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MIRDEC & GLOBECOS 2021

MIRDEC & GLOBECOS – 5th
International Academic Conference
Economics, Business and Contemporary Issues in Social Science
(Virtual/Online conference)

CONFERENCE PROCEEDINGS

Istanbul 2021, Turkey

Conference Proceedings

Full papers & Abstracts

Editors
Kemal Cebeci
Joaquim Ramos Silva
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Istanbul, Turkey
29–30 November 2021

MIRDEC-GLOBECOS Istanbul 2021 - International Academic Conference on
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The University of New Orleans, United States of America

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*Is Second Screening Responsible for Protests? – A Case Study of Ayesha Akram Incident on 14th
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ANTONIO FOCACCI¹

THE COVID-19, THE GLOBAL ECONOMIC CRISIS AND THE QUANTITY THEORY OF MONEY

Abstract

The ongoing COVID-19 pandemic and the resulting global economic crisis will affect the different Countries' fiscal balances also rising several concerns about the survival of many economic sectors and their business models. In addition to the private sector, the public sector will surely experience high levels in deficits and overall debt. In the present work the well-known Quantity Theory of Money (QTM) is analyzed to discuss the key variables in addressing the problem. Can an "old theory" provide useful insights? Without any claim to exhaustion, the goal is to explore the crisis through these lens. Interesting policy implications for governments' actions can be derived from this (heterodox) approach. At the same time, for economic scholars this is a stimulating intellectual theoretical exercise.

Keywords: Inflation, Money, Central Banks, Monetization, Fiscal Policy

JEL Codes: E02, E31, E51, E58

1. Introduction

Present COVID-19 unexpected crisis has severely affected public health and economic systems. As far as the economic aspect is concerned, on a global scale, the World GDP dropped by 3.27% (constant prices) between 2019 and 2020 (IMF, 2021a). Only, for brevity and in constant prices, we can list: Argentina -9.96%, Bolivia, -7.70% (IMF, 2021b), Italy -8.9%, Japan -4.83%, United Kingdom -9.92% and United States -3.30% (IMF, 2021c). Similar drops have been experienced during the WWII period with yearly average decreasing rates equal to -7.16% for Italy between 1939 and 1945, -10.7% for Japan between 1941 and 1945, and -3.6% for UK between 1943 and 1947. Different is the case of the USA, because they did not experience war damages on their territory. We can consider a more reasonable benchmark in the Great Depression period (1929-1933). That time span experienced a contraction rate of the economy equal to -7.76%. All this set of figures are personal elaborations on data collected from Bolt et al. (2018). Thus, the crucial issue can be identified in the capacity of Governments to respond in an effective way to a war-like emergence period. Traditional macroeconomic interventions rise serious doubts (Corsi, 2020). On one side, monetary policies show lacks considering that a low interest rates environment lasts since the 2008-2011 crises. Even if the public debt overall stock cannot be considerate as a decisive factor in limiting the economic growth of an advanced Country (Panizza and Presbitero, 2014), a challenging public fiscal stimulus following current rules is a complex (and probably not feasible) option for all those Countries where Government debt/GDP ratio reaches the highest levels. As a matter of fact, the increase of sovereign debt and the simultaneous contraction of GDP would be a very hard combination to sustain. Especially, this is true for Countries within currency unions, where asymmetric interest rates price the different sovereign debt issued. On the other side, also the excessive rate of private debt can be considered as detrimental for economies. The interesting study by Arcand et al. (2015) points out the negative effect exerted by finance on output growth when credit level reaches a threshold of about 100% of GDP. At this point, both classical monetary and ordinary fiscal policies seem unfitted in their role.

In such a context, the possibility to adopt extraordinary and unconventional measures is autho-ritatively introduced and debated in the quite recent contributions by Blanchard and Pisani-Ferry (2020) or

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Giavazzi and Tabellini (2020). Considering the specific nature of the current crisis, the “forgotten” role of possible monetization of public debt could be rediscovered as the most appropriated instrument in financing fiscal policy. By this option, Central Banks (CBs) directly purchase Government Bonds issued to finance Government public spending. Such a mechanism allows to fully exploit the fiscal keynesian multiplier and sustain (or stimulate) output growth. This unconventional opportunity can be considered as a key driver especially for all those EU Countries adopting the euro currency in this emergency period. Without saying that, such a choice is important also for those Countries having their own CBs and currency (ie. Japan, UK and USA). The potential expected impact is totally different considering the complexity of the EU functioning. At the moment within the current EU Treaty this possibility is not allowed (art. 123 TFEU). The main fear advocated by fiercest opponents is that of a potential (and uncontrollable) inflation rise ignited by the consequent monetary base expansion. This reasoning has its roots in the Quantity Theory of Money (QTM).

This discussion paper is intended to present a more in-depth articulation of the analysis of the QTM.

2. Related literature

As mentioned above, the QTM is the foundation of the inflationary and hyperinflationary fears. Firstly, we have to mention the “traditional” TQM suggesting a unitary relationship between money growth and inflation (Fisher and Brown, 1911). Then, we can associate its modern (and now prevailing) version that can be traced back to the contribution of Milton Friedman (1956, 1963a and 1963b). Such a second school of thought has been labeled as Monetarism. Monetarists agree with “traditionalists” on the fact that money-growth would be completely reflected on inflation in the long-period. Additionally, they argue that money growth impacts both inflation and output also in the short-period. A formal representation of the QTM can be expressed as:

$$M V = P Y \quad (1)$$

wherein:

- M is the quantity of money;
- V is the velocity of money (average number of times that money moves from one entity to another over the course of a year);
- P is the price level;
- Y is the real output.

As can be appreciated, the $P Y$ term represents the GDP in nominal (current) values.

The equation (1) can be re-written considering the percentage change over time of each of the four terms having:

$$m + v = \pi + y \quad (2) .$$

In the (2):

- m is money-growth;
- v is the percentage change in velocity of money;
- π is the inflation rate;
- y is the percentage change in output.

To represent the previous theoretical explanation, whether in the long-run the inflation π is a merely monetary phenomenon following the Friedman's dictatum (Davidson, 2015), we have to assume that both v and y have no effect (thus, they are equal to 0). This would represent the so-called "neutrality of money" on the total output. At this point, the (2) can be assumed as: $m = \pi$ (and/or inversely $\pi = m$) originating all the fears of dangerous inflationary growth for changes in money supply.

The money-growth vs inflation direct transmission mechanism has been object of a good wealth of empirical literature.

The unidirectional or (also) the bidirectional causal relationship are the findings in: Falck et al (2021), Ellington and Milas (2019), Makin et al. (2017), Jiang et al. (2015), Sola and Peter (2013), Basco et al. (2009), Chang et al. (2009), Hall et al. (2009), Assenmacher-Wesche et al. (2008), Guncor and Berk (2006), Hossain, (2005), Haug and Dewald (2004), and Liu (2002).

The short-run impact of money-growth on inflation is argued in: Zhang (2012), Zhang et al. (2012), Assenmacher-Wesche and Gerlach (2008), Roffia and Zaghini (2007) and Xie (2004).

Support to the the long-run positive effect hypothesis are proposed in the contributions by: Doan Van (2020), Zhang (2012 and 2008), Benati (2008), Christensen, (2001) and Crowder (1998).

The specific one-to-one long-run relationship is pointed out by: Grauwe and Poland (2005) and Mccandless and Weber (1995).

No evidences of this transmission mechanism has been highlighted by: Focacci (2021 and 2020), Müller and Watson (2018), Cukierman (2017), Liu and Chen 2012) and Nicoletti and Altamari (2001).

Interestingly, a negative influence of money-growth on inflation is tested in Shuai (2002) and Wu (2002).

3. Data, graphs and discussion

As can be appreciated from the previous Section, the empirical studies are neither decisive nor univocal and the theme is far to be considered as exhausted. Anyway, if the QTM holds, the "pure" monetary origin of inflation can be disputed. In fact, from the (2), we have:

$$\pi = m + v - y \quad (3).$$

From the (3), it is possible to derive –having a stable and exogenous v as Monetarists assume (Davidson, 2015)- that inflation π should not increase until the increase in output y exceeds the quantity of money supply m . The condition of a higher rate in output growth y is always possible when there is no full employment. In fact, when unemployment rate is high, Governments have the opportunity (the potential) to spur the process towards its reduction. Such a reduction in unemployment means a higher output level. The higher is the output growth the higher will be the overall impact of this action.

To depict the time-path of the variables for different Countries we collected the following data taking care to cover the longest possible time period. The time spans and the origins for the collected historical series are different, because they cannot be retrieved by a unique and complete official source. Argentina and Bolivia have been selected because they experienced important periods of hyperinflation (several time these Countries are presented as the "ultimate" evidence of the link between money-growth and inflation). More in detail, the whole dataset is built with yearly data for:

-Argentina: money supply (M2) and GDP (World Bank, 2020a) paired with Inflation Consumer Prices from 1970 to 2013 (World Bank, 2020b);

-Bolivia: money supply (M2) and GDP (World Bank, 2020a) coupled with Inflation Consumer Prices for the Plurinational State of Bolivia from 1970 to 2019 (World Bank, 2020c).

-Italy: money supply (M1) (Barbiellini Amidei et al, 2016), GDP (OCPI, 2021) and Consumer Price Index (IMF, 2020a and it.inflation.eu, 2020) from 1956 to 2014;

-Japan: money supply (M1) (OECD, 2020a), GDP (World Bank, 2020a) and Consumer Price Index (World Bank, 2020 from 1960 to 2019 (World Bank, 2020a and it.inflation.eu);

-United Kingdom: money supply M1 retrieved from Bank of England (2020a), GDP (Thomas and Williamson, 2021) and Consumer Price Inflation (Bank of England, 2020b) from 1923 to 2016;

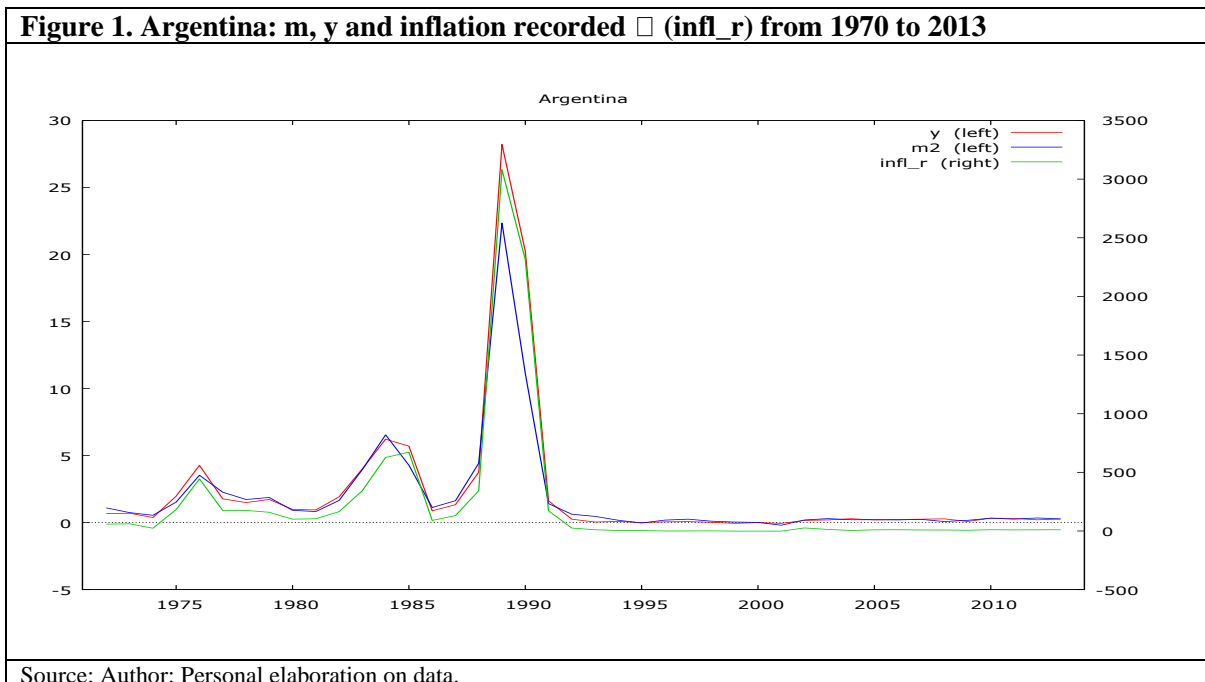
-USA: money supply M1 taken from IMF (2020b), GDP (Williamson, 2021) with Consumer Price Index (World Bank, 2020d) from 1961 to 2017.

Starting from GDP in current terms and money supply (M1 or M2 according to the case), it is possible to derive the velocity of money V from the (1) as:

$$V = (P Y) / M \text{ or, also, equivalently } V = GDP / M \text{ (4).}$$

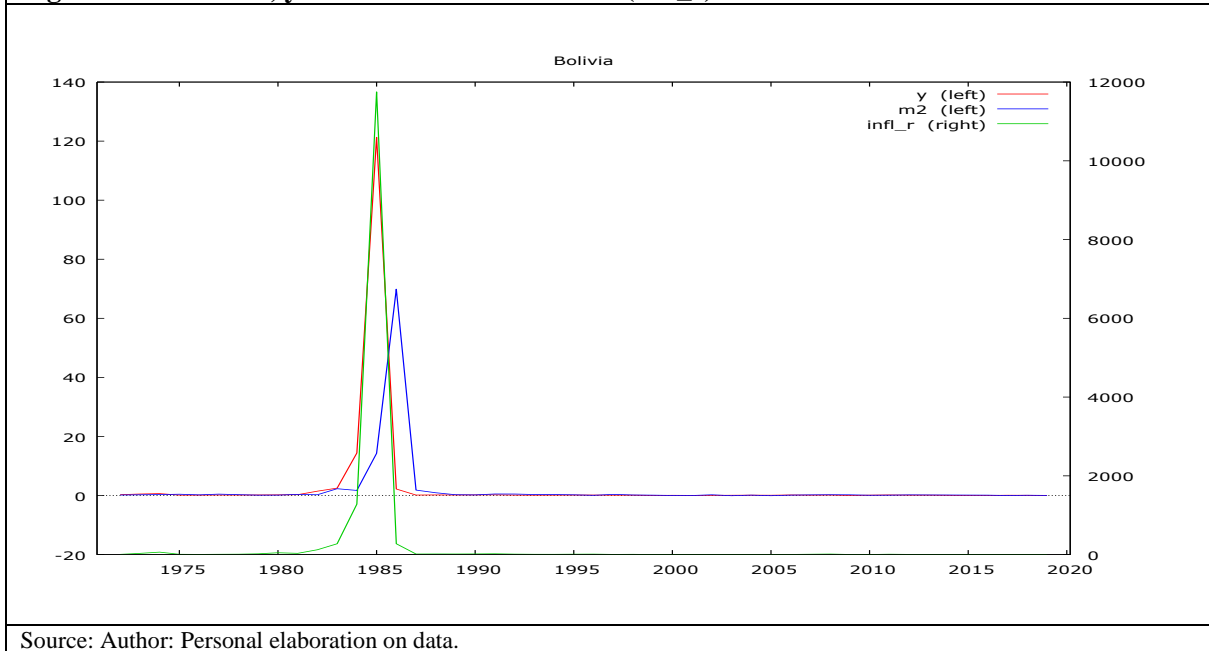
At this point, having V , GDP and M , we can get the corresponding “dynamic” versions v , y and m by calculating the respective percentage changes. Thus, coupling these values for the different Countries with recorded inflation data (π) as gathered from the above mentioned sources, we have the full empirical data to represent in diagrams all the variables represented in the (3). The charts are shown below from Fig. 1 to Fig. 6.

Figure 1. Argentina: m, y and inflation recorded \square (infl_r) from 1970 to 2013



Source: Author: Personal elaboration on data.

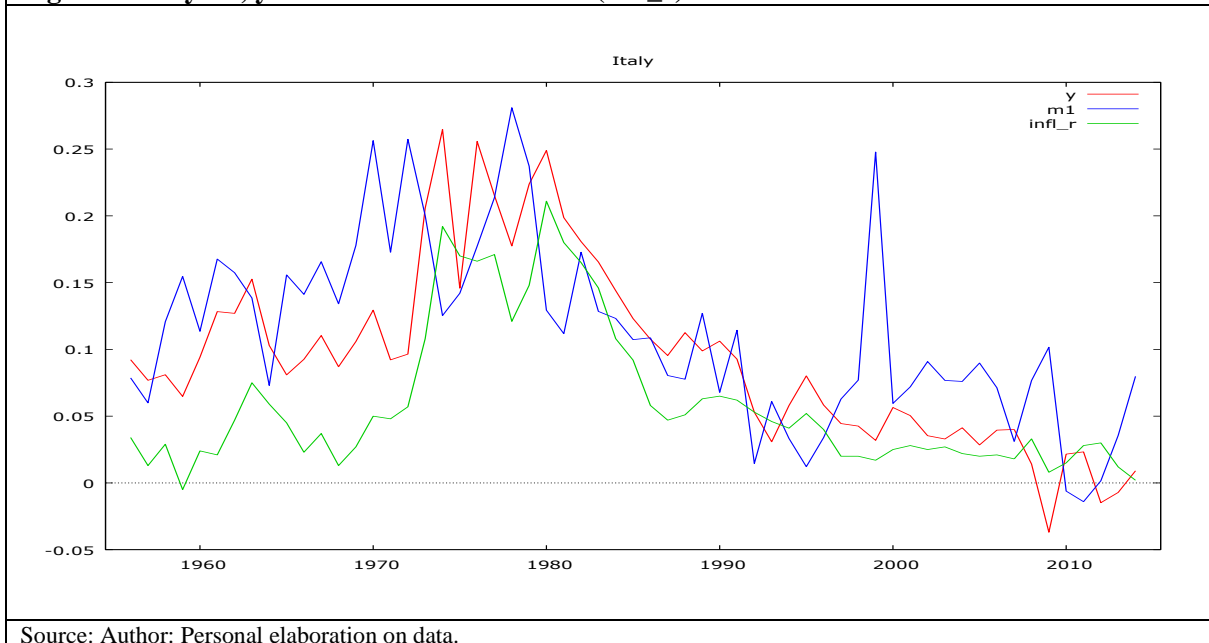
Figure 2. Bolivia: m, y and inflation recorded \square (infl_r) from 1970 to 2019



Source: Author: Personal elaboration on data.

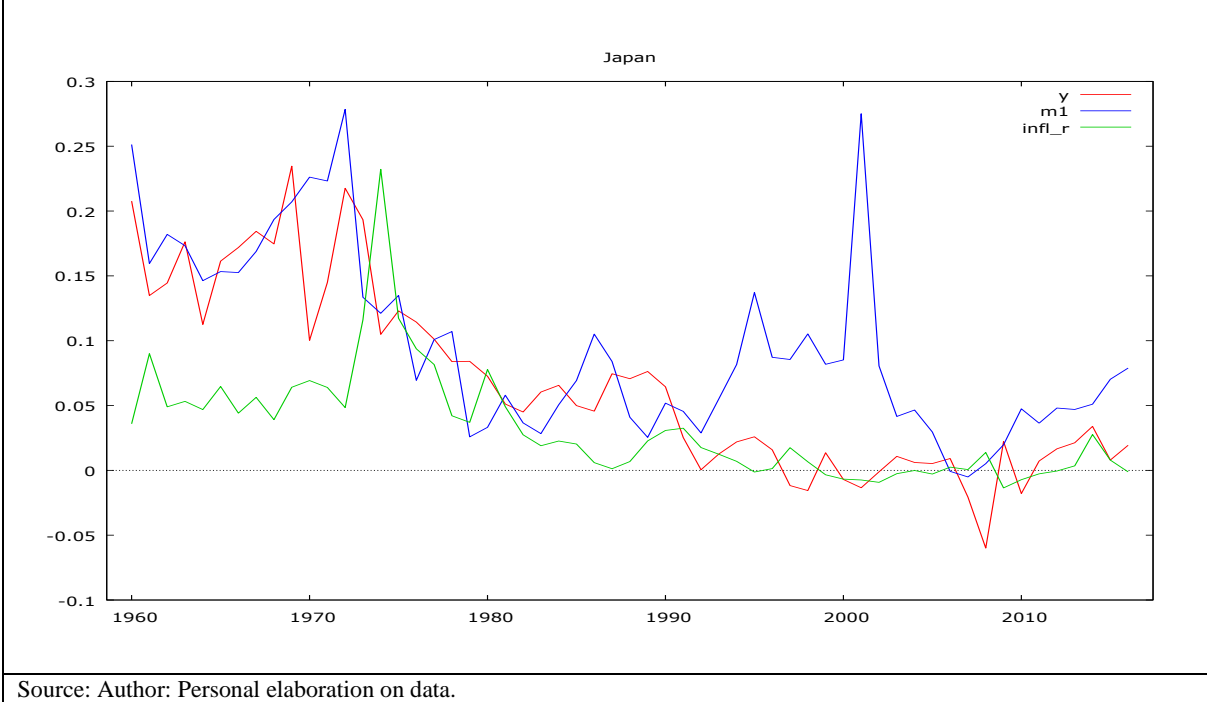
According to OECD (2020) “the economic consequences of the COVID-19 crisis are likely to affect regions within countries very differently, depending on their areas of economic activity and the policies in place to support workers and firms. Some regions may suffer more than others from containment and social distancing measures, facing initially a steeper economic recession and with larger shares of jobs at risk. The importance of tourism and local consumption – including retail stores and restaurants along with culture and entertainment – partially explains the relatively higher number of jobs potentially at risk in tourist destinations and metropolitan areas” (OECD, 2020).

Figure 3. Italy: m, y and inflation recorded \square (infl_r) from 1956 to 2014



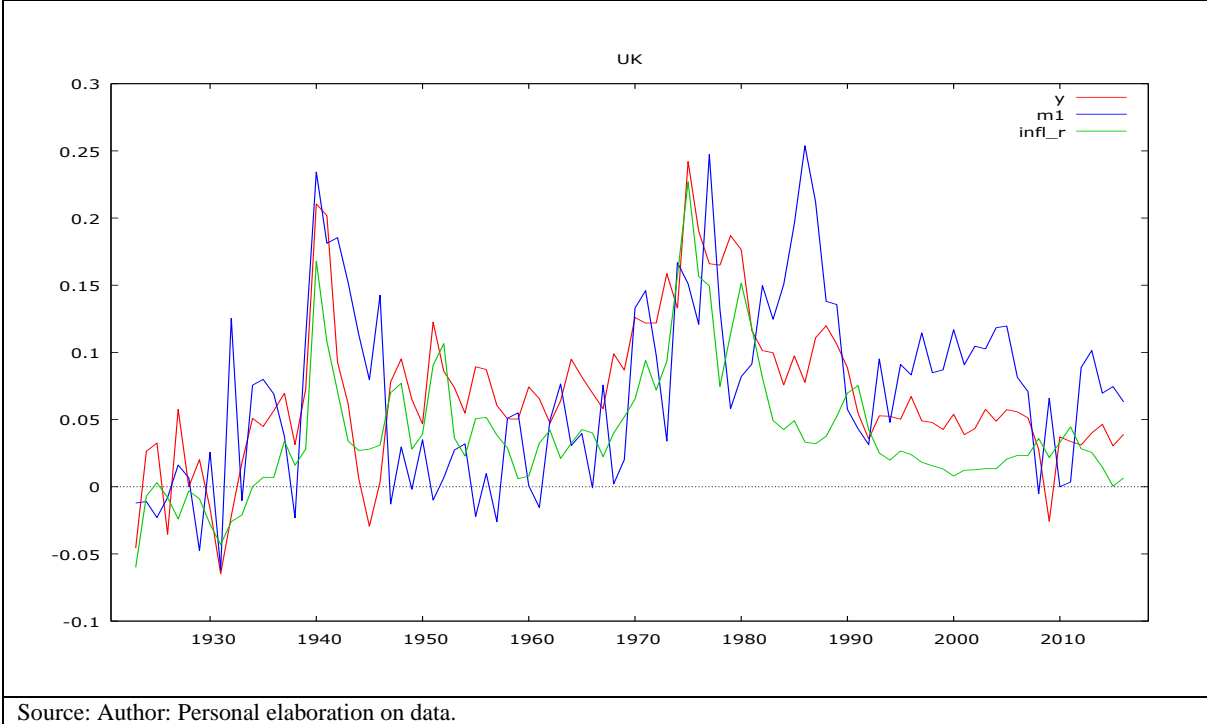
Source: Author: Personal elaboration on data.

Figure 4. Japan: m, y and inflation recorded \square (infl_r) from 1960 to 2019



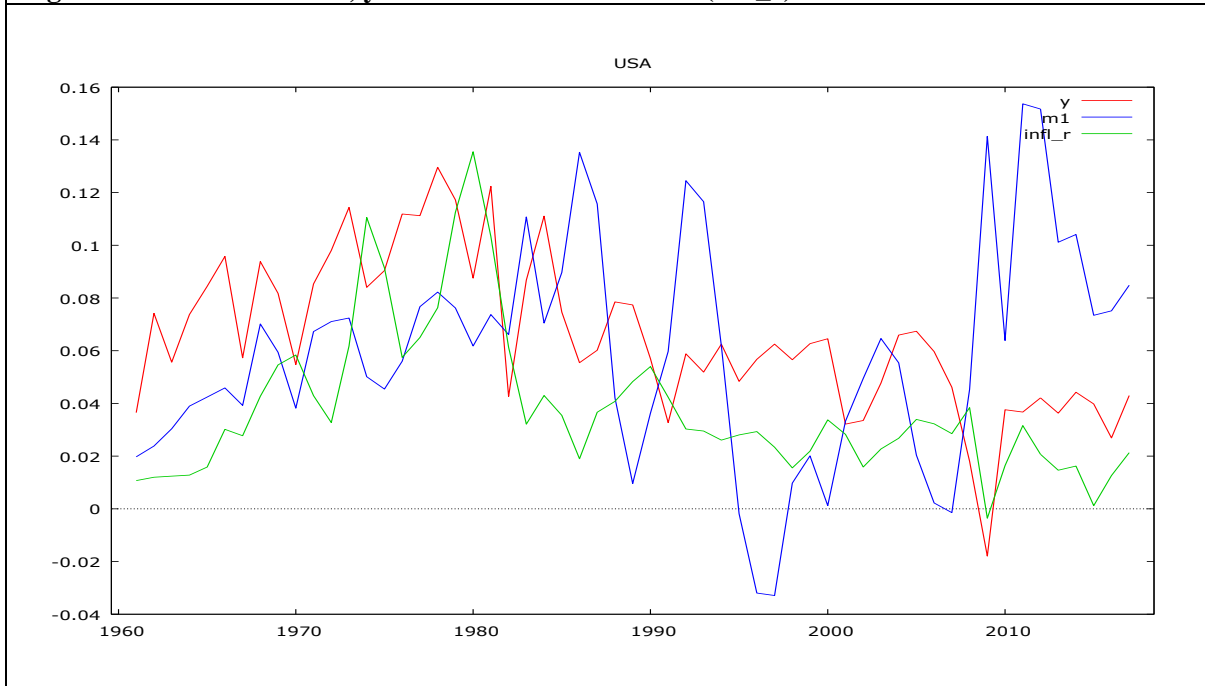
Source: Author: Personal elaboration on data.

Figure 5. United Kingdom: m, y and inflation recorded \square (infl_r) from 1923 to 2016



Source: Author: Personal elaboration on data.

Figure 6. United States: m, y and inflation recorded \square (infl_r) from 1961 to 2017



Source: Author: Personal elaboration on data.

Obviously, a simple visual inspection cannot be considered conclusive, however from the trends it is a bit complicated to argue that inflation growth is strictly and solely related to the change in money-growth rate. Econometrics analysis of the direct transmission mechanism from money to prices can be helpful. A recent attempt of the lead-lag analysis in the Granger sense (1969) has been proposed by Focacci (2021).

Taking, the (3) with a simple reasoning we can see that inflation dynamic is surely fostered by m but, at the same time, there is a counteracting effect due to y . As long as the rate of growth of GDP (y) is higher than the rate of growth of m (coeteris paribus), inflationary dynamics are not triggered. Instead, concerns are evident when GDP cannot grow for various reasons. The upper limit is the full employment condition. While the money \rightarrow inflation (the arrow stands for Granger-causes or leads) economic interpretation is quite standard and widespread, the opposite explanation (inflation \rightarrow money) is far less intuitive. This reverse case is plausible when fiscal revenues sharply decline and negative shocks on the supply -like for example in war periods or for exogenous events (as for oil shocks in the 70s or now the covid-19 pandemic)- affect the whole economic system. In this scenario, Government's possibilities to finance public spending are limited and increasing exogenous costs force new money issuances. This is precisely the critical point, the issuance of new money in the economy. Put it crudely, for classic economists, new money means new inflation, the "neutrality of money axiom" is an indispensable aspect of the issue. On the counterpart, for an entrepreneurial system, when its relevance is waived "understanding the essential role liquidity plays in determining the flow of production and employment" (Davidson, 2015) is crucial.

4. Policy implications and conclusions

The current economic crisis will severely affect living standard and economic conditions all over the World. As far as the economic policy options are concerned, both the fiscal and the monetary actions have pros and cons. Surely, in many cases, the overall public debt (and the corresponding Government

debt to GDP ratio as well) will grow. There are four levers that policy makers can pull to allow the debt and its servicing to maintain the sustainability path (Dalio, 2018):

- 1-Austerity;
- 2-Debt defaults or restructurings;
- 3-Printing money on behalf of CBs;
- 4-Transfer money and credit from those who have more to those who have less.

Each of these choices has its own benefits and drawbacks. The options 1,2 and 4 seem very complex. In some Countries austerity has been the keyword for long time (and the pandemic Covid made things worse). Debts default and/or restructuring do not seem serious to maintain credibility. Also the fourth lever would be difficult (impossible) to explain to those who had obtained wealth without defrauding the tax authorities. At this point, the third option seems the most feasible also because it would be combinable with the current low interest rates. This could spur, may be, a little of inflation whether not well managed. As Randall Wray (2015) points out: “Actually, some inflation is probably a good thing” and -on the other hand- some inflation is necessary to manage high debts. Additionally, another point would be the management of the high nominal debt in the hands of CBs. Is it too bold to think of a negative net worth in CBs balance sheets? Where would the problem be?

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DIASPORA TOURISM: CHARACTERISTICS AND REASONS TO TRAVEL THE CASE OF MEXICAN AMERICANS FROM TEJAS DE MORELOS

Abstract

Migration alongside with tourism are considered two of the most important economic agents in the world. However, despite having great similarities between them and being one as a result of the other, diaspora tourism has been very little studied so far, especially the Mexican American diaspora despite being the largest minority in the United States and Mexico being the second country worldwide as the home of many emigrants. This study analyzes the attachment to the place of origin and the characteristics and reasons for travel of migrants from the community of Tejas de Morelos residing within Sonoma County and their descendants upon returning to their place of origin to visit.

Keywords: Diaspora, Tourism, Mexican American Migration

JEL Codes: Z30, Z32, Z38

Introduction

Tourism together with migration are two extremely important phenomena for the economic sector. In both cases witnessing, mobility, cultural differences, and socioeconomic interaction. But seen from the touristic perspective, what happens when a migrant decides to visit their place of origin, do they remain part of the community as a local or are they seen as a tourist? What about the ascendant generations of these migrants? This phenomenon is attributed as Diaspora Tourism, according to Huang, Haller, & Ramshaw, ,(2013) diaspora tourists are in an intermediate place ("in-between"): they are half local because they are familiar with the destination, many even possess dual nationality; and at the same time they are half foreigners.

For Wagner quoted by Larraza-Azpiazu (2019) the point of view also takes an intermediate position by defining diaspora tourists as "tourists at home". Highlighting that despite being of the same ethnic origin, the one who is being visited and the visitor live in very different social, economic, and linguistic contexts. Adding that consumption habits point to these travelers both "at home" and "tourists": although they speak the local language, visit relatives, and go to local places of consumption, at the same time this type of tourist adhere to a tourist logic of consumption of leisure spaces, cultural spaces, and other non-essential purchases.

Based on Li & McKercher (2016) and Huang, Ramshaw, & Norman (2016), travel made by members of diasporas to their homeland, have been associated with many other types of tourism including personal heritage tourism, homecoming tourism, root tourism, ethnic tourism, ancestral tourism, ethnic tourism, VFR tourism (Visiting Friends and Relatives), genealogical tourism and diaspora tourism itself. However, diaspora tourism has become a broader term to describe the tourism activities produced, consumed, and experienced by first- or any-generation of migrants.

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Mexico in 2018 received 96,783 tourists, of which 41,447 were of international origin, mostly visitors from the United States, representing 57.5% of the total and tourists from Canada, with 15.9% (Notimex, 2018). Despite being recognized within the top 10 countries with the highest income of tourists to the country, unfortunately in terms of foreign exchange Mexico is positioned in 15th place worldwide. (UNWTO, 2019)

As a developing country, Mexico still faces the large number of Mexicans who emigrate to different geographical points, including those in other countries. The case of Mexico, just below India is shocking, based on the (United Nations, 2017) , it is in second place with the highest number of migrants. Currently there is a record of 11848,537 Mexican people living outside Mexico, of which 97.21% reside in the United States of America according to data from the Ministry of Foreign Affairs. (2018) The other 3% reside mainly in Canada, Spain, and the United Kingdom.

Despite being the largest diaspora group in the United States, Mucci Pineda (2014) points out that for the Mexican-American diaspora there are not many studies nor documents that inform of their conditions as a group based in U.S. territory, comparing to Cuban-Americans who have more literature dedicated to them, although their population is much smaller.

This is how we arrived at the study of the Mexican American diaspora of Oaxacans, especially those who reside in Sonoma County and have Tejano roots. Highlighting that Tejas de Morelos is distinguished by being one of the Oaxacan communities with the highest number of migrants in the United States, (ForoMexico, 2011) mainly residing in the city of Petaluma, a city located in Sonoma County, in the state of California. (Velez, 2017)

Revision of Literature

The study included members of the diaspora defined as Tejana-Petaluma, that is, migrants who live in Petaluma and carry out root tourism to the community of Tejas de Morelos.

The town of Tejas de Morelos is located in the central part of the state, within the district and municipality of Ocotlán de Morelos belonging to the region of the central valleys. (INAFED, 2013) Based in the town of Texas de Morelos, it depends economically on remittances, since it is characterized by being one of the main expellers of migrants to the United States, especially to the city of Petaluma belonging to Sonoma County in the state of California. (Velez, 2017) There is no exact count of how many people have migrated from Tejas de Morelos to Petaluma because of the large number that have left and reproduced. Some already with legal status, visit the town with their family every so often while those who still find themselves with illegal status only choose to send their children already born in the United States to know their roots and relatives. Although based on second or third generation children they are more difficult to assimilate a life in Texas. (Velez, 2017)

Mexico ranks second worldwide with a diaspora of 13.0 million Mexicans according to the United Nations (2017), of the total Mexican diaspora worldwide, 97.21% percent reside in the United States of America based on data from the Ministry of Foreign Affairs (2018). When reviewing the background in the study of diaspora tourism, there is the study of Hirai (2013), who analyzed the situation of some Mexican migrants who travel constantly to their place of origin and found among the reasons the need to travel for leisure and fun, but also to return to fulfill obligations, family likewise and to serve for their community.

Based in Hirai, (2013) diaspora tourism favors local communities, as it becomes a process in which several actors and institutions intervene, due to the important role that this type of trip can play for local and regional development in the countries of origin. Newland & Taylor (2010) highlights that diaspora

tourism can involve more stable use of infrastructure throughout the year and provide employment opportunities in times outside of peak hours.

According to Newland & Taylor (2010) diaspora tourism can result in the geographical expansion of tourism within the country and two streams of tourists can be identified: one is made up of people who are further away from the country of origin and may not be able to ask friends and family for food and accommodation; the second is composed of more recent emigrants who still have a close family in the country of origin.

But what about the Tejano diaspora in Sonoma County? Does their sense of belonging to Mexico change? When identified with their Mexican culture, do they recommend and travel constantly to Mexico? What are their reasons for traveling to Texas? There are several questions that arise to know this type of tourism better, however, due to the advances in the research of root tourism and the characteristics of the Mexican communities visited, it was proposed to answer the following research question:

What motivates Tejanos living in Sonoma County, California to travel to Mexico and in particular to the community of Tejas de Morelos?

Methodology

For this descriptive study on diaspora tourism the theoretical basis was used to identify the categories and define the tourism of the diaspora integrated by the community of Tejas de Morelos, Ocotlán Oaxaca and Petaluma in California. To define the variables, the research carried out by Dr. Huang on diaspora tourism was considered, emphasizing the document Attachment to the Home country or *Hometown? Examining Diaspora Tourism Across Migrant Generations* (Huang, Hung, & Chen, 2018) to operationally define the variables and design a questionnaire to collect the information that allowed to define the following variables Attachment to the place, Motivation and Sociodemographic and travel Characteristics.

In the first instance, a pilot test of the questionnaire to be applied was made. With 47 items in total, 12 items for the variable socio-demographic characteristics, 20 items for the variable attachment to Mexico, and 15 in the variable of Reasons for travel. Of the 47 items, 34 were based as such on (Huang, Hung, & Chen, 2018) . Annexing 13 items based on various authors among them the same (Huang, Ramshaw, & Norman, 2016) but in another research as well as (Hirai, 2013) (Berroeta, Ramoneda, Rodriguez, Di Masso, & Vidal, 2015) and (Gisolf, 2014).

To review the validity of the instrument for the data collected, a pilot test was conducted. The pilot was carried out in the first week of December 2019 with the participation of 24 Mexican migrants from all over the Mexican republic of first, second and third generation in the United States through Google Forms in the English language. The pilot test only included the variable of attachment to the Mexican republic in general, excluding the community of origin of each individual as proposed by Huang, Hung, & Chen. (2018)

Based on the results of the factor analysis, 7 items added at the beginning, 3 attachment and 4 motifs were eliminated due to alterations of the components creating other variables interfering with the main proposals by Huang, Hung, & Chen (2018) therefore only leaving the new items in the category of sociodemographic and travel characteristics. This with the aim of achieving a comparison between the theory proposed by Dr. and the alternate reality of the Mexican Diaspora.

As for the results of the pilot test, the four components proposed by Huang, Hung, & Chen (2018) are regrouped into two components, leaving the dependency category intact by adding item 9 of identity, and grouping the dimensions affective attachment with complete social bonding with items 6, 7 and 10 of identity.

However, item 8 was not applied, “To Visit Mexico says a lot about who I am” because of its low score of .512. When eliminating item 8 no modifications were shown. So, it was left with the attachment variable again with four categories and with 17 items as in the questionnaire proposed by Huang, Hung, & Chen (2018) for the final questionnaire obtaining an alpha reliability of Cronbach of .965.

As for the reduction of dimensions of the variable Travel reasons, Huang, Hung, & Chen (2018) proposed 2 dimensions for the variable of reasons, in fact two dimensions were also obtained in the pilot test with a Cronbach alpha reliability of .939. The items in this case were regrouped, since item number 18 strongly influences both dimensions, while in the dimension of Mexican culture no item changed of place, only item 3 was added to the heritage dimension. For the purposes of the final questionnaire, it was also decided to use the model of Huang, Hung, & Chen (2018) as is.

Final Questionnaire

The final questionnaire was applied in the month of December 2019 and January 2020 to the Mexican American population with Tejano roots who came to visit the community of Tejas de Morelos, Oaxaca, between the ages of 15 to 69 years of diverse generations of immigrants residing throughout Sonoma County, in California. It was also decided to use the questionnaire format proposed by Huang, Hung, & Chen (2018) as mentioned previously. In this case both sections of attachment related to Mexico as a country and Texas of Morelos as the community were included. The final questionnaire for the survey consisted of a total of 59 items, divided into 3 variables, sociodemographic characteristics with 12 items, attachment with 36, and travel reasons with 11.

In this case, like preciously mentioned both cases of country and community of origin were taken into account in the attachment category, dividing it into Attachment to Mexico with 18 items and Attachment to Tejas of Morelos with 18 items, using the same items, only modifying the name of the country by the community. Item number 18, “I recommend visiting Mexico / Texas de Morelos” was proposed measuring how much agreement they show in to recommending visiting the place of origin in both cases country and community.

Results

The obtained results grouped the interviewees into 4 generational groups. Making the observation in the third-generation interviewees who are not yet of legal age and only represented 7% of the surveyed population consequently classifying the Texas diaspora as young.

50% of respondents represent the second generation of migrants, individuals who were born in U.S. territory, while the remaining 43% which were shown to be divided into two equal parts of Texan-born individuals who left before turning 18 belonging to the 1.5 generation and the other half after the age of 18 who are already permanent residents or U.S. citizens being generation 1.

Like stated, according to Huang, Hung, & Chen (2018) generation 1.5 refers to foreign-born people who immigrated to a new country, usually with their parents, before the age of 18. They are the first generation of migrants, but they tend to behave like the second generation of migrants, children born in the new country.

As for the characteristics of travel, it has been found that like many other diasporas, this type of tourism favors the local market without the need to create places for lodging with unnecessary expenses and pollutants if the connection with the community is maintained since 57% still have their own house and 39% with a family member or acquaintance with whom to stay as shown in table 1.

Table 1. Sociodemographic and Travel Characteristics of Mexican American Texans.

Variables	Categories	Fr %	Variables	Categories	Fr %
Gender	Female	60.7	Arrangement	Organized	3.6
	Male	39.3		Self-Arranged	96.4
Age	15-24	46.4	Number of visits to Tejas	1-3 Times	17.9
	25-34	10.7		4-6 Times	21.4
	35-44	10.7		7-10 Times	17.9
	45-54	17.9		11-14 Times	3.6
	55-64	7.1		15+ Times	39.3
	65+	7.1			
Immigrant Generation	1	21.4	Travel size party	Alone	3.6
	1.5	21.4		1-5 People	89.3
	2	50		6-10 People	3.6
	3	7.1		11-15 People	3.6
City currently living in	Sonoma	7.1	Longest trip in Tejas	Less than a week	7.1
	Penngrove	7.1		1-2 Weeks	10.7
	Santa Rosa	10.7		More than two weeks	82.1
	Rohnert Park	21.4			
	Petaluma	53.6			
Interview Language	Spanish	39.3	Lodging	Hotel, Airbnb	3.6
	English	60.7		Family members home	39.3
				Own home	57.1
Number of visits to México	1-3 Times	42.9	Food preferences	Chain Restaurants	0.0
	4-6 Times	17.9		Local restaurants	46.4
	7-10 Times	32.1		Self-Prepared	53.6
	11-14 Times	0.0			
	15+ Times	7.1			

Source: Own elaboration based on results produced by the SPSS.

In addition, it can be observed with the frequency and period of stay that the vast majority of Texan Americans with 39.3% have visited Tejas de Morelos more than 15 times, while other Mexican destinations have only been visited 1 to 3 times corresponding to 42.9%. This means that this diaspora feels more motivated to visit their hometown than the rest of the Mexican country.

In second hand we have the dimension of attachment to the place of origin. In this case, the items were duplicated by analyzing the attachment to the community of Tejas de Morelos and to the Mexico Country. As can be seen in Table 2, adding the 4 categories, and taking out the average, it has been discovered that Texans identify with the country of origin more easily obtaining an average of 4.49

Table 2. Attachment comparison between Mexico and Texas de Morelos

Place Attachment		Slates		Mexico
Attachment and dependence				
No other Place can compare to Mexico	4.321	4.577	4.464	4.624
I would prefer to spend more time in Mexico if I could	4.571		4.607	
I feel Mexico is a part of me	4.607		4.535	
Mexico means a lot to me.	4.571		4.642	
Mexico is very special to me	4.642		4.750	
I have a lot of fond memories about Mexico	4.750		4.750	
Identity				
The types of things I do in Mexico cannot be substituted in any other place	4.142	4.185	4.178	4.242
I identify strongly with Mexico	4.500		4.321	
Visiting Mexico says a lot about who I am	4.214		4.285	
I feel that I can really be myself in Mexico	4.107		4.214	
Mexico reflects the type of person I am	3.964		4.214	
Importance				
Traveling to Mexico is more important to me than traveling to any other place	3.928	3.928	4.178	4.178
Social Bonding				
(If I have children) I will bring my children to visit Mexico	4.857	4.8745	4.928	4.928
I highly recommend visiting México	4.892		4.928	
Media General		4.433	4.499	
*Mexico was substituted by Tejas when asked about hometown. Source: Own elaboration based on results produced by the SPSS.				

Similarly compared to other diasporas, the organization of these trips is Self-arranged with 96.4% and usually travel size party is between 2 to 6 people. The stay is more than two weeks affirming the pre established theories, with 82.1% of Texans housed in their own home or in a family home providing food for all the inhabitants from the local Markets and restaurants and only 3.6% only housed in hotels and Airbnb.

Finally, as for the total average of the Reasons for travel, as shown in table 3, between family heritage and Mexican Culture, a total of 4,508 was obtained. The variable of heritage with 4,507 and 4.51 for Mexican culture. The difference is minimal, before this could be concluded that the Texans show and maintain a high interest balanced between Roots tourism and VFR to visit their place of origin.

Table 3. Travel Reasons for Mexican Americans

Family Heritage		Media
To remember our family's history		4.46
To discover my family roots		4.39
To maintain my connection to Mexico		4.57
To listen to life stories about family members		4.61
	Media Total:	4.50
Mexican Culture		Media
To visit interesting attractions		4.43
To have some entertainment (fun)		4.64
To learn more about Mexico		4.43
To learn about the history of the people from Mexico		4.54
	Media Total:	4.51

Source: Own elaboration based on results produced by the SPSS.

Conclusions

As mentioned, due to the recent movement of migrants, the Tejano diaspora is still very young, compared to the Chinese diaspora, very few Texans are third generation and yet still feel rooted in the community. Despite this, both diasporas have the same characteristics as other tourist diasporas, traveling frequently for family obligations, to maintain the connection with their place of origin and favoring the local economy by carrying out leisure and pleasure activities as tourists but without the need to create places for lodging with unnecessary expenses and pollutants within the community and nearby sites of interest.

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IRINA ANA DROBOT¹

USING MYSTERIOUS CIVILIZATIONS IN TEACHING CULTURE AND CIVILIZATION

Abstract

The purpose of this paper is to show some means of attracting first-year students at the Technical University of Civil Engineering, Bucharest, Faculty of Engineering in Foreign Languages to better understand the notions of civilizations, their significant elements for existing (a geographical territory and a large enough historical interval), as well as their cultural products and reasons for their dissolution. By presenting the cases of ancient civilizations such as the Maya, Indus, Anasazi, Cahokia, Angkor, and others, students can better form an opinion as to understanding the concept of civilization, as well as applying theories of their development and fall, and also argue in favour of one of the hypothesis regarding their disappearance. One purpose of this course is to help students develop their arguing and critical thinking skills.

Keywords: Humanities, dissolution, cultural products

JEL Codes: I20, I21, I29

1. Introduction

The Faculty of Engineering in Foreign Languages at the Technical University of Civil Engineering Bucharest, Romania, has, in the curricula, a Humanities course for first year students.

The purpose of the course is, generally, to help students develop their skills of bringing arguments to support their ideas and critical thinking.

This course has been considered by the author of the paper, who teaches it to first year students at the Faculty of Engineering in Foreign Languages, as having the possibility to present them with topics that are attractive to them. The reason for this is that students are interested at this age in travelling and discovering other cultures. They are also interested in practical aspects regarding the cultures of companies and institutions. Another aspect they are interested in, related to discovering other worlds, and which may have to do with the popularity of science fiction and fantasy literature, are mysteries and mysterious civilizations and cultures, such as Atlantis. The connection with science fiction and fantasy literature can be established as understanding what has happened with such civilization has been an on-going topic throughout the ages, and no clear conclusions have been reached. Moreover, every now and then we may find on the Internet articles regarding new theories and discoveries related to the lost civilization that contradict previous findings. These speculations involve the use of imagination and making hypotheses based on previous discoveries and students can bring evidence, while also arguing themselves in favour of the respective evidence. The topic of mysteries and mysterious civilizations was suggested for discussions by students from the university year 2016-2017 and has, since then, been present in courses and seminars, and has been received with positive reactions and interest from students series that followed.

Thus, the topic of mysterious civilizations resonates with the needs analysis which should be done before starting to work with students. The term “analysis of needs” was introduced at first in India in the 1920 (West 1994) by Michael West referring to foreign language learning classes, meaning what learners wishes to use the language for (Howatt, 1984: 245; White, 1988: 12-13; Tickoo, 1988). Such an analysis

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refers to students' future purpose of applying the notions learned in the future professions, but also to students' personal interests. Engineering students enjoy finding solutions to problems. What is more, "Preparing students to solve complex problems is an identified area of need in engineering education." (Kirn and Benson, 2018). The Humanity course will help students continue with developing this skill within an area of humanity sciences, but in combination with hard facts, regarding scientific arguments and discoveries present in their readings which they will bring forward to back up their arguments.

During this Culture and Civilisation course, the notions of culture and civilisation are discussed right from the start. Culture is presented as including ways of thinking, behaving, and cultural products, the latter including "symbols, heroes or even objects" (Baciu, 2013, p. 49). Civilisations are considered to be cultures that reach their highest level of development and excellence (Baciu, 2013). In order to be able to talk about a civilization, we need a geographical space that is large enough and "a historically assessable life span" (Baciu 2013, p. 45). Students will also be introduced to the notions of dissolution of civilizations (Baciu 2013, p. 67), having causes such as natural disasters, internal conflicts caused by civil wars and religious misunderstandings, corruption and decadence, disinterest in values and traditions, "military disintegration", conquests (Baciu 2013, pp. 68-69). One significant aspect is that civilisations can die mostly from within, as there can be a decay of values, and not so much from without, which is a phenomenon called implosion (Baciu 2013, p. 67). Examples related to well-known ancient civilizations like the Greek and Roman, as well as mysterious civilizations such as the Maya, Indus, Anasazi, Cahokia, Angkor, can help students to better understand that civilizations appear, develop, reach their highest stage of development, then move on towards moral decay and decline, or are abruptly ended due to natural disasters or conquests.

2. Material and Methods

The course is based on the textbook *Culture. An Awareness Raising Approach* by Professor Sorin Baciu (2013) for the theoretical notions of culture, civilization, and civilization dissolution. To these, notions regarding the development of civilizations, from a phase of bronze in the beginning, to silver when it starts to develop more and gold, which is the stage of the highest development, towards a phase of decline, will also be explored and applied to known ancient and mysterious civilizations. Targowski (2009) mentions three authors of such theories of stages of development of a culture or civilization: Spengler, Toynbee and Sorokin:

Spengler, in his book *The Decline of the West* (1918), argued that all cultures are subject to the same cycle of growth and decay in accordance with predetermined "historical destiny." Toynbee in his *Study of History* (1934), compared civilizations to organisms and perceived their existence in a life cycle of four stages: genesis, growth, breakdown, and disintegration. A mechanism of "challenge-response" facing civilizations influences their abilities at self-determination and self-direction. However, according to him, all civilizations that grow eventually reach a peak, from which they begin to decline. [...] Sorokin argued in *Social and Cultural Dynamics* (1937) that three cultural mentalities, ideational (spiritual needs and goals), sensate ("wine, women, and song"), and idealistic (a balance of needs and ends) are the central organizing principles of a civilization's life cycle, and that they succeed each other always in the same order according to super-rhythms of history. According to Sorokin, Western civilization has for the last 500 years been in the sensate stage, reaching now its limit, and will soon pass to the next idealistic stage (which, according to this author, could be the universal civilization).

By adding the notion of life cycles of cultures into the course and seminars discussions, students will gain a different perspective on the history of cultures and civilizations they have studied in school. They will begin to reflect, based on previous knowledge, on the way that civilizations and cultures have

progressed towards the maximum stage of development until they have shown signs of decline. They may notice that this is a universal pattern that applies to all cultures and civilizations they know about or they are going to find out about during this course. They will be invited to discussions about the achievements of well-known civilizations, such as ancient Greece, during the Golden Age. Since this is the golden age of development, and the highest one that a civilization can achieve, students will be asked to pay attention to all the cultural products and developments that took place during this time, in order to realize the extent to which the a civilization can develop at its highest moment. They can be asked to do a fast search online, since they are familiar with the online medium and since they enjoy using it for any question they may have, and find a site which they can use as a basis for discussions in class. One good example of such site is GreekBoston.com, whose article *What Was the Golden Age of Greece?* presents the time in history (5th and 4th centuries BC) together with an overview, where students may find what the golden age means, namely a flourishing civilization and a civilization having stability. Cultural products can also be identified, for instance the method of questioning, developed by Socrates, the theatre, democracy. Students can then be asked to find examples of other cultural products, including possible innovations in the field of engineering, which could be of special interest to them.

At the same time, after examining the theories of life cycles of cultures and civilizations, students will find out that there can be reasons other than decline of moral values that can lead to the end of a civilization and culture. The stage of decline can, in some cases, be replaced by an abrupt ending due to a natural catastrophe.

Students will be encouraged to look up articles on the Internet about mysterious civilizations, and identify information regarding reasons for the respective civilization's dissolution, as well as features of its golden phase (its phase of maximum development). Examples of articles suggested by the teacher are those dealing with titles such as *10 Civilizations That Disappeared Under Mysterious Circumstances* by Newitz (2015) and *Here's Why These Six Ancient Civilizations Mysteriously Collapsed* by Greenspan (2020). In the article by Newitz, students can identify the cultural products of the Maya, such as discoveries in mathematics, the calendar, writing, and engineering knowledge which enabled them to build pyramids and terraced farms. The students can thus understand that the Maya had reached the highest phase of their development, since they had all these cultural products, reminding them of the situation our world in in today. The other mysterious civilizations had all reached the peak of their development, with inventions that sound unusually familiar, reminding of the world we currently live in. The Indus Valley civilization also had walkways with highly developed roadside drainage. The inhabitants of the Cahokia civilization were very good artists and architects, among others. Cahokia also had a very developed irrigation system. Angkor amazes readers finding out that the members of this civilization had well-developed roads and canals. Students can be encouraged to find out more information on the inventions and developments related to the field of engineering during those times, since they may to some extent be able to compare them with their correspondents that exist nowadays. They may not have all the notions regarding them, since they are only first year students. However, they may find this exercise appealing since they can apply their interest while looking for information online and gain a better understanding of the issue. The reason why the Maya civilization disappeared, in the article, is a combination of factors, from wars, to climate change, to famine, all which led these people to abandon their cities. The reason for the disappearance of the Indus civilization mentioned in this article is a change in the pattern of rainfall which made it difficult to get the necessary food resources from agriculture. Cahokia encountered issues related to disease and famine, which made its members move to other territories. Angkor may have disappeared due to wars or natural disasters. The cause of the Easter Island's inhabitants' disappearance is supposed to be related to the finishing of all of the island's resources, which made them to move towards other territories. In the article by Greenspan (2020), there are additional examples of ancient civilizations, such as the Anasazi, whose members are remarkable due to their building homes into cliffs. A long-lasting drought, coupled with religious and political conflicts, are listed reasons for the dissolution of the Anasazi civilization. Students can also

look for more examples of information of their interest from this second article, regarding reasons for civilizations' dissolution, as well as cultural products from their phase of highest development. The teaching methods proposed for students to exercise their skills using these materials include individual work, as well as pair and group work. The methods are chosen based on their preferences. Often, students prefer to work together at least with one other colleague, since they feel the need for feedback during their work and for some dialogue with someone else regarding the given activity. Students at this university are generally not from this city, but from other cities in Romania, and they stay together at the hostel, and are used to studying together for the other subjects. Since they prefer to work together, such activities in class can help them train for working in teams for projects later in their career. They can decide themselves what each students' role in the group is and cooperate on the respective activity. For instance, a student can search for articles, and another student can begin to select the necessary information. In this way, the activity will be more relaxed, due to discussions among peers. This technique of having students work together is called cooperative learning (Slavin, 1980).

3. Results

Taking into account the students' needs, the lectures also tend to be interactive. Students can propose the mysterious civilizations they wish to hear about during the lecture, and they can also bring the topic up during the seminars. Given that the topic is of interest, students will be more motivated to understand the theoretical concepts presented in the textbook. By applying these concepts and theories to topics of their interest, they will realize that they gain new perspectives of their topic of interest. For example, if they have had their interest sparked up towards Atlantis due to the Disney animation film *Atlantis: The Lost Empire* (2001), and had read about this civilization, they will begin to understand how this civilization had gone through all phases of development, reaching its peak, until it disappeared. They will learn that other civilizations have also followed this same pattern, and think back about their history lessons in school regarding ancient empires such as the Greek and Roman ones. They will realize that they follow the same pattern. While these civilizations are ancient, discussing them using these theories and concepts makes students realize that they are discussing about issues that are very relevant today. The very world we are all living in at the moment seems to follow a similar pattern of evolution.

By looking at online articles about mysterious civilizations, students can also understand better the concepts regarding culture identity manifestations, including symbols, traditions, values and personalities (Baciu, 2013), as well as cultural products. All these are part of what distinguishes one culture from the others.

Part of motivating students during the Culture and Civilization course includes adding notions related to their main field of study, engineering. Innovations are cultural products, and inventors are personalities, with respect to various cultures. What is more, students can apply their knowledge in engineering regarding natural disasters and climate change that were found to be the causes of dissolution of some civilizations when arguing whether they believe or not that this could have been the cause why the respective civilization disappeared. Students may also be interested in studying the extent of engineering development in the golden phase of the mysterious civilizations.

All these aspects offer occasions for debates during class and among students. Engineering should be made part of the activities in the classroom, since students will feel that they are taken into account as a specific group, and that their needs matter.

4. Discussion and Conclusions

Common interests within a group of students are significant in motivating them for various class activities. What the group of first year students at the Humanities course have in common is their interest in their main field of study, engineering. This can be exploited to their advantage, since students need information and activities that are relevant to their field of activity and future profession.

Notions of culture and civilization have been present, in a basic form, throughout their English language classes in school and highschool. Most students who have studied English in school and highschool have basic notions regarding British and American cultures. Throughout their English language seminars at the Technical University of Civil Engineering Bucharest they will review these notions, together with acquiring new notions regarding English as a world language, as a lingua franca. English as spoken in various parts of the world, including former British colonies, will be brought forth during the English as a foreign language seminars.

The course in Culture and Civilization is meant to go further, and to deepen notions regarding cultures and civilizations. By resorting to ancient civilizations' examples, the course does not intend to simply offer historical information, but instead to offer the possibility of interpreting the respective historical information. The students will use the attractive examples of mysterious civilizations in order to illustrate with examples the theoretical notions presented in the course textbook. In this way, they will have a better grasp of the definitions, theories and notions, and also apply them later to other aspects of cultures and civilizations, including to situations in today's world. Students will realize that the world of yesterday, of ancient civilizations, is not so different from the world today, from the point of view of cultural products, cultural identity, and patterns of evolution.

The capacity of analyzing cultural differences will be enhanced afterwards, as students will move on to other topics in their Culture and Civilization course.

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ATHAR ELNAGGER¹ AND CHRISTIAN RICHTER²

EXCHANGE RATE PASS-THROUGH, INFLATION AND MONETARY POLICY IN EGYPT

Abstract

The role of exchange rate pass-through has been dominating the heated debates over effective monetary policies as well as exchange rate regime in general equilibrium models. Empirical literature from developed economies has shown evidence that the pass-through to prices can be incomplete in many cases. These studies have indicated that there are substantial differences between countries. Due to the lack of empirical literature for developing countries, this research contribute to the field by examining the exchange rate pass-through in Egypt from 2005 to 2018 using nine endogenous variables Vector Auto-regressive Model (VAR); this research estimates the degree and the size of exchange rate pass-through to domestic prices. In addition, we use a reduced two dimensional VAR to estimate once the relation between inflation (CPI) and money supply (M2) and once for the relation between inflation (CPI) and imports along with granger causality test to investigate causality between two variables. In the last part of the analysis, we investigate the exchange rate pass-through to inflation (CPI) in Egypt before floatation that is from December 2005 till October 2016 and the post floatation period which is from November 2016 till February 2018. The results have important implications for the ability of Egypt to achieve an effective inflation targeting regime.

Keywords: Exchange rate pass-through, Exchange rate policy, Inflation, Monetary policy, Pass-through elasticity, Granger Causality

JEL Codes: E5, E31, E52, C3, C320

1. Introduction

The exchange rate pass-through has been of interest for a long time; and has developed over the past few decades. For a long time, the debate has been over the law of one price and how prices tend to converge across different countries, however, starting from the late 1980s, the literature on exchange rate pass-through has underlined the role of price discrimination, industrial organization and segmentation across different products markets worldwide. Empirical studies have been conducted in developed countries to study the case, these studies include Anderton (2003), Campa and Goldberg (2004), Campa et al. (2005), Gagnon and Ihrig (2004), Hahn (2003), Ihrig et al. (2006), McCarthy (2000), Choudhri and Hakura (2006), Frankel et al. (2005) and Mihaljek et al. (2000).

Recently, the role of pass-through has been dominating the heated debates over effective monetary policies as well as exchange rate regime in general equilibrium models. These debates provide wide implications and effects for the conduct of monetary policies, transmission of shocks, stability of the macroeconomic environment as well as ways to solve imbalances in international trade and capital flows. In addition the debates are concerned with whether the exchange rate pass-through is endogenous or exogenous to the monetary policy in a specific country. In case of low import price pass-through, fluctuations in the nominal exchange rate will cause smaller expenditure-switching behavior in the monetary policy for the domestic economy and hence, this means that the effectiveness of monetary policy can be measured in terms of its impact on stimulating the economy of the domestic country. If the exchange rate pass-through can be considered as an endogenous variable to the various macroeconomic variables; the tools used to measure the effectiveness of monetary policy might be fragile and specific for a certain regime. Accordingly, the determinants and the degree of the exchange

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rate pass-through to prices are highly influential and can affect the efficiency of the macroeconomic environment (Campa and Goldberg, 2005; Taylor, 2000).

The management of exchange rate pass-through to prices is an important instrument to achieve macroeconomic stability, however, there has been limited empirical literature dedicated to study the case. Most of these literatures have been conducted for developed countries as mentioned earlier. This paper will study the exchange rate pass-through in Egypt from 2005 to 2018 using nine endogenous variables Vector Auto-regressive Model (VAR); we will estimate the degree and the size of exchange rate pass-through to prices). In addition, we will use a reduced two dimensional VAR to estimate once the relation between inflation (CPI) and money supply (M2) and once for the relation between inflation (CPI) and imports along with granger causality test to investigate causality between two variables. The last part of the analysis we investigate the exchange rate pass-through to inflation (CPI) in Egypt before and after implementing the floating regime.

This paper is divided into five sections. This paper starts with the introduction followed by a literature review for the different studies conducted in this field of research. The third section is dedicated to an overview on the exchange rate, inflation and monetary policy in Egypt. The fourth section explains the empirical analysis and results. The fifth section of this paper is the conclusion.

2. Literature Review

The choice of an optimal exchange rate system has been always related to the theory of optimal exchange regimes which has developed by Mundell in 1961 and Poole in 1970. The analysis and the choice for such exchange regime was based on the how efficient will the regime contribute to decreasing the fluctuations in the domestic output in the presence of stick prices. Nominal shocks in the economy will make the fixed exchange rate system attractive; if inflation was due to monetary shocks, this means that the having a fixed exchange rate system will lead to less volatility in the output. However, shocks which hit the economy affecting the prices of exports and imports as a result of changes in supply or demand will necessitate adjustments in equilibrium relative prices; in such a case, a flexible exchange rate system will be needed. A flexible exchange rate will allow a change in the nominal exchange rate and this in return can improve the effect of such shocks on employment and output. In addition, in a fixed exchange rate system, if the economy faces a downturn caused by real factors; the central bank must interfere to adjust the fall in the demand for domestic currency and increase in the interest rates by absorbing the excess in the supply of money. This theory in explaining the choice of optimal exchange rate regimes can provide some insights, however, it fails to explain cases especially for emerging economies (Calvo and Mishkin 2003).

There are different models that have been developed to assess the optimal exchange rate policy, in these models; prices are considered to be exogenous in local currency or the producer currency, this means that in the short term when prices are rigid, there will be a 100% pass through effect represented in the prices of imported goods priced in the currency of the producer. However, if the prices are adjusted, then the pass through has no difference. The question is then if the prices do adjust, will there be a relation between the pass through and the currency used for pricing the goods. The pass through of exchange rate changes into domestic prices is often related to the macroeconomic policy. This is because the degree of such pass-through will affect relative prices, for example, if the exchange rate pass-through is high, there will be changes in the relative prices for both tradable and non-tradable good and hence then trade balances will adjust immediately to such movement in prices. However, in case of low pass through effect, the exchange rate will not assist in the trade balance adjustment. In emerging economies, the degree to which inflation increases as a result of currency depreciation would affect the recovery process. In cases where there is a complete exchange rate pass through to both consumer prices and import prices, this means that the gains from exports due to depreciation in the nominal exchange rate

will be offset since there will be no change in the real exchange rate in the economy. The study of pass through is important and will have a direct effect on monetary policy decisions (Ito and Sato, 2008).

A large body of economic literature studying exchange rate pass-through (ERPT) has been developed in the past two decades. It has been believed that the condition of purchasing power parity (PPP) holds; that is the prices of goods (tradable) in different countries if are converted to the same currency will be equally priced. However, empirical evidence has shown only very weak support of this condition. Hence, given such evidence, over the past decades theoretical and empirical research has developed various explanations to clarify the incomplete exchange rate pass-through. In 1987, a paper by Dornbusch (1987), attributed the incomplete pass-through to imperfect competition in the market where firms operating in such markets alter not only the prices but also their mark-up in response to shocks in exchange rate. Other researchers have focused on the role of both monetary and fiscal policy to offset the effect of exchange rate on goods' prices. Moreover, Devereux and Engel (2001) and Bacchetta and van Wincoop (2003) have explored how the pricing of local currency results in a reducing the effect of exchange rate pass-through. The various studies conducted have shown that there are substantial differences between countries and hence raises the question of what are the determinants of exchange rate pass-through.

Hahn (2003) has investigated the pass through of external shocks to inflation in the EU. The framework is based on estimating pass-through of shocks to euro area domestic for quarterly data starting from time period 1970(2) to 2002(2) for 12 countries participating in the European Monetary Union (EMU). The analysis encompasses the pass-through of shocks in the exchange rate, oil prices and non-oil import prices to non-oil import, producer, and consumer prices in the euro area. Therefore, the analysis covers the pass-through of these shocks to each stage of the distribution chain (import, producer, and consumer prices). The analysis uses Vector Autoregression (VAR) model and identifies the structural shocks using a Choleski decomposition. The result shows that the non-oil import prices response to a one percent appreciation of the Euro is strong and has a high passes-through. The impact of exchange rate shocks account for almost 20% while within only three quarters, the total impact of around 50% is passed-through. These outcomes are also very close to the estimation by Anderton (2003). Variance decomposition shows that all of the shocks included in the estimation contribute to a large fraction of the fluctuations in prices, in addition, the historical decomposition indicated as well strong contribution of shocks to rising level of inflation in the euro area starting from 1999. Finally, the robustness check of two subsample periods 1971 to 1984 and 1985 to 2002 indicated that the speed and size of pass-through for all shocks were constant while the decomposition of variance over these periods showed that there is an increase in the contribution of shocks to the increase in inflation across euro area countries.

On the other hand, Ranki (2000) has found different result when estimating the relationship between the exchange rate of euro and the domestic inflation in the euro area. Ranki (2000) explains the domestic inflation rate in terms of three components which are the nominal exchange rate, domestic production, and world export prices. Ranki (2000) examined the relationship using the OLS regression for the period starting from January 1991 to March 2000.

The model estimates the relationship using nominal exchange rate lagged with one period. The results with the F test for the coefficients of the exchange rate of 4.057 indicating that the exchange rate has a significant impact on the changes in the rate of inflation. The impact of both lagged and current exchange rate can be summarized that within the period of one month, if euro depreciates by one unit, domestic inflation will increase by 1.097 units. This indicates that there is a complete pass-through of the exchange rate in the short run. This complete exchange rate pass-through comes in contrast to most of the other empirical studies which predicted incomplete pass-through in the euro area.

Campa and Goldberg (2005) have provided evidence using quarterly data on import price for 23 OECD countries from 1975 to 2003. The un-weighted averages among the countries indicate that on average the exchange rate pass-through into prices of imports in the short run is 0.46 and in the long run is 0.64.

These averages show some interesting facts about the pass-through to import prices. The exchange rate pass-through into import prices for the United States is considered low, 23% occurred in one quarter and 42% took place in the long run. For other countries such as France, Germany, and Switzerland, the coefficient estimates for exchange rate pass-through in the short run is around 60% and between 80% and 90% in the long run. It seems that smaller countries have lower stability in the exchange rate pass-through, however, there is no significant relationship found between the size of the country and the exchange rate pass-through.

Another study by Gagnon and Ihrig (2001) has looked at data for 11 industrialized countries and estimated an OLS regression to measure the relationship between exchange rate pass-through and inflation. They estimated long-run pass-through coefficients with lagged adjustment. The coefficient estimates before 1990s, the exchange rate pass-through has values that are insignificantly different from zero to significant values that are above 0.2 for Canada, Greece, Japan, and Switzerland. A value of 0.2 indicates that when exchange rate depreciates by 10%, there will be an increase in the domestic prices by 2%. In the period prior to 1990s, the long run exchange rate pass-through declined from 0.12 to reach 0.05 in the post 1989 period. Therefore, lower pass-through can be attributed to lower fluctuations in the level of inflation

Ca' Zorzi, Hahn and Sánchez (2007) have studied 12 markets in Asia, Latin America, and Central and Eastern Europe to estimate the exchange rate pass-through to import prices. They have used a Vector auto-regression (VAR) model to estimate this relationship. The baseline model includes six variables which are oil price index, output, exchange rate, import price index, consumer price index and short-term interest rate. The model is applied to each of the 12 countries in the sample. The results indicate that the exchange rate pass-through is higher for the imports prices than for the consumer prices in most of the countries; hence along the pricing chain the exchange rate pass-through seems to be declining. To compare between exchange rate pass-through between emerging and developed economies, the study applies the same methodology to the US, Euro zone and Japan. Results are shown in Table 10 below for euro zone are very similar to those predicted by Hahn (2003), Anderton (2003) and Campa et al. (2005) for prices of imports. The exchange rate pass-through is very low in the US for consumer and import prices. Japan has higher exchange rate pass-through than the US and the euro area for import prices. Comparing the exchange rate pass-through, the results indicate that the conventional wisdom that the exchange rate pass-through is higher in emerging economies than the developed one does not always hold. The comparison shows that specifically, Asian countries show a quite low exchange rate pass-through to consumer price.

Further, Ito and Sato (2008) studied the exchange rate pass through for the post crisis period in East Asian countries. VAR analysis has been used to study the relation between exchange rate and domestic prices. The study included five East Asian countries and analyzed how the exchange rate shocks in the form of country currency depreciation (NEER shock) affected three variables which are consumer price index (CPI), producer price index (PPI) and import prices (IMP). The effect of NEER shocks were different for the three domestic prices. The largest effect can be found for IMP, followed by PPI, while CPI response was the smallest. These results are also in line with earlier studies done on EU countries by McCarthy (2000), Hahn (2003), and Faruquee (2006). Ito and Sato (2008) also estimated the pass through elasticities for each of the three domestic prices for the aggregate sample and the post crises sample as well. From the pass through elasticities, a 10% decline in the NEER caused a 4% inflation in CPI (0.4-0.41 pass through elasticity) in Indonesia, 0.7% in Korea in the post crises period. Comparing the impulse response functions to the pass through elasticities, it is found that the effect of depreciation in NEER on inflation in CPI for these economies is lower than their estimates for pass through elasticities. Indonesia had that largest response to devaluation represented in CPI inflation. These results suggested some insights into the stability of prices against shocks. Except for Indonesia, the prices of imports in all the other countries did not react to NEER shock; this can be attributed to the openness of

these economies. In addition, oil imports have an effect on the domestic prices; for countries which imports oil, the depreciation in the currency resulted in a significant impact on the consumption prices in the country, however, for oil producing countries, devaluation of the currency lead to a lower effect on domestic prices. This can explain the response in Figure 7 why Malaysia, an oil producing country did not suffer from CPI inflation due to NEER shock. On the other, it is found Indonesia had a large response to CPI even though it is an oil producing country. The fact that the prices of petroleum goods were controlled by the government and therefore, the level of prices in the domestic market was less affected by increase in the price of oil due to depreciation. Therefore, it is clear that monetary policy and other macroeconomic variables could affect the post crisis inflation in Indonesia.

Bwire, Anguyo and Opolot (2013) studied the case of Uganda from 1999 to 2012 using VECM and SVAR models to estimate the exchange rate pass through effect. SVAR model estimated the effect of exchange rate shock as an unpredicted, temporary, exogenous depreciation on domestic inflation, output gap, oil price and 91-day Treasury bill rate in period 0. The results showed that the exchange rate shock pass through into domestic prices took around four quarters to show a full and persistent effect. A 4.1% exchange rate shock caused around 0.7% increase in the level of domestic prices; this means that the elasticity of exchange rate pass through was 0.16. After almost 4 quarters, the complete impact of exchange rate shock was 1.96% and therefore; 0.48 exchange rate elasticity. The effect of exchange rate shock showing a huge increase in the domestic inflation which starts to decline after 10 quarters, however, continues in the long run. This implied that the impact of shocks in the exchange rate on the fluctuations in level of inflation is strong and persists for long time, also, showed that the prices are sticky downwards. The exchange rate shock caused a decline in the output gap with fluctuations decreased after the ninth quarter. Therefore, the pass through of exchange rate into domestic prices was moderate, incomplete and persistent. The estimates for exchange rate elasticity was in line with results by Choudhri and Hakura (2001) who have estimated the pass through elasticity to be around 0.39 for Kenya and Cameron and 0.46 for Zambia. In addition, studies for other countries such as Ghana found that the pass through elasticity to be around 0.79 by Sanusi (2010), Anguyo (2008) found the elasticity to be 0.056 in Uganda (low) and Kiptui et al., (2005) reported incomplete pass through in Kenya which ceases after four quarters in which 46% of the changes in inflation level can be explained by the exchange rate variability.

McCarthy (2007) used data from nine developed countries which are United States, Japan, Germany, France, the United Kingdom, Belgium, the Netherlands, Sweden, and Switzerland to estimate the pass through effect of exchange rate and variations in import prices. The study used pricing model along the distribution chain by applying a VAR model with eight variables which are oil price inflation, the output gap, exchange rate change, import price inflation, PPI inflation, CPI inflation, short-term interest rate, and money. Exchange rate shock is defined as all variables' past values added to the current values of both output gap and prices of oil. The results showed that an appreciation in the exchange rate has an initial negative effect on the import prices for a time horizon of at least one year for all the countries in the sample. There are some positive impacts recorded in some countries at the end of the second year. High pass through into import prices was found in Belgium and Netherlands where import prices response exceeded one percent, while for Sweden and Switzerland the response was rather weak. The response in PPI was almost weak in most of the countries. The estimate showed that the pass through of exchange rate shock into CPI is lower than that to PPI and was insignificant for the majority of the countries.

Sanusi (2010) estimated the exchange rate pass through to consumer prices using a SVAR model for Ghana. The data used covered the period from 1983 to 2006. The response is estimated to a structural one SD shock to each variable in the model. The impact estimated approaches the complete impact gradually through 24 quarters. The estimated effect of a one SD exchange rate shock of a 6.1% appreciation resulted in 0.7% decline in the price level. Such effect implies an exchange rate elasticity

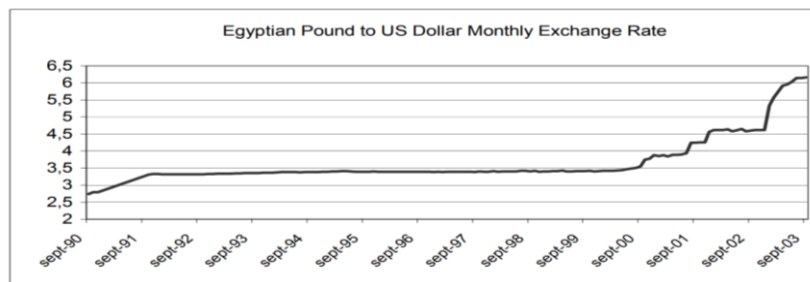
of 0.11. The complete pass through effect was reached after 24 quarters to cause a 4.8% decline in prices which implies a 0.79 dynamic pass through elasticity shown in figure 12. Therefore, Ghana had an incomplete but high and slow exchange rate pass through into prices. The value of the pass through in Ghana is close to the value in other countries such as in Jamaica the exchange rate pass through was 80% as reported by McFarlane (2002) and Zorzi et al. (2007) documented high pass through for China to be 0.77, Hungary to be 0.91 and 1.39 for Mexico.

3. Overview on exchange rate, inflation and monetary policy in Egypt

Each government has to decide on how to react to the open economy in terms of maintain a stable exchange rate regime along with keeping the growth in capital flows and adopt a monetary policy which will lead to achieve the country's goals. As a matter of fact, these 3 aims cannot be maintained at the same time. In the case of developing countries, capital flows are essential to stimulate economic growth, inflation should be kept down by a stable exchange rate regime while monetary policy should be used to adjust macroeconomic variables in the country. Hence, the debate on what exchange rate policy should be adopted by these developing countries has evolved. Based on IMF recommendations; developing countries should choose between two extremes either a fixed exchange rate system or a floating regime (Fisher 2001 and Mussa 2000). On the other hand, other economists argue that these countries should rather implement an intermediary policy between the two extremes (Williamson 2000).

Egypt has adopted a fixed adjustable peg to the US dollar since the 60s with several operating and exchange rate adjustments in 1979, 1989 and 1990. In 1991, Egypt started an economic reform program that change the exchange rate regime into a managed floating regime while the fact is that between 1991 and 1992, the central bank devaluated the Egyptian pound and then kept it fixed until June 2000 as shown in Figure 1 below.

Figure 1. Egyptian Pound to US Dollar monthly exchange rate (1990-2003)



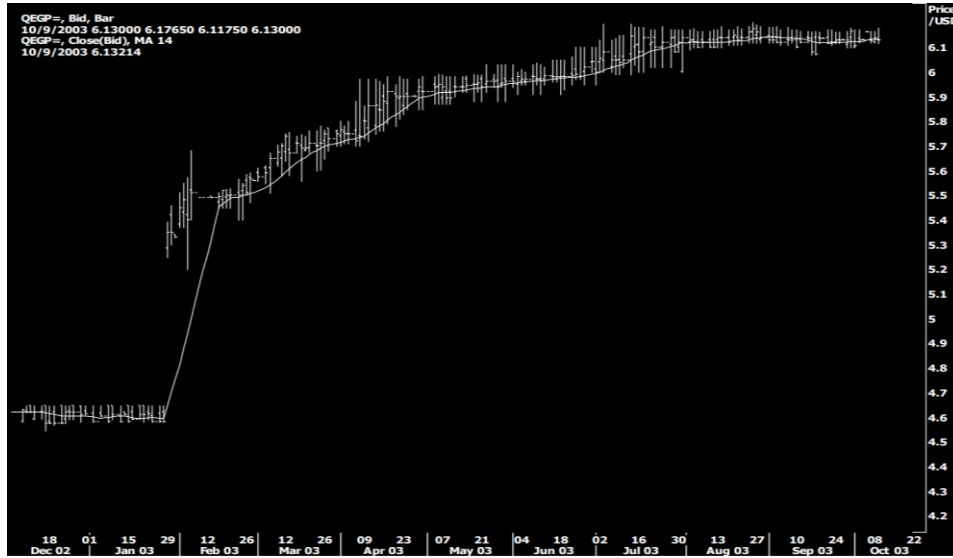
Source: Kamar B. and Bakardzhieva D., (2005), Economic Trilemma and Exchange Rate Management in Egypt, Review of Middle East Economics and Finance, De Gruyter, 3(2), 1-24.

To stabilize the market; the government announced in January 2001 that the exchange rate of EGP per USD will be 3.85 and introduced a crawling peg regime. The government used a three stage devaluation operation during that period which lead to a devaluation of 32% in the Egyptian pound and the exchange rate of EGP per USD reached 4.51. Even with this devaluation the market could not stabilize due the events of September 11, 2001 which affected tourism and Suez Canal revenues combined with the war in Iraq and the rising violence at the Egyptian borders due to the Israeli-Palestinian conflict with all these affecting the image of Egypt and driving international investments away from the country.

On January 28, 2003, the Egyptian government announced the adopting of a free floating regime which lead to a devaluation of 33% by October increasing the EGP per USD exchange rate to 6.15 (Figure 2). From 2000 to 2004, EGP experienced a cumulative depreciation of 68% against the US dollar. However,

inflation rate, based on the consumer price index (CPI), remained remarkably low and stable from 2000 to 2003. The CPI started rising only after July 2003. During 2004, the inflation rate increased reflecting a possible lagged pass-through effect of the cumulative depreciation.

Figure 2. Egyptian Pound to US Dollar daily exchange rate (12/2002 – 10/2003)

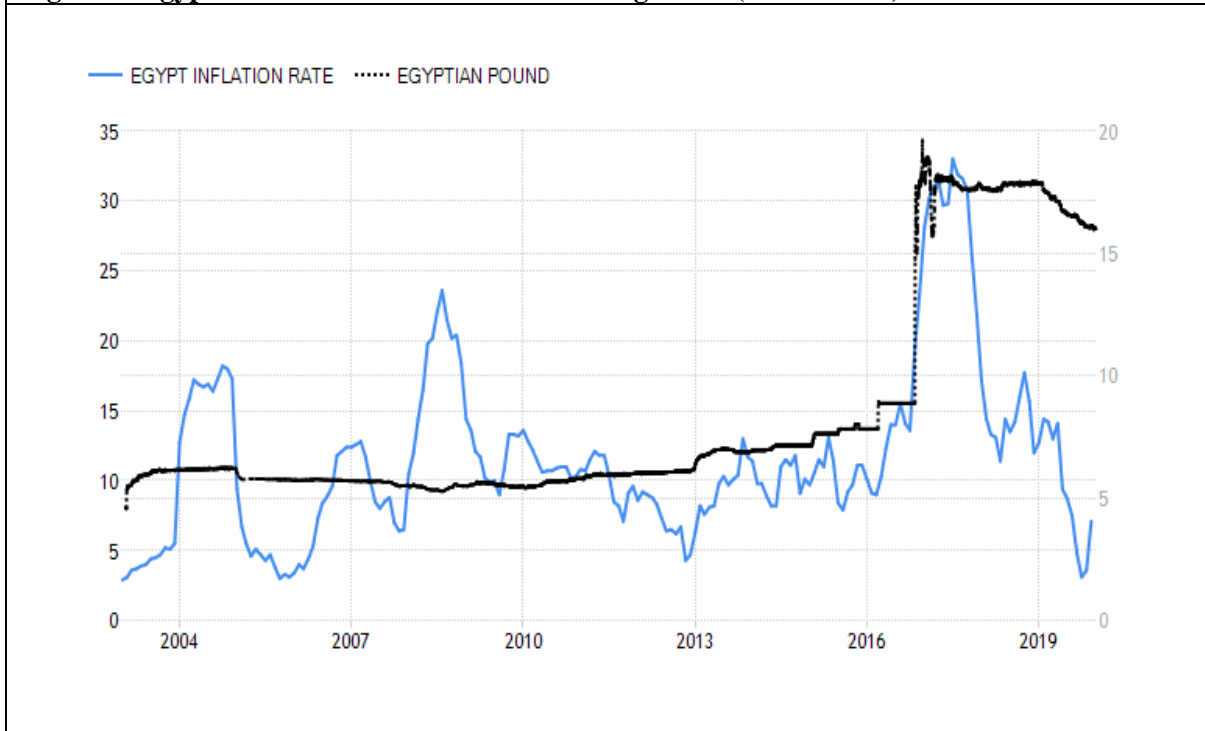


Source: Kamar B. and Bakardzhieva D., (2005), Economic Trilemma and Exchange Rate Management in Egypt, Review of Middle East Economics and Finance, De Gruyter, 3(2), 1-24.

The announcement of the floating exchange rate regime was needed to resolve inconsistencies in the earlier adopted policies which included rigidity in exchange rate, inability to support peg to USD through international reserves and the attempt to encourage investment by decreasing interest rates (Galal, 2003).

During the first half of 2005, CBE adopted a contractionary monetary policy to control the rising inflation rates. Inflation increased significantly from October 2006 till April 2007 to reach 11.47% due the appreciation of EGP and the tightening of monetary policy. This increase in inflation rate was driven mainly by the impact of an Avian Flu outbreak and adjustments in administered prices along with some domestic demand pressures arising from an increase in the economic growth. In August 2008, the inflation rate gradually increased reaching 23.62%. This increase could be attributed to the acceleration in the oil product prices and international food prices. The CBE cut policy rates six times between February and September 2009 which lead to lower commodity prices and lower demand accompanied by a sharp decline in inflation rate to reach 10.07% by August 2009. By September 2008, the financial crises lead to the depreciation of EGP by about 6%. In December 2009, the exchange rate appreciated to its level prior to the crisis (Figure 3).

Figure 3. Egypt Inflation Rate versus the Exchange Rate (2004 – 2019)



Source: Calculated using data from Central Bank of Egypt

The year 2011 was a turning point in terms of the political transition in Egypt. During 2011, Egypt has faced political uncertainty and social unrest, which kept growth rates low, impacted policy performance along with an increase in fiscal deficits, inflation, and debt. As shown in Figure 3, in December 2012, the Egyptian pound value depreciated by 13% in the six months after the introduction of the FX auctions. The exchange rate increased from EGP 5.80 in January 2011 to EGP 6.94 and EGP 7.26 in the corresponding months of years 2014 and 2015, respectively. During 2011 – 2015, inflation rate was very volatile, with the high inflation rate recorded in 2011 to reach 11.4%. The political instability in the country affected negatively the different local markets such as commodity supply especially fuel and butane gas cylinders.

The restoration of stability and confidence in 2015 led to some economic growth in the following year. We found that the first quarter in 2016 witnessed a 3% growth rate. The headline inflation has decreased from 11% to reach 9% in February, 2016 due to monetary tightening tools adopted by the central bank of Egypt. The actual floating of Egyptian pounds took place in November 2016. This floatation led to a devaluation of EGP by around 50% and by July 2017, the inflation rate reached its highest values of 32% to decline again to reach 11.97% by December 2018.

4. Empirical Analysis

4. 1. Methodology: Vector Auto-regressive Model (VAR)

The aim of this paper is to investigate the response of price level to exchange rate shocks in Egypt. The investigated period is from 2005 to 2018. This research will examine the interaction between variables in the domestic prices and exchange rate and estimate the degree and the size of exchange rate pass-through to domestic prices using Vector Auto-regression (VAR) model. The next section will start by illustrating the model used, data description and identification procedure.

The VAR model has several advantages compared to estimation using single equation. The VAR model identifies structural shocks through Cholesky decomposition of innovations; it examines the shocks of different macroeconomic variables on the domestic inflation. In addition, it allows the identification of pass through effect from producer to consumer level, unlike the single equation which investigates the effect to one price index only.

This paper investigates the pass through effect of exchange rate into the domestic prices in Egypt using VAR Model. The analysis will identify structural shocks to exchange rate to measure the pass through into domestic prices. The VAR baseline model is set up to include vector of 9 endogenous variables which are imports from USA, imports from Europe, imports from China, Real Exchange rate, Egyptian pound per US dollar, Egyptian pound per Euro, Industrial Production Index, Money supply (M2) and consumer price index (CPI).

The main purpose of this study is to estimate the effect of exchange rate and other macro-economic shocks on domestic prices along with the interactions among them. To identify the structural shocks, we use a Cholesky decomposition of the matrix Ω , a variance-covariance matrix of the reduced-form VAR residuals. The relationship between the reduced-form VAR residuals (μ_t) and the structural disturbances (ε_t) can be represented as below:

$$\begin{pmatrix} \mu_t^{IPI} \\ \mu_t^{Impusa} \\ \mu_t^{Impeur} \\ \mu_t^{Impchn} \\ \mu_t^{Money\ supply} \\ \mu_t^{Real\ Exchange} \\ \mu_t^{egpperusd} \\ \mu_t^{egppereur} \\ \mu_t^{CPI} \end{pmatrix} = \begin{pmatrix} S_{11} & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ S_{21} & S_{22} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ S_{31} & S_{32} & S_{33} & 0 & 0 & 0 & 0 & 0 & 0 \\ S_{41} & S_{42} & S_{43} & S_{44} & 0 & 0 & 0 & 0 & 0 \\ S_{51} & S_{52} & S_{53} & S_{54} & S_{55} & 0 & 0 & 0 & 0 \\ S_{61} & S_{62} & S_{63} & S_{64} & S_{65} & S_{66} & 0 & 0 & 0 \\ S_{71} & S_{72} & S_{73} & S_{74} & S_{75} & S_{76} & S_{77} & 0 & 0 \\ S_{81} & S_{82} & S_{83} & S_{84} & S_{85} & S_{86} & S_{87} & S_{88} & 0 \\ S_{91} & S_{92} & S_{93} & S_{94} & S_{95} & S_{96} & S_{97} & S_{98} & S_{99} \end{pmatrix} \begin{pmatrix} \varepsilon_t^{IPI} \\ \varepsilon_t^{Impusa} \\ \varepsilon_t^{Impeur} \\ \varepsilon_t^{Impchn} \\ \varepsilon_t^{Money\ supply} \\ \varepsilon_t^{Real\ Exchange} \\ \varepsilon_t^{egpperusd} \\ \varepsilon_t^{egppereur} \\ \varepsilon_t^{CPI} \end{pmatrix}$$

The structural model is identified because the $k(k-1)/2$ restrictions are imposed on the matrix S as zero restrictions, where k denotes the number of endogenous variables. The resulting lower-triangular matrix S implies that some structural shocks have no contemporaneous effect on some endogenous variables given the ordering of endogenous variables.

The selection of the variables in the model is based on earlier studies such as McCarthy (2000) and Hahn (2003). To identify structural shocks, we use a Cholesky decomposition of the variance-covariance matrix of the reduced-form VAR residuals. To correctly identify the structural shocks, the endogenous variable must be ordered first. Industrial Production Index will come first as it is expected to influence the other variables in the model. Next come the demand shock represented in import values for goods. Then comes the monetary variable represented by Money supply. In the last two places come the real exchange rates and the domestic price represented by consumer price index (CPI). In the light of literature on the pass through of exchange rate into prices, the domestic price variable is always placed at last as it is usually influenced by all the other variables in the system.

4. 2. Data Description

The data consists of monthly observations from 2005 to 2018. The data is obtained from Thomson Reuters data base at the German University in Cairo. The VAR baseline model will include vector of nine endogenous variables which are import prices from USA (IMPUSA), imports from EU (IMPEUR), imports from China (IMPCHN), Real Exchange rate (REALEXC), Egyptian pound per US dollar

(EGPPERUSD), Egyptian pound per Euro (EGPPEREUR), Industrial Production Index (IPI), Money supply (M2) and consumer price index (CPI).

The estimation procedure starts with testing the time series properties of variables and measuring whether the variables in the system are stationary or not using the Augmented Dickey Fuller (ADF) unit root test for all variables in the system. IPI, M2 and CPI are found to be stationary at level while the rest of the variables are found to be stationary at first differences. The ADF statistics are shown in the Table 1 below. Based on the unit root test, we will take the first difference for all variables except for IPI, M2 and CPI.

Table 1. Augmented Dickey Fuller (ADF) test for unit roots

	ADF Statistics	Comment
IPI <i>(At Level)</i>	-12.76	I(0)
IMPCHN <i>(At 1st Difference)</i>	-9.01	I(0)
IMPUSA <i>(At 1st Difference)</i>	-17.94	I(0)
IMPEUR <i>(At 1st Difference)</i>	-9.87	I(0)
M2 <i>(At Level)</i>	-12.87	I(0)
REALEXC <i>(At 1st Difference)</i>	-10.78	I(0)
EGPPERUSD <i>(At 1st Difference)</i>	-9.56	I(0)
EGPPEREUR <i>(At 1st Difference)</i>	-9.32	I(0)
CPI <i>(At Level)</i>	-7.79	I(0)

Source: Authors.

Second, the optimal lag length for VAR will be identified based on lag length criteria test which include the log-likelihood test (LR), the Schwarz information criterion (SC), the Akaike information criterion (AIC), Final Prediction Error (FPE) and Hannan-Quinn information criteria (HQ). Based on the result in Table 2 below a lag length of 5 will be used as indicated by LR test.

Table 2. VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-4503.537	NA	1.63e+15	60.57097	60.75241*	60.64468
1	-4339.361	306.3142	5.36e+14	59.45451	61.26898	60.19170*
2	-4252.610	151.3781	5.02e+14	59.37732	62.82480	60.77797
3	-4161.727	147.6080	4.52e+14*	59.24466*	64.32516	61.30879
4	-4085.315	114.8758	5.08e+14	59.30623	66.01975	62.03383
5	-4003.412	113.2346*	5.50e+14	59.29412	67.64065	62.68518

Source: Authors.

The VAR model has been tested for autocorrelation using the LM test. The test results in Table 3 below shows that there is no autocorrelation at lag of 5.

In addition, we tested for Heteroskedasticity using White Test. Table 4 shows that there is no Heteroskedasticity problem found in the model.

Table 3. VAR Residual Serial Correlation LM Test

Null hypothesis: No serial correlation at lag h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	101.4830	81	0.0615	1.275052	(81, 564.7)	0.0629
2	104.0651	81	0.0431	1.310370	(81, 564.7)	0.0442
3	102.3375	81	0.0548	1.286723	(81, 564.7)	0.0561
4	87.91106	81	0.2809	1.091876	(81, 564.7)	0.2843
5	85.14900	81	0.3547	1.055099	(81, 564.7)	0.3583

Null hypothesis: No serial correlation at lags 1 to h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	101.4830	81	0.0615	1.275052	(81, 564.7)	0.0629
2	185.3842	162	0.1006	1.160139	(162, 640.8)	0.1083
3	289.4242	243	0.0220	1.220574	(243, 603.2)	0.0291
4	407.6217	324	0.0011	1.314539	(324, 538.8)	0.0027
5	505.0216	405	0.0005	1.301331	(405, 465.6)	0.0030

*Edgeworth expansion corrected likelihood ratio statistic.

Source: Authors.

Table 4. VAR Residual Heteroskedasticity Tests (Levels and Squares)

Joint test:		
Chi-sq	df	Prob.
4154.254	4050	0.1238

Source: Authors.

4. 3. Exchange rate pass- through

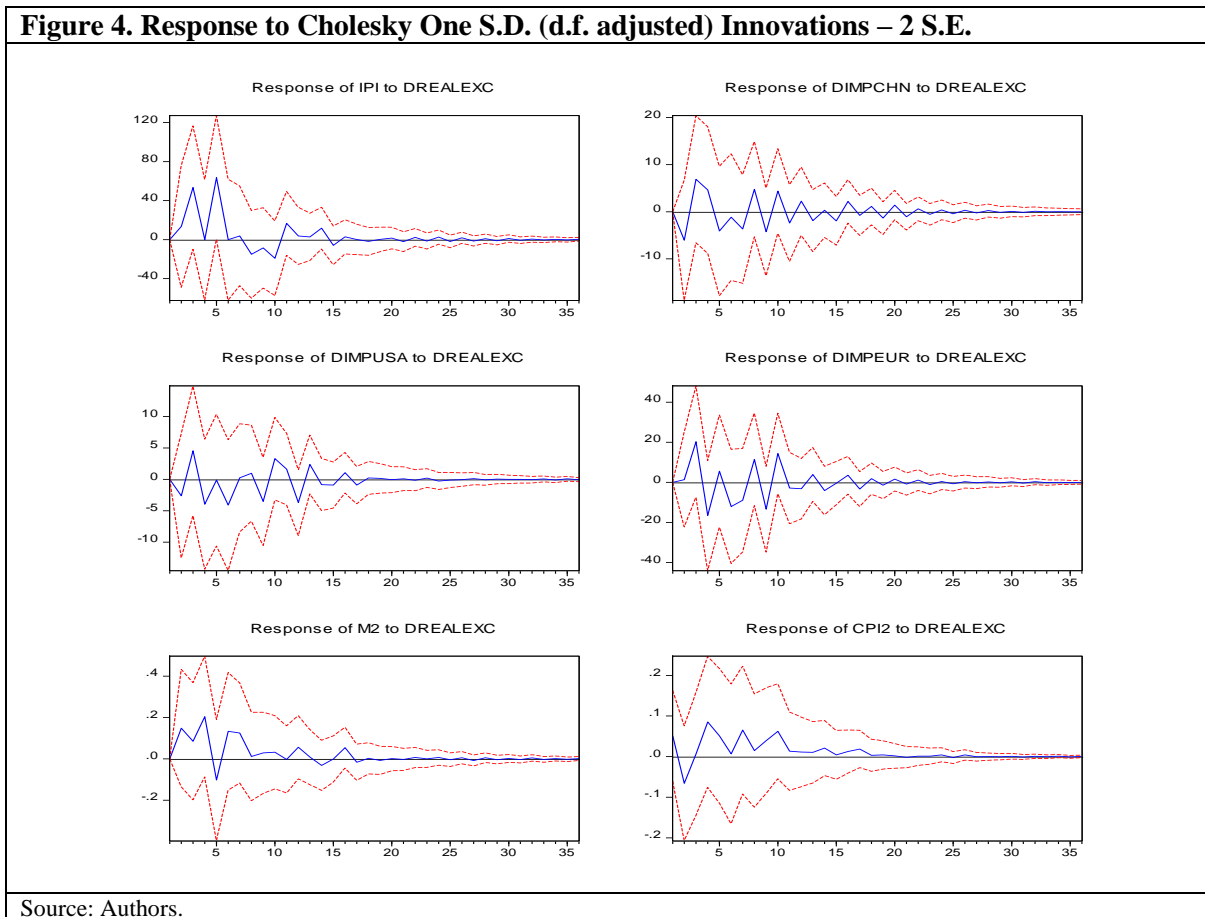
This section estimates the degree of pass through from real exchange rate to 9 variables in Egypt between 2005 and 2018. An increase in the real exchange rate is defined as an appreciation of the Egyptian pound. The VAR baseline model is estimated for all of the variables and then the impulse response functions for changes over 36 month are analyzed. In addition, exchange rate pass through elasticity is calculated to measure the accumulated response and the degree of pass through into prices, also, variance

decomposition are presented to identify the importance of exchange rate in explaining changes in the prices.

For the impulse response functions, the shocks are standardized to 1%; therefore, the vertical axis in the impulse response function in Figure 4 represent a percentage change in the variable with respect to a 1% shock of the real exchange rate (DREALEXC). The dotted line on the figures represents a 2 standard error (S.E.) confidence band around the estimate.

As shown in Figure 4, the impact of exchange rate shock on IPI, imports, M2 and CPI is large during the first year. By the end of the second year, the impact tends to decay for all the variables. For the IPI, the response is large but insignificant. The pass through to all imports and M2 is large and lasts for first 12 months. Statistically, the estimates for imports are significant. The pass through to CPI is weak and statistically, the estimates are insignificant. The response is largest for imports and IPI and smallest for CPI.

Figure 4. Response to Cholesky One S.D. (d.f. adjusted) Innovations – 2 S.E.



In addition to the response functions, it is informative to assess the pass through of exchange rate using the dynamic exchange rate elasticity calculated by the values of the impulse response functions:

$$PT_{t,t+j} = \frac{\sum_{j=1}^t P_{t,t+j}}{\sum_{j=1}^t E_{t,t+j}}$$

Where $P_{t,t+j}$ denotes the impulse response of the price change to the exchange rate shock after j months and $E_{t,t+j}$ denotes the corresponding impulse response of the exchange rate shock. The dynamic exchange rate elasticity shows the cumulative responses of the price change to the exchange rate shock after j months normalized by the corresponding responses of the exchange rate change. Table 5 below shows the pass through elasticity to CPI.

The pass through elasticity is zero for the first 6 time horizons for all imports and starts to show some response afterwards where the exchange rate pass through elasticity to imports is negative for imports from China, USA and EU except for the first 18 month time horizon for the imports from China. The highest elasticity was for the imports from USA. The pass through elasticity to CPI for 1 and 6 month horizon is quite low. At 12 month horizon, the elasticity increases and reaches 0.275. By the end of the 24th month, the elasticity become the highest to reach 0.32 and remains the same afterwards. The results here indicate that the pass through to CPI is substantial but is considered slow.

Table 5. Exchange rate pass through Elasticity to imports and CPI

Period	T1	T6	T12	T18	T24	T30	T36
IMPCHN	0.000	0.129	1.063	0.290	-0.123	-0.261	-0.300
IMPUSA	0.000	-3.434	-5.825	-4.764	-4.723	-4.715	-4.749
IMPEUR	0.000	-0.700	-2.962	-1.714	-1.827	-1.955	-2.082
CPI	0.027	0.075	0.275	0.317	0.323	0.322	0.323

Source: Authors.

4. 4. Variance Decomposition

The variance decomposition (VD) from the VAR analysis in Table 6 provide a further analysis of the transmission of exchange rate pass through. After 36 month, the VD results of imports from China (DIMPCHN), USA (DIMPUSA) and Europe (DIMPEUR) show that the exchange rate shocks only explain 2.46%, 2.06% and 3.61% respectively of the variations in these 3 variables, while 61.45% of the variations in imports from China were due to its own shock and 55.49% of the variations in imports from USA resulted from its own shock as well. However, the VD of imports from Europe (DIMPEUR) shows that 20.77% of the variation was due to shocks in imports from China, 25.16% due to shocks in imports from USA and 27.53% due to its own shock.

Moreover, the VD results for the consumer price index (CPI2) indicate that only 2.3% of the variations was due to shocks in exchange rates while shocks in monetary policy (M2) explains 20.74% of the variations, shocks in imports from China (DIMCHN) explains 8.94% and its own shock explains 31.69% of the variations.

Table 6. Variance Decomposition VAR Model

Variance Decomposition of DIMPCHN						
Period	DIMPCHN	DIMPUSA	DIMPEUR	M2	DREALEXC	CPI
36	61.44708	6.203336	6.93717	3.530001	2.461694	5.794301

Variance Decomposition of DIMPUSA						
Period	DIMPCHN	DIMPUSA	DIMPEUR	M2	DREALEXC	CPI
36	17.18144	55.49962	2.714658	1.545214	2.062899	3.635612

Variance Decomposition of DIMPEUR						
Period	DIMPCHN	DIMPUSA	DIMPEUR	M2	DREALEXC	CPI
36	20.77822	25.16487	27.53325	3.613265	3.617324	4.938239

Variance Decomposition of CPI						
Period	DIMPCHN	DIMPUSA	DIMPEUR	M2	DREALEXC	CPI
36	8.93941	4.874726	5.3629	20.74813	2.302891	31.69765

Source: Authors.

4. 5. Monetary Policy and Inflation: Two-dimensional VAR

Monetary policy has an important impact on the changes in the domestic inflation, hence we re-estimate its effect using a two dimensional VAR for the period from 2005 to 2018 using monthly data. The VAR lag criteria suggests an optimal lag of 2 based on the lowest Akaike information criterion (AIC) as shown in Table 7 below.

Table 7. VAR Lag Order Selection Criteria – M2

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-485.7037	NA	2.012662	6.375212	6.414826	6.391304
1	-466.1339	38.37223*	1.642042	6.171685	6.290525*	6.219960*
2	-461.9008	8.189568	1.637106*	6.168637*	6.366705	6.249096

Source: Authors.

The LM test for residuals serial correlation could not reject the hypothesis of no autocorrelation at lag of 2. The white test result shows that there is no heteroscedasticity detected, hence, residuals are homogenous (see Tables 8&9)

Table 8. VAR Residual Serial Correlation LM Tests - M2

Null hypothesis: No serial correlation at lag h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	4.942604	4	0.2932	1.241922	(4, 290.0)	0.2932
2	4.262322	4	0.3717	1.069734	(4, 290.0)	0.3717

Null hypothesis: No serial correlation at lags 1 to h

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	4.942604	4	0.2932	1.241922	(4, 290.0)	0.2932
2	7.454143	8	0.4885	0.934090	(8, 286.0)	0.4886

*Edgeworth expansion corrected likelihood ratio statistic.

Source: Authors.

Table 9. VAR Residual Heteroskedasticity Tests (Levels and Squares) - M2

Joint test:

Chi-sq	df	Prob.
31.29936	24	0.1453

Individual components:

Dependent	R-squared	F(8,144)	Prob.	Chi-sq(8)	Prob.
res1*res1	0.010290	0.187147	0.9924	1.574380	0.9914
res2*res2	0.039458	0.739428	0.6565	6.037134	0.6431
res2*res1	0.013027	0.237584	0.9832	1.993155	0.9812

Source: Authors.

The VAR estimate indicates that the money supply has a significant positive impact on the domestic inflation suggesting that an increase in the money supply will lead to an increase in the inflation as shown in table 10 below. Looking at the impulse response function, a 1% shock in monetary policy leads to a significant immediate impact on inflation of 33% (0.33). The full effect is realized after 10 months which is about 105% (1.05) of accumulated response to the policy shock. This means the transmission of the shock is gradual and complete (see Figure 5 and Table 11).

Table 10. Vector Autoregression Estimates – M2

Standard errors in () & t-statistics in []		
	M2	CPI2
M2(-1)	0.000258 (0.09014) [0.00286]	0.067863 (0.04374) [1.55151]
M2(-2)	0.071478 (0.08927) [0.80065]	0.104417 (0.04332) [2.41048]
CPI2(-1)	-0.027663 (0.18168) [-0.15226]	0.316411 (0.08815) [3.58926]
CPI2(-2)	0.054372 (0.17622) [0.30855]	0.067388 (0.08551) [0.78811]
C	1.149377 (0.23253) [4.94287]	0.366669 (0.11283) [3.24974]
R-squared	0.006944	0.240295
Adj. R-squared	-0.019895	0.219762
Sum sq. resids	414.3170	97.54744
S.E. equation	1.673153	0.811852
F-statistic	0.258729	11.70311
Log likelihood	-293.3064	-182.6650
Akaike AIC	3.899430	2.453137
Schwarz SC	3.998464	2.552171
Mean dependent	1.265713	0.951810
S.D. dependent	1.656753	0.919102
Determinant resid covariance (dof adj.)		1.535131
Determinant resid covariance		1.436435
Log likelihood		-461.9008
Akaike information criterion		6.168637
Schwarz criterion		6.366705
Number of coefficients		10

Source: Authors.

Figure 5. Accumulated response of CPI to M2 Innovation using Cholesky (d.f. adjusted) Factors

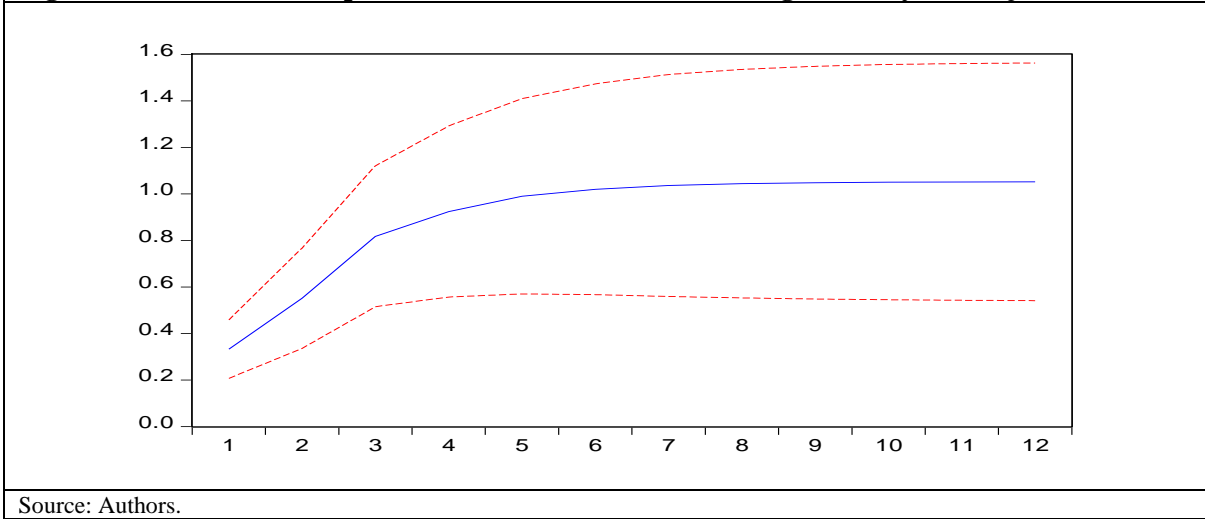


Table 11. Accumulated Impulse Response of Domestic Inflation to One SD M2 Shocks

Period t	Impulse Response
1	0.333
2	0.552
3	0.817
4	0.924
5	0.989
6	1.019
7	1.036
8	1.044
9	1.048
10	1.050

Source: Authors.

The variance decomposition can be used to explain the percentage of variation in the inflation. Table 12 below indicates that the changes in money supply (M2) contribute to 16.8% of the changes in inflation at period $t = 1$ and increases gradually to explain around 28.34% of changes in inflation after one year while the remaining variation in inflation is explained by its own shock.

Table 12. Variance decomposition of Inflation

Period t	M2	CPI2
1	16.80	83.19940
2	20.819	79.18048
4	27.921	72.07875
6	28.318	71.68114
8	28.343	71.65624
10	28.345	71.65462
12	28.345	71.65451

Source: Authors.

To confirm the direction of the relationship between money supply and domestic prices; granger causality test is applied at the optimal lag of 2. The test rejects the null hypothesis that M2 does not granger cause CPI2, hence money supply cause changes in domestic prices. However, the test fails to reject the null hypothesis that CPI2 does not granger cause M2 (see Table 13). Therefore, the relationship is unidirectional from money supply to domestic prices.

Table 13. Pairwise Granger Causality Tests – M2

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
CPI2 does not Granger Cause M2	153	0.04808	0.9531
M2 does not Granger Cause CPI2		3.90808	0.0222

Source: Authors.

4. 6. Import and Inflation: Two-dimensional VAR

To explore the relationship between imports and inflation in Egypt we apply a two-dimensional VAR model. The imports are divided into 3 categories based on the trading volume, hence we include imports from China, imports from USA and imports from Europe in separate VAR models.

We start by the 2 dimensional VAR which includes imports from China (DIMPCHN) and CPI using monthly data from 2005 till 2018. The VAR Lag Order Selection Criteria suggests an optima lag of 3 based on the lowest Akaike information criterion (AIC) (Table 14).

Table 14. VAR Lag Order Selection Criteria - IMP

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1070.474	NA	5060.372	14.20495	14.24491	14.22118
1	-1049.125	41.84904	4021.546	13.97517	14.09506*	14.02387*
2	-1042.990	11.86431	3909.549	13.94688	14.14670	14.02806
3	-1037.197	11.04847*	3818.132*	13.92314*	14.20289	14.03679

Source: Authors.

Table 15. VAR Residual Heteroskedasticity Tests (Levels and Squares) - IMP

Joint test:					
Chi-sq	df	Prob.			
38.72972	36	0.3475			
Individual components:					
Dependent	R-squared	F(12,138)	Prob.	Chi-sq(12)	Prob.
res1*res1	0.114593	1.488371	0.1354	17.30348	0.1385
res2*res2	0.052495	0.637137	0.8075	7.926722	0.7908
res2*res1	0.111744	1.446720	0.1521	16.87336	0.1544

Source: Authors.

Table 16. VAR Residual Serial Correlation LM Tests - IMP

Null hypothesis: No serial correlation at lag h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	5.022290	4	0.2850	1.262303	(4, 282.0)	0.2850
2	2.130922	4	0.7117	0.532852	(4, 282.0)	0.7117
3	0.941513	4	0.9185	0.234937	(4, 282.0)	0.9185
Null hypothesis: No serial correlation at lags 1 to h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	5.022290	4	0.2850	1.262303	(4, 282.0)	0.2850
2	5.901849	8	0.6582	0.737573	(8, 278.0)	0.6583
3	6.890287	12	0.8648	0.570921	(12, 274.0)	0.8648

*Edgeworth expansion corrected likelihood ratio statistic.

Source: Authors.

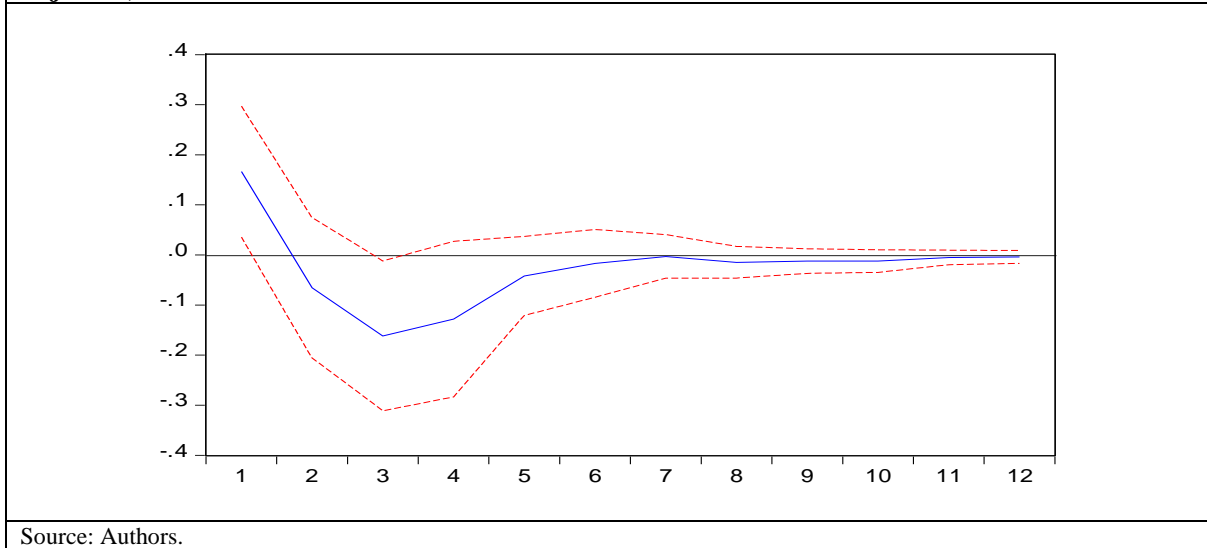
The VAR estimates in Table 17 below indicate that there is a significant impact of imports from china on the changes in the inflation. The impulse response function in Figure 6 below shows that the effect is statistically significant during the first 2 months and it takes approximately 11 months for the effect of china's imports to transmit. The response to the shocks is between 16.6% and 12.8% during the first 4 month and then the response decreases immediately. The transmission of shocks to domestic prices here is incomplete. The estimate shows a negative relation between inflation and imports from china; hence and increase of imports from china leads to a decrease in inflation. This finding is in line with Dexter et al. (2005) who have conducted a study in on the US economy and concluded that the exports have a direct relationship with the inflation, and imports have an inverse relationship with the inflation, in addition, Gruben and Mcleod (2004) showed that when import increases, inflation falls in the subsequent period in high income OECD and developing countries. Moreover, Wheeler (2008) has studied the impact of imports from china on UK inflation and have found that these imports significantly reduced CPI inflation, also, Kamin et al (2006) found same impact on US consumer prices.

Table 17. Vector Autoregression Estimates - IMP

Standard errors in () & t-statistics in []		
	DIMPCHN	CPI2
DIMPCHN(-1)	-0.178240 (0.08278) [-2.15314]	-0.001716 (0.00091) [-1.89359]
DIMPCHN(-2)	0.089569 (0.08762) [1.02227]	-0.002416 (0.00096) [-2.51904]
DIMPCHN(-3)	-0.257166 (0.09063) [-2.83767]	-0.001251 (0.00099) [-1.26082]
CPI2(-1)	7.738477 (7.72687) [1.00150]	0.370885 (0.08457) [4.38550]
CPI2(-2)	2.901381 (8.13928) [0.35647]	0.128542 (0.08908) [1.44292]
CPI2(-3)	-1.105574 (7.77591) [-0.14218]	0.116193 (0.08511) [1.36525]
C	-3.908917 (10.4910) [-0.37260]	0.385396 (0.11482) [3.35642]
R-squared	0.147026	0.252233
Adj. R-squared	0.111485	0.221077
Sum sq. resids	793809.8	95.09308
S.E. equation	74.24667	0.812631
F-statistic	4.136848	8.095580
Log likelihood	-861.0923	-179.3467
Akaike AIC	11.49791	2.468169
Schwarz SC	11.63779	2.608043
Mean dependent	4.194245	0.961845
S.D. dependent	78.76707	0.920759
Determinant resid covariance (dof adj.)		3487.311
Determinant resid covariance		3171.478
Log likelihood		-1037.197
Akaike information criterion		13.92314
Schwarz criterion		14.20289
Number of coefficients		14

Source: Authors.

Figure 6. Impulse response of Inflation to shocks in imports from China using Cholesky (d.f. adjusted) Factors



Source: Authors.

The granger causality test at the optimal lag of 3 confirms that we reject the null hypothesis that imports from China does not granger cause changes on inflation, hence the imports here causes variations in inflation. However, the test fails to reject that inflation granger cause changes in imports from china. Therefore, the relation is unidirectional running from Chinese imports to inflation as shown in Table 18.

Table 18. Pairwise Granger Causality Tests - IMP

Lags: 3			
Null Hypothesis:	Obs	F-Statistic	Prob.
DIMPCHN does not Granger Cause CPI2	150	3.18770	0.0257
CPI2 does not Granger Cause DIMPCHN		0.57441	0.6327

Source: Authors.

We estimated using the VAR model the impact of imports from EU and USA on inflation using an optimal lag of 4 and 1 respectively. The residuals are homogenous and there is no serial correlation detected. The impulse response shows insignificant effect on inflation for both imports. The granger causality test also showed that we could not draw a conclusive decision regarding the direction of the relationship for the imports from these two countries.

4.7. Real Exchange Rate and Inflation: Two dimensional -VAR

Here, we estimate a two dimensional VAR using monthly data for real exchange rate and consumer price index once for the period that preceded implementation of the floating regime and then we estimate the effect for the period after the actual floating of the Egyptian Pounds.

For the period that preceded the floating regime; the investigated period is between December 2005 and October 2016. In order to select the correct lag, we use the VAR lag order selection criteria. The criteria indicates a lag of 2 based on AIC and FPE and a lag 7 based on the LR shown in table 19 below. To eliminate serial correlation and heteroscedasticity, the model will use the lag of 7.

Table 19. Two dimensional VAR - Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-414.5724	NA	1.982046	6.359883	6.403780	6.377720
1	-398.7689	30.88309	1.655230	6.179678	6.311366*	6.233189*
2	-393.9075	9.351656	1.633700*	6.166527*	6.386008	6.255712
3	-391.5836	4.399447	1.676262	6.192116	6.499389	6.316975
4	-391.5178	0.122571	1.780439	6.252181	6.647246	6.412713
5	-389.6411	3.438343	1.839760	6.284596	6.767454	6.480803
6	-388.7160	1.666581	1.929186	6.331541	6.902191	6.563422
7	-382.9416	10.22639*	1.878954	6.304452	6.962894	6.572006

Source: Authors.

The estimated model has been tested for residual serial correlation using LM test and residual heteroskedasticity Tests using white test. These tests have indicated that the residuals are not auto-correlated and are homogenous (Table 20 and Table 21). The two dimensional VAR model estimates using lag of 7 are shown in Table 22 below.

Table 20. Two dimensional VAR - Residual Serial Correlation LM Tests

Null hypothesis: No serial correlation at lag h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	1.871792	4	0.7593	0.467813	(4, 226.0)	0.7593
2	0.722360	4	0.9485	0.180081	(4, 226.0)	0.9485
3	4.029008	4	0.4021	1.011767	(4, 226.0)	0.4021
4	7.540757	4	0.1099	1.908407	(4, 226.0)	0.1099
5	9.872257	4	0.0426	2.511407	(4, 226.0)	0.0426
6	2.978639	4	0.5614	0.746265	(4, 226.0)	0.5614
7	7.648282	4	0.1053	1.936080	(4, 226.0)	0.1054

Null hypothesis: No serial correlation at lags 1 to h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	1.871792	4	0.7593	0.467813	(4, 226.0)	0.7593
2	4.515172	8	0.8079	0.562496	(8, 222.0)	0.8079
3	10.32476	12	0.5875	0.860880	(12, 218.0)	0.5877
4	18.87243	16	0.2753	1.192353	(16, 214.0)	0.2758
5	24.40566	20	0.2251	1.237826	(20, 210.0)	0.2259
6	28.82304	24	0.2269	1.219264	(24, 206.0)	0.2280
7	35.21271	28	0.1638	1.283820	(28, 202.0)	0.1653

*Edgeworth expansion corrected likelihood ratio statistic.

Source: Authors.

Table 21. Two dimensional VAR - Residual Heteroskedasticity Tests (Levels and Squares)

Joint test:		
Chi-sq	df	Prob.
94.96449	84	0.1942

Individual components:					
Dependent	R-squared	F(28,102)	Prob.	Chi-sq(28)	Prob.
res1*res1	0.254987	1.246796	0.2118	33.40324	0.2212
res2*res2	0.216589	1.007136	0.4678	28.37313	0.4448
res2*res1	0.257749	1.264993	0.1977	33.76510	0.2087

Source: Authors.

Table 22. Two dimensional VAR Estimates

Standard errors in () & t-statistics in []		
	DREALEXC	CPI2
DREALEXC(-1)	0.299592 (0.09208) [3.25368]	-0.079526 (0.04039) [-1.96885]
DREALEXC(-2)	-0.189780 (0.09843) [-1.92810]	-0.063529 (0.04318) [-1.47131]
DREALEXC(-3)	0.068554 (0.10022) [0.68404]	0.012494 (0.04396) [0.28420]
DREALEXC(-4)	0.042081 (0.10101) [0.41660]	0.036273 (0.04431) [0.81860]
DREALEXC(-5)	-0.089938 (0.09969) [-0.90217]	-0.067378 (0.04373) [-1.54072]
DREALEXC(-6)	0.106296 (0.10198) [1.04237]	0.044114 (0.04473) [0.98614]
DREALEXC(-7)	-0.308326 (0.10243) [-3.01007]	-0.016151 (0.04493) [-0.35943]
CPI2(-1)	-0.163090 (0.21783) [-0.74872]	0.307119 (0.09555) [3.21408]
CPI2(-2)	0.415753 (0.22836) [1.82060]	0.053753 (0.10018) [0.53658]
CPI2(-3)	0.422749 (0.23382) [1.80799]	0.040242 (0.10257) [0.39233]
CPI2(-4)	-0.225181 (0.24109) [-0.93401]	-0.040378 (0.10576) [-0.38178]
CPI2(-5)	0.320086 (0.24140) [1.32595]	0.101650 (0.10590) [0.95990]
CPI2(-6)	-0.387151 (0.24301) [-1.59318]	-0.085097 (0.10660) [-0.79828]

CPI2(-7)	0.444078 (0.22853) [1.94316]	-0.009318 (0.10025) [-0.09295]
C	-0.294832 (0.38308) [-0.76963]	0.605061 (0.16805) [3.60053]
R-squared	0.231805	0.180176
Adj. R-squared	0.139092	0.081232
Sum sq. resids	334.9468	64.45536
S.E. equation	1.699256	0.745419
F-statistic	2.500234	1.820990
Log likelihood	-247.3707	-139.4267
Akaike AIC	4.005659	2.357660
Schwarz SC	4.334880	2.686881
Mean dependent	0.373911	0.880038
S.D. dependent	1.831388	0.777674
Determinant resid covariance (dof adj.)		1.512701
Determinant resid covariance		1.186114
Log likelihood		-382.9416
Akaike information criterion		6.304452
Schwarz criterion		6.962894
Number of coefficients		30

Source: Authors.

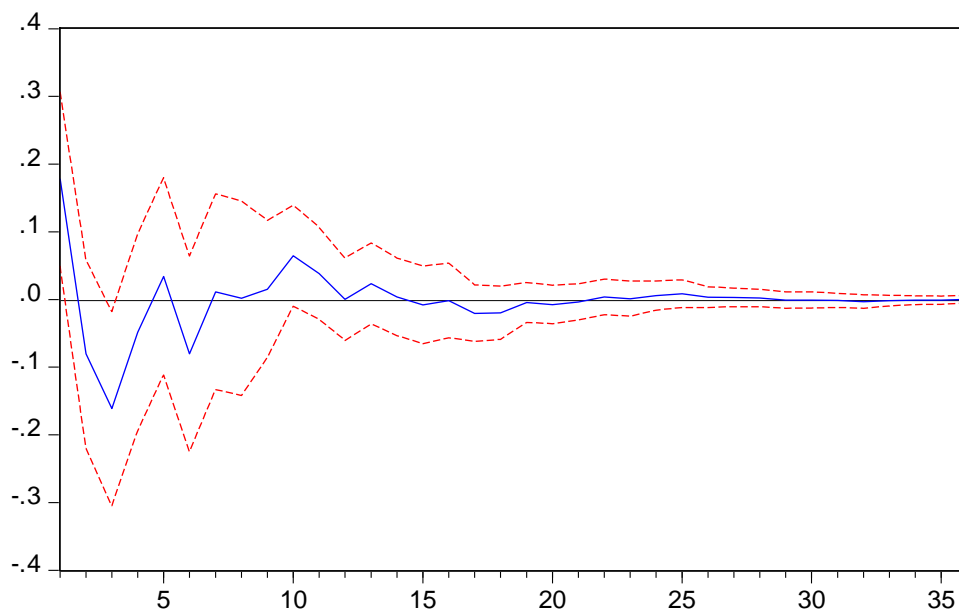
Based on the VAR model, the impulse responses of exchange rate to consumer price are estimated as shown in Table 23 and Figure 7 for a 1% shock in exchange rate. The pass-through to CPI is rather low with the highest response of approximately 0.2 recorded in the first month. This low pass-through result is in line with other studies for developing countries such as Ca'zozzi et al (2007) who studied China, Hong Kong, Korea, Taiwan, Singapore, Turkey and Argentina, in addition, Ito and Sato (2008) found similar results for Thailand, the Philippines, and Malaysia.

Table 23. Response to a 1% exchange rate shock

Period	Response of consumer prices (in %)
T= 1	0.1782
T= 9	0.0152
T= 18	-0.0199
T= 27	0.0028
T= 36	0.0002

Source: Authors.

Figure 7. Impulse response of Consumer prices to exchange rate Innovation using Cholesky (d.f.adjusted) Factors



Source: Authors.

In order to know the direction of the causality, we use the pairwise granger causality test using the optimal lag of 7 as indicated by the VAR model lag selection criteria. Based on the test statistic in Table 24 below, we cannot reject the null hypothesis that DREALEXC does not Granger Cause CPI2, hence, real exchange rate does not cause changes in CPI. However, we can reject the null hypothesis CPI2 does not Granger Cause DREALEXC, hence CPI cause changes in the real exchange rate. This finding is in line with the study by Khin et.al (2017) for Malaysia and Achsani et.al (2010) who studied United Kingdom, France, Germany, Netherland, Belgium, Danemark, Sweden, Norway, USA, Canada and Mexico has found that inflation Granger-cause changes in the real exchange rates, in addition, Oriavwote and Eshenake (2012) find the same result in Nigeria indicating a causal relationship running from inflation to real exchange rates. On the other hand, Madesha et.al (2013) and Amoah et.al (2015) showed that inflation and exchange rate are found to Granger-cause each other in Zimbabwe and Ghana respectively. Rashid and Husain (2013) showed that the exchange rate do not have any cause-effect relationship with the rate of inflation in Pakistan.

Table 24. Pairwise Granger Causality Tests

Lags: 7			
Null Hypothesis:	Obs	F-Statistic	Prob.
DREALEXC does not Granger Cause CPI2	131	1.73590	0.1073
CPI2 does not Granger Cause DREALEXC		2.30221	0.0311

Source: Authors.

Now, we run the two dimensional VAR model for the period after the actual floating of Egyptian Pounds took place from November 2016 till February 2018 using monthly data of nominal exchange rates (Egyptian Pound versus US Dollar and Egyptian Pound versus Euro) to see whether there will be any differences instead of the real exchange rate and CPI which showed no significant results when we run the model. The VAR lag order selection criteria suggests an optimal lag of 1 as shown in Tables 25 and 26 below.

Table 25. Two dimensional - VAR Lag Order Selection Criteria- (EGP per USD)

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-62.31448	NA	10.63215	8.039310	8.135884	8.044255
1	-54.94221	11.97993*	7.035733*	7.617777*	7.907498*	7.632613*

Source: Authors.

Table 26. Two dimensional - VAR Lag Order Selection Criteria- (EGP per EUR)

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-63.13443	NA	11.77968	8.141804	8.238377	8.146749
1	-55.29269	12.74282*	7.350817*	7.661586*	7.951307*	7.676422*

Source: Authors.

The VAR estimates show that the exchange rate pass through for Egyptian Pounds versus the 2 currencies to CPI is weak in both cases and insignificant as shown in Tables (27&28); same result we got when we did not separate the currencies. One explanation here could be that the investigated period is too short to show significant effect on inflation.

Table 27. Two dimensional VAR Estimates (EGP per USD)

Standard errors in () & t-statistics in []		
	DEGPPERUSD	CPI2
DEGPPERUSD(-1)	-0.017650 (0.33614) [-0.05251]	0.016057 (0.18198) [0.08823]
CPI2(-1)	-0.274545 (0.56524) [-0.48572]	0.535636 (0.30602) [1.75033]
C	1.067929 (1.15612) [0.92372]	0.776860 (0.62593) [1.24114]
R-squared	0.030312	0.274670
Adj. R-squared	-0.118870	0.163081
Sum sq. resids	86.58295	25.37897
S.E. equation	2.580742	1.397222
F-statistic	0.203190	2.461439
Log likelihood	-36.21113	-26.39368
Akaike AIC	4.901391	3.674209
Schwarz SC	5.046252	3.819070
Mean dependent	0.545854	1.785354
S.D. dependent	2.439802	1.527297
Determinant resid covariance (dof adj.)		4.989329
Determinant resid covariance		3.293737
Log likelihood		-54.94221
Akaike information criterion		7.617777
Schwarz criterion		7.907498
Number of coefficients		6

Source: Authors.

Table 28. Two dimensional VAR Estimates (EGP per EUR)

Standard errors in () & t-statistics in []		
	DEGPPEREUR	CPI2
DEGPPEREUR(-1)	-0.138233 (0.32662) [-0.42323]	-0.027380 (0.17091) [-0.16020]
CPI2(-1)	-0.205023 (0.57224) [-0.35828]	0.578126 (0.29943) [1.93074]
C	1.223843 (1.16311) [1.05222]	0.727016 (0.60861) [1.19455]
R-squared	0.050532	0.275666
Adj. R-squared	-0.095540	0.164230
Sum sq. resids	92.56344	25.34414
S.E. equation	2.668382	1.396262
F-statistic	0.345937	2.473757
Log likelihood	-36.74546	-26.38269
Akaike AIC	4.968183	3.672836
Schwarz SC	5.113043	3.817696
Mean dependent	0.736906	1.785354
S.D. dependent	2.549376	1.527297
Determinant resid covariance (dof adj.)		5.212768
Determinant resid covariance		3.441241
Log likelihood		-55.29269
Akaike information criterion		7.661586
Schwarz criterion		7.951307
Number of coefficients		6

Source: Authors.

5. Conclusion

This paper estimated the exchange rate pass-through to domestic prices in Egypt from 2005 till 2018 using Vector autoregressive model (VAR). The model included nine endogenous variables which are imports from USA, imports from Europe, imports from China, Real Exchange rate, Egyptian pound per US dollar, Egyptian pound per Euro, Industrial Production Index (IPI), Money supply (M2) and consumer price index (CPI). The VAR analysis through the impulse response functions showed that the exchange rate pass-through was found to be lowest for CPI and highest for imports. The pass-through elasticity to inflation was found to be slow but significant by the 24th month. The slow pass-through to CPI can be attributed to the fact that CPI basket of goods contains many goods which are subsidized by the government along with prices of goods which are administered by the government as well. The variance decomposition for CPI revealed that money supply (M2) and imports from China (IMPCHN) explains the majority of the variations in CPI while the rest of the variations are explained by variations in CPI itself.

Therefore, we then estimated a two-dimensional VAR to explore the relation between CPI and M2 and another time between CPI and imports from China. The two-dimensional VAR showed that the M2 has significant positive effect on CPI in Egypt. The impulse response function, showed that shock in monetary policy leads to a significant immediate impact on inflation of with the full effect is realized after 10 months. The granger causality test confirmed that the relationship is unidirectional from money supply to CPI. Moreover, the two-dimensional VAR revealed that imports from China (IMPCHN) has a significant negative effect on CPI. The impulse response function showed that the effect is statistically significant during the first 2 months and it takes approximately 11 months for the effect of china's imports to transmit. The granger causality test has confirmed the relationship is unidirectional; imports from China causes changes in CPI. We have explored as well the effect with respect to imports from USA and from Europe; however, both were insignificant.

In the last part of the empirical analysis, we have separated the data into two time series which are the period before the floating of the Egyptian pound that is from December 2005 till October 2016 and the post floatation period which is from November 2016 till February 2018. Here, we have again used a reduced form VAR with only two dimensions which are real exchange rate and CPI to explore whether there will be differences in the results relative to what we did in the first part of the analysis. For the period which preceded the floating regime, the pass-through to CPI was found to be slow with the highest response of approximately 0.2 recorded in the first month. Further, the pass-through to CPI after implementing the floating regime was insignificant; we have as well explored the exchange rate of EGP versus USD and once versus EUR and their effect on CPI; yet the VAR estimates showed that the exchange rate pass through for Egyptian Pounds versus the 2 currencies to CPI is weak in both cases and insignificant. We believe that this could be partially attributed to the short period which we have investigated after the floatation.

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TAMER BUDAK¹

AN EVALUATION OF DIGITAL SERVICES TAXES WITHIN THE SCOPE OF NEW DEVELOPMENTS

Abstract

Rapid progress in especially information and communication technologies has led to the emergence of the digital economy and its environment. It is a fact that the digital economy has been accepted as a new economy that is based on digital computing technologies. Even though the digital economy presents many benefits to businesses and all users, it creates important issues in particular the field of taxation. The digital economy creates and develops its ecosystem and components. One of these components is digital services. Representing more than 90% of global GDP, 136 countries and jurisdictions, have participated in the Two-Pillar Solution establishing a new framework for international tax and agreeing with a Detailed Implementation Plan that envisages implementation of the new rules by 2023. In 2021 in terms of fairer taxation in the international tax system, a consensus was reached on an agreement for the implementation of the previously planned global minimum corporate tax in 2023. In this process, countries like Turkey is a country that applies the digital service tax. At the end of the process, it is expected that Turkey and most of the countries will implement a global minimum corporate tax in 2023. The problem of taxation of the digital economy is not fully resolved. There will inevitably be many developments in this regard in the future.

Keywords: Digital economy, Dijital service tax, global minimum corporate tax, Turkey

JEL Codes: H20, H26, K34, F38

1. Introduction

The capacities and abilities of societies to use digital technologies through information processing technologies will reach a very advanced level over time. This will lead to an increase in the level of digitalization and an increase in the level of supply and demand for digital services. Globalization and digitalization offer the opportunity to access, purchase, review, comment and score goods and services offered all over the world, regardless of limited time and space. In the digitalization process, especially through e-commerce, local or national small businesses have the opportunity to become international businesses very cheaply and quickly. The size of the digital economy is boosting faster than global GDP, and the majority of governments have been trying to tax the resulting huge revenue. The level of the digital economy is nearly equal to 15.5% of global GDP and it has been growing around two times faster than global GDP over the past 15 years, according to the World Bank (The World Bank, 2020).

The phenomenon of digitalization is seen as one of the most important factors in the development, growth and emergence of new ideas in the economy since the industrial revolution. The growth in the volume of the digital economy and the resulting diversity in its tools has led to the emergence of new business ideas and business models that could not be predicted before; the erosion of taxation authority, which makes its presence felt intensely, especially at the national level; This has caused businesses that generate income and added value within the international tax system to cause significant impasses in terms of the international tax regime. The digital economy has been producing and developing its ecosystem and components. One of these components is digital services.

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2. Background of Digital Service Tax

The digital economy has been producing many new different business models. Such as; A) e-commerce: via the internet networks to sell/buy goods or services, with the inclusion of business to business (B2B), customer to customer (C2C), and business to customer (B2C); B) new payment methods or services: it is provided intermediary services, real-time bank transfer services, and virtual currencies or assets for the buyers and sellers; C) online advertising/the internet as a tool: using the internet network as a means to deliver customer's marketing info; D) cloud computing: gives an opportunity to use shared sources and virtual sources for supply services such as digital management, analytics, databases, computing, storage, intelligence, and other services (Peng, 2016). The types of new business contain different kinds of e-trades (CISCO, 2017), high-frequency trading, app stores, participative-networked platforms (Bal & Gutiérrez, 2017), online advertising, payment services, cloud computing, and online payment services (Li, 2015).

In parallel with these developments, digital treatments that is occurred in the digital environment, but it is not easy to detect the identity of taxpayers or users and the tax situations of digital treatments by tax authorities because digital transactions have privacy and virtualization features. Although all attempts to comprehend the facts of the digital economy, not only the national tax regulations of kinds of countries butt also international tax regulations have not become synchronized with the digital environment (Budak, 2017). The procedure of coping with the digital environment, setting up new and different policies and regimes may be achieved with combined predetermined policies and implementations getting taken into account. In these circumstances, the active international and regional organisations and the public authorities have to focus and work on the digital economy to detect the emerging issues and offer solutions for the taxation of the digital economy.

There are significant and rapid changes that have been taking place in the economic, social and environmental recently. so the OECD as an effective international organization has been running with together governments to figure out what prompts social, economic, and environmental change (OECD, 2021). The rapid developments in world trade have facilitated and increased the level of internationalization. In this situation, the expansion of the digital economy, increased mobility regarding finance and sources has challenged both national tax regimes and international tax regimes (Arora, 2017). In this concept, the OECD has started to work run with states and other international units to understand the features of the digital economy, its running processes, and related developments beginning in June 2012. The OECD published 15 specified recommendations for BEPS action in October 2015. Action 1 is just concerned with the tax challenges of the digital economy. The OECD was introduced to ring-fence digital given its integration with all aspects of the economy. Rather than propose specific measures, the organization is supporting forward running and observing to react to particular tax challenges. Since 2015, with the release of the BEPS Action 1 Report, discussing the tax challenges posed by digitalization has been the high precedence of the OECD/G20 Inclusive Framework at BEPS. Several countries have started their practices in line with the offers of the OECD. Companies have realized that the OECD suggestions will affect not only recompose long-standing tax implementations but also wide effects across all business processes such as finance, information technology, human resources, legal, and so on (Kielstra, 2016).

Representing more than 90% of global GDP, 136 countries and jurisdictions, have participated in the Two-Pillar Solution installing the latest frame for international tax and agreeing with a Detailed Implementation Plan that foresees the application of the new regulations by 2023. The Two-Pillar Solution covers Pillar One and Pillar Two. Pillar One purposes to provide an equitable allocation of profits and taxing rights among jurisdictions interesting the largest MNEs. Pillar One contains the elimination and standstill of Digital Service Tax and other connected, similar precautions, bringing an end to trade tensions resulting from the uncertainty of the international tax regime. Pillar Two sets a

ground layer for tax competition over corporate tax by introducing a global minimum corporate tax of 15% that countries can use to maintain their tax base (the GloBE rules). (OECD, 2021). Under the GloBE system, countries are independent to define whether to apply a corporate income tax rate and to set their tax rate below the minimum rate, but other countries are also able to implement new rules where income is taxed at an effective rate below a minimum rate. Countries can not be forced to operate the GloBE rules, but where they prefer to do so they must do so as required what has been agreed. Countries that do not choose to accept the rules must admit the practices of the regulations by other countries. The OECD plans the second pillar to be legislated in 2022, to come into effect in 2023, and to introduce the low-taxed payments rule in 2024 (Walker, 2021).

According to the existing international tax regime, a multinational company usually pay its corporate tax where production comes about rather than where its consumers or users, in the digital sector, is located. It is a fact that via the digital economy, without a physical entity, especially international businesses get revenue from users or customers abroad, but they are not subject to corporate tax in that market country. According to the proposal, some of the largest multinational companies would require to pay some of the corporate taxes where their consumers or users are located. This proposal is referred to as Pillar 1 (Esen & Bunn, 2021). This tax is called the digital service tax (DST). DSTs are taxes imposed on multinational companies based on their digital activities in a particular jurisdiction (Gray & Huddleston, 2021). Since Pillar 1 is focused on replacement where company profits are taxed, DTS is proposed to be a temporary tax that is expected to be terminated by the end of 2023.

In 2018, meanwhile, the European Commission (EC) recommended an interim Digital Service Tax be charged a rate of 3% on specific revenues provided from online advertising activities, digital intermediary activities, and sales of customers marketing information. According to the proposal, companies with all revenues annually of more than \$915 million and taxable revenues in the EU of more than \$61 million should have issued to the tax. Even though this proposal had been rejected by the EU level, most countries have admitted DSTs as an efficient method to get tax revenue, and have modelled and begun their proposed DSTs (Bloomberg, 2021).

Austria, France, Hungary, Italy, Poland, Portugal, Spain, Turkey, and the United Kingdom have enforced a DST. Slovenia, Latvia, and Norway have published intentions to apply DST. After then Slovakia, the Czech Republic, and Belgium have declared their plans to enact a DST. The proposed and applied DSTs significantly different in each country (Esen & Bunn, 2021). Announced, Proposed, and Implemented Digital Services Taxes in European OECD Countries are below in Table 1.

Table 1. Digital Services Taxes in European OECD Countries

Country	Tax Rate	DST
Austria	5%	Implemented – effective from January 2020
Brazil	1% - 3% - 5%	Several proposals.
Belgium	3%	Proposed
Canada	3\$	Intention
Czech Republic	5%	Proposed
France	3%	Implemented – Effective from December 2020
Hungary	7.5% but reduced to 0% through December 31, 2022	Implemented – Effective July 1, 2019
India	2%	Implemented – Effective April 2020
Indonesia	TBD	Announced
Italy	3%	Implemented- Effective from January 2020
Kenya	1.5%	Implemented- Effective from January 2021
Latvia	3%	Intention
Norway	TBD	Intention
Poland	1.5%	Implemented – July 2020
Slovenia	TBD	Announced
Spain	3%	Implemented – Effective from January 2021
Turkey	7.5%	Implemented – Effective from March 2020
United Kingdom	2%	Implemented – Retroactively applicable as of April 1, 2020

Source: ESEN Elke & BUNN Daniel, (2021), “What European OECD Countries Are Doing about Digital Services Taxes”, <https://taxfoundation.org/digital-tax-europe-2020/> (Accessed: 10.11.2021); KPMG, Taxation of the Digitalized Economy, <https://tax.kpmg.us/content/dam/tax/en/pdfs/2021/digitalized-economy-taxation-developments-summary.pdf> (Accessed:1011.2021).

In 2021, the OECD reached an agreement with member countries for a minimum standard in the corporate tax context, with few exceptions. The consensus reached were 136 countries represented more than 90% of global GDP, including the USA, China, Germany, France, the UK, Japan and Turkey. According to the agreement, multinational companies will be subject to a tax rate of at least 15% from 2023. According to calculations, more than 125 billion dollars of profit from the world's largest and most profitable 100 multinational companies will be distributed according to what country they operate in (Alkin, 2021).

3. Digital Service Tax in Turkey

DST has been introduced to the Turkish tax legislation with the Law numbered 7194 published in the Official Gazette dated 07.12.2019 and numbered 30971. The tax entered into force on the 1st of March, 2020. The Communiqué introduces explanations, procedures and principles regarding the implementation of the digital service tax. The taxpayer of the Digital Service Tax is the digital service provider. Service providers' status whether being full or limited tax liability about Turkish Income Tax Law No. 193 and Turkish Corporate Income Tax Law No. 5520 through offices or permanent establishments located in Turkey has no effect in terms of DST liability. According to the legislation, gross revenue generated from the following services provided in Turkey is subject to 7,5% digital service tax (GIB, 2021):

“a) All types of advertisement services provided through digital platforms (including advertisement control and performance measurement services, as well as data transmission and management services concerning users, and technical services for providing advertisements)

b) The sale of all types of auditory, visual or digital contents on digital platforms (including computer programs, applications, music, videos, games, in-game applications, etc.) and services provided on digital platforms for listening, watching, playing of these contents or downloading of the content to the electronic devices or using of the content in these electronic devices

c) Services related to the provision and operation services of digital platforms where users can interact with each other (including services relating to the sale or facilitation of the sale of goods or services among users). Intermediary services of digital service providers on digital platforms are subject to digital service tax, as well.”

The tax base for DST is gross revenue generated during a fiscal period from services falling within the scope of the tax. If the revenue is in foreign currency, that currency will be converted to TRY at the rate applicable on the date the revenue was earned by using the buying rate of exchange of the Turkish Central Bank. No deductions for expenses, costs, or tax can be made from the tax base. Digital service tax is not indicated separately on invoices or invoice substitutes. The tax rate is 7.5%. DST is calculated by applying the rate to the tax base. The President of Turkey is authorized to reduce the tax rate to 1% or to increase the rate up to twofold (either separately for each service type or collectively). The taxation period for the DST is one month of the calendar year. Taxpayers and tax withholders are responsible for submitting DST return to the Large Taxpayers Tax Office before the end of the month following the taxation period. Tax should be paid in the same period (GIB, 2021).

The digital service tax is levied by the Large Taxpayers Tax Office. Taxpayers or their representatives in Turkey who have not submit returns or make payments in accordance with Turkish Tax Procedural Law No. 213 may be served a notice from Large Taxpayers Tax Office urging them to fulfill their obligations. This notice will be issued based on information obtained through the communication instruments listed on their websites, domain names, IP addresses, and information obtained from similar sources through the notification methods listed under Law No. 213, electronic mail, or any other communication instruments. The notice is also announced on the Revenue Administration's website. In case obligations of declaration and/or payment are not fulfilled within thirty days following the announcement, the Ministry of Treasury and Finance may block access to the services provided by these service providers until the obligations are fulfilled. This decision can be sent to the Information and Communication Technologies Authority in order to notify the access providers. Decisions to block would be executed twenty-four hours after the notification had been served to the access providers. DST is deductible from the taxpayer's taxable income concerning personal income and corporate income taxes. DST paid by digital service providers may be taken into account as an expense for personal income and corporate income taxes (GIB, 2021).

4. Conclusion

The economic opportunities that have emerged with digitalization have brought along economic problems. In particular, tax administrations in countries with tax revenue could not track multinational digital companies that do not have a physical presence but generate income from their own countries. In addition, these tax administrations had tax losses. All these developments have led international institutions and countries to search for new ones. As a result of this process, many bilateral or multilateral agreements have been signed. However, none of these has fully ensured the taxation of companies involved in the digital economy.

The digital service tax, which was brought as a suggestion, was applied in many countries with different methods and different tax rates. In terms of fairer taxation, a consensus was reached for the implementation of the previously planned global minimum corporate tax in 2023. In this process, Turkey is a country that applies the digital service tax at a rate of 7.5%. At the end of the process, it is expected that Turkey will implement a global minimum corporate tax in 2023. The problem of taxation of the digital economy is not fully resolved. There will inevitably be many developments in this regard in the coming years.

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PHATNAREE OATSAWACHAITHAT¹

WILLINGNESS TO PAY ASSESSMENT FOR ASSISTED LIVING RESIDENCES IN THAILAND

Abstract

Thailand has become an aging society and would be a complete-aged society in a few years. Elderly population in Thailand is increasing due to lower fertility rate, lower birth rate, and longer life expectancy at birth. Furthermore, the number of caregivers is decreasing because these people are more likely to be educated and employed. Thus, residential Long-term Care (LTC) institution for elderly become more important. Assisted Living Residences (ALs) are taken into account for residential LTC institutions and mainly aim to encourage Quality of Life (QOL) and well-being of residents. The purpose of this study is to determine price and observe the preference of ALs in Thailand by conducting Willingness to Pay (WTP) survey. The double-bounded WTP questions with three attributes related to QOL are conducted and the data is collected from two groups of respondents (Generation X and Y person). Based on theory of consumer's choice and Random Utility Theory (RUT), the utility from choosing option is the function of an option's price, respondents' preference for attributes, respondents' characteristics, and an error term. Besides, WTP could represent individual's preference towards each ALs service (attitude). The findings from random logit model show that most respondents are willing to pay for AL providing standard medical service, breakfast and dinner, and private room. Additionally, individuals have heterogeneity of characteristics that impact on WTP decision. Furthermore, people who have positive attitude towards ALs tend to spend money on ALs than people who have less positive or negative attitude.

Keywords: Assisted Living Residences, Contingent Valuation, Long-term Care Residence in Thailand, Quality of Life, Willingness to Pay

JEL Codes: A10, D00, I10, I11, I12, I31

1. Introduction

Thailand has become an aging society since 2005 and is going to be a complete-aged society in a few years according to rapid increase in Thai elderly population in a half century ago. Foundation of Thai Gerontology Research and Development Institute (2019) claimed that this change in elderly population is caused by the longer life expectancy and the lower birth rate per woman. Furthermore, Thai women who used to be important role as a main caregiver are more likely to be educated, be single and be in the labor market instead of being formally unemployed and staying at home. Also, family size is smaller overtime and spouses are more willing not to have children. So, a number of familial caregivers become inadequate and parental care efficiency becomes an issue.

Additionally, the majority of elderly are experiencing aged-related problems and degenerative diseases. It could be referred that their physical and mental health are typically getting worse over time and elderly would encounter the risk of mortality, activity limitation and chronic illness which lead to worse Quality of Life (QOL). Therefore, demand for personal caregiving and health care system are increased in both family and social level.

According to the greater in elderly population together with less informal health services by family, and more elderly living alone. These contribute to a larger number of frail elderly who need supervision and

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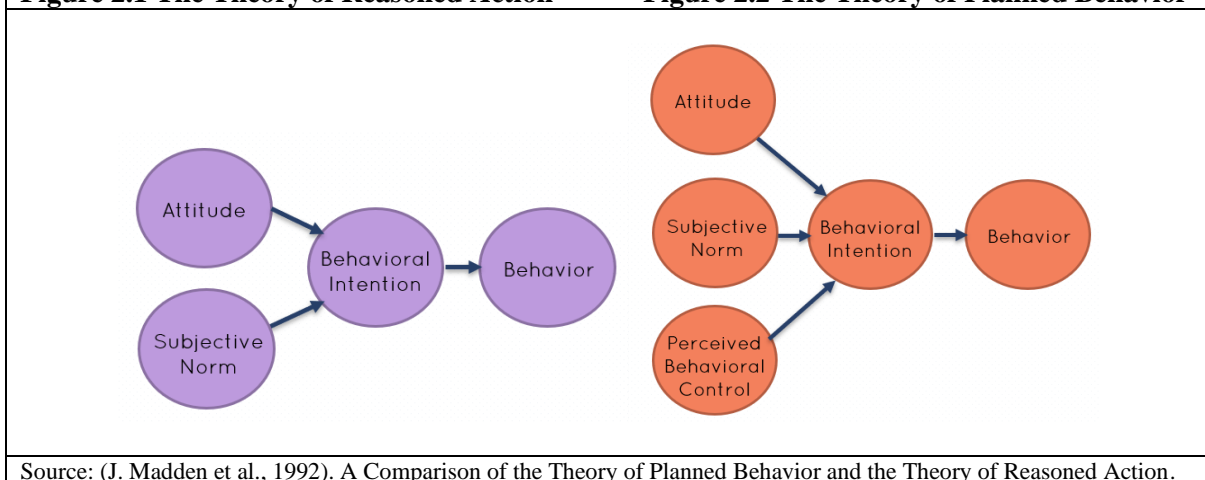
personal care. Consequently, it implies that demand or preference of residential long-term care (LTC) institutions is growing. So, it leads to the objectives of the study that is to determine price of ALs based on demand sides by using WTP method.

2. Review of literatures

ALs are taken into account for residential LTC institutions that provide residential facilities involving long-term living which are included housing, support services, and health care for frail elderly residents who require more help on daily tasks as family could not provide. ALs are typically designed to be homelike and primarily serve assistance with Activities Daily Life (ADL) such as eating, bathing, dressing, transportation, etc., staffs' supervision, health services, and emergency call service. The purpose of ALs is to encourage QOL of residents with mainly emphasizing to maximize dignity, autonomy, privacy, independence, and safety.

Stage of life theory indicate that human life could be classified into 6 periods. First is 'infancy period' which includes intrauterine period to one year after birth. Next is 'childhood period' involving from 1 to 13 years old. Next is 'youth period' aging from 13 to 25 years old which is generally healthy and active. Next, 'maturity period' is from 25 to 61 years old which physical degeneration gradually occurs. Lastly, elderly period who would be inevitably more vulnerable in physical and mental way when getting older. Therefore, elderly need higher level of assistance and intensive care for more convenient living and their safety. So, medical services are necessary for elderly and would be an attribute for evaluating WTP for ALs in this study.

Figure 2.1 The Theory of Reasoned Action - Figure 2.2 The Theory of Planned Behavior



Source: (J. Madden et al., 1992). A Comparison of the Theory of Planned Behavior and the Theory of Reasoned Action.

From these the Theory of Reasoned Action and the Theory of Planned Behavior, it could be concluded that performing behavior of Thai people about taking care of elderly parents follows these two theories because Taking care of elderly parents of Thai children is influenced by attitudes such as closeness in family (that Thai children are taught since they were young to stay and support their elderly parents when growing up), subjective norm such as filial culture, religious beliefs based on Buddhist teachings and repayment system, and perceived behavioral control or other related factors such as income level, marital status, and individual welfare. In the other side, Asian and Thai parents generally expect their children to be their caregiver when getting older. However, Thai children might be suffered from various negative effects and difficulties from being caregiver such as tiredness, stress, discouragement, work overload, and financial problems from quitting their job to be full-time caregiver. These contribute to opportunity loss and emotional problems of children being caregiver, then, these children would give up and no longer control their behavior.

Nevertheless, subjective norm in Thai context have already changed. Filial culture and repaying parents become more resilient than the past that is Thai children are more likely to bring their parents to live in ALs without guilty. Therefore, ALs is where elderly could comfortably live in their retirement life as well as children could repay parents by finding appropriate and convenient residences for them. We could summarize that these theories involve attitude about elderly living with children that is how much respondents value assisted living residences that would be factors in this study.

Thai people could be divided into 4 generations according to parenting, conception, and experience which lead to different behavioral intention or behavior. First is 'Baby boomers' that were born between 1946 and 1964 (age 57-75). Baby boomers strongly believe about seeking for better tomorrow, have good social skills but lack of technological skills, so, baby boomers are diligent, patient, and thrifty, so, they are rational, dedicated, loyal, earnest and willing to be employed by a single company for their whole life and retirement is not preferred. Second is 'Generation X' which were born between 1965 and 1979 (age 42-56). (Parents of Gen X generally work hard and leave them alone at home. Thus, they have to use their personal skills to live on.). In contrast with Baby boomers, Gen X are lack of social skills but technologies are initially involved with Gen X. Therefore, this generation have more choices. Then, they become less patient, less loyal, more independent, more creative than Baby boomers and seek for work-life balance. Third is 'Generation Y' or 'Millennial Generation' which were born between 1980 and 1997 (age 23-41). Gen Y are coming of age during economic expansion and the rise of internet and social networking in line with they have high level of education and high technological skills. Thus, they prefer to consume and explore information through online rather than face-to-face or traditional interaction. Lastly, 'Generation Z', 'Net Generation' or 'Digital Kids' were born since 1997 and younger (age up to 23). They are more likely to prefer simplicity and become responsible because they could aware of current situations surrounding them from convenient accessibility to technologies, information, and news.

QOL estimation is used to be a proxy for health and well-being of individual. QOL could be influenced by many factors; first is supportive facilities, environments or privacy, and the remaining are health conditions, social relation, and socio-economics status. If surrounded environments in the ALs do not provide as better or equal QOL as staying at home, living in the ALs would not be the best option for elderly. In this study, I pick mealtime and privacy as the two of three attributes influencing WTP for ALs. Since mealtime is claimed that it has an important effect on physical and psychological health of residents. Gathering elderly to have meal together in ALs could enhance social participation and improve their QOL from keeping elderly to stay away from isolation and depression because they could share experiences and develop short-lived emotional bonds during mealtime. Physically, it could improve food intake and nutritional level rather than eating alone. While privacy in residence is basic issue of residents' well-being. Moving to ALs might lead to feelings of loneliness and isolation for elderly who are not willing to live here. If ALs could provide choices which offer balance of socialization and privacy for elderly's needs, it ensures that their well-being is still maintained. A private room could provide privacy but resident might be isolated and depressed if he/she does not have opportunity of social interaction. While a shared room with roommates could provide more opportunity of social participation but trading off with lack of privacy.

3. Methodology

Contingent Valuation approach is based on theory of consumer's choice of Lancaster (1966) and Random Utility Theory (RUT) of McFadden (1973).

$$U_{is} = \beta_0 + \gamma price_{is} + \sum_{k=1}^K \beta_k D_{kis} + \sum_{j=1}^J \alpha_j X_{jis} + \alpha_i + \varepsilon_{is} \quad (0.1)$$

As shown in equation (3.1), Where U_{is} represents the utility of respondent s obtaining from choosing option i , γ is the coefficient related to $price_{is}$. $price_{is}$ is bid price, D_{kis} is k^{th} attribute levels of ALs for respondent s choosing option i , β_k is k^{th} coefficient related to each attribute in the vector D_{kis} (marginal utilities) which represents respondents' tastes, X_{jis} is j^{th} personal characteristics of respondent s choosing option i (control variable), α_j is the coefficient related to X_{jis} deviating from β_k which represents other personal characteristics that influence choice, α_i is a random effect, and ε_{is} is an error term.

Conditional on x , the choice probability of respondent s choosing option i which provides maximum utility is written as equation (3.2).

$$P_{is} = Pr(y = 1|x) = \frac{1}{1 + e^{-U_{is}}} \quad (0.2)$$

When respondent chooses a choice, trading-off between attributes and ALs cost would be occurred. Therefore, individuals' preferences could be estimated by WTP of attribute (D_k) as shown in equation (3.3).

$$WTP_k = \frac{\partial price}{\partial D_k} = \frac{\partial U}{\partial D_k} \div \frac{\partial U}{\partial price} = \frac{\beta_k}{\gamma} \quad (0.3)$$

I design 3 attributes extracted from the earlier concepts and theories for using in WTP survey. 3 attributes consist of 2 levels in each which are standard and extended for medical services attribute, breakfast and breakfast and dinner for mealtime attribute, shared and private room for room type attribute (as shown in table 3.1).

Table 3.1. All combinations and bid price of assisted living facilities' profiles

<i>Profiles</i>	All combinations of facilities			Initial bid price (baht/month)	Second bid price (baht/month)	
	Medical services	Mealtime	Room type		Lower second bid price	Upper second bid price
1	Standard	Breakfast	Shared room (4 persons)	13,000	10,000	16,000
2	Standard	Breakfast	Private room	16,000	13,000	19,000
3	Standard	Breakfast and dinner	Shared room (4 persons)	15,000	12,000	18,000
4	Standard	Breakfast and dinner	Private room	18,000	15,000	21,000
5	Extended	Breakfast	Shared room (4 persons)	16,000	13,000	19,000
6	Extended	Breakfast	Private room	18,000	15,000	21,000
7	Extended	Breakfast and dinner	Shared room (4 persons)	20,000	17,000	23,000
8	Extended	Breakfast and dinner	Private room	25,000	22,000	28,000

Source: Author.

According to this, we obtain 8 combinations in total. Since we apply double-bounded question, if respondent accepts a profile at the initial bid price, he/she would further decide to accept or reject the same profile at higher second bid price in the next question. Otherwise, if he/she rejects a profile at the initial bid price, the same profile at lower second bid price would be asked in the next question instead. As a result, each respondent has to complete 16 WTP questions because each profile is asked to accept or reject twice.

In addition, respondents are asked whether they make decision on ALs for themselves or their parents at first. Also, the questionnaires include respondents' personal characteristics questions asking about age and gender of respondents and their elderly, education, government or non-government jobs, monthly income; and 5-likert scale questions of attitude towards ALs and preference of residential socialization are also asked.

4. Empirical results

Sample data of 273 respondents is divided according to gender and age. There are 40 respondents aged less than 23 (Generation Z) or about 14.65% of all respondents, 136 respondents aged between 23 to 41 (Generation Y) or about 49.82% which is the highest number of respondents grouped by age, 51 respondents aged between 42 to 56 (Generation X) or 18.68%, and 46 respondents aged more than 56 (Baby boomer) or 16.85%. The number of female respondents is 210 which is 3 times higher than male respondents.

Table 4.1. Factor loading analysis for attitude towards ALs

		<i>Factor Loading</i>	<i>%Total Variance</i>	<i>Cronbach Alpha</i>
	<i>Good choice for living</i>		0.5759	0.7377
<i>b4</i>	ALs is a good choice, if elderly is unhealthy and need caregiving.	0.8052		
<i>b5</i>	ALs is a good choice, if it could provide caregiving and assistance for residences.	0.8473		
<i>b6</i>	You think that moving into ALs is major adjustment.	0.5276		
<i>b9</i>	ALs is a good choice if there is no familial caregiver.	0.8118		
	<i>Residence for future</i>		0.6790	0.7606
<i>b3</i>	You are interested in choosing ALs for yourself in the future/elderly in your family.	0.8304		
<i>b8</i>	You think that living in ALs is suitable for elderly at the end of his/her life.	0.8207		
<i>b11</i>	You think that living in ALs is a good choice for decreasing family's responsibility.	0.8209		
	<i>Inappropriateness</i>		0.6688	0.5005
<i>b7</i>	You think that ALs is bad for living.	0.8178		
<i>b10</i>	You think that elderly is not supposed to move into ALs because children should be caregiver and repay their parents.	0.8178		

Source: Author.

Table 4.2. Factor loading analysis for residential socialization preference

		<i>Factor Loading</i>	<i>%Total Variance</i>	<i>Cronbach Alpha</i>
<i>Human relations</i>			0.5802	0.8168
<i>b13</i>	You always talk to you neighbor.	0.8163		
<i>b14</i>	You always make friend with many neighbors.	0.8418		
<i>b19</i>	You choose residence with large public and less private space in order to interact with many people.	0.6561		
<i>b20</i>	In public space (such as fitness center, clubs, elevator), you always talk to other people.	0.7402		
<i>b21</i>	You often enjoy doing activities outside your home.	0.7401		
<i>Neighborhood</i>			0.6230	0.6949
<i>b12</i>	You think that making friend with neighbors is important for living in residence.	0.7186		
<i>b15</i>	You think there should be public space for making friend in your residence.	0.8367		
<i>b16</i>	You think that being able to make friend with neighbors in is an important factor for moving into the residence.	0.8078		
<i>Privacy</i>			0.7078	0.5870
<i>b17</i>	You feel uncomfortable when telling your private stories to neighbors.	0.8413		
<i>b18</i>	You think that making friend with neighbors impacts on your privacy.	0.8413		

Source: Author.

Table 4.1 and 4.2 show factor loading analysis of attitude towards ALs and residential socialization preference respectively. However, question b1 and b2 have less than 0.5 of factor loading, total variance, and Cronbach alpha which is unacceptable level, so they are ruled out from the study. According to the factor analysis, attitude towards ALs could be influenced by 3 factors; First is about ‘good choice for living’ which refers to ALs is a good choice for unhealthy elderly who might need assistance or supervision. Second is ‘residence for future’ referring to plans for living in the future. Third is inappropriateness of ALs in residents’ opinions. The factor loading, total variance, and Cronbach alpha are around 0.5-0.84 which is acceptable level, so they could be used in the study. For the residential socialization preference, it could be influenced by 3 factors as well; First is about ‘human relations’ which refers to frequency of respondents talking to their neighbors. Second is ‘neighborhood’ which refers to importance of making friends. Third is about ‘privacy’ which refers to how respondents feel

when interacting with people. The factor loading, total variance, and Cronbach alpha are around 0.58-0.84 which is acceptable level, so they could be used in the study.

The random effect logit is used to estimate WTP. The results show that for overall estimation, respondents are significantly willing to pay 9682.234 baht/month for ALs with standard medical service, breakfast only, and shared room which approximately equal to WTP of respondents who choose ALs for themselves. It is interesting that people who choose ALs for parents/relative do not concern about spending more for living in private room, remarked that additional spending for private room is -237.721 baht/month. It might be caused by respondents are more concerning about their own privacy not others'. Furthermore, respondents who are familiar with ALs significantly have the highest WTP (11119.52 baht/month) for based profile with no significant WTP for private room and significant for extended medical service and dinner added. While respondents who almost never heard about ALs are significantly willing to pay for based profile 15094.93 baht/month.

For age group, the results show that the older respondents are, the greater WTP is. For based profile, WTP is significant around 19159 baht/month and for extended medical service, dinner added, private room are significantly around 995, 7650, and -4943 baht/month, respectively. It might regard to the older respondents are, the more income they earn, so they have more power and savings to spend money on ALs.

For gender, it is remarked that male have more WTP than female significantly for based profile which is about 11901.04 baht/month, but less WTP for extended medical service and dinner added significantly which are 13425.67, 7408.41 baht/month, respectively.

Respondents who choose ALs for themselves in question a5 and a6 significantly have equal WTP which is around 11013.35 and 11992.38 baht/month, respectively. While WTP of choosing ALs for elderly is greater due to the greater age of elderly. However, WTP of choosing ALs for female elderly is significantly higher than WTP of choosing ALs for male elderly which is 7618.80 and 5454.90 baht/month, which is in contrast with WTP of female and male choosing ALs for themselves.

Surprisingly, married respondents are more willing to pay than single persons significantly which is about 17753 baht/month with significant WTP for extended medical service, dinner added, private room around 9230, 7295, and -2618 baht/month, respectively.

People having both sons and daughters have the most WTP significantly which is about 20531.46 baht/month. However, people having only daughters are significantly less willing to pay than people having only sons, which is 16585.54 and 17995.67 baht/month, respective. It might be from some traditional thoughts in Thailand that daughter and women are main caregiver in family.

For occupation aspect, respondents who are government officers significantly have the highest WTP for based profile. While freelance are insignificantly willing to spend only 3600 baht/month for based case but significantly have the highest WTP for additional features.

Higher income persons have more WTP than lower income persons but 1 hundred-2 hundred thousand income persons have the highest WTP. And people earning monthly income 15001-30000 baht and 30001-50000 baht significantly have equal WTP but the higher income group significantly have more WTP for additional features.

Lastly, people with health problems significantly have more WTP than without health problems which are approximately 12691 and 9101 baht/month, respectively. In the same way, they significantly have more WTP for additional features except private room that is higher but insignificant.

5. Conclusion

The results in this study are received from self-reported online survey through Google Form. Factor loading analysis and random effects logit model are used to estimate data. This study could make us know about how people value and think about ALs since ALs become more important due to greater population of Thai elderly. Thus, if people are more likely to value ALs positively, ALs might be more demanded. This study does not benefit only for people who intend to move into ALs, but also for entrepreneurs, nurses, nurse assistants, physicians as medical staffs who operate ALs. Furthermore, cooks and food retailers are also important as food producer and serve meal to residents in ALs as aforementioned that mealtime affect QOL of residents in ALs both physically and mentally.

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JORGE HERNANDO CUÑADO¹

AUTOMATIZATION AND ENVIRONMENTAL CRISIS: PROSPECTIVE ANALYSIS

Abstract

This paper analyzes the trends of automatization and environmental crisis in the field of security. After reviewing four prospective reports from national and international organizations (World Economic Forum, European Commission, NATO and the Spanish National Foresight and Strategic Office) the article points out the importance and the consequences of such trends nowadays and in the future. There are also associated phenomena in the security area such as climate refugees, social unrest caused by automation or the proliferation of pandemics due to the destruction of ecosystems. This article uses a theoretical framework of the prospective discipline with the idea of taking action in the present in order to reach a desired future.

Keywords: Environmental crisis, automatization, environment policy

JEL Codes: N50, O44, Q50

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KEERTI MALLELA¹

THE WELFARE EFFECTS OF REMITTANCES

Abstract

The paper examines the dynamic impact of remittances on welfare, through the interaction of financial development and labour markets. Two possible effects of remittances are contrasted, depending on whether remittances accrue to low-skilled households or high-skilled households. Using an open-economy DSGE model and a Bayesian VAR approach, it is shown that the effects of remittances are inherently expansionary when they accrue to the first category of households and contractionary when they accrue to the second category of households. Calibrating the model to Mexico, using both aggregate data as well as administrative data from the National Institute of Statistics and Geography (INEGI), it is shown that countercyclical remittances are substitutes to financial development and explain Mexico's consumption-led growth. On the other hand, procyclical remittances complement financial development, stabilize exchange rates, reduce pressure on inflation, and increase investment potential. Additionally, assuaged credit constraints indicate a potential increase in per capita income, and an increase in productivity per high-skilled worker. The relatively adversely impacted ones are the low-skilled households, with pro-cyclical remittances increasing inflation, and discouraging investments. Moreover, the remittances received by these households decrease per capita income and increase inequality. The study concludes that welfare gains are possible when remittances are procyclical and when remittances are skewed towards high-skilled workers.

Keywords: Remittances, Welfare, Inequality, Labour Markets, Financial Development

JEL Codes: F24, D63, J24, G21

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TANU M. GOYAL¹

TRADE IN THE TIMES OF CRISIS AND UNCERTAINTY: ROLE OF THE G20²

Abstract

The Covid-19 situation has been a watershed moment for building cooperation in global economies. The responses adopted by the countries for addressing the crisis had both – a certain degree of synchronisation as well as divergence. The case of international trade has been similar. While restrictions were imposed on international trade of certain commodities, at the same time, measures were taken to facilitate or support trade of certain essentials goods and services. Countries did try to cooperate through several international forums, the G20 being one of them.

The G20 members have significant share in global trade, as they account for more than 75 per cent share in world trade. Promoting free trade has been one of the cornerstones of the G20 agenda since the first G20 Summit in Washington. Even during the pandemic, importance of international trade has been highlighted by the WHO for building a resilient post pandemic recovery. Despite this, the G20 members made a majority of the trade policy notification by imposing trade restrictions, in response to the Covid-19 situation. With this background, the paper discusses nature of the trade policies adopted by the G20 members and the provision in the multilateral trading system that allow countries to adopt such measures. The paper then goes on to comment on the areas where the G20 has been able to deliver and also briefly talk about the areas where there are still gaps.

Keywords: Trade, G20, Covid-19, Uncertainty

JEL Codes: F10, F11, F13

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² This paper is a part of a research paper series on G20 issues, titled “Shaping the G20 Priorities into Agenda Items in a Post Covid World: A Roadmap to the Indian Presidency 2023”, in partnership with the Konrad Adenauer Foundation (Konrad-Adenauer-Stiftung), India Office.

SHEMA BUKHARI¹

IS SECOND SCREENING RESPONSIBLE FOR PROTESTS? A CASE STUDY OF AYESHA AKRAM INCIDENT ON 14TH AUGUST 2021 IN PAKISTAN

Abstract

The prevalent and round-the-clock use of digital media has made second screening even more relevant for information gathering. Smartphones are in everyone's hands, especially university-going youngsters, as they use social media habitually. Therefore, this practice of second screening makes people more open to new or the other side of the story. In the current study, several university-going students were given a questionnaire to understand how they received and perceived the news about Ayesha Akram's incident that happened in Lahore on 14th August 2021. Based on co-viewing theory, the results have shown that the audience has social-needs gratification by watching the incident on TV and smartphones, although not simultaneously. The findings also reflect youngsters' cognitive development through participation in the protests. The current study is an attempt to investigate how an event of 'female harassment' was responsible for the protests through dual screening.

Keywords: Digital media, second screening, co-viewing theory, cognitive development

JEL Codes: Z00

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ABDULLAH ALHUMUD¹

THE IMPACT OF CUSTOMER ENGAGEMENT ON CUSTOMER RELATIONSHIP MANAGEMENT IN UK MOBILE PROVIDER

Abstract

In the current market structure, incorporating customer relationship management and engagement has become a vital element for companies and individuals looking forward to getting a share of a competitive market. Most of them have established to remain competitive, they must understand their customer's needs. In the UK, mobile providers have identified the importance of customer relationship management and have gone to the extent of engaging the customers behavioral, Cognitively, and emotionally. This has been achieved by developing products that allow customers and companies to engage with each other.

Purpose: The paper aims to improve customer relationship management that leads to increased satisfaction then improve customer engagement among UK mobile providers' customers.

Design/Methodology: Questionnaires were used for the data collection from UK customers.

Findings: Customer relationship management played a vital role in improved customer satisfaction and engagement in UK mobile providers. Additionally, most of the customer attributed good relationships between themselves and UK mobile providers to the ability of the providers to engage them through satisfaction with their products.

Originality/Value: The paper bases its originality on the fact that although similar studies have been conducted, they have not dwelled on the mobile provider sector. Additionally, the research is unique in that it targets UK mobile providers, thus making the data collected unique.

Keywords: Customer Relationship Management, Customer Satisfaction, Customer-Business Relationship, Customer Engagement

JEL Codes: M10, M20, M30

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ABDULKADIR ALSULAMI¹

SOCIAL MEDIA IN CUSTOMER DECISION-MAKING PROCESS: THE ROLE OF REVIEWS

Abstract

Social media has been used by marketers and customers to enhance decision-making. This can be based on the fact that most people are relying on social media to gather information on various products or determine the effectiveness of the services provided by a company. When people buy products or seek services from companies, they begin by analyzing the company and its products through the reviews left by other people. This has been made possible by social media applications that allow consumers to post reviews on other social media platforms or on the social media page of companies.

Purpose - The paper aims to determine the role social media plays in influencing the decision reached by a consumer. Additionally, the paper aims to illustrate the importance of social media as a marketing tool.

Design/Methodology/Approach- This study relied on online questionnaires.

Findings - It was evident that customer reviews on products and services influenced consumers' purchasing decisions. The majority of the customers who were active social media users were of the doctrine that consumer reviews played the role that most companies were not willing to play.

Originality/Value - The originality of the article will be determined by the accuracy of the data collected from the research participants.

Keywords: Social media marketing, Customer reviews, Customer decision making, Social media influence

JEL Codes: M10, M20, M30

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ONYEKA NWELUE¹

JUXTAPOSING THE CULTURAL LIVES OF THE ARABS AND THE AFRICANS

Abstract

Culture is an all-encompassing word for social organization, customs and traditions, language, arts and literature, religions, forms of government, and economic system. Cultures all over the world tend to vary from each other and also overlap. Sacred monarchy was the most popular notion, though there were many variations. A concept of the state emerged from a variety of cultures. Theories of the state's origin and purpose have been developed in Greece, India, and China. Justice was declared everywhere, with various definitions, but it usually included equitable treatment of rich and poor before the law. The well-being of all citizens was unanimously regarded as a state responsibility. People were only given a crucial role in Greece, Rome, and Israel, and only Greece and Rome cherished liberty. Women were scorned everywhere. The Israelites were the only ones who associated the state with the nation. There were classes everywhere, but only China and India gave them moral significance. Political views were formed in a variety of methods, including scientific debate and divine revelation. The struggle between might and right was a problem in every place, and the answers varied according to one's metaphysical system. This paper would be comparing and contrasting between the cultures of the Arab and African cultures.

Keywords: Culture, Language, Arts, Religions, Economic system, Literature, Customs and Traditions, Social Organization.

JEL Codes: Z00, Z10

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ROSELLA CARE¹ AND OLAF WEBER²

MAPPING THE INTELLECTUAL STRUCTURE OF SOCIAL FINANCE: A BIBLIOMETRIC OVERVIEW

Abstract

Recently, there has been significant growth in the number of published articles on social finance in academic journals. However, myriad of different terms are often involved in Social Finance discourses. This study provides a bibliometric analysis of the research on social finance. Our results show that the social finance research field is composed of several research hotspots - which represent the core of this research domain – and five main research clusters including impact investing, social entrepreneurship, social impact bonds, and social innovation. The paper also identifies the research institutions and the researchers that contributed to this field of research. Finally, emerging research areas are also mapped and described. The theoretical contribution of this paper lies in its intention to connect the different manifestations of Social Finance under one concept. Using a common umbrella concept allows researchers to find common ground for their otherwise isolated research endeavors.

Keywords: Social Finance, Bibliometric analysis, Co-word analysis

JEL Codes: G00, G10, G20

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PABLO CASAS¹ AND CONCEPCION ROMAN²

EARLY RETIRED OR AUTOMATIZED? EVIDENCE FROM THE SURVEY OF HEALTH, AGEING AND RETIREMENT IN EUROPE

Abstract

This paper measures the implications of the actual destructive and transformative technological process in the labor market for the early retirement decisions in 26 European countries. In order to perform the analysis, we use the Survey of Health, Ageing and Retirement in Europe, the computerization probability (Frey and Osborne, 2017) and a technological classification of occupations in 4 occupational terrains (Fossen and Sorgner, 2019) to find that the current technological change is playing a significant role in the early retirement decisions, although it affect heterogeneously to certain groups in the sample (workers with higher education, self-employed workers and workers in occupations with low affectation by the technological change). This fact leads to a contradiction between governments trying to delay retirement ages and labor markets trying to expel workers earlier. Therefore, we conclude that, in order to elaborate policies on ageing and retirement, the effect of new technologies in older worker's decisions must be taken into account. We propose that the delay in statutory retirement ages should be accompanied by training programs and/or policies promoting self-employment for workers at risk of ending their working lives prematurely. Furthermore, the programs aimed to relocate middle-age workers displaced from their origin occupations should focus the finding of a destination occupation among those less impacted by new technologies (i.e., occupations in the human terrain).

Keywords: Early retirement, Technological change, Automation

JEL Codes: H55, J24, J26, O33

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HUDA A. ALHAJJAJ¹ AND AMNEH A. GHRAIBEH²

**PERCEPTIONS OF JORDANIAN SOCIETY TOWARDS THE LATE AGE OF MARRIAGE
AMONG YOUNG PEOPLE AND ITS EFFECTS**

Abstract

The study aimed to reveal economic and social perceptions of the late age of marriage among young people in Jordanian society and to detect social effects according to variables sex, age, geographical origin). The sample of the study consisted of (385) individuals, and was applied questionnaire prepared specifically as a tool for collecting the data. The results of the study showed that the economic reasons from the point of view of the individuals of the sample came to a high degree, and the results showed that the social causes of the sample came to an average degree, as well as the social implications of delayed age of marriage, the differences due to the group of males in Jordan due to gender (0.019) which was lower than ($\alpha \leq 0.05$). The economic reasons for the late age of marriage among Jordanian youth in Amman were not statistically indicative at the level of significance (0.05) according to the gender variable, as the results showed no statistically significant differences in the social causes of the late age of marriage among Jordanian youth in Amman due to age. Also, there were statistical differences in the social reasons for the late age of marriage among Jordanian youth. In Amman, the level of significance (0.000) is lower than ($\alpha \leq 0.05$) and the source of the differences is attributed to the rural population.

Keywords: Late Marriage, Economic and Social Representations, Social Repercussions

JEL Codes: A14, Z10, Z13

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RABIA FATIMA¹, IUSTINA ALINA BOITAN² AND ROSELLA CARE³

A BIBLIOMETRIC REVIEW OF SUSTAINABLE FINANCE: SETTING THE RESEARCH AGENDA

Abstract

The emerging environmental, social and economic pressures highlighted the need for long-term approaches to bring sustainable development. Sustainable finance emerged as a novel approaches that actively contribute to sustainable development. However, it is often considered as an umbrella term that encompasses different financial practices, tools, and instruments. All the progress and success in the field of sustainable finance to date notwithstanding, it is thus essential to develop a standardized conceptual framework to clarify the ambiguity among the core construct. Based on this consideration, this study applies a bibliometric approach to provide a robust roadmap that delineates the sustainable finance conceptual landscape. The concrete outcomes of this research elucidate the origin and evolution of the sustainable finance concept and provide a contemporary review of the related tools, approaches, and instruments. Simultaneously, this study also depicts the precise boundaries among the core elements of sustainable finance. The main contribution of this study is thus to provide researchers, organizations, and the society a better understanding of all the aspects of sustainable finance that are useful for sustainable development in the financial world. Further, this research uncovers the underexplored areas within the sustainable finance paradigm to which researchers and organizations should channel their attention.

Keywords: Sustainable Finance, Sustainable Development, Bibliometrics

JEL Codes: G01, Q01

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