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ECONOMIC RESEARCH FORUM
منتدى البحوث الاقتصادية

Working Paper No. 1534
February 2022

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We acknowledge the contributions of TED-KISR Principal Research Associates Ms. Marwa Al-Musallam and Weam Behbahni.

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First published in 2022 by
The Economic Research Forum (ERF)
21 Al-Sad Al-Aaly Street
Dokki, Giza
Egypt
www.erf.org.eg

Abstract

Applying rich micro-level data for 2013 and 2020, this paper juxtaposes the living conditions and consumption profiles of foreign workers in Kuwait. It contributes to a growing literature on foreign workers by focusing on migrant workers' consumption profiles and their heterogeneity following the COVID-19 income shock. The paper compares the 2020 income and consumption profile with that of 2013. Moreover, since foreigners represent the majority of the population, the paper inquires if the most commonly used consumption functions apply in the case of foreign households in Kuwait. Findings corroborate that the migrant community bore the brunt of the COVID-19 impact in terms of employment, earnings, and living conditions. Our research also corroborates that the consumption-income decisions of foreign workers in Kuwait are broadly congruent with Friedman's permanent income hypothesis and that, for given income levels, consumption heterogeneity holds for foreign workers according to age cohorts, thereby giving some credence to the life cycle hypothesis. Finally, Kuwait's foreign workers consume high proportions of their incomes derived from business activities, as opposed to workers whose incomes derive mainly from wages and salaries. For comparative purposes, the analysis is benchmarked against Kuwaiti households comprising citizens with more endowments, rights, and privileges, including ability to borrow to finance random consumption peaks.

Keywords: Foreign workers, COVID-19, income, consumption.
JEL Classifications: C12, C13, C21, D12, D15.

ملخص

تقارن هذه الدراسة بين ظروف المعيشة وملفات استهلاك العاملين الأجانب في الكويت بتطبيق بيانات وافرة على المستوى الجزئي لعامي 2013 و2020. تساهم زيادة الأدبيات حول العاملين الأجانب من خلال التركيز على ملفات توصيف استهلاك العاملين المهاجرين والاختلافات الموجودة بها بعد صدمة الدخل التى نتجت عن جائحة فيروس كورونا (كوفيد-19). تقارن الدراسة ملفات الدخل والاستهلاك لعام 2020 مع ملفات عام 2013. وعلاوة على ذلك، نظرًا لأن الأجانب يمثلون غالبية السكان، تستفسر الدراسة عما إذا كانت خصائص الاستهلاك الأكثر استخدامًا تنطبق في حالة الأسر المعيشية الأجنبية في الكويت. تؤكد النتائج أن مجتمع المهاجرين قد تحمل العبء الأكبر من آثار فيروس كورونا (كوفيد-19) من حيث التوظيف، والأرباح، وظروف المعيشة. كما يؤكد بحثنا أن قرارات الاستهلاك والدخل للعاملين الأجانب في الكويت متوافقة إلى حد كبير مع فرضية الدخل الدائم لفريدمان ويؤكد بحثنا إنه، بالنسبة لمستويات الدخل المعطاة، ينطبق عدم تجانس الاستهلاك على العاملين الأجانب وفقًا للفئات العمرية، مما يضفي المصداقية على فرضية دورة الحياة. وأخيراً، يستهلك العاملون الأجانب في الكويت نسب عالية من دخولهم التى يحصلوا عليها من أنشطة أعمالهم، على عكس العمال الذين يحصلون على دخولهم أساسًا من الأجور والرواتب. ولأغراض المقارنة، تم قياس أداء التحليل مقابل الأسر المعيشية الكويتية التي تضم مواطنين يتمتعون بقدر أكبر من الهبات، والحقوق، والامتيازات بما فيها قدرتهم على الاقتراض من أجل الصرف فى حالة أعلى استهلاك عشوائى.

1. Introduction

The international migration of workers tends to be from poorer to richer economies where jobs are more readily available and wages are higher, making the expected value of emigration sufficiently lucrative. Countries differ with respect to the volume of migrants relative to the labor force. They also differ with respect to the composition of migrants. For instance, while 15 percent of the US population is born abroad, they tend to be dominant as founders of creative companies; 43 percent of the top Fortune 500 companies, including Space-X, were founded by immigrants (Brookings, 2017).[2] In other countries, foreign laborers constitute somewhat of a higher share of the labor force, such as Malaysia (20 percent) and Singapore (35 percent) (DESA, 2019) where they tend to cluster in low-paying, low-skill jobs. However, the highest cluster of immigrants in terms of shares in the labor force and the population is concentrated in the Gulf Cooperation Council (GCC) countries, where foreigners represent 84 percent of the labor force in Kuwait (PACI, 2021a) and 69 percent of the population (PACI, 2021b). They constitute the majority of the population in the UAE (88 percent) and Qatar (79 percent).[3] Although citizens represent the majority of the population in KSA (62 percent), Bahrain (55 percent), and Oman (54 percent), foreign workers nonetheless dominate the labor market; representing 75 percent in KSA,[4] 77 percent in Bahrain,[5] and 79 percent in Oman.[6]

The outbreak of COVID-19 had a massive impact on economies, including Kuwait, the GDP of which declined in 2020 by nearly nine percent (CSB, 2021). Because of the health risks and prolonged lockdowns, many private companies bankrupted and their workers, mostly foreign, became jobless and many subsequently exited Kuwait. Data from a recent survey indicate that COVID-19 drastically ravaged private sector companies and created hardships for foreign workers and their companion households (KISR, 2021). In order to examine and contrast the consumption-income relationships during normal and random times, research conducted in this paper examines the following questions:

First, what is the impact of COVID-19 on foreign workers and their families? How did COVID-19 impact foreign workers in terms of employment and wages and how did it spill over to foreign households' consumption-income profiles relative to that of Kuwaiti workers and their families?

Second, compared to the ravaging effect of the random COVID-19 shock, how did foreign workers manage their monthly flows of income and consumption during typical normal times? Is the consumption-income profile of foreign workers congruent with major economic constructs like the permanent income hypothesis (PIH) and life cycle hypothesis (LCH)? In addition to testing the PIH, we test consumption variability according to age cohorts and the possible variability of consumption due to the Kaldor hypothesis; meaning, holding income

[2] https://www.brookings.edu/blog/the-avenue/2017/12/04/almost-half-of-fortune-500-companies-were-founded-by-american-immigrants-or-their-children/

[3] Population shares for GCC countries other than Kuwait are for 2019 and based on the DESA (2019).

[4] https://www.stats.gov.sa/en/43

[5] http://blmi.lmra.bh/2021/03/newsletter_en.pdf

[6] https://data.gov.om/byvmwhe/labour-market

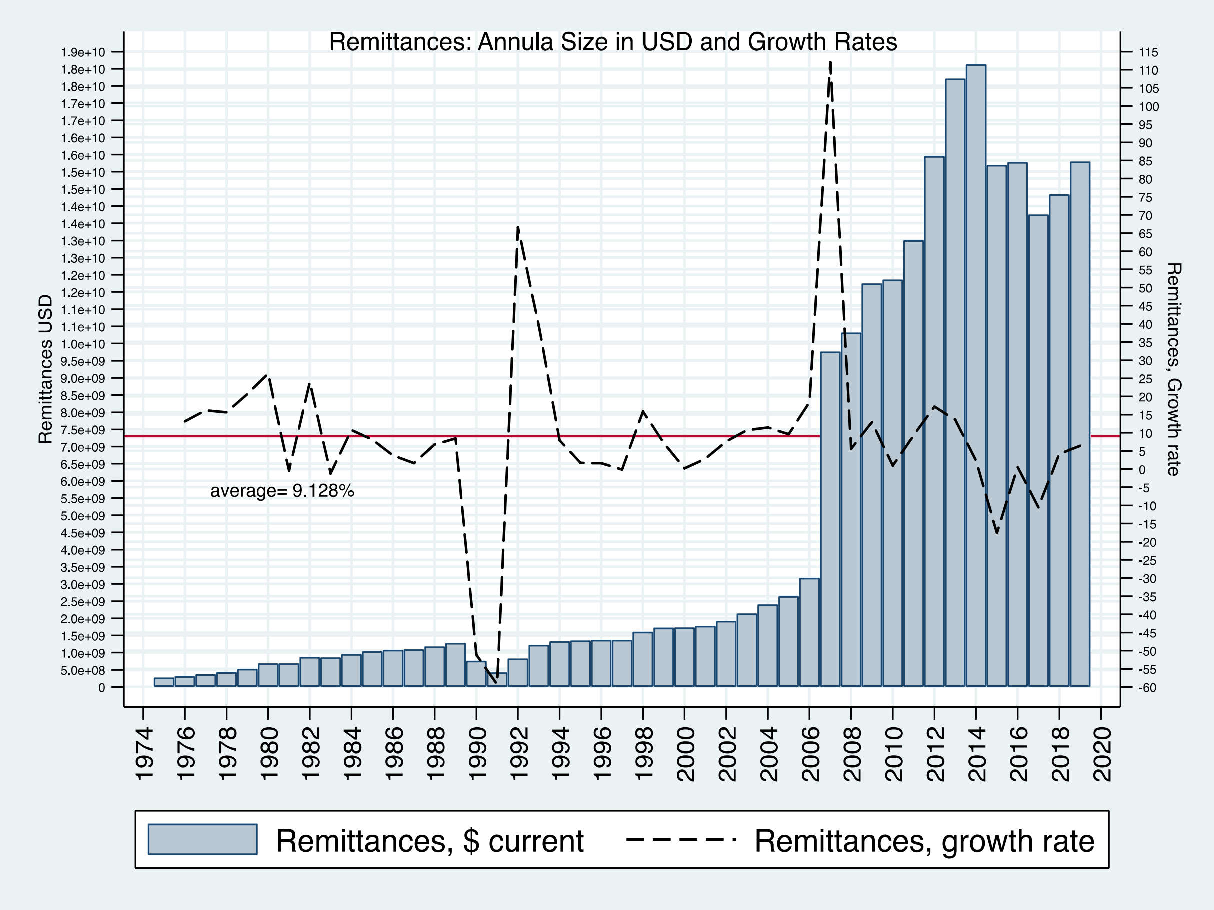
constant, breadwinners who derive their incomes from businesses tend to have a higher marginal propensity to consume than workers whose incomes are derived from wages and salaries. Over the long haul, we observe a positive correlation between private consumption and non-oil GDP in Kuwait's national income accounts ($\rho = 0.85$) (KISR, 2021). Much less is known about consumption heterogeneity and relationships to income levels at the micro-level of individual households.

1.1. Data and Kuwait's foreign workers' enclave

We use two data sources to characterize foreign workers under normal and random shocks. The first is the 2013 Central Statistical Bureau (CSB) Household Income and Expenditures data. The second is the 2020 Techno-Economics Division (TED) Survey of Kuwaiti and foreign households (KISR, 2021). The TED survey was conducted between September and December 2020. The household sample covered 250 Kuwaiti and foreign households. The survey aimed to assess the impact of the COVID-19 recession of 2020 on households regarding the impact of the pandemic on family welfare gauged by lay-offs of family members, lost earnings, reduced or altered consumption profiles, among other variables.

Derived findings and insights are compared against the literature, including studies that utilized Kuwait's earlier income and expenditures survey data of 1973 and were reported in Al-Qudsi (1984). The comparison provides insights about the relative stability of households' consumption and its heterogeneity over more than one cross-sectional survey detected in another cross-sectional data experiment. Therefore, the paper assesses the relative stability over time of the marginal propensity to consume and in the income and other elasticity estimates over time. An important reason for outmigration is to help household members who are left behind. Hence, the empirical inquiry addresses the variability of remittances across households according to age, nationality, and family demographics. For instance, based on the 2013 CSB Incomes and Expenditures Survey, we estimate that about 40 percent of foreign households and seven percent of Kuwaiti households routinely remit some of their incomes abroad. Transfers are typically made in order to support family members abroad, finance the education of offspring, or to conduct investment (e.g. building a family). Such commitments are significant components of total remittances from Kuwait, the annual pattern of which changes from year to year because of random forces, including the pandemic shock, the changing size of foreign workers, and the possible changes in workers' earnings and off course changes in their Kuwait-specific consumption expenditures. The latter may be due to the changing cost of living, CPI, higher rents, and/or reformed fiscal policy leading to higher utility prices…etc. Finally, modified or altered family consumptive needs inside and outside Kuwait could trigger changes in the size and income share of transfers (Figure 1).

Figure 1. Remittances: Annual size in USD and growth rate



Source: World Bank, 2021.

The remainder of this paper is organized as follows. The following section reviews the evolution of the foreign workers' community in Kuwait. Section three discusses income and consumption profiles during normal times, while section four reviews the income-consumption profile under lockdown based on a recent 2020-21 survey. Section five discusses the relevance of consumption theories to the context of foreign workers. Section six presents the empirical results drawn from the 2013 household survey, while the last section is a summary of findings and policy implications.

2. The evolution of the foreign community in Kuwait

Since the discovery of oil in Kuwait in 1938, the country experienced high population growth, mainly starting the 1950s; it increased from about 200,000 in 1957 to reach 4.7 million in 2020 (PACI, 2021) with an annual average increase of five percent during the 1957-2020 period. This increase was not fuelled exclusively by an increase in the Kuwaiti population; the main driver for this was the influx of migrant workers (and their families) since the 1950s. In fact, the share of non-nationals in the total population has increased from 45 percent in 1957 to 69 percent in 2020 (CSB, 2017 and PACI, 2021). The share of foreigners has not only increased over time; the nationality mix has changed dramatically. In 1989, just before the first Gulf War, Arabs constituted 59 percent of foreigners (Shah, 2004). According to current numbers for the year 2020, the top Asian nationalities constitute 55 percent of the foreign population in Kuwait.

The literature attributes these changes in origin composition to the expulsion of Palestinians from Kuwait after the Iraqi Invasion of Kuwait in 1990; the relatively lower wages of Asians and their greater acceptance to employment conditions; host country policies to diversify the nationality background of migrant workers; the establishment of social networks of friends and relatives in the host country; and the increased demand for domestic servants (Shah, 2007 and De Bel-Air, 2018).

The gender composition of the population and foreign labor have also changed dramatically over the years. In 1957, males comprised around 64 percent of the population, with non-nationals comprising 55 percent of the male population and 27 percent of the female population (CSB, 1990). These have changed in 2020, where non-nationals comprise 75 percent of the male population and 58 percent of the female population (PACI, 2021). The age composition of the population has also changed drastically over the years. The share of the population below 19 years of age has decreased from 53 percent in 1975 to 29 percent in 2011 (CSB, 1990, and CSB, 2017), with the majority of the change attributed to foreigners. Meanwhile the share of people over 60 years of age and 20-59 years old have increased, which suggests that the size and compositions of households have changed over the years. The educational status of Kuwait's population has also changed over the years. With regards to the total population, the share of people ten years of age and older with a post-secondary degree in 1965 was about 1.8 percent, while the corresponding shares for Kuwaitis and foreigners in 1965 were 0.3 percent and 2.8 percent, respectively. In 2011, these shares have changed to 24.4 percent, 21.4 percent, and 30.2 percent for the total population, non-nationals, and nationals, respectively (CSB, 2017). This might indicate an imbalance in the development of the foreign labor force and explains the increasing wage gap between Kuwaitis and foreign laborers.

3. Income and consumption profiles during normal times

The foreign community in Kuwait changed in terms of socio-economic status, income, education, occupation, and skills over time. The private sector kept employing waves after waves of cheaper and less educated workers over time in order to maximize short-term revenues. This is reflected in the degradation in the income and education of foreign workers and hence in the welfare of the foreign community in Kuwait. In terms of size, the survey covered 2,961 households (17,434 individuals), of which 1,226 were Kuwaiti families and 1,735 were non- Kuwaiti families. Table 1 shows the differences among the household groups according to income, consumption, education, average age, and work. It is apparent that Kuwaiti households earn more income compared to their foreign counterparts. This might be due to the fact that they are concentrated in economic sectors that are not central to Kuwait's economy (Shah, 2007). Foreign households/workers tend to have lower average consumption, lower education, and a higher average age compared to their Kuwaiti counterparts. They are also mostly concentrated in the private sector, which usually pays fewer salaries and demands higher working hours (Table 2). This trend has persisted in Kuwait. For instance, based on the 1973 Incomes and Expenditures Survey, Al-Qudsi (1984) reports that foreign workers earn 57 percent less income than Kuwaitis. The earnings gap has widened in 2013, as foreign households earn, on average, around 30 percent of the income of Kuwaiti households. Received literature suggests that nearly one-half of the wage gap is pure economic rent for the nationals in the public sector (Al-Qudsi, 1985 and 1989).

Table 1. Household characteristics by major nationality groups in 2013

Nationality	Kuwaiti	Foreign	Total
Average Household Size	7.7	4.3	5.7
Average Income	3351	992	1969
Average Consumption	2607	828	1565
Saving Rate*	22.2%	16.5%	20.5%

Source: Calculated using microdata from (CSB, 2013).
*(1-(Consumption/Income)

Table 2. Individual Characteristics by Major Nationality Groups in 2013

Nationality	Kuwaiti	Foreign	Total
Average Income	1891	551	1200
Average Age	26.2	29	27.8
Education (Above Secondary)	69%	46.2%	58.4%
Employment: Public Sector	91%	27.7%	35%
Employment: Private Sector	9%	72.3%	65%

Source: Calculated using microdata from CSB (2013).

Table 3 shows a comparison among average incomes and consumptions for the years 1973 and 2013. The monthly income of an average Kuwaiti family has increased almost ten-fold from KWD 354 in 1973 to KWD 3,351, while non-Kuwait households' income increased in a substantially more moderate fashion from KWD 201 in 1973 to KWD 992 in 2013. As for consumption, the increase in average monthly consumption is more profound for Kuwaitis as it increased from KWD 258 in 1973 to KWD 2,607 in 2013, while the increase in foreign households' average consumption was less flamboyant as it increased from KWD 152 in 1973 to KWD 828 in 2013. As for the savings rate, it dropped for both groups as shown in Table 3.

Table 3. Average monthly income, consumption, and savings rate by household group in Kuwait for the years 1973 and 2013

	Income		Consumption		Savings Rate	
Year	1973	2013	1973	2013	1973	2013
Kuwaiti	354	3,351	258	2,607	27.1%	22.2%
Foreign	201	992	152	828	24.4%	16.5%

Source: (CSB, 2013) and (Al-Qudsi, 1984)

Tables A.1 and A.2 show the distribution of income and consumption of households according to components deciles. The richest decile earns and consumes about ten times more than the poorest decile for Kuwaitis households (about seven times for foreigners). By way of comparison, for Kuwaitis, the richest decile in 1973 earned 18 percent of total income (Al-

Qudsi, 1984) compared to 23 percent of income in 2013, which indicates an increase in wage disparities among Kuwaitis.

4. Business owners, workers, and consumers in Kuwait under lockdown: Evidence from TED's CEO and TED's household surveys 2020

More statistically robust is the response of Kuwaiti CEOs to the question about the impact of COVID-19 on the employment of non-Kuwaiti workers (Figure 2 and Table 4). The majority (66 percent) indicated that the employment of foreign workers was scaled down. The category of "No Change in Non-Kuwaiti Employment" was indicated by 28 percent of Kuwaiti CEOs and a minority (four percent) stated that the number of non-Kuwaitis employed by the company rose after the outbreak of the COVID-19. The distribution of the ranges of decreasing non-Kuwaiti employment was as follows: 15 percent put the decrease as exceeding 40 percent, 33 percent classified it as ranging between 20 and 40 percent, another 33 percent of CEOs put it between 10 and 19 percent, while 18 percent placed the scaling down to be less than ten percent. On the other hand, of the minority of CEOs indicated an increase in employment (only four percent of CEOs), with nearly 77 percent putting the increase under 20 percent, 11 percent putting it around 20 to 40 percent, and another 11 percent at exceeding by 40 percent. However, the number of CEOs in this increasing non-Kuwaiti employment category is small; only nine CEOs representing four percent of the CEOs addressing this question.

Figure 2. TED CEO survey: What is the cumulative impact of COVID-19 on company employment of non-Kuwaiti workers?

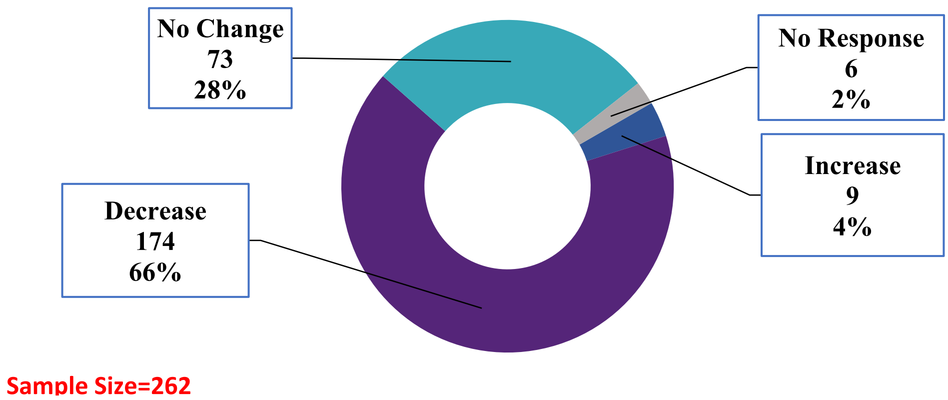


Table 4. TED CEO survey: What is the cumulative impact of COVID-19 on company employment of non-Kuwaiti workers?

What is the Cumulative Impact of the 2020 Coronavirus on Company Employment of Kuwaiti Workers?	Increase			Decrease			Total		
	No	%	Cum.	No	%	Cum.	No	%	Cum.
1-4%	1	11%	11%	16	9%	9%	17	9%	9%
5-9%	4	44%	56%	15	9%	18%	19	10%	20%
10-19%	2	22%	78%	57	33%	51%	59	32%	52%
20-40%	1	11%	89%	58	33%	84%	59	32%	84%
More than 40%	1	11%	100%	26	15%	99%	27	15%	99%
Not Indicated	0	0%	100%	2	1%	100%	2	1%	100%
Grand Total	**9**	**100%**		**174**	**100%**		**183**	**100%**	

Source: S. A-Fulaij and S. Al-Qudsi (2021).

TED's CEO survey had a strong focus on labor markets, future jobs, and demand for workers by nationality. The response of Kuwaiti CEOs to the question about the post-2020 COVID-19 impact on employing Kuwaiti workers were as follows: 41 percent expect there will be "no change" in hiring Kuwaitis, but 39 percent expect an increase in hiring Kuwaiti workers (Figure 3 and Table 5). The distribution of the "voted ranges" of increasing Kuwaiti employment was as follows: seven percent put the increase as exceeding 40 percent, 16 percent classified it as ranging between 20 percent and 40 percent, and 30 percent of CEOs put it between 10 to 19 percent, while 47 percent place the scaling up to be less than ten percent. On the other hand, 17 percent of the CEOs indicate a decrease in employment, while nearly 55 percent put the decrease under 20 percent, with 27 percent putting it around 20 to 40 percent and 16 percent at exceeding 40 percent.

Figure 3. TED CEO survey: What is the expected change in employing Kuwaiti workers post COVID-19?

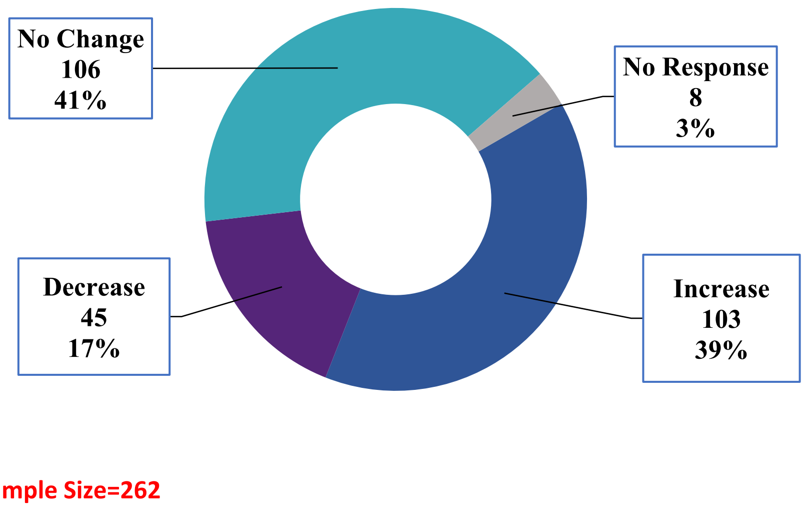


Table 5. TED CEO Survey: What is the expected change in employing Kuwaiti workers post COVID-19?

Post Coronavirus: What is the Expected Change in Employing Kuwaiti Workers?	Increase			Decrease			Total		
	No	%	Cum.	No	%	Cum.	No	%	Cum.
1-4%	29	28%	28%	8	18%	18%	37	25%	25%
5-9%	20	19%	48%	6	13%	31%	26	18%	43%
10-19%	31	30%	78%	11	24%	56%	42	28%	71%
20-40%	16	16%	93%	12	27%	82%	28	19%	90%
More than 40%	7	7%	100%	7	16%	98%	14	9%	99%
Not Indicated	0	0%	100%	1	2%	100%	1	1%	100%
Grand Total	103	100%		45	100%		148	100%	

Source: S. A-Fulaij and S. Al-Qudsi (2021).

On the other hand, 62 percent of Kuwaiti CEOs indicated they think that post-2020, COVID-19 will have a negative impact on the hiring of non-Kuwaiti workers in their companies (Figure 4 and Table 6). Around 53 percent of those estimated the extent of the diminished demand for hiring non- Kuwaiti workers to be greater than 20 percent. A total of 17 percent indicated a loss of 40 percent or more, whereas 36 percent put the reduction in hiring of non-Kuwaiti workers in the range of 20 to 40 percent.

CEOs that estimate an increase in hiring non-Kuwaitis after the outbreak of the COVID-19 recession are 16 percent, 21 percent of whom estimate the increase to be under ten percent, and 40 percent put the increase in the 10 to 19 percent range. The remaining 39 percent estimate the increase in hiring non-Kuwaiti to be 20 percent and more.

Figure 4. TED CEO Survey: What is the expected change in employing non-Kuwaiti workers post COVID-19?

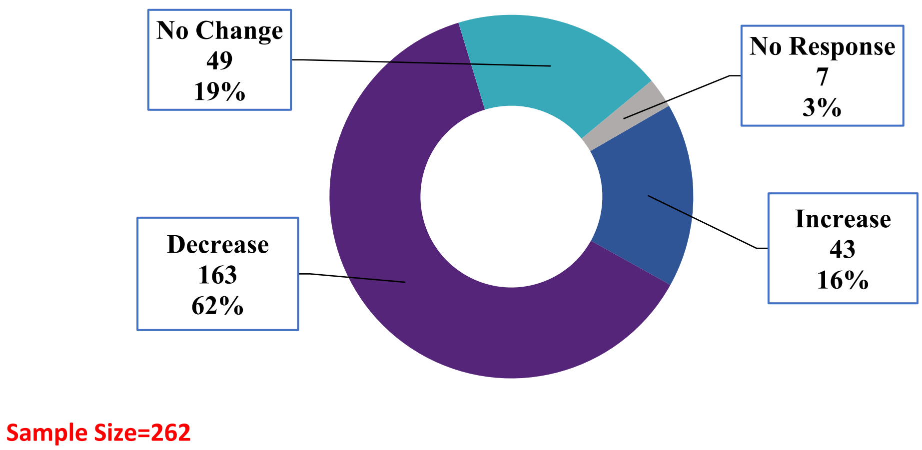


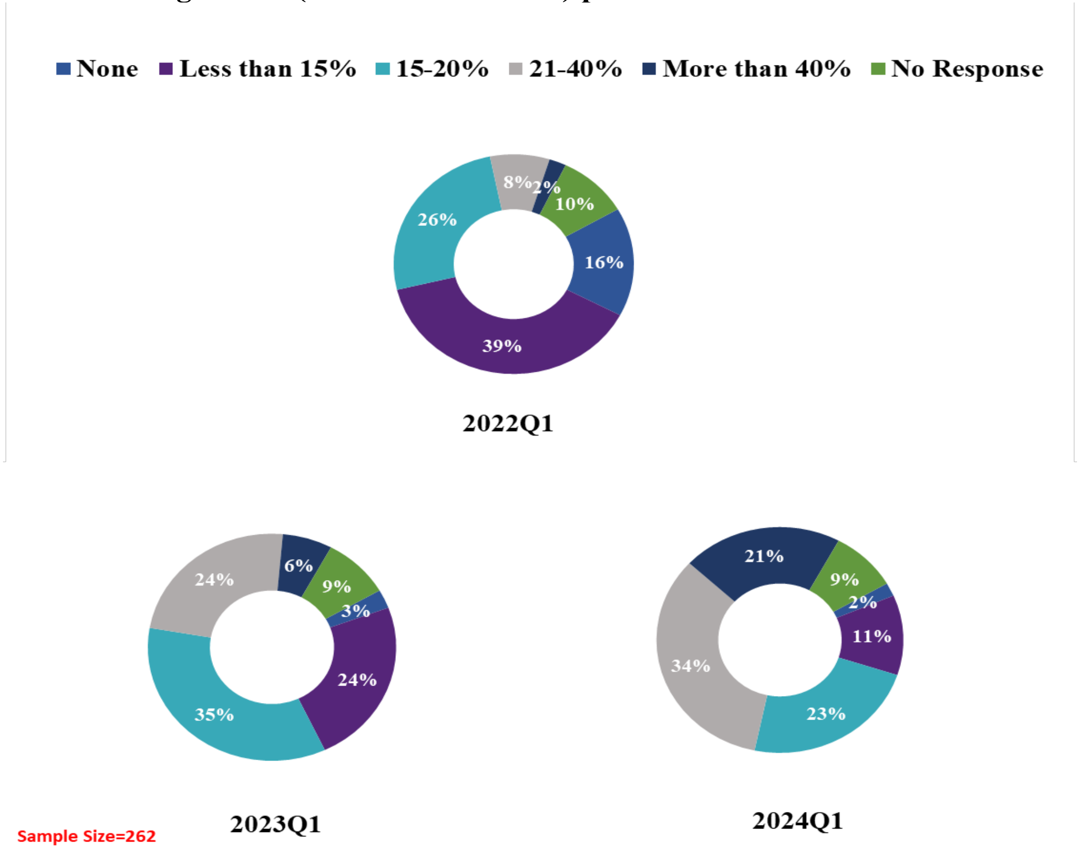
Table 6. TED CEO Survey: What is the expected change in employing non-Kuwaiti workers post COVID-19?

Post Coronavirus: What is the Expected Change in Employing Non-Kuwaiti Workers?	Increase			Decrease			Total		
	No	%	Cum.	No	%	Cum.	No	%	Cum.
1-4%	4	9%	9%	8	5%	5%	12	6%	6%
5-9%	5	12%	21%	22	13%	18%	27	13%	19%
10-19%	17	40%	60%	47	29%	47%	64	31%	50%
20-40%	10	23%	84%	59	36%	83%	69	33%	83%
More than 40%	7	16%	100%	27	17%	100%	34	17%	100%
Grand Total	**43**	**100%**	**0%**	**163**	**100%**	**0%**	**206**	**100%**	**0%**

Source: S. A-Fulaij and S. Al-Qudsi (2021).

As mentioned before, life before and after the outbreak of the pandemic is not the same. This seems to apply to the proportion of Kuwaiti workers in the company's total (Kuwaiti and non-Kuwaiti) labor force over the indicated quarters and years (Figure 5). During Q1 of 2022, 39 percent of the CEOs think Kuwaiti workers will represent less than 15 percent, but 26 percent think Kuwaiti workers will represent between 15 and 20 percent. A small proportion of CEOs (two percent) think Kuwaitis will represent more than 40 percent of the total company workforce.

Figure 5. TED CEO Survey: What is the likelihood that Kuwaiti workers will represent the following shares (% of total workers) post COVID-19?



During Q1 of 2023, nearly 35 percent of Kuwaiti CEOs believe that Kuwaiti workers could represent between 15 and 20 percent of their company workforce, and an additional 24 percent stated that Kuwaitis will represent less than 15 percent. On the upside, a minority of Kuwait CEOs (six percent) believe that Kuwaiti workers will represent more than 40 percent of their company workforce and an even smaller minority of CEOs (three percent) believe that their company's workforce will comprise only Kuwaitis.

Finally, by Q1 of 2024, 34 percent of CEOs think Kuwaiti workers will represent between 21 and 40 percent of their company workforce. By that data, another 23 percent of Kuwait CEOs think that Kuwaiti workers will represent between 15 and 20 percent. A relatively sizeable proportion of CEOs (21 percent) believe that by then, Kuwaiti workers will represent more than 40 percent. Again, a minority of CEOs (two percent) believe there will be no non-Kuwaitis among their company workforce.

TED also conducted a household survey on a sample of 250 households (130 Kuwaitis and 120 foreign families) in order to assess the extent of the pandemic's impact on households and understand how households are adapting. As before, TED's household survey was implemented during the last quarter of 2020, between September 1 and December 20, and covered a random sample of households (KISR, 2021). While not comparable to the 2013 CSB Household Expenditures Survey, the responses unveil important information about how the COVID-19 pandemic affected households according to family size, nationality, income cohorts, and sector of employment. Specifically, TED's household survey provides valuable information about the extent of economic duress that families endured as some saw their incomes shrink, along with other households whose members experienced layoffs. Furthermore, the survey fetched data on households' assessment of the extent of income and consumption squeeze and wage loss under the protracted COVID-19 recession. Households also provided information about the role of online purchases as they faced lockdowns and restricted mobility for extended months. While the survey does not claim to be representative of Kuwait's population of households, it nonetheless provided an important anchor for future, more representative, more elaborate, and perhaps more accurate future household surveys that TED plans to implement.

When sampled households were probed about whether the COVID-19 pandemic caused one or more of their members to become unemployed and whether their own household experienced salary and wage cuts, around 52 percent of all households indicated that one or more of their members had experienced joblessness during the COVID-19 pandemic recession. The reported incidence rate of joblessness was fairly higher (around 28 percent) among Kuwaiti households but was 78 percent among foreign households.

On the other hand, nearly 78 percent of foreign households reported that one or more of their members experienced job losses and that most of the Kuwaiti and foreign job losses occurred in the private sector of the economy. Similarly, the proportions of households experiencing wage and/or salary cuts during the course of the pandemic were equally high (around 51 percent), equaling to 128 households out of 250 total sampled households. Among households experiencing wage cuts, Kuwaitis represent 23 percent of the total among households relative to a much higher proportion among members of foreign households (77 percent). The majority of members of households undergoing wage cuts have jobs in the private sector of the economy, and accordingly are expected to be predominantly foreign households. This is consistent with the findings of Alsharif and Malit (2020), as 83 percent of foreign labor respondents to their survey in Dubai reported a loss of employment, while 35 percent reported loss of employment in Jeddah. With wage cuts ranging between 25 to 50 percent. The finding supports the hypothesis that the pandemic and associated business closures and lockdowns had dire consequences on the foreign community (Alahmad et al., 2020).

Considering the wage and income class intervals that sampled households fall into, one question arose: Who is more likely to bear the brunt of salary and wage cuts? As reported by sampled responses, most of the wage and salary cuts were borne by the households that belong to the poorest two income classes who earn under KWD 1,000 per month. The richest households that earn KWD 5,000 and more experienced the smallest wage cuts (Table 7). This is not a surprise as the COVID-19 pandemic forced changes in the mode of household purchasers, in person versus online purchases. As reported by TED's sample of households, nearly 66 percent of all households reported definite increases in the online purchases of goods and services. This implies that households have the capabilities, Internet connections, and smart phones to make these electronic purchases. The majority of Kuwaiti households (87 percent) reported increased online purchases. The corresponding increase among foreign households is milder at 43 percent.

Table 7. Incidence of wage cuts according to household monthly income

Household Monthly Incomes Range	Number of Households Affected by Decreased Income/Salary	
	No	%
Less than 500 KWD/month	28	22%
501- 999 KWD/month	44	34%
1000-1499 KWD/month	14	11%
1500-1999 KWD/month	10	8%
2000-2999 KWD/month	19	15%
3000-4999 KWD/month	9	7%
5000 and+ KWD/month	4	3%
Grand Total	128	100%

Well-off households are more likely to purchase online than lower-income households. In fact, most of the increase in households' online purchases occurred for the upper two income categories. For instance, 83 percent of households earning more than KWD 2,000 per month experienced increased online purchases during the COVID-19 recession and lockdown. Likewise, 87 percent of households earning KWD 5,000 or more per month experienced increased online purchases (Table 8).

Table 8. Household online purchases during the COVID-19 lockdown by income

Household Incomes range	Household Online Purchases During the COVID-19 Lockdown						Total	
	Not affected		Decreased		Increased			
	No	%	No	%	No	%	No	%
Less than 500 KWD/month	8	26%	12	39%	11	35%	31	100%
500-1000 KWD/month	24	41%	9	15%	26	44%	59	100%
1001-1500 KWD/month	8	22%	2	5%	27	73%	37	100%
1501-2000 KWD/month	6	18%	1	3%	26	79%	33	100%
2001-3000 KWD/month	6	13%	2	4%	40	83%	48	100%
3001-5000 KWD/month	1	3%	3	10%	27	87%	31	100%
More than 5000 KWD/month	1	9%	2	18%	8	73%	11	100%
Grand Total	54	22%	31	12%	165	66%	250	100%

The commodities and services for which households indicated increased online purchases during the pandemic lockdown are shown in Table 9. Apparently, most of the increased online purchases were for health and food products. Kuwaiti households ranked the increase in their online purchases of health products as either high or very high. They also ranked the intensity of their online purchases of food products as second in terms of intensity of expenditure. The great majority of foreign households fall in the lowest income strata, i.e. make less than KWD 1,500 per month, and 95 percent make less than KWD 3,000 per month. Only one percent of foreign households are in the top income bracket of KWD 5,000 or more. This contrasts with the earnings of Kuwaitis: only 20 percent make less than KWD 1,500 per month and 33 percent make between KWD 2,000 and less than KWD 3,000. Moreover, around eight percent of Kuwaiti households make more than KWD 5,000 per month. The income strata of foreign households are different from those of Kuwaiti households, with nearly 85 percent of foreign households in the lowest three earnings strata, that is K.D. 1,500 or less.

Table 9. Household revenue distribution by nationality

Household Nationality	Kuwaiti		Foreign	
Monthly revenue	Freq.	Percent	Freq.	Percent
Less than 500	2	1.5%	29	24.2%
500-1000	4	3.1%	55	45.8%
1001-1500	20	15.4%	17	14.2%
1501-2000	25	19.2%	8	6.7%
2001-3000	42	32.3%	6	5.0%
3001-5000	27	20.8%	4	3.3%
More than 5000	10	7.7%	1	0.8%
Total	130	100.0%	120	100%

For foreign households, a similar ranking is observed, albeit at a smaller order of magnitude. Most households indicated that the majority of online purchased products underwent an increase of 75 percent in their purchases of health products, pharmaceuticals, and health-aid equipment. While being preliminary, these findings suggest that households were shaken sharply by the pandemic, with nearly 30 percent of Kuwait households experiencing a member's job loss and an almost equal proportion realizing wage-income loss. The proportion among foreigners is higher, partly because of their cluster in the private sector and in relatively lower-paying jobs and some in firms that were unable to sustain the repercussions of the COVID-19 recession.

The pandemic and social distancing forced households to modify lifestyles, including the pattern of purchases; a large number of surveyed households reporting increased online purchases of goods and services. Health products and healthcare products followed by food products led the increase in online purchases by households during the pandemic. The outlook seems to be that the trend of online purchasing is likely to prevail in the future consumption and lifestyle of Kuwaiti households in particular. Households indicated that, relative to 2019, they are spending less on goods and services. Families responding to the survey indicated that Kuwaiti households as well as foreign households living in the country have tended to modify their patterns of purchases in part because of uncertainty and unavailability in some cases, but also in order to combat rising uncertainty. This uncertainty is because some of their household members, previously actively engaged in the labor market and earning incomes, suddenly became unemployed and lost their labor earnings.

Table 10. Change in household expenditures by commodity group and nationality

Change in Expenditure	Commodity Group											
	Food Items		Apparel Items		Transportation & Communications		Travel, Tourism & Entertainment		Health		Remote Learning	
	K	NK	K	NK	K	NK	K	NK	K	NK	K	NK
Very high	56%	49%	18%	24%	3%	16%	6%	28%	75%	45%	26%	30%
High	28%	18%	26%	30%	5%	10%	2%	2%	13%	10%	40%	23%
Neutral	9%	23%	28%	16%	10%	28%	2%	4%	5%	24%	5%	18%
Low	2%	5%	21%	11%	75%	37%	18%	16%	3%	12%	5%	8%
None	5%	6%	6%	19%	6%	10%	73%	51%	5%	9%	23%	22%

5. Relevance of consumption theories to foreign expatriates

We should note at the outset that the literature on consumption behavior in Kuwait is scarce. Three studies examined the consumption function (behavior) using household survey or time series data, while the other two examined consumption patterns in Kuwait using household surveys. The first study was Al-Qudsi (1984), which used micro-data from the 1972-73 budget survey to principal consumption models, the Keynesian model, the Kaldor Hypothesis, the Freidman Permanent Income model, and the Modgiliani Life Cycle model. The results from Al-Qudsi (1984) confirm the presence of MPC <1 as predicted by Keneys, find evidence to support the loose version of Friedman's model, find that Kaldor's Hypothesis does not strictly apply in the Kuwaiti context, and find partial application of Modgiliani's model in the Kuwaiti data. Due to the similarity of the objectives of this study and Al-Qudsi (1984), a comparison of this study's results and Al-Qudsi's (1984) results are presented in the appendix. The second study was Zind (1999), which used a two-stage regression analysis on a pooled cross-section covering the period 1975-1997 for GCC countries. Zind (1999) finds that for GCC countries, the marginal propensity to consume (MPC) and average propensity to consume (APC) was about 0.36. The third study was Packey and Nusair (2009), who examined Kuwait's consumption function over the period 1973-2003 in which Kuwait experienced a variety of unpresented economic shocks. After correcting for stationarity, cointegration, and structural breaks, they find that over the long run MPC=APC, which implies a long-run constant APC, and that the long run MPC is 0.48. The other two studies relate to household consumption patterns in Kuwait. Burney and Al-Mutairi (1993) applied three different functional forms of the Engel curve on household size and total expenditure using data from the 1986-87 household budget survey to examine the differences in expenditure patterns between Kuwaitis and foreigners. Their main findings are that economies of scale exist among large households for some commodities, especially food and beverage, and they also find that Kuwaitis and foreigners exhibit different consumption patterns. Finally, Alali et al. (2020) used the 2013 household budget survey for Kuwait to study and contrast differences in expenditure patterns between Kuwaiti and foreign households over nine commodity groups. Their result suggests that the probability of consumption and the level of expenditure vary for the two household groups. They find that there is a significant variation of expenditure patterns across all commodities between the two household groups.

The presence of a predominantly foreign component among the population of Kuwait posits a question about the applicability of consumption theories to this duality of a migratory-settlement socio-economic environment. Specifically, do foreign workers follow the same consumption-income profiles as native Kuwaitis? Which consumption-income patterns seem to apply most in the case of foreign workers, relative to native Kuwaitis? The questions are important in this context since foreign workers tend to have relatively shorter time horizons and accumulate less wealth than Kuwaiti households. Some have been living in the country for many years, others stay for shorter periods ranging between two to five years. Moreover, some foreigners have unaccompanied members who live back home or attend schooling\higher learning institutions abroad. Relative to Kuwaitis, foreigners typically encounter a different set of incentive and pricing structures in terms of government eligibility for publicly provided goods such as housing, access to credit, government employment, and publicly provided services including electricity and water, the prices of which were recently (in 2017) increased for foreigners living in apartments and commercial dwellings. This section addresses these questions by testing two influential consumption-income theories, the life cycle hypothesis and the permanent income hypothesis profiles. The section briefly scans salient consumption-income theories and hypotheses to prepare to test hypotheses pertinent to their applicability in the context of native-foreign workers' environment. The empirical analysis applies the CSB 2013 micro-level data which details the sources of income, the total consumption, and their allocation across some 800 commodities and services for Kuwaiti and foreign households.

6. Results

One of the earliest contributions to examining the determinants of consumption was by Keynes (1936). Keynes proposed an absolute-income hypothesis (AIH) followed by other hypothesis or modifications, most notably those of Modigiliani-Brumberg (1954), Friedman (1957), and

Kaldor (1960). The study first starts with Keynes' AIH, which indicates consumption as a function of income (log-linear form) as follows:

$$LnC_i = \beta_0 + \beta_1 LnY_i + \beta_2 Nat_i + u_i \quad (1)$$

where,
C_i: is the consumption of the ith household;
Y_i: is the income of the ith household;
Nat_i: is a dummy variable that takes the value of one if the ith household head is Kuwaiti and zero otherwise.
u_i: Error term.

β_0 is a constant that represents the initial level of consumption for all households, $\beta_1$is the marginal propensity to consume (MPC), if MPC<1 then the consumption level would decrease as income increases. β_2 is the coefficient for Nat_i that indicates if there is a difference in consumption between Kuwaitis and foreigners. Nat_i was incorporated to determine whether Kuwaitis and foreigners have different consumption patterns. The Chow test[7] was used to merit dividing the sample data to two groups based on nationality. The regression results for AIH are presented in Table 11.

Table 11. OLS results for AIH for total Kuwaiti and foreign samples

Sample Group	Full Sample Log-Consumption	Kuwaiti Log-Consumption	Non-Kuwaiti Log-Consumption
Log-Income	0.713***	0.641***	0.750***
	(0.0186)	(0.0279)	(0.0243)
Nationality	0.412***		
	(0.0331)		
Constant	2.039***	3.127***	1.748***
	(0.145)	(0.259)	(0.189)
Observations	2,961	1,226	1,735
R^2	0.770	0.435	0.449

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

The estimated elasticity of income was 0.713, 0.641, and 0.75 for the total, Kuwaiti, and foreign samples, respectively. This indicates that, for example, a one percent increase in total population income will result in a 0.713 percent increase in total population consumption. The nationality dummy was statistically significant and indicates that, on average, Kuwaitis have higher consumption than foreigners. To test if incremental income induces incremental consumption – that is, the statistically significant MPC – we simply test the hypothesis that:

[7] The estimated Chow test F (3,2955) = 4.188 which is greater than F (3,2955) at one percent significance (3.79).

H_0: $\beta_1 = 1$. The results of the test for the three sample groups indicates rejecting the null hypothesis at the one percent level, which confirms the existence of MPC for these groups.

Furthermore, we compared our findings with earlier estimates of the MPC using CSB micro-level data for the year 1973. We infer that there was a perceptible drop in the elasticity of income in the case of the total or "full" sample of households and also in the case of the sub-sample of Kuwaiti households. However, there was an increase in the size of income elasticity in the case of foreign or foreign sample when compared to 1973 results as estimated by Al-Qudsi (1984). This may indicate that foreigners have become more sensitive to changes in income during the past few decades, implying that they may feel "more at home" altering their consumption in response to changes in incomes.

We move on to test Kaldor's hypothesis (1960), which states that, ceteris-paribus, the source of income such as wage versus property or capital income has bearings on consumption and its distribution. The hypothesis has clear ramifications in the context of Kuwait's foreign workers whose major (sole) income sources is from wages and salaries earned in the labor market, whereas business incomes represent the "bread and butter" of some Kuwait households.

To test the presence of this effect on households, the following equation is estimated:

$$LnC_i = \beta_0 + \beta_1 LnY_i + \beta_2 Nat_i + \beta_3 Self\_Employed_i + u_i \qquad (2)$$

where, $Self\_Employed_i$ is a dummy variable that takes the value of one if the ith household head is self-employed and zero otherwise. The rest of the terms are the same as from (1). The coefficient of interest is β_2 which captures the effect of different types of employment on households' consumption. Results are presented in Table 12. The results suggest that self-employment does have a bearing on consumption across the three sample groups. This is in tandem with some of the findings of Al-Qudsi (1984).

The results corroborate Kaldor's hypothesis, which implies that, for foreign workers, the limited access to earnings from property and business incomes tends to reduce the marginal propensity to consume holding income level constant. The findings clearly support the hypothesis that households headed by a self-employed breadwinner consume, on average, more than households headed by wage and salary earners. Moreover, the results indicate that the Kaldor effect is, on average, stronger for Kuwaiti households compared to the migrant or foreign households.

Table 12. OLS results for Kaldor Hypothesis for total, Kuwaiti, and foreign samples

Sample Group	Full	Kuwaiti	Foreign
Log-Income	0.706***	0.633***	0.744***
	(0.0187)	(0.0284)	(0.0244)
Nationality	0.428***		
	(0.0335)		
Self Employed	0.204***	0.236**	0.194***
	(0.0542)	(0.112)	(0.0614)
Constant	2.082***	3.194***	1.789***
	(0.146)	(0.263)	(0.190)
Observations	2,961	1,226	1,735
R^2	0.772	0.439	0.452

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

With insights drawn up from validating the validity of the Keynesian and Kaldor hypotheses in the context of socio-economic environments experienced by two population components, foreign and native, the analysis in the remainder of this section investigates the applicability of the permanent income hypothesis (PIH) in the case of foreign and native households; that is, if households tend to consume out of the permanent component (as opposed to the transitory) component of their incomes.

Following economic literature, there are mainly two versions of PIH:

1. The strict version, which assumes MPC=1 for permanent income and MPC=0 for transitory income.
2. The loose version, which states that MPC of permanent income > MPC of measured income. The formulation of PIH entails estimating two equations:

$$LnC_m = \beta_{0m} + \beta_{1m}LnY_m + u_m \tag{3}$$
$$LnC_p = \beta_{0p} + \beta_{1p}LnY_p + u_p \tag{4}$$

where C_m, C_p denote measured and permanent consumptions, respectively, Y_m and Y_p denote measured and permanent incomes, respectively, u_m and u_p are error terms and $\beta_{0m}, \beta_{1m}, \beta_{0p}$ and β_{1p} are coefficients to be estimated. Equation (3) represents the estimation of average consumption based on ten deciles of income, while equation (4) entails the estimation of average consumption based on profession groups. Table 13 lists regression results for the estimation under different income and profession groupings.

Table 13. OLS results for PIH by nationality under different income and occupation groupings

Sample Group	Full		Kuwaiti		Foreign	
Grouping	Income	Profession	Income	Profession	Income	Profession
Log-Income	0.881***	1.043***	0.751***	0.518**	0.669***	0.937***
	-0.0282	-0.0431	-0.0918	-0.194	-0.0743	-0.128
Constant	0.792***	-0.597	2.111**	4.315**	2.399***	0.245
	(0.225)	(0.364)	(0.84)	(1.816)	(0.593)	(0.994)
Observations	10	11	9	9	10	11
R^2	0.992	0.982	0.948	0.7	0.959	0.903

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1

To verify the existence of PIH, a test of the strict and loose versions was conducted. The PIH strict version test implies that $\beta_{0m} = 0$ and $\beta_{1m} = 1$. Results are presented in Table 14. They indicate failure to reject the null hypothesis for the strict version of PIH for the full and foreign samples and a rejection of the hypothesis for the strict version of PIH for Kuwaiti sample.

Table 14. Test results for strict PIH

Full Sample		
Null Hypothesis	F-value	Decision
B0 = 0	2.69	Fail to Reject
B1 =1	1	Fail to Reject
Kuwaiti		
Null Hypothesis	F-value	Decision
B0 = 0	5.64	Reject
B1 =1	6.21	Reject
Foreign		
Null Hypothesis	F-value	Decision
B0 = 0	0.06	Fail to Reject
B1 =1	0.24	Fail to Reject

To confirm the results, the test of the loose version was applied by estimating Mayer's (1966) prediction coefficient, which centers on the ratio of permanent and measured income elasticities (β_{1p}/β_{1m}). If the ratio is greater than unity, this implies the existence of the loose version hypothesis. Results presented in Table 15 indicate that there is validity in the loose version of the PIH for full and foreign households, while the loose version of PIH is not valid for Kuwaiti households. Overall, Kuwait's data supports both the loose and strict version of PIH for foreign households but not for Kuwait households.

Table 15. Test results for loose PIH

Sample Group	Group	APC	Log MPC
Full	Income	0.795	0.88
	Profession		1.04
	Mayer's Coefficient		1.18
	Decision		Valid
Kuwaiti	Income	0.778	0.75
	Profession		0.52
	Mayer's Coefficient		0.69
	Decision		Not Valid
Foreign	Income	0.835	0.67
	Profession		0.94
	Mayer's Coefficient		1.40
	Decision		Valid

Finally, the study concludes by testing whether the LCH applies in Kuwait settings. LCH suggests that younger consumers would spend a smaller share of their income compared to older cohorts. Yet, the share of current and future income to permanent income declines with time, thus offsetting increased consumption due to aging. The net results expected are a decline in marginal propensity to consume for older cohorts. To test the presence of LCH in Kuwait, the following equation is estimated:

$$LnC_{im} = \beta_0 + \beta_1 LnY_{im} + \beta_2 Size_{im} + u_{im} \quad (5)$$

where LnC_{im}: the consumption of ith household and the mth age group (three age groups, 20-40, 41-54 and 55+);
Y_{im}: is the income of ith household and the mth age group;
$Size_i$: the number of individuals for the ith household and the mth age group.

Equation (5) is estimated for different age groups (20 to 40, 41 to 54, and 55 and over) of the household head. LCH predicts that marginal propensity to consume (β_1) will be smaller for younger age groups compared to older groups. However, the share of current and future income to permanent income declines with time, thus offsetting increased consumption due to aging. The net results expected are a decline in marginal propensity to consume for the 41 to 54 age group and then an increase in consumption for the 55 and over age group. The regression results are presented in Table 16. The income variable is positive and significant for all age groups and sample groups. For full and Kuwaiti households, the propensity to consume goes up for the 41 to 54 age group (compared to the 20 to 40 age group) and then goes down for the 55 and over age group. As for foreign households, the propensity to consume increases for the 41 to 54 age group (compared to the 20 to 40 age group) and continues to increase for the 55 and over age group (LCH partial applicable). Overall, regression results indicate that the income effect on consumption increases with age, yet, in the case of Kuwaiti households, it does not increase after retirement (LCH does not hold for Kuwaiti households). This finding is consistent with Al-Qudsi (1984) for Kuwaiti households, suggesting this phenomenon has persisted among Kuwaiti households since 1973.

Table 16[8]. OLS results for LCH by household head age group (dependent variable: log of consumption)

Sample Group	Age Group	Nationality	Log Income	Household Size	Constant	Observations	R^2
Full	20 to 40	0.395*** (0.0584)	0.643*** (0.0366)	0.0570*** (0.00885)	2.339*** (0.269)	927	0.749
	41 to 54	0.367*** (0.0584)	0.673*** (0.0341)	0.0323*** (0.00556)	2.210*** (0.257)	1221	0.778
	55 and over	0.447*** (0.0561)	0.634*** (0.0375)	0.00908** (0.00452)	2.641*** (0.290)	813	0.756
Kuwaiti	20 to 40		0.603*** -0.0543	0.0277*** -0.00899	3.286*** -0.48	299	0.417
	41 to 54		0.667*** -0.0465	0.00551 -0.00575	2.859*** -0.416	477	0.449
	55 and over		0.604*** -0.0621	-0.00229 -0.00585	3.461*** -0.556	450	0.409
Foreign	20 to 40		0.601*** -0.0455	0.130*** -0.0145	2.387*** -0.329	628	0.450
	41 to 54		0.640*** -0.0445	0.0724*** -0.0121	2.289*** -0.333	744	0.486
	55 and over		0.669*** -0.0446	0.0284*** -0.00671	2.268*** -0.345	363	0.501

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

[8] Results of Chow test show that the estimation based on age groups is warranted compared to a full sample with no age groups F (4,2942) = 9.328 which is greater than F (4,2942) at one percent significance (3.326).

7. Conclusion

This paper utilized recent surveys conducted in 2020 and the consumption-income profiles of foreign workers relative to natives in 2013 to discern the impact of COVID-19 on foreign and native households in terms of income, employment, and consumption profiles. TED's 2020 surveys revealed that many foreign workers lost their jobs, especially in the private sector and in low- and middle-skilled occupations. The incidence of unemployment rate and wage cut are quite high (70 percent), with the majority of affected individuals belonging to lower income households. The severity and protraction of the pandemic, coupled with lockdowns, caused many foreign workers to exit the country. Official data suggest that as many as 250,000 foreign workers left Kuwait in the aftermath of the COVID-19 outbreak. Moreover, for stayers during the pandemic, consumption profiles changed markedly, with many households resorting to online shopping and ordering of meals, clothing, and medical supplies. Workers that could afford it were asked by their employers to tele-work and many students had to switch to virtual learning instead of school-attending in person.

Tests of four major consumption-income models utilizing micro-level data from the 2013 CSB Household Survey were conducted to analyze the extent of applicability of the Keynesian and Kaldor consumption functions and the permanent income and life cycle hypotheses for a society with a large component of foreign workers. The results affirm the applicability of the Kaldor hypothesis, which implies that, for a given level of household income, the source of income, such as business, property, and returns of other assets, bears significantly on consumption. Existing bylaws in Kuwait restrict the ownership of assets by foreigners and hence limits consumption variability beyond wage and salary incomes. The results suggest that income has the largest impact on consumption. For example, according to AIH results, a one percent increase in income for a household leads to a consumption increase of about 0.63 percent for Kuwaiti households and 0.74 percent for foreign households. This may indicate that foreign households are more sensitive to changes in income, which may indicate that they are more affected by recessions (hence the COVID-19 recession). Compared to earlier budget surveys, the findings indicate a drop in the elasticity of income for the full and Kuwaiti samples and an increase for the foreign sample. The results for PIH generally support both the loose and strict version of PIH for foreign households but not for Kuwait households.

Finally, the results for the LCH show that saving/consumption behaviors vary with age, yet the behavior is different across age groups when comparing Kuwaiti and foreign households. In the case of Kuwaiti households, the LCH results indicate that consumption does not increase after retirement. This finding is consistent with the finding of Al-Qudsi (1984) for Kuwaiti households, which means that this phenomenon may haved persisted since earlier years. Our rudimentary findings suggest that PIH holds in the case of Kuwait's foreign households in being found to be generally applicable in the decision-making of foreign households in Kuwait.

Overall, the results from the four models suggest that policies targeting foreign workers should be selective and aim to attract workers with high human capital that can contribute to Kuwait's economic growth that is envisioned to be digitized and based on technology. Attracting, training, and retaining competitive and highly-productive foreign workers ought to become the norm in order to safeguard Kuwait's future economy.

Regarding earnings and consumption policies, policies ought to become more oriented toward allowing foreigners to feel they are welcome, to feel they want to contribute to their "new environment" and feel secured and treated competitively; meaning, to reward the innovative, hard-working, and productive. Policies should rely much less on low-wage, low-skilled workers and more on highly skilled, internationally demanded foreign workers.

The patterns and size of consumption of the foreign population should be a policy objective as it affects economic growth through productivity and through spending on necessities, including food and housing, durables, and other luxury products, and through spending internally rather than leaking the significant income abroad. Suggested policies to boost foreign households' consumption include access to owning property and longer residency durations based on skills, human capital, and income levels. Inter-alia, this implies that Kuwait ought to attract and retain workers that are well educated, skilled, and hence can earn higher wages and salaries.

References

Alahmad, B., Kurdi, H., Colonna, K., Gasana, J., Agnew, J. and Fox, M.A. (2020). COVID-19 stressors on migrant workers in Kuwait: cumulative risk considerations. *BMJ Global Health*, *5*(7), 2020-002995.

Alali, M., Aljabber, A. and Naseeb, A. (2020). Household expenditure patterns in Kuwait. *Journal of Research in Emerging Markets*, *2*(2), pp.1–18.

Al-Fulaij S. and S. Al-Qudsi (2021). The 2020 Kuwaiti Economy under Coronavirus and beyond: Insights from TED's Survey of Kuwait Business Leaders TED 2020.

Fahad L Alsharif, F. and Malit, F. (2020). Migration and the COVID-19 Pandemic in the Gulf. A Study of Foreign Expatriate Worker Communities' Coping Attitudes, Practices, and Future Prospects in Dubai and Jeddah. Policy Report No. 15 – October 2020. Konrad-Adenauer-Stiftung V.

Al-Qudsi, S.S. (1984). An empirical evaluation of consumption behaviour in oil societies: the case of Kuwait. *The Pakistan Development Review*, pp.81–94.

Burney, N.A. and Al-Mutairi, N. (1993). Household consumption patterns in Kuwait. *The Middle Eastern Business and Economic Review*, *5*(2), pp.1–12.

CSO (1990). Statistics Abstract in 25 Years. Central Statistical Office, Kuwait.

CSB (2013). The results of family budget survey for the year 2013 (in Arabic). Central Statistical Bureau, Kuwait.

CSB (2017). Annual Statistical Abstract 2015-2016. Central Statistical Bureau, Kuwait.

CSB (2018). Revised & provisional estimates national accounts during the years from 2016 to 2018. Central Statistical Bureau, Kuwait.

DESA, UN. "International migrant stock 2019." *United Nations database, POP/DB/MIG/Stock/Rev* (2019).

Friedman, M. (1957). The permanent income hypothesis. In *A theory of the consumption function* (pp. 20–37). Princeton University Press.

Gibson, J. and Kim, B. (2013). How reliable are household expenditures as a proxy for permanent income? Implications for the income–nutrition relationship. *Economics Letters*, *118*(1), pp.23–25.

Kaldor, N. (1960). Alternative Theories of Distribution in Essays on Value and Distribution. *Duckworth, London*.

Keynes J. M. (1936). The General Theory of Employment, Interest and Money, *New York and London*.

ILO. "COVID-19: Labor Market Impact and Policy Response in the Arab States. Briefing Note with FAQs" (May 2020): 11.

Mayer, T. (1966). The propensity to consume permanent income. *American Economic Review* 56, 1158-77.

Modigliani, F. and Brumberg, R. (1954). Utility analysis and the consumption function: An interpretation of cross-section data. *Franco Modigliani*, *1*(1), pp.388–436.

Packey, D.J. and Nusair, S. (2009). Kuwaiti consumption in the presence of dramatic economic events: 1973–2003. *Review of Middle East Economics and Finance*, *5*(2), pp.1–20.

PACI (2020). The population in each district by nationality and gender. Public Authority for Civil Information, Kuwait. https://www.paci.gov.kw/stat/SubCategory.aspx?ID=2 (Accessed 3rd May, 2021).

Zind, R.G. (1999). Income determination in the GCC member states. *OPEC review*, *23*(4), pp.341–354.

Appendix A

Table A.1. Household consumption and income by income decile in 2013

Nationality	Kuwaiti		Foreign	
Decile	Income	Consumption	Income	Consumption
1	3.30%	3.50%	3.00%	2.30%
2	5.00%	5.20%	4.10%	3.80%
3	6.10%	6.20%	5.20%	4.90%
4	7.20%	7.30%	6.00%	5.90%
5	8.30%	8.10%	6.90%	7.00%
6	9.60%	9.20%	8.10%	8.40%
7	10.60%	10.20%	9.20%	10.20%
8	12.30%	11.50%	11.30%	12.60%
9	14.50%	14.00%	15.30%	16.30%
10	23.00%	24.80%	30.80%	28.60%
Observations	1,226	1,226	1,735	1,735

Source: Calculated using micro data from CSB (2013)

Table A.2. Broad consumption groups by Kuwaitis and foreigners (% of income)

Consumption Category	Foreign	Kuwaiti
Food, Drinks and Tobacco	8.5%	7.5%
Shoes and Apparel	8.5%	9.1%
Housing, Electricity & Water	21.0%	6.9%
Furniture and Maintenances	8.4%	12.2%
Health and Education	5.8%	2.9%
Transportation	8.8%	7.8%
Communication	3.4%	2.7%
Hotels, Restaurants, Entertainment and Culture	5.3%	6.0%
Other Commodities and Services	8.1%	11.5%
Transfer Payments	5.7%	6.9%

Source: Calculated using micro data from CSB (2013)

Table A.3. 1973 income coefficients compared to 2013 for AIH

Year	2013			1973		
Sample Group	Full Sample	Kuwaiti	Foreign	Full Sample	Kuwaiti	Foreign
Log-Income	0.713***	0.641***	0.750***	0.77***	0.71***	0.63***
Observations	2,961	1,226	1,735	1,160	481	679
R-squared	0.77	0.435	0.449	0.75	0.72	0.76

*** p<0.01, ** p<0.05, * p<0.1.

Table A.4. 1973 icome coefficients compared to 2013 for Kaldor hypothesis

Year	2013	1973
Log-Income	0.706***	0.76***
Observations	2,961	1,160
R-squared	0.772	0.75

*** p<0.01, ** p<0.05, * p<0.1.