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Bearing the Cost of Global Politics

The Impact of FATF Grey-Listing on Pakistan's Economy

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Abstract

This paper aims to investigate the economic implications of Pakistan's placement on the Financial Action Task Force's (FATF) grey list. Following the approach set forth by Abadie and Gardeazabal (2003), the synthetic control method is used to understand how Pakistan's economy would have evolved in the absence of FATF interventions. Results suggest that FATF grey-listing, starting in 2008 and till 2019, may have resulted in cumulative real GDP losses of approximately USD 38 billion. Moreover, estimates indicate that a large proportion of this response (≈58 percent) was driven by reduction in consumption expenditures (both household and government). Exports and inward foreign direct investment are also partially responsible for this decline in GDP, with associated cumulative losses of USD 4.5 billion and USD 3.6 billion respectively. These results point to the significant negative consequences associated with FATF grey-listing.

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1. Introduction

This paper aims to study the impact of the Financial Action Task Force's (hereafter, FATF) grey-listing on Pakistan's economy. For this purpose, the response of four macroeconomic variables most likely to be affected by such an intervention are considered and analysed. These include gross domestic product, final consumption expenditures, exports, and inward foreign direct investment (hereafter, FDI). A combination of other developing countries is used to construct a synthetic Pakistan which resembles the relevant economic characteristics of actual Pakistan, i.e. investment to GDP ratio, employment as a share of total population, and other variables, before the FATF's grey list intervention in 2008. The subsequent economic evolution of this counterfactual Pakistan without any FATF grey-listing is then compared to the actual experience of Pakistan. Estimates suggest that real GDP in Pakistan witnessed a cumulative decline of about USD 38 billion relative to synthetic Pakistan following two FATF grey-listings of the country. There is overwhelming evidence of widening gaps in GDP between real Pakistan and its synthetic counterpart following FATF sanctioning. A large proportion of this decline in GDP can be attributed to the reduction in household and government consumption expenditures, with real consumption in actual Pakistan USD 22 billion lower, relative to its counterfactual counterpart. Furthermore, greylisting leads to lower levels of both exports and inward FDI.

The paper proceeds as follows. Section 2 discusses the relationship between FATF and Pakistan. The economic consequences associated with being on the FATF's grey list are discussed in Section 3. A detailed discussion on the econometric methodology used to calculate economic losses is also included in this section. Section 4 concludes.

2. History of the FATF and Pakistan

In 1989, the G7 countries introduced FATF as a temporary forum to tackle the rising issue of money laundering. In 1990, the FATF released a report containing 40 recommendations, which eventually became the central norms through which a comprehensive plan was provided to fight money laundering (hereafter, ML) and terrorist financing (hereafter, TF). The key difference between the two crimes is that ML necessarily entails an illicit source of funds, whereas TF may come from legitimate sources like donations, as long as the purpose of the funds is criminal.

FATF is seen as a "transnational public policy network" — consisting of 39 members. It has also established nine regional bodies which have fully endorsed their recommendations. So, between FATF members, its regional bodies, observer states and international organizations, around 205 countries and jurisdictions around the world have committed themselves to implement FATF recommendations. It must be noted that the FATF's role in global financial governance has become more prominent over the last few decades as it expanded its mandate in October 2001 after 9/11, by adding "terrorist financing" to its list. FATF is the main decision-making body, and its regional bodies provide support and assistance in those decisions. Every year in February, June, and October; a plenary meeting is held in Paris at the FATF secretariat. The president of the FATF, who is elected by and of the 39 members, chairs the meeting and sets the agenda. During the plenary meeting, key issues related to AML/CFT are discussed, along with a discussion on the countries that have deficiencies in the AML/CFT regime. FATF categorises countries with a fragile AML/CFT regime as 'jurisdictions under increased monitoring' (grey-listed), while countries with significant strategic deficiencies are labelled as 'high-risk jurisdictions' (blacklisted).

Pakistan is a member of the FATF-style regional body called the Asia/Pacific Group on Money Laundering (APG), which it joined in 2000. In 2012, due to non-compliance with the United Nations Security Council Resolution (UNSCR) 1267, which called on countries to freeze assets, impose travel bans and arms embargos on any terrorist/militant groups linked with al-Qaeda, Pakistan was placed on the grey list. It was removed from the list following amendments to the Anti-Money Laundering and Anti-Terrorism Act of 2015, in which measures were enacted to "confiscate the properties of the affiliated groups, as well as act against the financers of terrorist activities within the state". When it was decided that Pakistan will be grey-listed again in 2018, it cooperated and formulated an action plan to avoid blacklisting and negotiated an approval on a 27-point action plan from the FATF.² For visual convenience, Table 1 summarizes FATF interventions in Pakistan dating back to 2008.

Given that major financial institutions like the IMF and World Bank are affiliated with FATF as observers, a grey-listed country faces complications in accessing international lending instruments. For example, the USD 6 billion IMF loan contract in July 2019 emphasised the need for Pakistan to comply with the FATF's action. An IMF representative even went as far as to suggest that failure to exit from the grey list could pose a threat to the IMF programme.³ At the same time, investors were reluctant to invest in a grey-listed country as its borrowing capacity decreased.

The Economist argued that the economic consequences of being grey-listed would be limited in Pakistan but maintained that "the banking industry and external sector in Pakistan are likely to be affected most directly. Global "correspondent" banks and other intermediary

financial institutions involved in transactions with Pakistani entities are likely to demand a higher level of due diligence".

This decision of putting Pakistan on the grey list in 2018 appears to be against FATF norms, since normally, the decision materialises by taking into consideration the Mutual Evaluation Report (MER) of the respective country. MER analyses the levels of implementation of FATF recommendations in a country and provides in-depth description and recommendation. Pakistani officials were critical of this procedure which didn't wait for the MER analysis, calling it "unprecedented and in clear violation of the established rules and practices of FATF", and believed that it is "politically motivated", mainly due to pressure from the United States.⁴

Table 1: FATF Interventions

Year	Event
2008	Pakistan is classified as high risk and non-cooperative in adopting AML/CFT legislation. Placed on the grey list.
2009	Pakistan taken off grey list.
2012	Pakistan is classified as high-risk and non-cooperative in adopting AML/CFT legislation. Placed on the grey list.
2013	Pakistan remains on the grey list until next evaluation.
2014	Pakistan remains on the grey list until next evaluation.
2015	Pakistan taken off grey list after FATF identified progress in improving its AML/CFT regime.
2018	Pakistan was grey-listed for failure to address significant deficiencies in its AML/CFT regime.
2019	Pakistan remains on the grey list until next evaluation.

Source: Financial Action Task Force public statements 2008-2014 and mutual evaluation reports.

3. Economic Implications of FATF Grey-listing

There is significant motivation to believe that the FATF's grey-listing has strong negative effects on the economic well-being of a country. However, to the best of our knowledge, empirical evidence documenting these harmful effects is scarce. One reason for the lack of empirical analysis is that it might be difficult to quantify how economies would evolve in the absence of such interventions. For this purpose, we use the synthetic control method to construct a counterfactual Pakistan that did not have any FATF interventions post-2008. The response of four macroeconomic variables is considered that are most likely to be affected by FATF interventions. These include gross domestic product, final consumption expenditures, exports, and inward foreign direct investment. This section aims to shed light on the econometric methodology and data used to determine the economic costs associated with FATF grey-listing for Pakistan.

3.1. Literature Review for Synthetic Control Method

The synthetic control method is one method that can be used to assess the impact of an event on the economy. Like all methods, it is not perfect, and has its limitations. Given the kind of macroeconomic data available, it is one of the few credible models we can use to evaluate the impact of FATF grey-listing on Pakistan's macroeconomic variables, and calculate the losses associated with it. This method has been used abundantly in the economics literature to understand the effect of interventions in comparative case studies. These interventions range from terrorism conflict to natural catastrophes, and political murders to control programs, e.g. tobacco.

Abadie and Gardeazabal (2003) rely on this method to calculate the economic costs of conflict, by using the terrorist conflict in Spain's Basque Country as a case study. Furthermore, Abadie et al. (2010) estimate the effect of California's tobacco control program on tobacco consumption using a similar methodology. Other examples in which the synthetic control method is applied to understand the impact of an intervention, include Cavallo et al. (2013) who analyse the causal effect of natural catastrophes on economic growth, and Gautier et al. (2009) who examine the effect of Theo van Gogh's murder on housing prices in Amsterdam.⁵

3.2. Limitations of this model

There are risks to using the synthetic control method, and the manner in which it has been applied in this paper. The most obvious and important of these risks is the confluence of other interventions that occurred immediately before, concurrent to, or soon after the FATF intervention. For example, the global economic crisis occurred in 2008, and Pakistan also entered an IMF program in 2008. Both these interventions are known to have caused reductions in overall GDP, domestic investment and consumption. Declines seen in these variables can arguably be attributed to any one of these factors, and not solely to the FATF intervention. Indeed, other interventions, such as the growing acrimony in the Pakistan-United States relationship, growing inward investment from 2015 onward through the China Pakistan Economic Corridor (CPEC), and the absence of similar externalities shaping the control group countries are all examples of the limitations of the model. Separating the

effects of these various interventions and factors should be the subject of further and more detailed examinations of the synthetic control model's application to GDP in Pakistan.

3.3. Using Other Countries to Construct a Synthetic Pakistan Without FATF

The synthetic control method is a statistical technique that is used to estimate the effects of events or interventions at the aggregate level, i.e. cities, states, or countries. The underlying research question involves estimating the effect of FATF's intervention on Pakistan's economy. To do so, we need to figure out the unobserved counterfactual. That means, we need to determine what would have happened to Pakistan's economy without any FATF intervention in the post-2008 time period. This unobserved counterfactual Pakistan would give us an idea of what difference FATF interventions actually made. We refer to this unobserved counterfactual as synthetic throughout the remainder of the paper to maintain consistency with the economics literature. The effect of an FATF intervention is then estimated by comparing the evolution of the affected macroeconomic variable for actual Pakistan, to the evolution of the same variable for some control group (synthetic Pakistan).

An important question is how to choose the control group. While Pakistan's economy could be compared with other developing countries in the world, this clearly would not be a good control group since it is possible that these countries followed a different trend prior to the FATF intervention. As a result, we are interested in a control group which is more similar to Pakistan in the pre-intervention time period, and somewhat less arbitrary. The synthetic control method gives us a data-driven procedure to construct this comparable control group by providing an algorithm that finds synthetic Pakistan using a weighted combination of similar economies that did not face any FATF interventions at all. These weights are chosen such that they best resemble the values of predictors of GDP (or other macroeconomic variables) for Pakistan before the intervention. A brief discussion regarding the choice of weights follows in the next subsection.

3.4. The Synthetic Control Method Model for Pakistan and FATF Listing

Suppose that a panel of J+1 countries is observed in years $1996,1997,\ldots,2019$ and Pakistan is exposed to FATF interventions during years $2008,2009\ldots,2019$. J refers to the number of countries included in the control group. The outcome of real GDP (or other macroeconomic variables) for Pakistan at year t in the absence of an FATF intervention is represented as $Y^{N}_{Pak,t}$, whereas $Y^{I}_{Pak,t}$ is the corresponding outcome in the presence of an FATF intervention during years $2008,2009\ldots,2019$. The effect of an FATF intervention on Pakistan's economy in each year is thus represented by vector

$$\alpha=(\alpha_{Pak,2008},\alpha_{Pak,2009},\ldots,\alpha_{Pak,2019})$$
, where $\alpha_{Pak,t}=Y^{I}_{Pak,t}-Y^{N}_{Pak,t}$ for

t>2007. The weights assigned to construct $Y^I_{Pak,t}$ are such that the control group resembles the treatment group (actual Pakistan) as closely as possible. This is done by minimizing the mean squared prediction error (MSPE) for the difference between the actual and weighted combination values calculated using the synthetic control method for each variable.

3.5. Defining the Control Group and Applying the Data

It must be noted that identifying countries for the control group was an arduous task, since countries that resemble the macroeconomic characteristics of Pakistan have had FATF interventions at least once in the last 25 years. To form the control group, we first identify a panel of developing countries with real per-capita GDP similar to that of Pakistan. This includes Bangladesh, Cameroon, India, Niger, Tajikistan, Nepal, Egypt, Myanmar, Kenya, Nigeria, Ghana, Uzbekistan, Philippines, and Vietnam. However, we end up dropping Egypt, Myanmar, Kenya, Nigeria, Ghana, Uzbekistan, Philippines, and Vietnam from the control group since these countries have had at least one FATF intervention since 1996. Based on FATF's announcements and mutual evaluation reports, the interventions that took place in these countries are as follows: Egypt (2001-2003), Myanmar (2001-2007, and 2011-2019), Kenya (2011-2013), Nigeria (2001-2007, and 2011-2012), Ghana (2012, and 2019), Uzbekistan (2008-2009), Philippines (2000-2004), and Vietnam (2013). Consequently, we rely on a weighted combination of Bangladesh, Cameroon, India, Niger, Tajikistan, and Nepal to construct a synthetic Pakistan.

This paper aims to study the impact of FATF grey-listing on Pakistan's economy. For this purpose, we consider the response of four macroeconomic variables that are most likely to be affected by such interventions. These include gross domestic product, final consumption expenditures, exports, and inward FDI. Final consumption expenditures are defined as the sum of household and government final expenditures. Inward FDI refers to direct investment equity flows into the country. We use annual data on these macroeconomic variables from 1996-2019 to create a synthetic Pakistan. It must be noted that the sample selection is not arbitrary, and was chosen based on data availability. Throughout the paper, pre-intervention period refers to years 1996-2007, whereas post-intervention indicates years 2008-2019.

Table 2: Pre-FATF Characteristics

	(1) Pakistan	(2) Synthetic Pakistan	(3) Other Countries
Real per-capita GDP ^a	863.76	864.01	672.29
Investment $ratio^b$	17.52	20.94	21.89
Population density ^c	217.68	278.30	296.06
Sectoral shares ^d			
Agriculture	23.61	22.13	25.90
Industry	20.84	24.87	24.17
Services	49.75	46.02	43.14
Human Capital ^e	50.52	55.39	54.20

Sources: Author's computations and World Bank database.

^a2010 USD, average for 1996-2007.

^bGross capital formation/GDP, average for 1996-2007.

^cPersons per square kilometer, 2007.

^dValue added as a percent of GDP, 1996-2007.

^eEmployment as a share of population, 1996-2007.

We follow Abadie and Gardeazabal (2003), and use investment to GDP ratio, population density in the year before the intervention, average real GDP per capita across the pre-intervention period, human capital, sectoral shares for agriculture, industry (including construction and manufacturing), and services as the predictors for real GDP, consumption, exports, and FDI. These predictors are used to estimate the path of GDP and other macroeconomic variables after FATF's grey-listing. Investment to GDP ratio is defined as gross capital formation as a share of total GDP. Abadie and Gardeazabal (2003) define human capital as the illiterate, primary, high school, and college graduates' shares of the working-age population. However, in our case, due to limited data availability, human capital is defined as the employment share of population. For sectoral shares, we rely on the value added (percent of GDP) by three sectors which consist of the following International Standard Industrial Classification (hereafter, ISIC) divisions:

- Agriculture, forestry, and fishing: Agriculture corresponds to ISIC divisions 1-5, and includes forestry, hunting, and fishing, as well as cultivation of crops and livestock production.
- Industry: Industry corresponds to ISIC divisions 10-45, and includes manufacturing (ISIC divisions 15-37). It comprises value added in mining, manufacturing (also reported as a separate subgroup), construction, electricity, water, and gas.
- Services: Services correspond to ISIC divisions 50-99, and they include value added in wholesale and retail trade (including hotels and restaurants), transport, and government, financial, professional, and personal services such as education, health care, and real estate services.

Data on all these variables has been downloaded from the World Bank's collection of development indicators.⁶ All variables have been deflated using 2010 USD, and are expressed in real terms to account for inflation. Since there is significant variation in the population of countries chosen in our sample, we express all macroeconomic variables (GDP, consumption, exports, inward FDI) in per-capita terms to normalise for the population. For example, it wouldn't make much sense to use the weight of a small country like Nepal to create a synthetic Pakistan, since the size of Pakistan's economy is almost nine-fold that of Nepal. Consequently, expressing variables in per-capita terms addresses this complication.

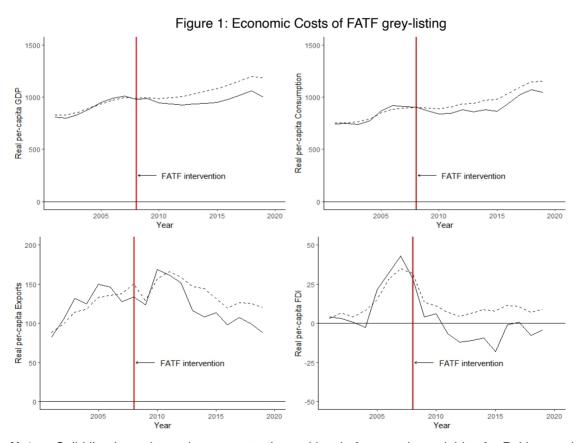
3.6. Discussion of Results

We judge the accuracy of synthetic Pakistan, which is constructed using a weighted combination of Bangladesh, Cameroon, India, Niger, Tajikistan, and Nepal, in a couple of ways. First, we compare the values of GDP predictors for synthetic Pakistan, i.e. investment to GDP ratio, employment as a share of the population and sectoral shares, to those of its real counterpart. Second, we compare the evolution of our macroeconomics variables in the pre-intervention period (2001-2007), and analyse how well synthetic Pakistan matches its real counterpart.

Table 2 represents the values of all predictors during the pre-intervention period for the real Pakistan, its synthetic counterpart, and the control group. The resulting synthetic Pakistan matches its real counterpart very well on the predictors of GDP, including the trend of GDP in the pre-intervention periods. We find similar results for consumption, exports, and inward

FDI. Column (1) in Table 2 indicates the values of variables for the real Pakistan. Column (2) are the values for synthetic Pakistan, whereas column (3) corresponds to the average value for all variables across Bangladesh, Cameroon, India, Niger, Tajikistan, and Nepal. We observe that the real GDP per-capita for synthetic Pakistan between 1996 and 2007 is USD 863.76 which is almost identical to its real counterpart at USD 864.01. Furthermore, the investment to GDP ratio is also quite similar. Moving on to the sectoral shares, for synthetic Pakistan we find that the services sector is the biggest contributor to the country's output, which is in line with the economic structure of actual Pakistan.

Figure 1 compares the evolution of GDP, consumption, exports, inward FDI for actual Pakistan, to the evolution of the same variables for synthetic Pakistan between 2001 and 2019. The solid line in each graph represents the level of real per-capita variables for actual Pakistan ($Y^{N}_{Pak,t}$), whereas the corresponding dashed line is the level of real per-capita variables for synthetic Pakistan ($Y^{I}_{Pak,t}$). Referring to Figure 1, it is evident that synthetic Pakistan very accurately tracks actual Pakistan for the entirety of the time period before FATF interventions (2001-2007). Furthermore, the similarity on the GDP predictors in Table 2 also gives us confidence that synthetic Pakistan is a reasonable approximation of what would have happened to Pakistan's economy in the absence of FATF interventions. These results point to the robustness of our methodology and GDP predictors. The vertical distance between the two lines (solid and dashed) after 2007 is the gap in real GDP per-capita between Pakistan and its synthetic counterpart.



Notes: Solid line in each graph represents the real level of per-capita variables for Pakistan, whereas the corresponding dashed line represents the real level of per-capita variables for synthetic Pakistan.

Looking at the graphs for consumption, exports, and inward FDI in Figure 1, we can observe that these variables for Pakistan and the synthetic counterpart also behave quite similarly until 2007. However, from 2008 when FATF interventions come into effect, both lines (solid and dashed) start to diverge. More importantly, we also notice that the gap in macroeconomic variables between real and synthetic widens following FATF interventions through 2012-2015 and 2018-2019. For the purpose of reporting and exposition, the percapita losses (gains) are converted into total losses (gains) by multiplying the loss (gain) with the population in each year. These numbers are presented in Table 3, where all values are expressed in 2010 USD billions.

One of the mechanisms by which FATF grey-listing can adversely affect the economy is through increased scepticism surrounding the economy's future outlook. This will most likely lead to a decline in local investment, exports, and inward foreign direct investment. We see evidence of this in Table 3. Column (1) in table 3 suggests that the FATF grey-listing in 2008 may have resulted in GDP losses worth USD 3.76 billion. However, it must be noted that these losses were not restricted to the year of FATF's grey-listing in 2008, as such actions might have long-lasting effects on the economy. This is evident from GDP losses in subsequent years of 2009-2011, with an estimated loss of USD 10 billion across the three years.

Table 3: Economic losses associated with FATF's grey-listing (2010 USD billions)

Year	(1) GDP	(2) Consumption	(3) Exports	(4) Inward FDI
2008	-3.76	-2.34	-1.15	-1.86
2009	-1.00	-4.23	1.94	-1.10
2010	-5.96	-4.45	3.25	0.72
2011	-3.01	-1.87	-3.10	-1.56
2012	-3.78	1.10	-0.50	-0.51
2013	-2.60	-5.64	-4.58	-0.21
2014	-3.56	-1.40	-0.97	-0.15
2015	-3.49	-5.87	3.50	-1.44
2016	-1.54	4.67	-0.65	2.66
2017	0.47	5.04	0.62	0.52
2018	0.15	-0.74	-1.68	-0.99
2019	-10.31	-6.49	-1.20	-0.35

Notes: This table represents the difference in the level of each macroeconomic variable between actual Pakistan and synthetic Pakistan. All variables are expressed in 2010 USD billions. A negative value indicates loss, whereas a positive value represents a gain.

The FATF sanctioning between 2012 and 2015 cost the economy approximately USD 13.43 billion. And even though, Pakistan saw itself out of the FATF's crosshair in June 2015, it took a while for GDP to recover with an estimated loss of USD 1.54 billion estimated in 2016. This

implies that FATF sanctioning has short to medium run implications for the economy. It is interesting to point out that Pakistan's economy saw an estimated increase in GDP in 2017 and 2018 following removal from the FATF grey list in 2015. The estimated GDP increase in 2018 is only USD 0.15 billion (USD 150 million). It is possible that Pakistan's re-entry on to the FATF grey list in June 2018, wiped off most of its GDP gains from the first half of 2018. This is followed by a staggering loss of USD 10.31 billion in 2019. It is worth pointing out that the 2019 GDP losses are in line with the calculations of the Foreign Office in Islamabad, as suggested by Foreign Minister Shah Mehmood Qureshi's conversation with Khaleej Times' principal correspondent Waheed Abbas (Khaleej Times, 2019).

Column (2) in Table 3 indicates that consumption follows a similar pattern to GDP, in that we see a large drop in consumption expenditures following FATF grey-listing. Likewise, it takes a while for Pakistan's consumption expenditures to increase following an exit from the grey list. On the other hand, exports and inward FDI are quick to recover and post an estimated increase following removal from the FATF grey list unlike GDP and consumption. This is evident from our estimates of 2010, whereby GDP saw a decline but exports and FDI saw an increase. The overall findings suggest that real GDP in Pakistan witnessed a cumulative decline of about USD 38 billion relative to synthetic Pakistan over 12 years (2008-2019) as a result of FATF's grey-listing. A large proportion of this decline in GDP can be attributed to the reduction in household and government consumption expenditures, with real consumption in Pakistan USD 22 billion less relative to synthetic Pakistan. Furthermore, grey-listing also leads to lower levels of exports and inward FDI for Pakistan in comparison to the synthetic Pakistan, with associated cumulative losses of USD 4.5 billion and USD 3.6 billion respectively.

Table 4: Loss ratio

Year	GDP	Year	GDP
2008	-2.27%	2014	-1.73%
2009	-0.57%	2015	-1.62%
2010	-3.36%	2016	-0.68%
2011	-1.65%	2017	0.19%
2012	-2.00%	2018	0.06%
2013	-1.32%	2019	-4.02%

Notes: The loss ratio is defined as the proportion of each year's GDP lost as a result of FATF interventions.

The proportion of GDP lost due to FATF sanctioning in each year is calculated using the following formula:

$$Loss \, Ratio = 100 \times \frac{GDP \, loss \, in \, year \, t}{GDP \, in \, year \, t}$$

The results for the loss ratio in each year are presented in Table 4. These numbers suggest that FATF grey-listing has taken a significant toll on Pakistan's economy since 2008, with losses as high as 4.2 percent of GDP in 2019.

4. Conclusions

Much has been said about the negative effects of FATF interventions on Pakistan's economy. However, the empirical evidence surrounding this has been scarce. This paper shows strong evidence of short to medium term implications for the economy following FATF interventions. Specifically, grey-listing events spanning from 2008 to 2019, have may have resulted in cumulative GDP losses worth USD 38 billion, with this response driven by a reduction in consumption expenditures, exports, and FDI. Importantly, our results also suggest that Pakistan's removal from the grey list has at times led to the revival of the economy, as evident from an increase in the level of GDP for the years 2017 and 2018.

The estimates from this paper point to the significant negative implications of FATF's grey-listing for Pakistan, thus emphasising the need for policymakers to comply with the FATF on the adoption of AML/CFT legislation to avoid future economic losses.

It must be noted that Pakistan has taken several legislative actions to comply with FATF's 27-point action plan following its placement on the grey-list in June 2018. Examples of these legislative actions include amendments in the Anti-Terrorism Act, Limited Liability Partnership Bill, Anti-Money Laundering Bills, etc. By October 2020, Pakistan had been found to be compliant with 21 of the 27-point action plan formulated to avoid blacklisting. In addition to the legislative action, regulatory authorities have also frozen bank accounts of customers enlisted by the United Nations Security Council (UNSC) as terrorist financers. Furthermore, the government also began the process of forcibly shutting down certain NGOs and NPOs that were sources of money laundering.

These changes have helped improve Pakistan's ranking on the Basel AML Index, an independent annual ranking that assesses the risk of money laundering and terrorist financing (ML/TF) around the world. The Basel AML Index is influenced by the FATF's set of 40 recommendations and the Mutual Evaluation Reports (MER) of each country. The index now ranks Pakistan at 28 out of 141 countries, an improvement of five places from the last assessment. Pakistan's overall risk score is 6.30, where 10 equals the highest risk. In comparison, it is interesting to note that countries like Sri Lanka (6.52), Cambodia (7.1), and Vietnam (7.04) have a higher risk score than Pakistan's, but they are not grey-listed, nor do they face any criticism from the FATF.

Given that Pakistan has made significant progress on its compliance with the FATF's action plan, the results of this paper call for serious introspection concerning the use of FATF grey-listing as a policy instrument, especially given the intensely political nature of the listing and de-listing process.

5. References

Abadie, A., and Gardeazabal, J. (2003). "Economic Costs of Conflict: A Case Study of the Basque Country". *American Economic Review*, 93 (1): 113–132.

Abadie, A., Diamond, A., and Hainmüller, J. (2010). "Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program". *Journal of the American Statistical Association*, 105 (490): 493–505.

Allegretto, S., Dube, A., Reich, M., and Zipperer, B. (2017). "Credible research designs for minimum wage studies: A response to Neumark, Salas, and Wascher." *ILR Review*, 70, 559-592.

Borjas, G. (2017). "The wage impact of the Marielitos: A reappraisal." *ILR Review*, 70, 1077-1110.

Cavallo, E., Galliani, S., Noy, I., and Pantano, J. (2013). "Catastrophic Natural Disasters and Economic Growth". *Review of Economics and Statistics*. 95 (5): 1549–1561.

Gautier, P., Siegmann, A., Van Vuuren, A. (2009). "Terrorism and Attitudes towards Minorities: The effect of the Theo van Gogh murder on house prices in Amsterdam". *Journal of Urban Economics*. 65 (2): 113–126.

Jardim, E., Long, M., Plotnick, R., Inwegen, E., Vigdor, J., and Wething, H. (2017). "Minimum wage increases, wages, and low-wage employment: Evidence from Seattle." *National Bureau of Economic Research*.

Neumark, D., and Wascher, W. (2017). Reply to "Credible research designs for minimum wage studies". *ILR Review*, 70, 593-609.

Peri, G., and Yasenov, V. (2019). "The labor market effects of a refugee wave: Synthetic control method meets the Mariel boatlift." *Journal of Human Resources*, 54 (2), 267-309.

Reich, M., Allegretto, S., and Gdoy, A. (2017). "Seattle's minimum wage experience 2015-16." Center on wage and employment dynamics policy brief, UC Berkeley.

Abbas, Waheed, "Pakistan to be out of FATF's grey list by September: Central Bank", Khaleej Times https://www.khaleejtimes.com/pakistan-to-be-out-of-fatfs-grey-list-by-september-central-bank

6. Endnotes

- ¹ Pakistan in the FATF Grey-List: Challenges, Remedies and International Response, NDU, https://ndu.edu.pk/issra/issra/pub/articles/margalla-paper/MP-2020/03-Pakistan-in-the-FATF.pdf
- ² "Pakistan formally placed on FATF grey list", Express Tribune https://tribune.com.pk/story/ 1746079/1-pakistan-formally-placed-fatf-grey-list
- ³ "Remaining on FATF grey list to impact capital inflows: IMF" The News, https://www.thenews.com.pk/print/508931-remaining-on-fatf-grey-list-to-impact-capital-inflows-imf
- ⁴ "Sources claim Pakistan back on FATF watch-list, govt says no 'official intimation' yet", Express Tribune, https://tribune.com.pk/story/1642791/fatf-puts-pakistan-back-terrorist-financing-watchlist-media
- ⁵ While not an exhaustive list, synthetic control methods have also been applied to study the effects of other interventions like immigration (Borjas, 2017; Peri and Yasenov, 2019) and minimum wage laws (Allegretto et al., 2017; Jardim et al., 2017; Neumark and Wascher, 2017; Reich et al., 2017)
- ⁶ Source: World Bank Open Database, https://data.worldbank.org/.
- ⁷ Basel AML Index, Basel Institute for Governance, https://baselgovernance.org/basel-aml-index/public-ranking