approval code and the authority that approved it.

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