

आपूर्ति

The Economics Journal



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2019

Faculty Advisor's Note



It is a pleasure to introduce the ninth edition of the annual magazine of the Economics department, Aapoorti. It was started in the year 2010-11 with the collective efforts of the students of our department when they were able to come up with a journal of their own. Since then this legacy has been carried forward. It is a significant step forward to encourage our students to have inquisitive minds and pen their thoughts on paper that can go way beyond the academic curricula. This would also prepare them to engage in rigorous research in future.

This edition of Aapoorti deals with various aspects of the underground economy, its origin and continued existence in various sectors of the economy as well as its effect on economic policy and decision making.

The journal includes contributions not only from Miranda House but also external contributions from colleges across Delhi University and the University of Mumbai. The contributions include Research Papers on topics as diverse as School Dropouts and Economics of Weight Loss, as well as several other academic articles. The current edition of Aapoorti is quite engaging and unique as it includes creative contributions as well. The Aapoorti team has interviewed four esteemed economists for the journal including Lord Meghnad Desai, Dr. Jayati Ghosh, Dr. Bina Agarwal and Dr. Indira Rajaraman. We congratulate the editorial team of Aapoorti for their hard work and yearlong efforts for mobilizing and collating resources to bring out this issue. We wish them all the luck in their future endeavours.

Alka Budhiraja

Faculty Advisor, Arthashastra

Department of Economics, Miranda House

Teacher-in-Charge's Note



Aapoorti epitomizes the commitment and dedication of the bright young minds of our department that has helped the annual economics journal grow from strength to strength. Over the years it has given students a platform to pen their diverse opinions on various economic issues, both theoretically and empirically. Every year a new economic matter is brought in to focus via articles and research papers.

This year the central theme of the journal is Black Economy. There is no one way to define a Black or Shadow Economy. Broadly it is the result of activities that cannot be measured and taxed and hence are not accounted for in the calculation of national income. This gap between what can be observed and what is actual has plagued successive policy makers. It has political, economic and social ramifications because the absence of data leads to policy failures and causes repercussions when the black money tries to flow back into the country. I congratulate the students for highlighting a topic that is especially relevant in the Indian context, given the steps taken by the government to recover money that is parked abroad.

The Aapoorti team has interviewed four eminent economists and distinguished professors ranging from Lord Meghnad Desai, Dr. Indira Rajaraman, Dr. Jayati Ghosh and Dr. Bina Agarwal. The journal includes research papers from various colleges across the University of Delhi and from the University of Mumbai. Keeping with the central theme, team Aapoorti has also included a quiz on Black Economy.

I congratulate all the student contributors for their submissions and the editorial team for their hard work throughout the year for making this journal a success. I wish them all the best and hope that Aapoorti has been a stepping stone that will help them progress further as researchers.

Hena Oak
Teacher-in-Charge, Economics Department
Miranda House

Acknowledgement

Creating a journal such as this one takes a lot of time, grit and perseverance. First and foremost, we would like to thank our Faculty Advisor, Alka Budhiraja ma'am and Teacher-in-Charge, Hena Oak ma'am for their continued support and encouragement. Our department is blessed to have resolute teachers like Ravinder Jha ma'am who single-handedly ensured that our team got the interviews we wanted. We extend our sincere thanks to our faculty for guiding us through this long and often, tumultuous process.

This journal would not be what it is without the dedication and unceasing effort of our in-house Design team, consisting of C.K. Pushyami, Sandhya Subramanian and Sonali Pan. They delivered on their suggestions and contributed immensely in the making of Aapoorti. This year our cover has been created by Anoushka Verma. The cover truly captures the essence of the black economy visually.

We would like to thank our contributors from various colleges for their entries and our readers for their unending support. Lastly, to everyone without whom Aapoorti wouldn't have materialised, we thank you wholeheartedly.

The Editorial Team

Aapoorti

Chief Editors' Note

Greetings!

As the ninth edition of Aapoorti goes into print, we can't help but feel immense pride in taking the legacy forward. For the past nine years, the Economics Department of Miranda House has given its students an opportunity to harness their potential in the art of writing, the demanding practice of research and the age-old craft of management. This journal has supplied readers with excellent guest entries from universities far and wide, editorials on a plethora of themes and a grand selection of interviews with leading experts from our field of economics.

This year the editorial board chose the theme - 'Black Economy'. It is understood to be a segment of the economy that is unrecorded and untaxed by the government. As a country, we are responsible for fueling a large chunk of the black economy and as citizens, we need to learn to make more informed choices. But why? The problem with the shadow economy is multifold - governments lose revenue, black market operators incur lower costs and so, legal operators can't compete with their prices but perhaps the most convincing argument against the shadow economy has to be the lack of safety, protection and regulation for the workers. Our editors have produced four papers highlighting the presence of the shadow economy in a number of fields from domestic labour to cryptocurrency. Adding on to this, we've been very fortunate to receive a number of thought-provoking guest entries. The 'Contributor's Column' consists of guest papers on topics ranging from the economics of weight loss to the statistical analysis of school dropouts.

We would be remiss not to mention that our team was fortunate enough to interview legends like Lord Meghnad Desai, Dr. Indira Rajaraman, Dr. Jayati Ghosh and Dr. Bina Agarwal. We hope our readers have as enriching a time going through these interviews as we did while conducting them. And lastly, to keep our readers on their toes we've brought back interactive elements like quizzes.

Every year we work on the journal, determined to do our best and give our readers the most comprehensive, enjoyable experience possible. Here's hoping our readers thoroughly enjoy the ninth edition of Aapoorti!

Warm Regards

Chief Editors

Ahalya P. Rajesh, Pragti Rathore

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EDITOR'S DESK

Rethinking Red Lights

The Economics of Prostitution Policy

Simran Panesar, Sakshi Dhawan

Abstract

Through the course of this article, we will delve into the intricacies of the sex trade and use basic economic theories to analyse the potential effects of legalization, and other policy approaches on the size of the market for sex work. Using a supply-demand analysis, the impact of legislation on sex trafficking will be theorized. The article will culminate with an in-depth examination of the Swedish Sex Purchase Act. This paper lays emphasis on the need to break away from cultural apprehensions and look at legislation from an objective viewpoint so that optimal policies can be designed to reduce the harms and overall social costs associated with prostitution.



Figure 1: Credits: “The Economics of Prostitution,” Forbes India

Sex work might be the oldest profession in the world, but it continues to be largely treated as a criminal activity across the globe. Some common arguments put forth by individuals looking to criminalise sex work include combatting exploitation that sex workers (who overwhelmingly tend to be women) often face.

The Case Against Criminalisation of Sex Work

However, like many other policy decisions, there exist a large number of consequences-often unforeseen by policymakers- of the criminalisation of sex work. Ronald Weitzer’s “Legalising Prostitution: From Illicit Vice to Lawful Business” (2011) outlines them clearly. Firstly, the primary consequence of criminalisation of sex work-arrests, tends to have a minor impact as a deterrent towards sex work. This can

be attributed to the fact that escape from prostitution is virtually impossible without a strong social system, something that is made even harder with the stigmatisation of sex work, a direct consequence of criminalisation. Sex workers tend to go back to selling sex, even after arrests. The only difference that comes in here is the possibility of a police record, which makes it even more difficult for sex workers to find work beyond the sex industry. Secondly, criminalisation of sex work places an immense burden on the judicial system of a country. Third, criminalisation often leaves sex workers without the support of the police system, for they fear that their complaints will not be taken seriously or that policemen might use criminalisation laws to blackmail or extort them.

However, one of the most fundamental arguments that the proponents of decriminalisation of sex work put forth is about the nature of the trade. Sex work presents as a victimless activity, a trade like any other mutually beneficial exchange between a buyer and a seller. Sex work, when practiced privately, in a voluntary and consensual framework, does not pose any significant harm to the public. In purely economic terms, if demand and supply exist for something that is not inherently dangerous, there is no basis for a government to prohibit the existence of a market for the same.

The second argument against the criminalisation of sex work is an economic one: criminalisation of an activity doesn't bring an end to the market. It simply pushes the market underground, and into the black economy, where all parties involved in the trade, especially sex workers have no protection from exploitation.

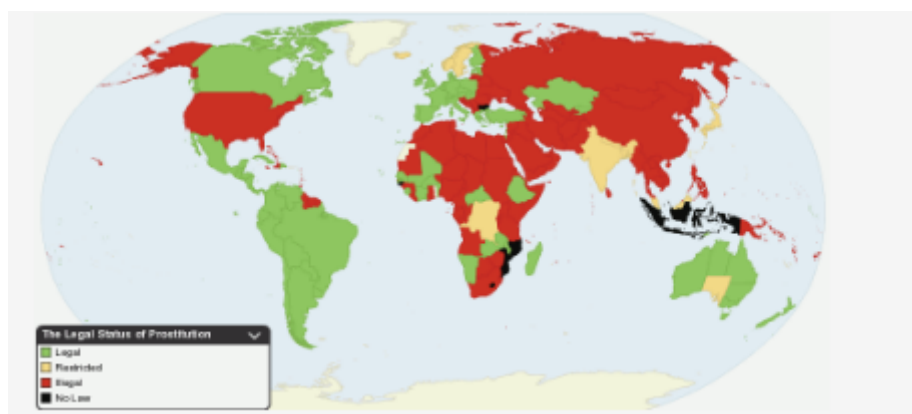


Figure 2: Credits: ChartsBin.com

Consequences of Criminalisation of Sex Work

As the market for sex work and sexual slavery are closely connected, it is important to examine the workings of the market for sexual slavery before examining the impact criminalisation or decriminalisation of sex work will have on human trafficking.

The supply for sex slaves tends to be high as a result of the fact that there exist many people around the world who are poverty-stricken and desperate to make their lives better, making them vulnerable to exploitation at the hands of traffickers. It has also

become easier to move individuals from one country to the other. Globalisation has led to a steady decrease in the cost of transportation, however, this fall appears to have been stagnated in recent years. In many regions, women are treated poorly, denied basic rights and viewed only through whatever value they might hold for men- as child rearers, objects of sexual pleasure etc. These factors make it easier for human traffickers to exploit people and women in particular.

The demand for sex slaves can be split into two different categories- demand by third parties, such as brothel owners and demand by customers.

The demand for sex slaves tends to be high from customers because of the high price elasticity of demand for sex work.

This can be demonstrated by examining the market for sex work during times of recession. During such times, there is a sharp decrease in the demand for sex work, due to high income elasticity of demand for sex work. However, there is also an increase in supply as workers at the fringes of the industry often decide to join in during times where there is an economic downturn. This increase in supply and decrease in demand decreases the prevailing wage rate for sex workers and helps in receiving demand to some extent.

Sex slaves tend to have high demand from third parties because “sex slavery is the profit maximising version of prostitution”. As sex slaves constitute involuntary labour, brothel owners don’t need to pay them wages; thereby reducing their costs and increasing their profits. Slavery has only gotten more profitable- in the 1850s one had to pay what is the equivalent of US\$9,500 to US\$11,000 for a slave that would generate around a 15% to 20% annual return on investment. However, now, a slave can be brought for only \$420 and generate a return of around 300% to 500% annually.

However, economists do not hold similar views on the subject- there is doubt about whether or not there is actual economic profit in slavery. In *Human Action*, Mises says that it is the human trafficker and not the owner who profits from slavery. Slavery is not profitable in the long run because slaves tend to have lower productivity and produce low-quality output when compared to voluntary labour. However, this analysis may no longer hold true.

Another reason for the high demand for sex slaves is that on studying conviction rates, human trafficking appears to be less risky than trafficking drugs or arms.

Now that the factors impacting the supply and demand of sex slaves have been studied in relation with the market for sex work, we can stipulate- to a certain degree- the impact that legalisation of sex work will have on the market for sex work, and the subsequent impact it will have on the market for sex slaves.

Legalisation of Sex Work

The impact that legalisation of sex work has on the market for sex work depends on socio-cultural factors that often tend to be region specific. Legalisation of sex work will invariably increase the size of the market for prostitution. More workers will voluntarily

enter the market, and assuming that sex work is legal in some regions, but a criminal activity in others, it is possible that sex workers from other regions will move to areas where sex work has been legalised. Hence, the supply of sex workers will increase.

Since legalisation of sex work will decrease the chances of arrest for solicitation of sex, the demand for sex workers will.

Hence, there is an increase in both, the demand and supply of sex workers after legalisation of sex work. However, the impact that this has on the market for sex slaves is ambiguous and depends on the legal measures that are in place. Here, it is also important to distinguish between decriminalisation and legalisation of sex work.

Decriminalisation of sex work - of both buying as well and selling sex- means that sex workers and those who solicit them will no longer be faced with criminal penalties or a jail sentence. It is possible that they could be made to face civil penalties i.e., attending workshops or classes. However, legalisation of sex work would mean that sex workers and their customers would face no penalties at all. In addition to facing no penalties, it is possible for legalisation to mean that the government will regulate the demand and supply of sex workers.

If certain provisions regulating the supply of sex workers are implemented, then it is possible that legalisation of sex work will allow some involuntary sex workers to escape, thereby reducing the number of individuals who have been forced into sex work. However, since legalisation of sex work will increase both demand and supply of sex workers, it is possible that if the increase in demand is greater than the increase in supply, human trafficking could increase.

The impact that the legalisation of sex work will have on human trafficking can sometimes be ambiguous because it depends to some extent on the laws that are present in the region regarding sex work and their implementation, as well as the change that legalisation of sex work might bring in socio-cultural attitudes.

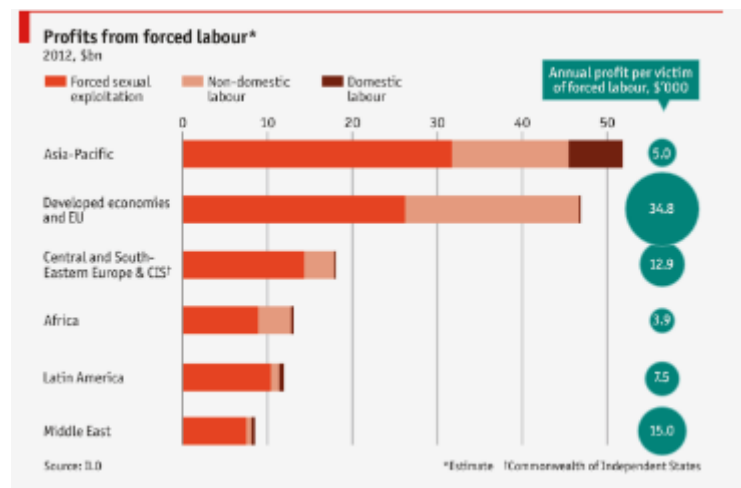


Figure 3: Credits: “Modern Slavery,” The Economist

Certain studies suggest that there is an increase in human trafficking in regions where sex work is legalised. This happens when the expansion of the market for sex overpowers all other factors at play, and the supply of voluntary labour is unable to fill the gap between demand and supply of sex workers. It is also possible that certain customers will be unable or unwilling to distinguish between voluntary and involuntary labour, so the demand side of the sex market may not have any impact on whether more or less trafficked individuals are employed in the sex industry. There are, however, suggestions that legalization of sex work can reduce human trafficking because it may lead to recognition of the human rights of sex workers, an important factor in decreasing human trafficking. However, empirical evidence tends to support the view that an increase in human trafficking often corresponds to legalization of sex work.

The Swedish Sex Purchase Act- Where Does it Stand?

Among the wide range of policy approaches toward sex work, the ‘Swedish Model’ has often been presented as a success in bringing down the number of women engaged in visible prostitution and in promoting a feminist perspective that defines sex work as ‘a form of male violence against women’. In its proposal to prohibit the purchase of sexual services, the Swedish government states,

“By prohibiting the purchase of sexual services, prostitution and its damaging effects can be counteracted more effectively than hitherto. [...] The government considers, however, that it is not reasonable to punish the person who sells a sexual service. In the majority of cases at least, this person is a weaker party who is exploited by those who want only to satisfy their sexual drives.” (Ministry of Labour, 1998, p. 55)

After several years of public debate initiated by the Swedish women’s’ movement, the Law that Prohibits the Purchase of Sexual Services came into existence on January 1, 1999. The law attempts to target the root cause of prostitution and trafficking of sex slaves- the demand. That is, the ‘men who assume the right to purchase persons for the

purpose of sex'. The logic of this 'No Buyer Law' is as follows: When buyers risk punishment, the number of men who purchase prostitution services decreases and the local prostitution markets consequently become less lucrative. Sex traffickers will then choose other, more profitable destinations. The size of the Swedish prostitution market and the number of sex slaves will hence, invariably decrease.

In the analysis of the success of this law, we must look at some integral questions: Firstly, has the size of the prostitution market decreased after the introduction of the law? Secondly, have the norms pertaining to prostitution changed due to the act? Thirdly, has the act limited the extent of trafficking for sexual purposes? And lastly, has the act created unintended consequences for those who sell sex?

Numerous studies have investigated the size of the prostitution and trafficking industry in Sweden to determine whether the law has had its intended effect of reducing both. While some studies survey how many people report having sold or bought sex, others focus on certain groups and areas collecting data, both street as well as online, on young and LGBT people. In Kuosmanen's study (2008), 8% of male respondents reported having purchased sex. In Mansson's survey (1996), this figure was 13%. While the numbers hint at a definite fall in the purchase of sexual services, Kuosmanen is cautious about drawing these conclusions due to the possibility of underreporting in 2008, when buying sex was a criminal offense. However, Waltman argues that the figures were more or less true because respondents were given anonymity and protection from prosecution. A study by Kotsadam and Jakobsson also concludes that 'buying sex seems to be most prevalent where it is legal and least prevalent where it is illegal'. Hence, the evaluators of the Sex Purchase Act conclude that 'this reduction should be considered a direct consequence of the criminalization of purchasing sex'. However, critics have pointed out to a major empirical shortfall-only visible sex work i.e. street prostitution is accounted for. According to a study conducted by the Country Administrative Board of Stockholm, there was a sharp jump in the number of online ads for sexual services from 304 to 6,965 ads in the period 2006-2014. Hence, there is a belief that prostitution, instead of decreasing, may have simply shifted indoors or online.

The Swedish National Police Board states that the Sex Purchase Act has helped prevent trafficking of sex slaves. This conclusion is supported by various international studies that examine the link between prostitution legislation and trafficking for sex. Kotsdam and Jakobsson (2013) too conclude that sex trafficking is less prevalent in countries where prostitution is criminalized and more in countries where it is legal. Using data on 46 European countries from UNODC and the International Labour Organisation (ILO), they draw a positive correlation between prostitution legislation and rates of trafficking, with restrictive legislation associated with lower rates of human trafficking. The overall picture appears to be one of continued, but decreased demand for prostitution in countries where the purchase of sexual services has been criminalized.

Throughout this paper, and more generally in the literature on prostitution, there has been much emphasis laid on the difficulty in assessing how prohibition has affected the size of the prostitution market. Is it possible to draw wide-ranging conclusions based solely on the information collected from the street or internet? This problem of 'how much information is sufficient' is much more than a methodological issue, it stems from

varying definitions of what counts as prostitution. Tiby and Petterson find that the police and social services in Sweden have a narrower definition of prostitution than that of NGOs and health care agencies.

Even though the Sex Purchase Act does not criminalise sale of sex, women involved in the profession report experiencing discrimination and stigma to the extent that it limits access to the support and security nets that they are entitled to. Legal norms are much more than a practical instrument to police a population. The wish to combat prostitution has to be weighed against the needs of this vulnerable group for protection, and more generally, the ideals of the law.

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Money Makes the World Go Around

The Black Market for Currency, its Determinants and the Rise of Cryptocurrencies

Pragti Rathore and Shreya Arora



Credits: www.dnaindia.com

A popular American Sitcom *Sienfeld* has an episode in its 7th season called “The Shower Head.” The plot of the episode revolves around the eponymous character and his shower-loving friends Kramer and Newman trying to buy a shower-head on the black market. Not only are their antics hilarious, but they are also a great introduction to Black Markets.

Black Markets usually conjure up images of shady characters in dark alleys with suitcases full of dollar bills. But in reality, it is just a normal marketplace with law-abiding citizens as participants who want commodities that the government might not be too willing to give them. An underground economy or what is commonly known as a ‘Black Economy’ is a stealth market where illegal transactions take place. This is the type of market people reach out for in order to get the commodities that are not available legally. This includes drugs, arms, human trafficking, and currency. Yes, money itself is traded on the black market. It is this trade in currency that we aim to uncover in the paper.

Currency Black Market

The currency black market exists along with its official counterpart which includes banks and other financial institutions. Due to restraints on financial openness and imperfect monitoring of currency exchange channels, the black market for currency thrives. It’s not so legal status makes it smaller when compared to its legal counterpart. It’s location specific, transactions are carried out mostly in cash that leaves no paper trails and carry some level of risk. The risk comes from the possibility of confiscation by

government authorities and the chance of being swindled or robbed. In all countries where this kind of black market exists, such exchanges are usually carried out in convenience stores, illegal and local money changers offices and border crossings. While its unregulated nature might attract criminals, it is not the only purpose it serves. A black market for currency may develop for one or more of several reasons:

1. **Fixed Exchange Rate:** In a fixed Exchange Rate regime, the government officially fixes or pegs the rate of exchange of its currency with that of other currencies, typically the US Dollar. The government pegs the local currency at some arbitrary level to another currency that does not reflect its true market value and often over-values the local currency relative to what its market value would be if it were a floating currency. In a floating exchange rate system, the currency is determined on the basis of supply and demand mechanisms. Fixing the exchange rate at a level below the floating equilibrium leads to excess supply of the economy in the local market. Those with access to the currency to which the local currency is pegged, or the undervalued currency, find it better and much cheaper to use the black market to buy the local currency at better exchange rates than they can get officially. These include expatriates and tourists.

Under the Bretton Woods monetary order (1946-1971), most countries had a system of fixed exchange rate and imposed controls. The Foreign Exchange Trilemma meant that they could not have capital mobility and as a result, most countries had black markets to some degree. Only a few countries were completely devoid of parallel markets, including, ironically, Venezuela – previously considered to be a paragon of monetary virtue.

After Bretton Woods collapsed in 1971, many countries continued to retain controls to navigate the financial chaos following the oil shocks, commodity price swings and the early 1980s recession and debt crises. This was mostly true for developing nations in Africa and Latin America, but even developed economies continued to impose restrictions. Until 1979, British holidaymakers were not allowed to take more than £50 spending money out of the home country and passports were marked with the amount of foreign exchange bought at the bank.

2. **A government makes it difficult or illegal for its citizens to own much or any foreign currency:** Sometimes people trade for currency on black market because their government allows them to own only a specific amount of currency and they might need more than that or when they are being taxed while buying/selling foreign currency. This phenomenon has been increasingly observed in emerging market economies and less developed countries where it is fairly easy to acquire foreign exchange through officially established channels like the Central Bank. If foreign currency is difficult or illegal for local citizens to acquire, they will pay a premium to acquire it.
3. **The government taxes exchanging the local currency with other currencies, either in one direction or both (e.g. foreigners are taxed to buy local currency, or residents are taxed to buy foreign currency).**
4. **Counterfeiting of currency.**

5. **Illegally acquired currency that needs to be laundered before the money can be used:** One problem of criminal activities is accounting for the proceeds without raising the suspicion of law enforcement agencies. Considerable time and effort may be put into strategies which enable the safe use of those proceeds without raising suspicion. Implementing such strategies is generally called money laundering. After money has been laundered it can be used for legitimate purposes.

There are several ways to launder money and avoid suspicion. The most common are structuring or Smurfing- which basically refers to cash being broken into smaller deposits of money (hence Smurfs), used to defeat suspicion of money laundering and to avoid anti-money laundering reporting requirements. Another method is to use smaller amounts of cash to purchase bearer instruments, such as money orders, and then ultimately deposit those, again in small amounts; Shell companies and trusts; Round-tripping, in which money is deposited in a controlled foreign corporation offshore, preferably in a tax haven where minimal records are kept, and then shipped back as a foreign direct investment, exempt from taxation.

Black Market Premiums

Black markets arise when controls on foreign exchange restrict access to the official markets, forcing people to resort to unofficial channels. This typically gives rise to a premium over the official rate known as the black market premium.

Many factors determine the black market premium. On the demand side, anything that signals depreciation – for example, a deteriorating balance of payments – leads to an increase in the demand for foreign currency. If the public expects depreciation in the future, they'd like to sell their domestic currency holdings in exchange for foreign currency. This is because after depreciation, the domestic currency will buy less of foreign currency. As a result, people take their investments out of the domestic country, a phenomenon known as capital flight. In the absence of official channels for capital mobility, they turn to the black market. On the supply side, anything that affects the willingness of exporters, tourists and expatriates to transfer foreign exchange from official to illegal channels is likely to affect the premium. But the most important determinant is the severity of the foreign exchange controls. The black market premium primarily reflects the severity of the restrictions. Higher the restrictions, higher rises the premium. When the controls are strict, the stock of foreign assets is fixed, such that any increase in demand will result in a steep rise in the premium. Premiums can also rise due to an anticipation of devaluation. In Tanzania, the parallel premium increased tremendously in the run up to the 1986 devaluation to 800%. From 1984, anticipation was rife that a major agreement with the IMF would happen imminently and include a major devaluation. Capital flight ensued and the black market premium continued to surge. The actual devaluation was followed by, the premium falling rapidly to reflect the new official rate. Sometimes, however, the causality runs the other way. It was the growing black market premium itself that led Venezuela to devalue 3 times during the 1980s. The graphs below give a better picture.

Tanzania

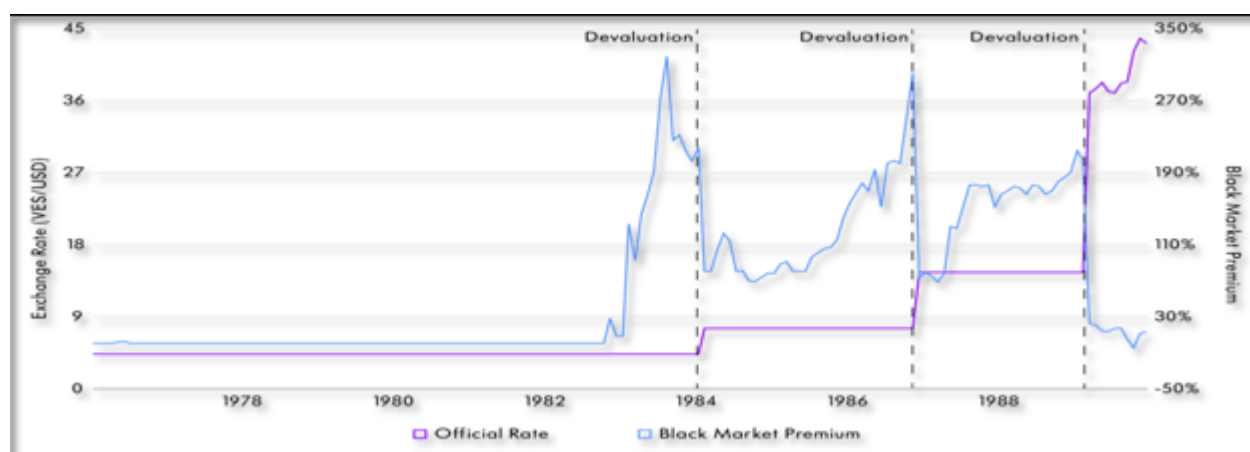


Figure 4: Credits: <https://www.winton.com/longer-view/currency-black-market-exchange-rates>

Venezuela

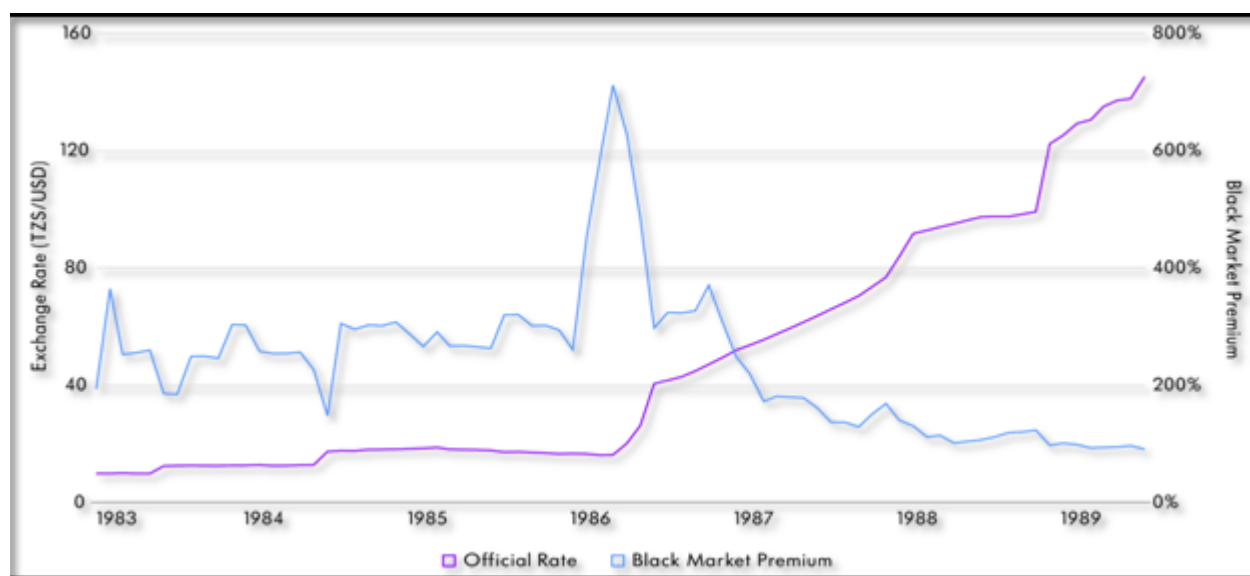


Figure 5: Credits: <https://www.winton.com/longer-view/currency-black-market-exchange-rates>

Effect of Several Policy Measures on the Market Exchange Rate

A devaluation of the official exchange rate leads to a steady state depreciation of the black market exchange rate. Since the official devaluation reduces the attractiveness to tourists of supplying foreign currency in the second economy, in the long run there are

lower foreign currency stocks in black markets. The steady-state effect on asset markets is a nominal and real depreciation of the black-market exchange rate. The black market premium will fall since the demand for foreign currency will be reduced.

If there's an increase in the riskiness of the returns on holding domestic currency assets, perhaps due to changes in the perceived threat of savings or monetary confiscation, it reduces the attractiveness of domestic currency assets and increases portfolio demands for goods and foreign exchange. The immediate jump by exchange rates and prices onto the saddle path implies a jump appreciation of the nominal exchange rate. The immediate increase in both nominal and real black market exchange rates implies overshooting behavior in the transition economy. As foreign exchange availability adjusts, the exchange rates will gradually depreciate and return to their real and nominal levels. The initial inflation surge will be followed by a period of deflation. In the steady state, individuals will hold larger stocks of foreign exchange in their investment portfolios.

Credits: <https://lailasnews.com/abokifx-dollar-naira-exchange-rate-today-euro-pound-black-market/>

Inclinations Towards Cryptocurrencies

But as war wages between different currencies for the position of global currency, black market traders have moved on to the supposedly next best thing on the block, Cryptocurrencies. They are part of the largest unregulated market in the world. Cryptocurrencies have transformed black markets into black 'e-commerce' giants. Cryptocurrencies have grown rapidly in price, popularity, and mainstream adoption. The numerous online cryptocurrency exchanges and markets have a daily dollar volume of around \$50 billion. Over 170 "crypto funds" have emerged (hedge funds that invest solely in cryptocurrencies), attracting around \$2.3 billion in assets under management. The rapid growth of currencies and the anonymity that they provide has created considerable regulatory challenges. While cryptocurrencies have many potential benefits including faster and more efficient settlement of payments, regulatory concerns center around their use in illegal trade (drugs, hacks and thefts, illegal pornography, even murder-for-hire), potential to fund terrorism, launder money, and avoid capital controls. There is little doubt that by providing a digital and anonymous payment mechanism, cryptocurrencies such as bitcoin have facilitated the growth of online "darknet" marketplaces in which illegal goods and services are traded.

Darknet markets or Crypto markets are e-commerce sites like Amazon and ebay that sell different illegal items through the Dark Web. The factor that makes these markets more attractive is how much they actually resemble the online e-commerce websites that we commonly use. The feedback system of these darknet markets helps them analyze which products have more demand and which buyers are more trustworthy and able in providing high quality products. This arrangement makes both parties better off. High amount of profit increases choice and competition, which in turn reduce prices, and raises demand. Cryptocurrencies help in completing illicit transactions easily and faster. These transactions are also usually untraceable and keep sellers out of the reach

of government. The value of cryptocurrencies is prone to fluctuations and hence the rate of speculation that is being done around them increases. With the advent of bitcoin, the threat to the economic power of centralised banks has increased. Transactions and trading between the parties are cost efficient and done more frequently. Digital currencies make transfer fees practically zero and hence these become more viable for the people of developing or underdeveloped countries who are unable to pay a higher price. People also reach out to these marketplaces in order to get the capital investments that they want for their start-ups.

But it is important to consider the differences between cryptocurrencies and cash. After all, cash is also largely anonymous (traceable only through serial numbers) and has therefore traditionally played an important role in facilitating crime and illegal trade. The key difference is that cryptocurrencies (similar to PayPal and credit cards) enable digital transactions and thus e-commerce.

Arguably, the ability to make digital payments has revolutionized retail and wholesale trade. Online shopping substantially affected the structure of retailing, consumption patterns, choice, marketing, competition, and ultimately supply and demand. Until cryptocurrencies, such impacts were largely limited to legal goods and services due to the traceability of digital payments. Cryptocurrencies may have changed this, by combining the anonymity of cash with digitization, which enables efficient anonymous online and cross-border commerce. Cryptocurrencies, therefore, have the potential to cause an important structural shift in how the black market operates. While the emergence of illegal darknet marketplaces illustrates that this shift may have commenced, it is not obvious to what extent the black market will adopt the opportunities for e-commerce and digital payments via cryptocurrencies.

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Maids in the Middle East

Ahalya P Rajesh, Aarti

Abstract

This paper takes a look at the socio-economic implications of the “maid problem” of the Middle East. Countries in the Middle East make up a huge portion of the demand for domestic labour. Post the 1970s oil boom, most of this demand has been met by workers from the more densely populated countries of South and South-east Asia. But with an increasing number of allegations of ill-treatment, terrible living conditions and in extreme cases, assault - it begs the question : what keeps this system going? Economically, this model doesn't conform to traditional demand & supply models. There are overlooked nooks and crannies here, from which the black economy is sustained. We try to take a look at both sides of this convoluted model, from a humane point of view and from an economist's categorical point of view.

Introduction

Modern-day slavery is far from dead. In 2016, on any given day an estimated 40.3 million people were in modern slavery, including 24.9 million in forced labour according to the International Labour Organization. These statistics of enslaved workers and forced labourers are made up, almost entirely, by migrant workers.

Economics is a simple social science - where there is high demand, markets will find a way to supply whatever is demanded. This holds true for a plethora of both legal and illegal goods, suppliers find ways to make profits under the nose of the authorities. But, in this instance, it seems that the authorities choose to turn the other way as the skyrocketing demand for domestic servants in Middle Eastern countries leads to labour brokers essentially trafficking workers from impoverished countries. In Middle Eastern countries, the system of procuring migrant workers for domestic work has been termed as the 'Kafala' system. The Centre for the Study of Labour and Mobility defines the Kafala system as a “sponsorship system that regulates the residency and employment of the workers in the GCC countries.”

What on paper looks like a neat arrangement is far from tidy in reality. The kafala or sponsorship system is one where migrant workers' are sponsored by their employers - the employers have control over the workers' visas and legal status. Thus, the system binds the migrant workers to their employers. Workers aren't allowed to change their jobs without the employer's permission. A combination of physical and legal dependency on the employer gives them immense power of the resource-poor migrant workers and in extreme cases, this immense power grows into a fundamentally incorrect sense of “ownership” of the workers, likening the “kafala” system to a system of forced labour. Here, the breach of fundamental rights meets another huge problem - black economy. The agencies that bring together workers in need of better employment and

potential employers in Middle Eastern countries, achieve this through false advertising and other nefarious techniques. Are their operations fueling the global black economy? Does this black economy have a real economic impact on the host and home nations? And how does this impact the economic policies of home and host nations?



Credit : broadly.vice.com, 2015

How the System Works

The Middle-East has been seeing an increasing demand for the domestic workers of foreign origin for years. The main reason is believed to be the impressive financial and the culturally perceived social status of the citizens in the Middle-Eastern nations. The demand has been getting met for years by migration of the female workers from the developing nations - namely, Philippines, Indonesia, Ghana, Sri Lanka, Bangladesh, India etc.

Very often the migrant workers, mostly women, come from the countryside and they have been trying to work it out for their family in the fields, but as the families get bigger, it becomes an impossible task for the family to sustain on their land. The journey from countryside to the desert starts with the recruitment agencies, which are located in the countries of origin in larger cities, and there are middlemen who travel across the countryside to find women to work in the Middle East. The middlemen think that such females don't have any other resort, because back at home, there aren't many jobs that pay enough to sustain an entire family.

The agents promise them a golden opportunity—very vague and impressionistic—and they don't discuss what kind of work, exactly, they are going to do in the foreign land. They don't tell the workers what their salary is going to be, just that they will be earning enough to keep their loved ones comfortable. They employ fraudulent techniques and dishonesty to dupe people in desperate need of better employment. Thus, these workers come into the middle-eastern countries on a visa that is restrained to one specific employer. If the employer decides to fire the worker, then immediately,

the visa becomes invalid, and then according to the law, immediately, she is classified as a criminal. The host country does not have a structure to keep the migrant workers safe.

Home Nation-Host Nation Paradigm

Like other critical problems, the problem of the black economy of the 'army of the maids' and the resultant issues is multi-dimensional. It becomes crucial to study this resultant layout from a macroeconomic perspective. In a 'maid-transaction', we generally have two national economies involved - one of which is 'the employer nation' and the other one being 'the home nation'.

Where the employer nation faces the problem of tracing the principal employer in a 'maid-transaction' that ultimately leads to the very existence of shadow economy, the system of the shadow maid-transactions also satisfies the otherwise unmet demand for the domestic workers in the economy. On the other hand, the home nations view the 'maid-market' as one of the principal means of their remittances.

The home nations, mainly the East-Asian, the South-Asian and some of the African countries, and the current account in their Balance of Payments Account depend upon the very remittances sent by the domestic workers (mainly females) working abroad. It is very intriguing to learn and understand that the sources of remittances from overseas domestic workers to the listed countries are quite well diversified, making remittances resilient to uncertainties in [individual] regions [the Middle-East]. Overseas remittances from the domestic workers to their families in the home countries help to finance consumption and, in that sense, the home economies perceive them as a "driver of domestic demand." This can also help in explaining the glamorization of the work opportunities of the same category at the home nations' airports. So the personal sacrifices overseas domestic workers make to, in many cases, leave family behind for many years to work abroad, is a source of benefit for their home country and, in turn, for the relatives who remain. Thus, this "export" - the outflow of the domestic workers - remains critical to the homeland of the workers.

The employer nations - mainly the Middle-Eastern nations - have been seeing the labour migration into the nations for decades, most of which is attributed to the high demand for the domestic workers. The subject of Economics does indeed have mood-swings. We work out to reduce, if not eliminate, the negative economic forces out of an economic system - like poverty - but when we are finally able to do that, the system implicitly starts 'importing' the very same variables into the system. This is similar to what happened in some of the middle-eastern countries, namely, Saudi Arabia, Lebanon etc. As the nations followed the path of growth and development and the citizens became financially and socially better-off, the supply of labour for a certain section of jobs such as domestic workers declined at a sharp rate. This approbated to the demand of foreign maids that has been increasing ever since. The economies, very often, face the problem of tracing the principal employer - indicating the traces of 'black market' in the system.

Statistical Evidence of Black Economy Presence

In the Middle-East region, domestic workers mostly lack primary labour rights because protective law enactment either does not exist or is not administered at all. 90% of all Kuwaiti households employ a foreign domestic worker. 99.6% and 94.8% of all domestic workers and personal assistants in Saudi Arabia and the UAE are migrant workers. Domestic workers in Saudi work an average of 63.7 hours per week, the second highest rate in the world. With the exception of Bahrain, domestic workers are kept out from the national labour laws and from regulations relating to safety conditions, limiting working hours, safety standards, mandatory break-from-work periods, and other basic standards. A total of 5,179 domestic workers ran away from their Saudi sponsors in the six months from November 2013 to April 2014. Since most domestic workers live with their employers and because their residency status is bound to their employment, their ability to access the means to escape is also restricted.

Role of Labour Brokers

So, who greases the wheels of this well-oiled machine? The labour brokers or middlemen, as they are generously described, play the most pivotal role in this operation. Brokers go to rural areas, single out workers who fit their criteria and are in need of a better source of income. They unabashedly paint false pictures and spin fabricated tales of the Gulf dream to naïve workers, who hope of slogging in the Gulf for a couple of years and then, triumphantly returning home having earned enough to fulfil their modest dreams of owning a house, sending their kids to college or simply, living a life without extreme deprivation/suffocating chokehold of penury. But the price to place a foot in this utopia is always steep. Most brokers charge a couple of thousand dollars paid in cash, of course. This model doesn't fit seamlessly with the typical labour market model - when you sell labour in a market, you generally aren't charged a fee to sell your labour. With outrageous fees demanded of them, the clueless workers take loans with mounting interest rates to pay the fee - they believe they'll be able to pay the lender back with the riches they'll earn. But once they arrive in the so-called 'Land of Opportunity', more often than not the wages they receive are a fraction of what they were promised. The pressure of paying back the debt keeps them working under any physical and mental condition. And so, migrants from India, Philippines, Ghana, and more countries find themselves in a worse situation than before, far from fulfilling any dreams of a normal life now they simply yearn to live without someone's foot on their neck.

It isn't just one single labour broker who runs the entire operation but a tangled web of contractors, sub-contractors and low-level brokers who have spread their roots throughout South Asia, South-east Asia and parts of Africa. The headquarters of these so-called companies could be based anywhere, such as the model. They make money from the "fees" paid to the low-level brokers and use some of this cash to bribe representatives (of employers) to select workers from their roster. As all of the payments made in this unscrupulous business model are done in cold, hard cash, it is not a leap of faith to believe that this money slips into the inviting hands of the black

economy. The exact amount of money in the black economy due to the activities of labour brokers remains vague but given the pivotal role these brokers play, a significant percentage of the money in the shadow economy created by human trafficking would be attributed to this very cause.

Cultural Interference

Middle Eastern cultures are extremely hierarchical, and personal associations are valued over rule of law. Also, it must be noted that the countries in the region did not ban slavery until the 20th Century. Historically, slavery was never criticized and it was normal for the slave owners to have sex with enslaved women and girls, who had no power to refuse. There are very little or negligible social denunciation and poor legal repercussions against those who misbehave with their foreign workers. Racial prejudice could be seen as one of the other reasons resulting in inhumane behavior.

Here, however, it is important to look beyond the realm of media sensationalism and try to see the truth. The truth, sometimes, cannot point towards the statement absolutely deduced by the media reports and statistics. There are families that treat them well and consider them part of the family. But domestic help is inherent to abuse; what makes it worse is the legal system that is constituted in a way that puts them at a pitfall. Considering that a cent percent of the foreign domestic workers in the Middle-East are females, and the laws in the region are set up such that women do not have equal rights, the sickening behavior towards the domestic helpers that is observed very often could be explained. So imagine the worst treatment possible for a maid, and it will be safe to assume that it is happening right now to a maid in these countries.

Imagine a reasonable to polite treatment of maids and we are sure that a good number of maids are experiencing it right now in these countries.

Ideally, the governments of Sri Lanka, Ghana, Philippines, Indonesia, and India - the home nations of most of the maids - should stand up for their citizens working abroad and demand the required steps.

Conclusion

With a partial exception of Bahrain, the Middle-Eastern states do not recognize the migrant workers as their own workers - indicating the lack of belongingness. This implies that the migrant workers do not have access to the labour laws of the country that they are working in. These laws could mediate the relationship between workers and their respective employers - by regulating maximum working hours limit, workers' safety, and other concerned determinants. Taxing the migrant workers might prove to be an effective incentive for the host nations to enable the migrant workers to access the labor laws of the state.

The Middle-East has been suffering from lack of domestic help, often termed as 'the maid problem,' for very long. Whereas, the other developed nations like Japan, UK, USA have barely complained about any such problem. One of the most probable

reasons could be the prevalent culture in the desert. Certainly, it would be impractical to think of triggering a cultural shift to encourage the Middle-Eastern people to do their house chores; a step towards a gradual cultural shift to influence people to at least think about doing their own household chores would not do any harm.

An ideal market is where all the participants, driven by their self-interests, participate to maximise their welfare without any inadmissible practice. Whose duty is it to ensure that there is no inappropriate practice taking place within the market mechanism? In a real case situation like the desert maid problem, it is certainly out of the invisible hand's mastery. This is where the administration's involvement becomes necessary, if not sufficient.

The international community is now beginning to take the critical issue of the black market of maids and its repercussions in the desert more seriously. The Middle-Eastern states have not left an opportunity to proclaim their efforts to tackle the problem of the domestic workers' abuse and the concerning black market system. The degree and faithfulness of the host state's involvement in dealing with the predicament remains a conflicted question - without which the dream of an ideal maid market in the Gulf would remain what is, a dream.

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Beneath the Hemline

The Murky Reality of Counterfeit Culture

Ritika Agarwal, Naina Khurana

Abstract

While buying and selling of counterfeit goods are seen as a victimless crime, the trillion dollar bootleg industry in fashion partly funds the shadiest criminal operations in the world. These operations, ranging from terrorism and human trafficking to drug dealing are very harmful to the society. The growth in global trade and technology, while affecting many markets positively, has fueled the counterfeit market which has adverse effects on the corporate sector by diluting the presence and authenticity of the big brands in the market. There is a need to analyse the problem of counterfeiting by studying the root cause, that is, the purchase behaviour of the consumers to combat this growing epidemic.



Credits: "Child Labour in the Fashion Supply Chain," [theguardian.com](https://www.theguardian.com)

The last hundred years have witnessed maximum development in the production and dissimulation of fashion to date, and the greatest transformation has been in its consumption: from the dominance of couture for the elite few at the turn of the twentieth century, to the near- versatility of fast fashion today on the high street or at the click of a mouse, designer collections are assimilated by high-street chains almost overnight. Fashion-forward looks on the street are relayed by an upsurge of digital media: affordable clothes are bought in quantity and discarded at will. This transformation in fashion's consumption reflects, and is inseparable from, the seismic

changes in society that have taken place over the last century: the end of colonial rule, revolutions fuelled by political ideologies, two World Wars, economic and developmental disasters, artistic movements, design innovations and the digital age; all have shaped the way we now live fashion.

Streetwear is huge today. What started as an underground insular subculture is now the uniform of young people all over the world. The culture has exploded over social media and the hype seems to be getting crazier every week. The clothing obsessed consumer culture has made the streetwear scene booming, but beneath the surface, there is an insane market for counterfeit streetwear and it is unlike anything we have witnessed in the fashion industry.

The growth in global trade and technology has positively affected many markets across the world but has had major adverse effects as well. Business organisations spend a lot of money, time and resources on protecting their brand and trademark but despite the measures, the counterfeit market is booming rapidly.

Tracing back counterfeiting, the phenomenon is as old as couture itself. In the early 1900s, fashion forgers often sketched designs they saw in Paris shows and sold reproductions in France and overseas. By 1914, more than two million fake couture labels had been sewn into garments.

Chanel's three-piece suit is arguably the most copied style in fashion history and the designer was notoriously proud to provoke so many imitations. In a similar vein, Oliver Rousteing, the creative director of Balmain has no qualms with fast-fashion brands appropriating his designs either. "I love seeing a Zara window with my clothes mixed with Céline and Proenza Schouler! I think that's genius," he told *The Independent* in an interview after his FW 2014 show.

Unsurprisingly, there are certain designers like Christian Dior who went to great lengths to ensure that their pieces weren't copied. Dior marked his final sketches with invisible ink that could only be seen under a black light.

Over the years, several forms of replica fashion have come to existence- counterfeits, legal fakes, yuandan goods, knock-offs- to name a few.

To counterfeit means to imitate something authentic, with the intent to steal, destroy, or replace the original, for use in illegal transactions, or otherwise to deceive individuals into believing that the fake is of equal or greater value than the real thing. Counterfeit products are fakes or unauthorized replicas of the real product. They are often produced with the intent to take advantage of the superior value of the imitated product.

The counterfeit market in fashion has grown as an industry immensely from the 1970s. While developing countries remain a favourite for these markets to penetrate, their persistence in the developed economies over the decades has raised eyebrows, reached boardroom agendas, and their popularity is now tagged as an epidemic.

Not disregarding the benefits of the counterfeit market, there has been a rise in employment due to the huge success of the market. Moreover, they stimulate innovation by mixing different styles and lead to better choices for consumers. The market also

makes the original manufacturers improve their quality in order to sustain their products and open new low-cost product lines. However, the negatives of counterfeiting clearly outweigh the few positives.

A trillion dollar bootleg industry in fashion exists and while buying and selling of counterfeit goods is seen as a victimless and harmless crime, sometimes the profits go on to fund some of the shadiest criminal operations around the world.

The Italian Bootleg Industry and the China Connection

Though drugs, arms, and prostitution are the organised activities that attract headlines, fashion is just as profitable. The Neapolitan mafia crime clan “The Camorra” was, and still is, no small-time operation – their power is both great and vast, affecting various dimensions of the Italian industry, as well as its political structures. While their multi-million euro operation draws money from a number of different areas, the clan’s fashion exploits are integral to their financial structure. The low-cost business model after the large-scale deregulation in the 1950s in which small family owned factories developed all over Campania was full of high-skilled, low paid and dominantly female garment workers putting in 10 hours a day. This attracted companies from Italy, Germany, and France to invest in these small garment factories producing the best in Italian fashion, thus the best in the world.

However, what made these factories so profitable is that, like the smuggled Chinese goods entering the Port of Naples, officially these factories didn’t exist, and neither did the employees. Therefore, like the importers, they didn’t have the added overhead of taxes or complying with government regulations, including labour laws. The lack of regulation and government oversight provided ample fertile ground for organized crime to infect the garment industry. The fashion houses succeeded in bringing both sides together and facilitating their transactions- the fashion house auction became the link between the Camorra, the loan sharks, the factory owners and the designers.

Multiple factory owners would bid on a single job proposed by a luxury brand (with the names including some of the most famous Italian houses). The factories were then each supplied by the brand with the fabric and design required, and whoever produced the pieces with the best combination of quality, speed and price would be paid.

This, however, left multiple other factories with finished garments and no one to sell them to. It is through this overproduction that the “real fake” rose in Italy. The garments that had been rejected by the luxury house were relabelled and sold through the Camorra’s vast retail empire, dotted across several of Europe’s major cities and the U.S.

The clan had warehouses from which they would wholesale from, as well as their own stores in Madrid, Barcelona, Brussels, Vienna and Amsterdam, to name a few.

Saviano, in his book Gomorrah, claims that the luxury Italian houses were aware of this practice but turned a blind eye, knowing the cost of preventing the Camorra from

selling their grey-market fakes, which, in turn, would jeopardise their access to the cheap labour on offer in the factories that surround Naples.

Perversely, this seems to be the purest form of unregulated unconstrained capitalism, encouraging intense, cut-throat competition among the factories and at the same time, providing jobs, mortgages, and protection to the thousands of people who either directly or indirectly benefit from the industry. However, the social costs of this are drastically huge, and should not be sustained in any welfare economy.

Factory employees work twelve hours each day and have only a day or two off each month. They live in small dormitories with ten roommates and they are exposed to toxic chemicals during work. China Labour Watch has also found instances in which owners seize workers' identification papers, making finding work elsewhere impossible. Various reports of child labour have stated that they found children handcuffed to sewing machines.

Counterfeit designer clothing thus becomes a business that relies on consumers' thirst for bargain shopping to line the pockets of terrorists, drug dealers, and human traffickers.

The counterfeit fashion industry thrives on the perceptions of the consumers and their preferences at any point in time. There are major implications of the same:

1. The demand side of the fashion industry is completely consumer-oriented.
2. The industry is dynamic, considering the rapid change in preferences of clothes. (time-inconsistent preferences)

It is therefore imperative to study the purchase decisions of consumers of the counterfeit market. The growing demand is indeed a worrying trend, and to reach the bottom of this, one needs to start at the base.

Identity theory suggests that identities are dynamically constructed from meanings provided in social interaction or from personal experiences. The idea of consumers as identity-seekers explains their obsession with brands, and several prominent studies have investigated and supported the relationship between brands and consumer identity. Belk argued that "we are what we have," indicating that various facets of consumption, including the purchase and possession of brands, are major contributors to, and reflections of, a consumer's identity.

The analysis behind the purchase decisions of consumers of counterfeit goods can thus be categorised in the following manner:

1. Psychographic characteristics of identity
2. Demographic characteristics of identity

Psychographic characteristics can be defined as a consumer's lifestyle and personality that reflect the dimensions of individual differences in a consumer's tendency to show consistent patterns of thought, feelings and behaviours.

With the advent of the trillion dollars counterfeit fashion industry, the well aware,

middle-class consumers are better off than ever before. Luxury items that were only a dream before now stand well within their reach, fulfilling their thirst for the newest fashion and trend, displaying taste, wealth and a standing in desirable social groups. If we look at the late '80s and early '90s, and the hip-hop culture, we see everybody wearing logo-emblazoned garments, really drawing on the idea of aspirational dresses. Rappers were draped in Polo and Tommy Hilfiger. Calvin Klein jeans were a status symbol. It inspired and propelled the idea of counterfeit luxury goods.

The brands their idols wear now hang in their wardrobes albeit realistically fake. The level of satisfaction that the counterfeit market brings to the mass population, therefore, stands unparalleled by any such phenomenon in the past.

The persistence of the increasing demand for counterfeit fashion can be explained by examining the evolution of consumer behaviour over the decades.

The consumer today recognises counterfeit to be the smarter way to shop. While the consumer achieves the status symbol she/he yearns to build in the society, he gets the same for dirt cheap prices. There is a new-found pride in the counterfeits, and a drastic change in the acceptance of the same. While it was initially looked down upon, the counterfeit market is brilliantly innovative, unbelievably cheap, unmanageably widespread and overwhelmingly popular today. The consumer today seems well versed with the economical way to shop. He has understood the dynamism of the fashion industry and places a value on the cost of acquisition of each trend. Why should one pay a thousand pounds for something that could get them the same look in 50 pounds? And on an average, the chosen way is the counterfeit market. While integrity and risk aversion continue to be certain psychographic characteristics that serve as barriers to the demand, owing to the considerable risk of quality, and loss of integrity and reputation on being discovered as a fake in public, this forms a relatively negligent part of the population as evidenced by the magnanimous growth of the market.

Demographic characteristics are observable measurements of a consumer's characteristics. Each consumer can be identified by certain parameters which influence their purchase decisions. Age, education, employment status, gender and income are important identifications.

According to the meta-analysis conducted by Eisend, age depicted a negative relation with the demand for counterfeit fashion. This can be explained by the observation that the youth constitutes a major chunk of the demand side of the counterfeit market. In terms of behaviour this makes sense because of the level, duration and frequency of productive and social activity amongst the youth, directly contributing to the increasing need for clothes and, in the 21st century, for fashionable clothes.

Education, in all probability, has an ambiguous influence on the demand for counterfeit goods. While education and greater awareness discourage people from getting involved in illegal activities, the consumer tends to believe that those who actively benefit from unethical behaviour (counterfeiters) are more unethical than those who passively benefit from the activity. Consumers tend to justify their behaviour by firstly accusing the big brands of charging exorbitant prices which they cannot afford, and secondly, by believing that counterfeiting is not that serious of an offense. Some also believe that

they're, after all, promoting the brand by showing it's desirability in the market. Those with greater ability to rationalise their behaviour have found to be more willing to purchase counterfeit fashion products. Consumers also justify the same because they see the counterfeiter as more efficient and consumer-oriented. It is observed that the more the consumer believes that counterfeiting should be defended, due to perceptions formed, the more likely they are to purchase such goods. When analysed through the variable gender, many researchers have found that men are more likely to indulge in unethical behaviour like buying pirated movies than women. However, women are more likely to buy fashion products than men in the US and are less likely to see it as a crime. Some studies have been incongruent to this result which could possibly be due to the change in culture, country, product and values of the sample. There is inconsistency in the evaluation of ethicality by both genders as well. While consumers believe that buying fake pharmaceuticals is unethical, they consider buying bootlegged movies as acceptable behaviour. Employment and income have a clear negative relation with the counterfeit industry, as with the expansion of your budget constraint you reach the unaffordable.

An unsettling question remains. Why does trust in a product lose in the counterfeit market?

We believe that consumer of the counterfeit market, who depict deviant consumer behaviour by acting unethical, are in fact victims of cognitive dissonance, which means that while they believe that buying counterfeits is unethical and illegal, in the face of the prices (new evidence) offered in the counterfeit market, they rationalise their purchase decisions and contribute to the market. It thus indicates that a huge monetary incentive pushes a consumer away from the value the person attaches to the trust in the product or the manufacturer as both the quality and the brand are compromised when the consumer purchases the product. A person therefore directly prefers to opt for an apparently great deal, disregarding the social cost of the same. As consumers always make decisions at the margin and act in their self-interest, the enormous perceived benefit of buying a bag worth \$10 fuels the demand for the counterfeit market.

The counterfeit industry holds a mirror up to our own desires. Consumer demand for cheap knock-offs is the root of the problem and a very difficult root to cut out entirely. In developing countries, it is difficult to criticize a poor person for buying fakes when they are targeted with sophisticated advertisements to the effect that one's social status is dependent on the brand one wears. However, if people knew the real social costs of counterfeit goods, it's hardly debatable that they would think twice before they make a purchase.

There are a lot of ugly things that go on to make a fake allegedly beautiful designer bag despite the relative ease with which shoppers can purchase these fake goods.

The Italian Intelligence says “**almost all**” of the country's bootleg industry is run by the Mafia. Another **UN Report** mentions Chinese gangs with ties to Italian counterfeiting experts forcing “smuggled migrants into prostitution and low-wage labor.” While the losses caused by counterfeiting in monetary terms alone are daunting enough, the threat is not merely an economic crime. Counterfeiting presents as a social

problem as well. Counterfeiting is not an isolated activity, it is usually heavily associated with organized crime.

The demand problem has us struggling with lack of public awareness. Initiatives in educating the masses reveals itself as the only viable strategy to treat the growing epidemic of counterfeiting.

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In conversation with :
LORD MEGHNAD DESAI



In Conversation With

Meghnad Desai

Q1. How true is the belief that modern mainstream macroeconomics plays a vital role in shutting out a crisis like the 2008 Financial Crisis?

Ans. First of all, there had not been a crisis since 1945. That is 63 years without a crisis, before the 2008 Financial Crisis. When the crisis came, although unpredicted, its lieu of building stabilisers and policies were known. So unlike in 1929, when everyone failed to predict, here, it was basically common sense. Suppose to overcome a famine in India, you ask people to dig and pay them money. The work, despite not being very technical, has the ability to pull people out of it.

But economists had to understand technically. As you know, we had two phases, the Keynesian phase, when things seemed simple and then there was the neoclassical macroeconomics, in the view that these things won't happen. However, knowledge doesn't go away, and you can use it to combat crises in the present. There's another way to think about it. In my book *Hubris*, I've talked about a long term perspective. Capitalism is a system which can never be completely stable. When a boom lasts a while, people start doing foolish things and no longer make investments, but rather make nuisance. Mad investments happen and eventually, the market punishes them. The market cleanses itself with a crisis.

One insight here is that even with the best macroeconomic policies that the government opts for, people make their own interpretations. Alan Greenspan said there was irrational exuberance during the dot com bubble and later was seen to be following policies that were market trendy. Of course, there are a lot of people trying to redo, reform, restructure the macroeconomic theories but presently, nothing big has happened. However, I think that we have three or four robust structures already available and something will come out of those.

Q2. What do you think about the interdisciplinary nature of economics where people are integrating other physical sciences into economics, such as psychology with behavioural economics or even neurosciences?

Ans. In the 1930s-1940s, physics was a dominant subject and economists like Samuelson come from the generation who wanted to make economics like physics. Earlier generations of economists like Alfred Marshall thought that biology was the future of economics. Thus, economics became a younger sibling of the big subjects. Astronomy was related to economics because Adam Smith was very impressed by Newton's work and wanted to have a system based on a few principles with the idea that they will call it social astronomy. They thought that mapping hunting and gathering, agriculture, feudalism, commercial things would be like mapping the movements of the planet. Eventually physics became very important mechanically and Samuelson, a physics enthusiast, ultimately realised that there is a limit to which

mechanical modelling can control theory and cannot take us too far, as human behaviour is more complex than physical bodies. The realisations of the importance of behaviour in analysing these crises lead to the gradual advent of behavioural economics.

What is interesting to note is that while every crisis has a macroeconomic nature, people don't appreciate the microeconomic originity for any kind of higher modelling of macroeconomics. It was when I was a graduate student way back in the early 60s, that behavioural economics was born. Hence, it has been around for 58 years. Herbert A. Simon published a book on The Behavioural Theory of the Firm in 1962 and at that time too, companies were just coming in operation research, experimental economics, and psychology. The thing about traditional economics is that it is very economical in its requirements. You sit down, and it's like you are in the middle of a road, with a pencil and a paper and you're like okay, what is being maximised? What are the constraints? Then you get an insight into the first three steps and that advantage, none of the other subjects have. Recently we had the bitcoin and crypto currencies - it is very simple. It is a model of bills of payment and store of value. You examine that. You don't have to go into how bitcoin is produced, the mining and none of this is relevant. Simple thing is, it is not a means of payment and it is an uncertain store of value. That kind of power of economic reasoning is why economics is good and realism is not indispensable in that.

Q3. You wrote about targeted basic alliance in your blog and you mentioned how targeting is a very difficult task because the person above it or the person below it feels deprived. Why do you think that women are the best category to target and how is income not going to play a role even then?

Ans. The first thing you have to know is targeted basic income is different from anti-poverty measures. It is very logical. You do not have a target income above which you will not pay. My argument was ultimately if you are going to pay everybody some income, the calculation is very simple. Total income of the country is per capita income times the population. The total amount you will spend on universal basic income is whatever you fix the basic income times population, so population cancels out. Now, the question is what proportion of per capita income can a country afford to give as basic income? Obviously the government has other expenses so you are an addition to that. Suppose we ignore all that, then the question is- can you give 10% of per capita income to everybody? The government of India only collects about 18% of GDP in taxes and 10% is a huge part of that. Ultimately, it is not going to be enough. So how do you construct universal basic income while as it were, making the money go far?

I say women because I have this thing about unpaid work and women do unpaid work. In India, the proportion of working and paid women is very low, internationally. So clearly, because of patriarchy and other things, there is a disadvantage in economic resource. If you make universal basic income just given to women, first of all, there is limited scope of cheating. People say, 'why do you want to pay Mukesh Ambani?' 'that kind of argument does not occur because nobody thinks women are very rich. So paying to rich does not occur, as UBI includes everybody. There is an intelligent Belgian philosopher Philippe Van Parijs who said surfers is meant for surfers, people don't want to hurt, they just surf. It is a liberating concept of freedom. So basically, we are

rewarding people substantially for unpaid work and we don't want to send a target level of income because that will lead to cheating but also, at very high level of incomes, sometimes unpaid work is, especially in taking care of elderly falls on the women of those families, it's unavoidable.

Q4. The female labour force participation has been declining in the past few decades, not just in India but also in the US. Do you think having family - friendly policies such as a paid maternal leave or a paid parental leave could contribute?

Ans. Oh yes, absolutely. It is very simple, whenever you have a meeting with a businessman, what do they say? Cut taxes. So why should they object to other people getting some breaks? The thing is, in essence first of all, we have a very strict separation between the home place and the workplace, especially for women with small children who want to take their small children with them. So to some extent the workplace has to cater for more than just working time. Working time is helped by having these supporting mechanisms. Now, obviously these things are costly. Whether the government has tax concessions for crèches or not is a question, but undoubtedly, these policies help out.

Q5. Economists such as Milton Friedman have often said that paid maternity leave has unintended consequences. Such as, women don't get hired if companies have to take into consideration that women will be on leave for a greater period of time?

Ans. It's important to keep it mind, that through this leave, you will not be away for a long time. People make all sorts of excuses. People have the conception that if women have to drop out and come back, they will not get the same seniority or post. Firstly, what is so great about seniority? Does it really matter? What are the things we can do to remove the obstacles to women working? It can only be unintended consequences, not unanticipated consequences. For example, given the current technology, can we work from home? Can you make it easy for them to do so by providing ancillary facilities? For the firms, this would enhance productivity as well as provide continuity of the working person. We need to think about what we can do to remove the obstacles that stand in the way of women working.

Q6. We've heard so much about all the great work that you've done so far. What are you currently working on?

Ans. Oh wow! Well, I wrote two books last year; 'Politic Shock' which was about Trump, Modi, Brexit and the prospect of liberal democracy and 'Raisina Model' which was about the 70 years of Indian democracy. I completed that in 6 months. You see, I felt a very dangerous thing; I write too much. So this year I, of course, continue to write my weekly column in The Financial Express. I write a blog for a London think tank called OMFIF and I am working on a book, (well I am writing several books) but this particular book is on Savarkar, Ambedkar and Jinnah, who were the three people who were not charmed by Gandhi. Recording their interaction, it will be three against Gandhi and we will see what happens. It is in progress and I have written two novels which I am trying to finish. Currently, I am not doing any serious work in economics.

Q7. In recent interviews, you have mentioned that when you read books, you learn a lot about yourself as well as the world. Which books have helped you learn more about yourself and your world of economics?

Ans. I have read so much that it is very hard to say. You see, I more or less don't remember when I couldn't read, let's put it that way. I come from an over-educated family, so I didn't know when I could not read, and soon as I could read, it was my principal pleasure. When I was an undergraduate in college, Bombay being a crowded place, art lectures were in the morning and science lectures in the afternoon. Art lectures would get over by 12 o'clock and I never went home right after. From the first week onwards I spent the day in the library. So I read everything there was to read. Many things have changed my life but I'll mention the more unusual ones.

One was reading Henry Kipson, who's a playwright. When I was young my family used to say, "no no no let's not argue about this unless you read Laski or read Russel or read Shaw" so I used to go and look it up. I read 'Dolores' by Edwin Allen Baker and it completely blew my mind. I don't know if any of you have read that but it is a mind-blowing play. I mean it is the late 1880s, early 1890s and a real feminist play back then was fantastic. I then started doing theatre and it changed my whole perspective on life. Obviously, the classics of economics like the General Theory of Employment, Interest and Money and all of Marx's Capital three volumes which I've read not once, but several times have had a major impact on my life. I keep on reading because you see what is in the subjects and there is no bar on subjects.

Q8. In your book 'Nehru's Hero Dilip Kumar', you talked about how Dilip Kumar's films portrayed the social economic changes prevailing in India during that time. Do you think that the cinema in India today is serving the purpose?

Ans. Oh yes, I think Indian cinema, or actually Bollywood, since I can't really go into other languages, is the most amazing achievement of Indian culture because it reflects the social life brilliantly. That it always relates itself to social problems is quite amazing. Now, India never had a proper export sector for a long time but Bollywood has always been an export sector. The advantage of a Bollywood film is that it is made for people who don't understand a language or can't read. Hence, everything has to be unsubtle. There are no ambiguities and that makes very powerful narrative projection. It is possibly the only industry which is totally all India. Even before I.T. became a global industry, Bollywood was. There is a huge fan following of Bollywood around the world.

I basically put it in the context of Nehru, but Bollywood has never lost its ability to talk about social questions. It has done more for the Hindi language than any other force I know of. Secondly, it has done more for women, than anything. Bollywood has shown more and more women doing things which they are not supposed to do and succeed. In the 40s and 50s, it was a tragedy but in the late 50s and early 60s onwards there were capable women. So, it related to the national story. You could write a book on Amitabh Bachchan, the 'Angry Young Man', coinciding with a very unhappy country in 1970s. Then you come to 1990s and there is so much money floating around. 'Zindagi Na Milegi Dobara', is the most astonishing film. It is the most un-Indian film because it

has absolutely no problem that any Indian faces. There is no money problem; they can fly anywhere, no visa problem. That was a time when India was feeling very prosperous, diverse and very global. So, things go around and yes, Bollywood is serving the purpose.

Q9.What do you think about India's fiscal deficit problem along the lines of recent GST cut rates?

Ans. The most remarkable thing about the last 4 budgets is that at least the country is aware that there is a fiscal problem. Jaitley has said time and again that he wants to bring it down, and has managed to keep it lower than 3.5 times the GDP. Indira Rajaraman, a very talented individual, has recently written an article on the dire state of the fiscal discipline of the states of India. It would be political suicide to admit but 80% of farms in India are subsistence farms and are not viable as a means of livelihood. Since our manufacturing went the high-capital intensive way and not the low tech way it has not generated enough jobs. The standard model of development is that manufacturing demands workers and farmers leave land and join the industries.

The huge divide in the productivity between the agricultural and service sector is worrisome. Agriculture employs more than 60% of the population but contributes to less than 20% of the GDP, a stark difference from the service sector. No one tackles the question of the meagre productivity of this sector but rather supports more subsidies in it. Whenever farmer agitations happen, no one says we can't afford this kind of money, stop. The consequences of continuously giving and covering farmer loans and subsidies leads to huge government deficits as the probability of bad risk taking by farmer increases. The deficit problem, thus, due to political and developmental issues has become a precarious problem.



Women up- In the World of Men (A poem on Feminist Economics)

Dikshita Jha

Hand in hand
With the changing times
The world on rise
Economics enhanced
Movement upholding
Feminism mounting
Together.

Not about who is greater
Or who is not
They are equal
The nature's wrought
From votes to work
Brains to brawn
To lift the weight
Of the changing world.

The world of art
The politics' web
The game of leaders
The myriad readers
Entrepreneurial battle
The battle of wits
Name a sphere
Where women aren't
Climbing up the stairs.

In the shadows
Of the patriarchal roles
The chain of dominance
Trying to break
From right to work
To equal pay
But why is it
That the Economics' world
Is still a world of men?
That it's still a world for them?

Economics that we study
The subject that we apply
Production, consumption, investment
The demands and the supply
Why is it that the subjectivity of it

Loses the same
And what just remains
Is the objectivity of men?

A belief of the proponents
Of the feminist economics
The domination of patriarchy
The biases of it all
For the time is changing
And change might be
The only constant thing
But accepting women
In this changed world
Is still a barrier
Yet to be overcome.

For economics is still
The M's three-
Men, machine
and money.
The wage labour is
In the GDP
where the unpaid work
at home is just that.
For all we say
In the changing times
Is the battles won aren't enough;
We want a world
Where you don't resist
The inevitable change
And a world
Where these labels
Do not exist.

Venezuela's Economic Crisis: A Keynesian IS-LM Analysis

Sukhnidh Kaur and Adhish Sawant

Introduction

The Bolivarian Republic of Venezuela is sitting on the world's biggest oil reserves, and is the region's poorest performer in terms of GDP growth per capita. The country is in the middle of an economic crisis with a hyperinflation rate forecasted to be north of a staggering 4000% by the end of 2018, and is in a state of emergency wherein the border to Columbia has been reopened to allow citizens to purchase essential commodities such as food and toiletries. Panic about the future and seemingly bleak prospects for the progress of the economy lie in a calamitous coincidence of a number of factors: The country hosts not one, but three exchange rates, it succumbed to unsustainable socialist policies under Chavez's reign, and a 13-year low is being witnessed in terms of plummeting exports. Both state sanctioned and private players play a hand in corruption – and the country, which owes \$196 billion to bondholders and other entities, has been drained and left with a mere \$9.6 billion.

This paper attempts to analyze Venezuela's monetary and fiscal policies, the history of its economic crises, the current day scenario in context of its inflation rate and GDP growth rate with the help of the Keynesian Investment-Saving Liquidity-Money model.

Macro-Economic Indicators

1. **Inflation:** Since the economic crisis of 1980, the level of inflation has been on a rise. Government decisions such as allowing interest rates to fluctuate in tandem with the market forces of money demand and money supply helped in bringing temporary relief, but market determined interest rates were declared illegal, bringing about a massive relapse. The measure of inflation in terms of Consumer Price Index (measures expenditure on necessary commodities of daily survival) was 800% in 2017. A rise beyond 4000% is predicted by the end of 2018.
2. **Balance of Payments:** The BoP situation has been sharply deteriorating in the nation since 1990 mainly on account of the economic recovery programme undertaken by the Government. Exports (except oil due to OPEC regulations) have declined due to currency exchange problems.
3. **GDP growth rate:** On account of the large fiscal deficit due to a negative BoP, the GDP growth rate has been negative over the past few years.

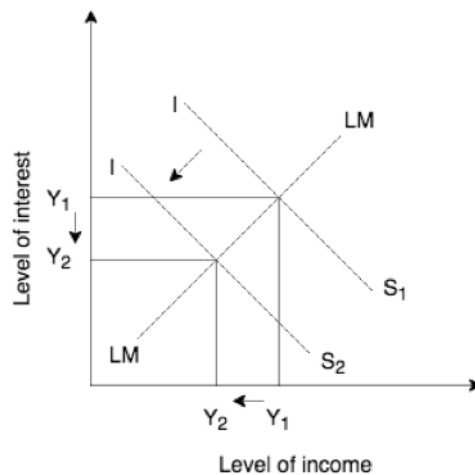
Venezuela's Economic History

Pre-1980s: In Venezuela, price stability was the norm and inflation was a healthy 3 percent from 1930 to 1970. During the 1970s, the country's oil windfalls were invested and managed in a way that prevented price instability.

1980s: Being a member of the OPEC, Venezuela is heavily dependent on the export of petroleum products which account for more than 50% of its GDP. A crash of oil prices in this period marked the beginning of economic downfall, causing national debt to multiply. Financial deterioration, multiple devaluations, and fiscal deficits combined to push consumer prices and inflation up exponentially, leading to unemployment and poverty. The government issued a policy allowing the bank rate to fluctuate freely with the money market equilibrium, and abandoned its earlier policy of import substitution by allowing the inflow of foreign direct investments in order to maintain its social spending and to expand income and employment. An attempt to reverse the economic crisis through devaluations of the currency was made, through a multi-tier exchange-rate system, greater import protection, and increased producer and consumer subsidies, and these reforms stimulated a recovery from the negative growth rates. This marked the first step undertaken by Venezuela towards liberalisation. On 2nd February 1989, Venezuela undertook a macroeconomic adjustment program which aimed at dismantling protectionist policies and deregulating prices supplemented by the withdrawal of the Government from key areas of the economy.

1990s: Most price controls were abolished, liberalisation made it possible to improve the effectiveness of monetary policy, and the Bank initiated an open market. A system of exchange controls was introduced by the Government, which placed further constraints on the conduct of monetary policy. Other related policies sought to eliminate budget deficits, to liberalise trade, and to abolish most subsidies and price controls.

2000s: In 2003, Chavez installed price controls for essential consumer products, which increased supply shortages from an average of 5 percent to 22.2 percent. The Supreme Court declared the free fluctuation of the Bank rate in accordance with the market forces to be illegal. This drastically affected foreign direct investments in the nation reducing the net revenue generated by the Government, which in turn led to problems of financial deficit government policy. The official exchange rate in terms of dollars was pegged, and dissuaded imports and foreign business from operating in Venezuela. The government, due to lack of financial resources, failed to come up with an adequate plan to combat the sudden depression in foreign investments. This led to the relapse of inflation, which increased the poverty rates as well. In 2016, the new exchange rate was set to 1,600 Bs. per dollar. A currency black market emerged, fuelled by the reliance on imports that required payments in foreign currency. In 2017, the inflation rate, which had been over 50% since 2014, reached 536.2% due to the rapid depreciation of the local currency on the black market. Venezuela's currency weakened sharply on the black market and its oil production, which has been falling by about 20,000 barrels per day (bpd) since 2016, fell by at least 250,000 bpd in 2017. As of 2018, Venezuela and its state-run oil company PDVSA owe over \$196 billion. Venezuela eliminated its heavily



subsidized DiPro exchange rate used for imports of food and medicine in an effort to revamps its exchange control system amid an economic crisis. It was replaced by its new crypto-currency Petro.

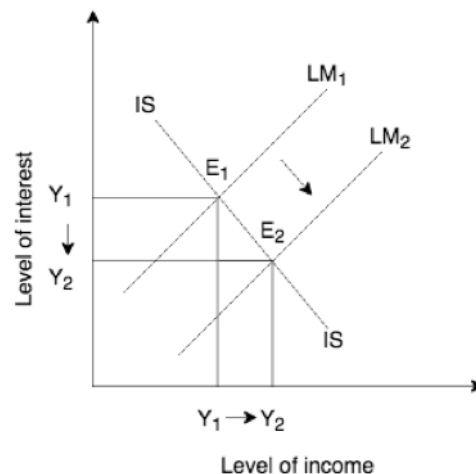
IS-LM Analysis

Venezuela's monetary and fiscal policies have had a jagged trajectory, with remedial measures being introduced to this day. The country is plagued with hyperinflation which reduces its capacity to save income and thereby leads to lower levels of investment (under circular flow of income, savings = investment), and therefore lower levels of aggregate supply, leading to a vicious cycle.

The Investment-Saving (IS) curve displays the equilibrium in the goods and services market for various interest rates. The determining factors for the IS curve are, (a) elasticity of investment demand curve, i.e. the responsiveness of investments to a change in rate of interest, and (b) level of investment. The position of the IS curve is determined by autonomous investments in the economy. In Venezuela, the percentage of government expenditure has only fallen, as will be explained further.

The Liquidity-Money (LM) curve is used to determined equilibrium in the money market. The determining factors of the LM curve are, (a) the supply of money, and (b) the responsiveness of demand for money to a change in income. The position of the LM curve depends on the change in supply of money. In current day Venezuela, there is a shift in the position of the LM curve due to a change in liquidity preference in the economy given the introduction of the new crypto-currency. In terms of Venezuela's fiscal policy, the government expenditure has been decreased as a remedial measure for hyperinflation. Aggregate demand hence decreased, and this has led to a leftward shift in IS curve. As there is a shift in the IS curve but LM remains constant, the equilibrium changes. As rate of interest falls, income level also falls. Hence we can say that Venezuela has a contractionary fiscal policy.

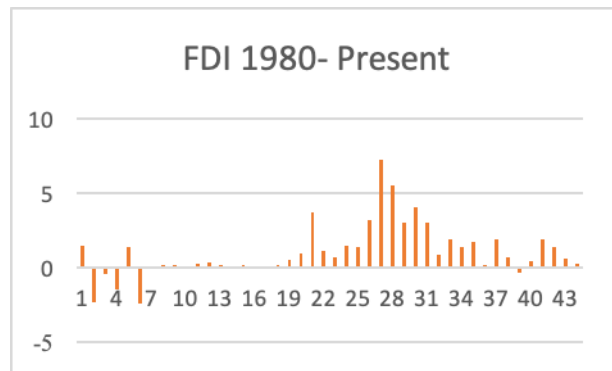
The country's monetary policy is an expansionary policy and to lift the country out of recession, measures are taken to increase the money supply in the economy. This leads



to fall in the rate of interest, and due to this, the cost of investing is lesser and therefore the rate of investment is higher. This will lead to a remedial rise in aggregate demand and income.

If the money supply of the economy increases either in liquidity or cryptocurrency, this should ideally result in the fall in the rate of interest offered by commercial banks. In Venezuela, due to its expansionary monetary policy, there is a fall in its rate of interest leading to a fall in income. The government is trying to bring about greater investments to induce more production in the economy. The inward shift in the IS curve also leads to a fall in NI on account of reduced autonomous expenditures by the government.

The intended aims of the Venezuelan monetary policy have not been achieved. In spite of a sharp increase in money supply since 2010, especially in 2016 with the launch of a new crypto currency, we note that the levels of private investments continue to remain minimal. This is because the commercial banks, despite the ready availability of cash for credit creation are reluctant to give out loans. This is because given the very high levels of investment and the strict government regulation making it largely difficult for private firms to sustain themselves, the banks find it more profitable to invest in financial assets, specifically government bonds in order to avoid the risk of bad debt. Secondly, even though the new crypto currency has added to the money supply, the banks cannot give loans against it on account of its anonymous mining nature which makes its regulation uncontrolled and supply unpredictable, further there is a large risk of hacking and international acceptability for payments. Lastly, the advent of an expansionary monetary policy in times of inflation has led to greater cash availability,

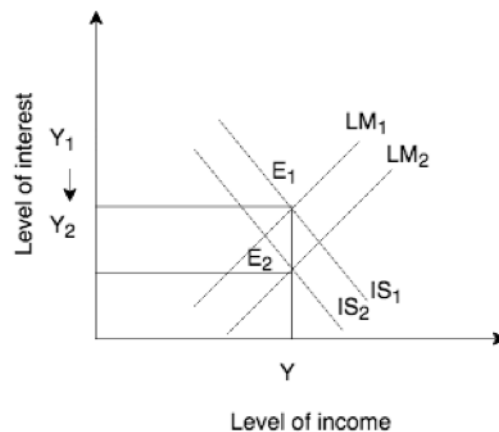


but as mentioned above the supply has not increased in correspondence. Thus, we note that the aggregate demand further increases while aggregate supply remains low leading to the problem of hyperinflation. Under such a dire state, the level of savings in the economy by households remains low (since most of the income is spent on consumption) thereby reducing the nations capacity to invest (since under the circular flow of NI, Savings= Investments).

In terms of fiscal policy, the government of Venezuela, by reducing its level of expenditure, brought about a fall in the level of income as well as the rate of interest prevalent in the nation, however the inflation levels continued to rise. This is because the Government, to combat inflation employed a supply side approach, i.e. it created conducive conditions for private investments which would add to the nations aggregate supply. However, no efforts were made to curb the level of aggregate demand in the economy which continued to stay high. The corporate and personal income tax have remained the same over the past decade, no increase was undertaken which would reduce the disposable income in the economy thereby negatively affecting aggregate demand.

Further, even in the face of decreased interest rates, the anti FDI policy in effect since the advent of the 21st century acts as a deterrent to foreign ventures in Venezuela, thereby foreign production in Venezuela remains low, the pegging of exchange rates by the Chavez government has further discouraged imports which has in turn reduced the aggregate supply further.

The private firms find it largely difficult to compete with the state-owned enterprise that have easy access to foreign currency. This has reduced their area of activity to domestic boundaries only. Therefore, the dominant companies are the state-owned enterprises, and these too have failed in being profit making. This has adversely affected their



productive capacity. The Government too has a large fiscal debt which has limited its capacity to pump more capital in these companies, making production growth stagnant. Lastly, the Venezuelan economy is largely dependent upon oil trade, the market for which is largely elastic. Both upswings and down swings are common. This risk factor dissuades private investors and makes the condition of the Venezuelan economy highly volatile, which is largely evident from the crash of oil prices in the 1980 which changed the face of Venezuela's governance, ideology and the nature of its economy.

The country's policy failure is due to a number of reasons. There has been no change in taxation to reduce the aggregate demand as an immediate measure to combat inflation. Moreover, the anti-FDI policy under the Chavez government has been a strong deterrent to investments in infrastructure from abroad. There has been a failure to channelize private investments for the following reasons:

1. Hyperinflation leading to minimum savings and hence no investments
2. Pegging of exchange rates and lack of availability of foreign credit readily makes it enormously difficult for the private sector to compete with the public sector.

There has been a steadily performance of state-owned enterprises to produce adequate quantity of goods. Venezuela also has a history of excessive dependence on the oil trade which has a largely elastic market demand, due to which the income of the people working in the sector also tends to fluctuate.

Other contributing factors include the pegging of interest rates and other socialist policies followed by the Chavez government, and the reluctance of banks to give out loans under the danger of bad debt in spite of increased capacity to give out loans which is channelized towards purchasing Government bonds and securities.

In the simultaneous equilibrium of the IS and the LM curve, we note the combined effect of the 2 policies, fiscal and monetary, as mentioned earlier, a contractionary fiscal policy reduces both rate of interest and income, while an expansionary monetary policy reduces rate of interest while increasing the level of income. Therefore, the fall in income caused by the Venezuelan fiscal policy counter balances the increase in income caused by its monetary policy, thereby keeping aggregate demand intact.

The double negative effect on the rate of interest causes the interest rates to fall

drastically, therefore the intention of the Venezuelan government was to combat its massive inflationary pressure by increasing the aggregate supply in the nation based on the assumption that a lower rate of interest would lead to greater levels of private investments of a real nature. However, the resultant impact was not achieved due to the individual failures of the 2 policies as mentioned earlier in the analysis.

Conclusion

It is necessary to reinstate the 1990s liberalisation plan that was implemented in reaction to the oil crisis of the 1980s. From the analysis above, we have established that the government's capacity to invest and to increase aggregate supply by state owned enterprises is highly limited. Further, given the large scale financial debt of the government over the last decade, the government's capacity to pump more capital into SEPs is also limited. This creates the need for private investments from abroad. It is necessary to revise the taxation policy to approach inflation from a demand perspective. In order to simulate such FDIs, it is necessary to allow the currency rates to fluctuate freely as opposed to pegging which deters foreign investors.

The Dropout Crisis in India: A Survival Analysis

Vanshika Wah

Topic Statement:

Analysis and Prediction of the Student Dropout Rate in India

Abstract

“Education is the basic requirement for human development.”

Retention of students in schools all over the country has been a concern for many decades now, as it is a key indicator of social and economic well-being. Student attrition results in consequences which affect the functioning of the overall institution. The early identification of ‘at-risk’ students is a crucial task that needs to be addressed precisely. In this paper, we use the method of Survival Analysis - a popular technique in the field of Data Analytics - to predict the student dropout rate in the country and to analyse the reasons for the same, along with providing possible solutions to prevent student attrition.

Introduction

In this study, a sample of 1335 students (class1- class12) from Indian schools has been analysed. The data has been collected from the National Family Health Survey (NFHS-3). In the NFHS, specific questions are asked to household respondents about schooling for children aged 5-17 years. It is observed that the dropout rate in India is higher as compared to many other countries (figure-1). Our aim is to predict, when students are likely to drop out of school and to find out the factors which play an important role behind this. This paper will also discuss some probable solutions to improve student retention in schools. To find out when students are most likely to drop out, we proceed with the help of Survival Analysis using the Python Program.

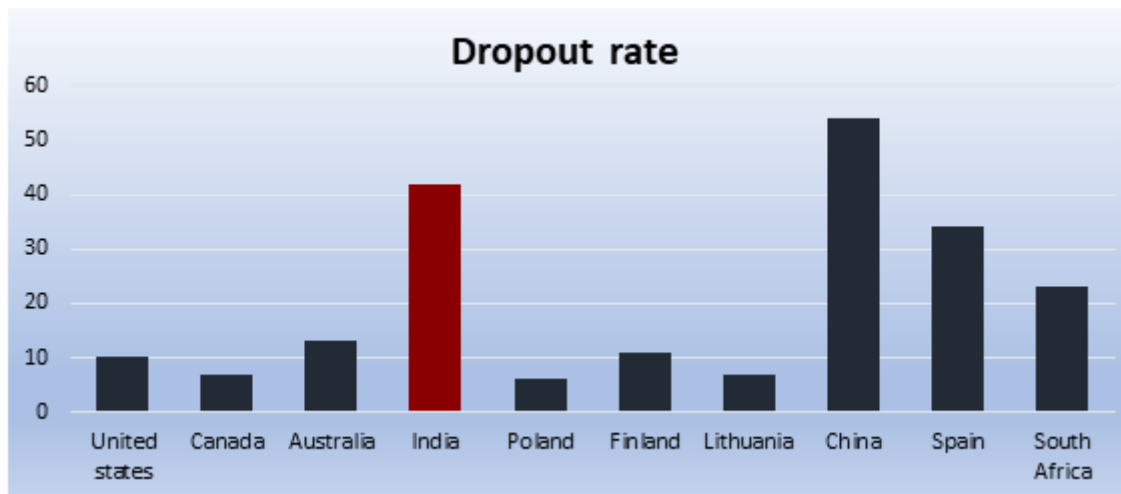


Figure 6: Comparson of Dropout rates between different countires

What Is Survival Analysis?

Survival analysis is a technique that is used to study the time until some event of interest, often referred to as ‘death’, occurs. The survival function is:

$$S(t)=P(T>t)$$

where,

T= subject’s survival time

t= specific number of years for which we want to check the probability for

In our case, we check whether T years (actual years spent in school by a student) is greater than t years (t=1-12 depending on the number of years spent in school which we want to check probability for).

We use the Kaplan-Meier estimator and curve. The Kaplan- Meier curve is a step function that is used to estimate the survival function. The estimator is given by-

$$\hat{S}(t) = \prod_{i: t_i \leq t} \left(1 - \frac{d_i}{n_i}\right),$$

Where,

t_i = time when at least one event happened

d_i = the number of events

n_i = the individuals known to survive (censored cases) Censored cases refer to the events of interest which did not occur in the study time

period. In this paper, the event of interest is the student dropping out and the censored case refers to students who have not yet dropped out. Using the Kaplan Meier Fitter function on our sample data, we obtain the curve in [figure-2](#) using Python Programming.

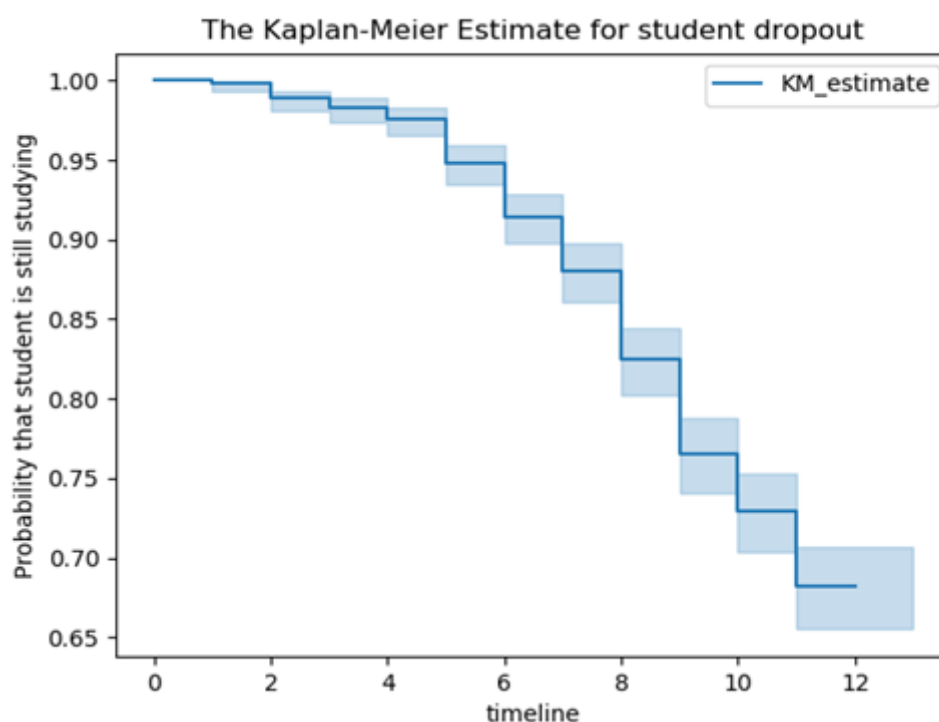


Figure 7: The Kaplan Meier Estimate for student dropout

We observe that the probability of a student still studying reduces as the years in school pass by. The curve begins with the probability of 1, where every student has just enrolled into school; hence, there is no possibility of leaving school at that time, as it is the time of joining (we have taken class 1 as the year of enrolment in our study). The probability of the students still studying keeps reducing till it comes down to 0.68 after 11 years of education and remains constant after that, till the end of year 12. The curve stops at year 12 because after 12 years of education, i.e. after class 12, a student graduates and hence cannot dropout. The curve moves in a step function, as it shows the probability of the students still studying, at every consecutive passing year, with no period in between any two classes as it is assumed that students leave before the next academic year begins.

To check the probability of student retention at any year, we use the survival function, where t can be any number from 0-12, depending on the number of years spent in school that we want to check the probability for.

The major drops in retention (probability that student is still studying) can be seen at the following values in Figure-2 or by putting t = 'number of years' in the survival function-

- year 5 ($t=5$): probability drops from 0.97 in year 4 to 0.94 in year 5
- year 8 ($t=8$): probability drops from 0.88 in year 7 to 0.82 in year 8
- year 9 ($t=9$): probability drops from 0.82 in year 8 to 0.76 in year 9
- year 11 ($t=11$): probability drops from 0.72 in year 10 to 0.68 in year 11

These are the years of education at which the dropout rates are the highest.

Since year 5 is the end of primary school and year 8 is the end of middle school, we can say that the dropout rates are highest at the time of transitioning to a higher level of education, i.e. from primary school to middle school and from middle school to high school.

Factors affecting the dropout rate

The factors that affect the dropout rate are stated in [table-1](#).

Factor	Percentage of dropouts
Lack of interest	29.8
No female teacher	0.2
Transportation problem	1
Repeated failures	6
Required for household work	11.9
High cost of education	18.8
Safety issues	1.4
Others	5.1

Percentage of dropouts based on different factors

For a simpler analysis, we create a column chart ([figure-3](#)) from the data given in Table-1.

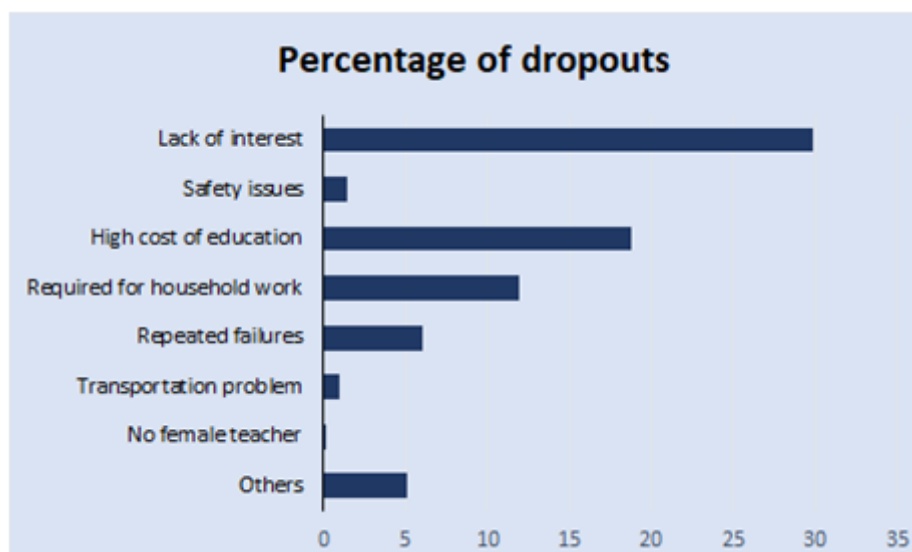


Figure 8: Percentage of dropouts based on different factors

We can see that the factors which play the most important role are ‘Lack of interest’, followed by ‘High cost of education’ and then ‘Child required for household work’. Since these three factors have a significant effect on the dropout rate, our analysis of prediction for future dropout rates will be based on these three factors.

Early prediction of dropout rates

It can therefore be said that the majority of students who tend to dropout are those who lack interest in studies. These students see little value in the content of the course and feel that they can utilize their time in better fields to start earning early. This problem exists in both urban as well as rural areas, whereas the problem of high costs mainly affects students from rural areas who come to urban cities for education. Hence, students from rural areas tend to leave school due to the disability of their families to bear high costs. The other factor, which is requirement of children for household work, mainly affects students from rural areas due to the traditional mindset of rural families. Girls specifically are stopped from attending school in order to be taught household chores or for being married off. We can see the percentage difference between boys

and girls who drop out in figure-4. We notice that there is a 60:40 ratio which indicates the lack of social and economic well-being. We also see in figure-5 that the majority of students who dropout are from backward classes.

DROPOUT RATE- SEX BASED

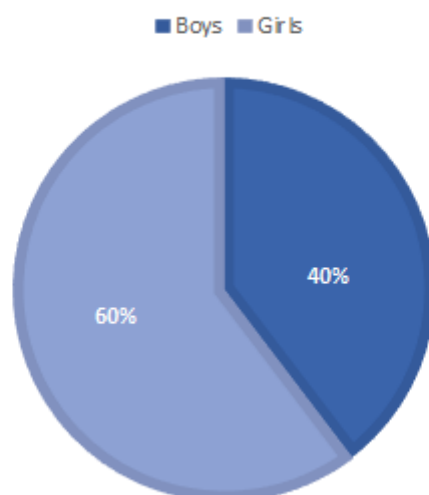


Figure 9: Percentage difference between boys and girls who dropout

DROPOUT RATE- CASTE BASED

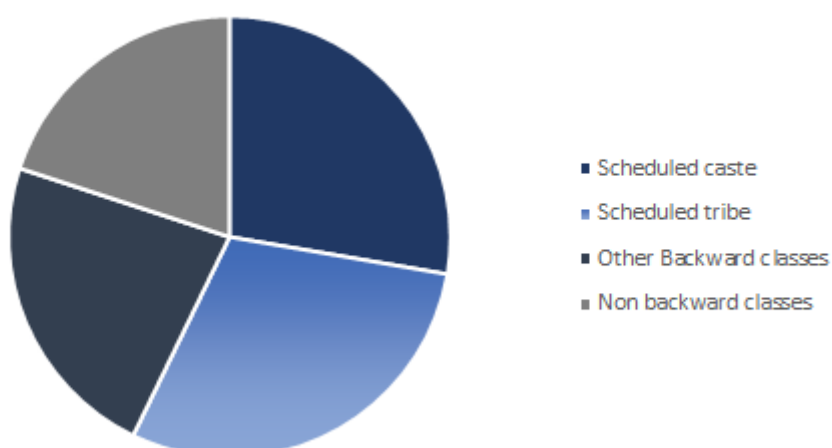


Figure 10: Percentage difference between dropouts based on caste

What can be done to prevent student attrition?

“Knowledge is power.”

The major problem lies in the education system of the country which is mostly about rote learning in order to score higher marks, rather than understanding and gaining real knowledge. If students could clearly see how coursework connects to their goals, interests and concerns, they would be more likely to value it, and thus more motivated to invest time and effort in it. There is a huge scope for improvement in India's education system. The improvisation should begin by making the coursework more practical and application based. Reduction in syllabus will also be a relief for students and will create more room for creativity in their minds.

The problem of rising inflation in the economy and hence rising costs has led students from poor families to drop out of schools. The issue of black money collected by wrong means by private schools needs to be investigated. Also, there needs to be an increase in the number of government schools like Kendriya Vidyalaya in India. The government should be encouraged to begin self-financing schooling under these bodies.

According to NFHS, almost 90 million girls, i.e. approximately 29% of the total student population, are stopped from attending school in India. India should adopt some approaches similar to those adopted in countries like Pakistan, Senegal and Nepal where non-formal education with flexible timetables is provided to girls. Schools with only women as teachers and supervisors should be opened to address the issue of safety for girls.

Conclusion

In this paper, we attempted to understand the differentials and factors associated with school dropouts in India along with an analysis of the time when these students are most likely to leave, based on the data from NFHS-3. The major reasons cited for dropping out were ‘lack of interest’, ‘high costs’ and ‘children required for household work’. The most concentrated time interval of dropouts was the time of transitioning to a higher level of education, i.e. from primary school to middle school and

from middle school to high school. This analysis can help schools all over the country to be prepared for future dropouts as the dropout rate affects the overall functioning of an institution. Unless and until there is considerable improvement in the economic status of households and change in the social attitudes of the citizens of India, achieving the goal of universalisation of school education will remain a major challenge for the country.

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The Economics of Weight Loss

Shivani Pandey

Abstract

Obesity is now being considered one of the biggest health concerns globally. Ironically, while India records the largest number of underweight population in the world along with China, it has also been placed in the top five countries in terms of obesity as per a new study by the Lancet Journal. Obesity entails various direct and indirect costs in terms of lower productivity and higher medical expenditure and has the potential to lower economic growth. This paper analyses the need for strengthening government regulations in the weight loss industry. After analysing the causes of obesity and its negative effects on both health and the economy at large and reviewing the loopholes of the existing regulations, certain policy recommendations have been provided.

Keywords: Cardiovascular Diseases, Diabetes, Low Productivity, Obesity.

JEL classification: I10, I12, I18

Introduction

Obesity is now considered one of the biggest public health concerns facing India. According to the National Family Health Survey (NFHS-4, 2015-16), one-fifth of Indian women (20.7%) in the age group of 15-49 are overweight. The figure has jumped from 12.6% during NFHS-3, 2005-06 when the last survey was conducted to 20.7% (nearly a 60% jump) indicative of the fact that obesity is increasingly becoming a major health concern plaguing our nation. The proportion of obese men has also doubled over the last decade. As per the survey, as much as 18.6 per cent of men (15-49 years) are obese—up from 9.3 in 2005-06.

Treating obesity and obesity related diseases costs lakhs of rupees every year. Manufacturers, sellers, agent's etc. who comprise the selling side of the weight loss industry have been major beneficiaries from the same. Misleading advertisements, asymmetric information, slower economic

growth, hazards of obesity on health are few of the many reasons which call for government intervention. This paper will therefore analyse the requirement of strengthening regulations in the weight loss industry in four sections.

The first section defines obesity, its causes and the various hazards associated with it. It also outlines the impact of obesity on production levels. The second section highlights the reasons for the growth of the weight loss industry in recent years. The third section analyses the need for regulations in the weight loss industry, followed by the fourth section which enlists the existing regulations in the industry and finally the fifth section provides future recommendations. The consequences are quantified wherever data was available.

Methodology

For the present study, both qualitative and quantitative data were collected from secondary sources viz. several national sample surveys, books, reports, journals, magazines, web journals etc. pertaining to the field. The collected data was analysed by employing the analytical method of research.

Obesity

Meaning and Effects on Health

As per WHO, overweight and obesity are defined as abnormal or excessive fat accumulation that may impair health. The number of obese people is increasing at an alarming rate across the globe.

Adults with a BMI (Body Mass Index) ranging between 25 and 30 are termed as overweight and those with a BMI greater than 30 fall within the obese range, as per Centre for Disease Control and Prevention.

Obesity is a major cause of a multitude of illnesses and therefore demands urgent intervention. Other than leading to higher likelihood of being subject to prejudice, depression, and lower wages in the workplace, obesity can lead to the following health consequences:

- **Cardiovascular diseases** (mainly heart disease and stroke), which

were the leading cause of death in 2012 globally;

- **Diabetes;**
- Musculoskeletal disorders (especially osteoarthritis – a highly disabling degenerative disease of the joints);
- Some cancers (including endometrial, breast, ovarian, prostate, liver, gallbladder, kidney, and colon).

The risk for these non-communicable diseases also increases, with increases in weight.

(World Health Organisation: Media Centre, Fact Sheet)

Incidence of type-2 diabetes, high blood pressure, cardiovascular diseases, gall bladder diseases etc. have increased tremendously over the years and one of the major causes for the same is obesity. Heart diseases and type-2 diabetes are causing nearly 5.8 million deaths per year (Current Diabetes Reviews, Volume 13, 2017). They accounted for almost 60% of all deaths in 2011. It is estimated that about 44% of the diabetes burden and 23% of the cardiovascular diseases burden can be attributed to overweight and obesity in India¹. Certain estimates show that as much as 60% of all diabetic cases are attributed to obesity (Runge, 2007). Obesity affects more than 135 million individuals in India with over 69 million people suffering from Type 2 diabetes and this number is expected to rise to 140 million by 2040. The prevalence of cardiovascular diseases is also increasing with percentages as high as 12.6% in some urban areas. Prevalence of hypertension is about 39.2% on an average (48.2% urban and 31.5% rural), the major cause of which is again, obesity².

Causes of Obesity

According to one study (Current Diabetes Reviews, Volume 13, 2017), Indians have a lower intake of fruits and vegetables as compared to 47 other Non-South Asian countries and are instead associated with high intake of refined cereals like polished white rice, clarified butter (ghee), vegetable oil and coconut oil.

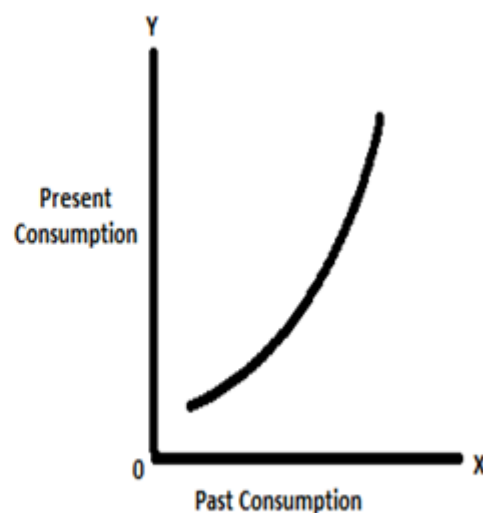
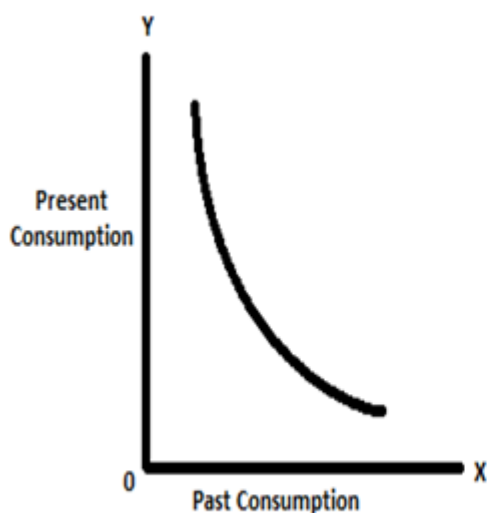
¹Shrivastava, U, et al. "Obesity, Diabetes and Cardiovascular Diseases in India: Public Health Challenges."; *Current Diabetes Reviews* (2017): Volume 13, Issue 1

²Shrivastava, U, et al. "Obesity, Diabetes and Cardiovascular Diseases in India: Public Health Challenges."; *Current Diabetes Reviews* (2017): Volume 13, Issue 1

An **economic explanation** to the cause of obesity is that obesity primarily results from addictive eating behaviour. Higher level of consumption can be regarded as a normal good whose marginal utility declines as its consumption increases. Thus, higher levels of past consumption result in present consumption with a lower marginal utility because of negative health effects. So, if the marginal costs (higher medical bills) exceed the marginal benefits, rational consumers may resort to lower present consumption.

However, higher past consumption is usually associated with higher present consumption. This does not mean that the consumer is not behaving rationally but simply points to the fact that many times, consumers view the benefits of higher present consumption more than the future harm. In this case, people may continue to eat in ways that may be harmful in the long run.

Both behaviours can be explained economically. The first group of people resort to healthier eating, regular exercising etc. while the second group continues to increase their consumption thereby adding to the pool of obese people. However, to say that individuals rationally choose to consume more while ignoring the cost of discomfort, discrimination, lower income and other social and economic factors points to market failure which has been further elaborated in the next section.



A rudimentary explanation of the above can be explained with the help of these indifference curves. For the first group of people, higher past consumption leads to lower present consumption thus leading to a downward sloping indifference curve. Here, people reduce their present consumption when there is high past consumption to compensate for the negative health effects so that their utility remains the same. However for the second group of people higher past consumption increases the desirability of higher present consumption thereby leading to an upward sloping indifference curve.

Effects of Obesity on the Economy

Obesity is associated with both direct and indirect costs. Indirect costs of obesity include the value of lost work, higher insurance premium for those who are covered and lower wages. Days missed are a cost both to the employers in terms of incomplete work and to the employees in terms of lower wages. Obese people tend to miss more days from work and they usually work at less than full capacity. Obese people are also required to pay higher insurance premiums as they face a higher probability of getting chronic illnesses than others. These costs however, are hard to measure and identify as compared to the direct costs which involve costs of surgery, radiological and laboratory tests, therapy etc.

In India, the annual direct and indirect cost of diabetes which is the most

common outcome of obesity was estimated to be 1541.4 billion INR in 2010 (median expenditure incurred by patients on diabetes care annually was INR 10,000 per patient in urban areas and INR 6260 per patient in rural areas). Estimates have shown that nearly **25-30%** of the annual income of low income groups is spent on diabetic care (Current Diabetes Reviews, Volume 13, 2017). In case of complications, the costs increase manifold. In India particularly, inadequate resources and medical reimbursements, insufficient healthcare budgets and socio-economic barriers contribute to the rising cost of diabetes and cardiovascular disease management. As per the data of the National Sample Survey of 2014 (Ministry of Statistics and Programme Implementation) private healthcare in India costs about 4 times more than the public sector yet majority of all cases are treated by the private sector further shedding light on the inadequacy of public medical resources. The cost burden of these non-communicable diseases caused majorly by obesity is likely to double during the period 2010-2030 in India as per CMHI1 and CMHI3 estimates (Commission of macroeconomics and health). In fact as per the global report on URBAN HEALTH: EQUITABLE, HEALTHIER CITIES FOR SUSTAINABLE DEVELOPMENT, jointly released by WHO and the UN Human settlements programme, these diseases can cost our economy **\$6.2 trillion** during the 2012-2030 period.

Obese workers experience certain health related limitations in the workplace with respect to the time taken to complete certain tasks and to perform physical tasks. The employers have to bear the additional cost of underperformance and increased number of absences on part of obese employees. Employers of overweight and obese workers face additional costs if they offer health insurance. Obesity related conditions like diabetes, cardiovascular diseases, hypertension etc. not only lead to increased doctor visits each year but also result in many lost workdays amounting to millions of rupees when considered at an aggregate level.

There is a two way connection between obesity and income level. While obesity denies people economic opportunities thus reducing their income; lack of economic opportunities can also lead people to become obese. While the first implication is intuitively clear, the second link requires more explanation. Lack of economic opportunities lead people to obesity because many households when faced with increasing budget constraints

alter their food budgets in a way that their calorie intake remains the same or in some cases, even increases. They, therefore shift to calorie rich sugars, trans-fats and carbohydrates from lean meats, vegetables and fruits. This is especially common among teenagers and young adults who when faced with lower budgets resort to low-cost, high calorie bearing unhealthy substitutes.

In India, individuals tend to develop type 2 diabetes and cardiovascular diseases at a younger age (Current Diabetes Reviews, Volume 13, 2017) thus increasing the risk of morbidity and mortality during the peak years of their productive life.

The productivity level of obese people is already low leading to lower incomes and in addition they suffer from an additional reduction in their income in terms of out of pocket expenses because of increased medical expenditure if they are not covered by insurance. Higher medical expenses along with lower earnings of the bread earner (if afflicted by an obesity related disease) forces many households into borrowing loans and sale of assets thus pushing many of them into poverty. Moreover, most Indians are not covered by any health insurance and therefore involve even higher out of pocket expenses on medical bills when they could have been spent on better education of their children, nutritious meals, higher standard of living etc.

The global annual medical cost of treating serious consequences of obesity is expected to reach \$1.2 trillion per year by 2025, as per data from the World Obesity Federation.

As per a study conducted in the National Capital of India, Delhi average monthly health expenditure was Rs. 132 among overweight women, Rs. 143 among obese women which further increased to Rs. 224 among morbidly obese women compared to only Rs. 68 among normal weight women. (Agrawal and Agrawal)

It also affects the expenditures of local, state and national governments wherever the programs compensate for or cover some medical expenditure which are then ultimately pushed to present and future taxpayers.

The Weight Loss Industry

We find that rise in obesity rates has been co-incident with rise in the weight-loss industry. The weight loss industry is made up of companies developing and supporting diet plans, weight-loss supplement manufacturers, diet experts, gyms, gym instructors, obesity doctors, low-fat food makers, low-calorie soda makers etc.

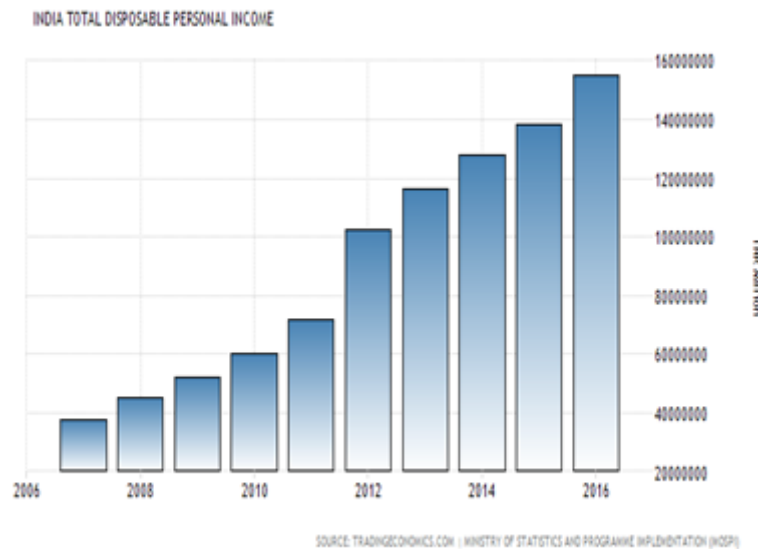
Wellness industry is projected to touch Rs. 150,000 crore by FY20 as per a FICCI- EY Consulting Report (During FY15, the Indian wellness industry was estimated at Rs. 85,000 crore.), thus reflecting the tremendous growth rate one could expect in the weight-loss industry which comprises a sizeable share of the wellness industry.

As per SMERGERS³, in 2015 the fitness industry specifically comprising of gymnasiums was worth Rs. 4500 crore with an annual growth rate of 16-18%. However, one major concern is that the market is dominated by unorganised and independent gym outlets. Organised fitness retail constitutes about 28% of the Industry as a whole with a yearly growth rate of about 22-27%.

Primary reasons attributed to current and expected growth rate of the weight-loss industry:

- **Increases in Disposable Income:** Rising middle class population along with a consistent increase in the personal disposable income of people, as represented in the following figure, has made fitness services more accessible. With the current trend of growth, weight loss industry is only expected to grow further.

³Smergers: Industry Watch. 2015. (<https://www.smergers.com/industry-watch/india-gym-fitness-industry/>)



- Increasing health concerns: Rise in the number of chronic diseases and those affected by it has led people to make efforts to adopt a healthier lifestyle. Heart healthy, probiotic, sugar free, fat free, low cholesterol, baked/boiled are some of the common lines we see appearing in product packaging these days simply to tap this growing desire of people to eat healthy. In fact, as per a study by Nielson⁴, in the Asia-Pacific region 93% say they're willing to pay more for foods with health attributes to some degree.

Why Strengthening of Government Regulations is Imperative

Obesity and its consequent effects on health drag down productivity growth rates and take away resources that could be invested in education, technology, social improvements etc. They have shown to affect even robust economies like USA and China. Therefore, the Government has a competitive incentive in terms of higher growth rate to respond to these challenges for economic growth and welfare of future generations.

In addition, two other major reasons why the regulation in the weight-loss industry needs to be strengthened namely -market failure and

⁴Accessed from: <https://www.nielsen.com/content/dam/niensenglobal/eu/nielseninsights/pdfs/Nielsen%20Global%20Health%20Wellness%20Report%20-%20January%202015.pdf> (We are what we eat: Healthy eating trends around the world, Global Health and Wellness Survey)

consumer protection, are discussed in greater detail as follows:

1. **MARKET FAILURE:** Market failure refers to a situation where free markets fail to allocate resources efficiently. Free markets, as bountiful as they may be, will not only provide us with what we want, as long as we can pay for it; they will also tempt us into buying things that are bad for us, whatever the costs. In other words, in market equilibrium and given a profit motive, we should expect firms to offer things that are not in our best interest. Well-functioning markets are supposed to yield the optimal allocation of resources. The prevalence and trend of obesity—which are far from the optimal societal (or individual) outcomes—indicate there is reason to suspect some market failure here. The argument that people are “choosing” obesity rationally seems to be contradicted by the fact that people spend a large amount of time, effort, and money to lose weight, although often in vain. However, the (free) market for food does have one interesting feature: the companies that produce the calorically-dense food also manufacture and sell potential solutions. Ironically, Kellogg’s K is owned by Kellogg’s. The same food companies accused of selling energy-dense food that leads to obesity are also making money from the obesity crisis by selling weight loss products and programs. The dominant economic view is that market failures occur due to three causes: market power, asymmetric information, and externalities. While the market for food is competitive in India and negative externalities are very few, primarily imperfect information leads to market failure, which renders consumers vulnerable. For example, asymmetric information in terms of marketing through television and advertisements to children and teenagers who are not capable of making sound judgements, weighing future consequences and of complex and imperfect information which are difficult even for adults to correctly judge. (Karnani, McFerran and Mukhopadhyaya)
2. **CONSUMER PROTECTION:** The rise of the weight-loss industry and increase in obesity rates is only making consumers more susceptible to believe false claims made by diet food manufacturers, gym experts etc.

Some diets have adverse side effects resulting in medical

complications and sometimes death. The government can however only regulate strict requirements to be followed by registered dietitians. This is a problem because the patients are not required by law to follow their close instructions, which leaves them completely corruptible by the false claims and misleading information of the weight loss industry. Misleading broadcast advertising as well as articles on the web, claiming things which could potentially affect consumer's health, call for strengthening of government regulation.

One such remarkable case was of Smt Divya Sood vs Ms Gurdeep Kaur Bhuhi (RP No. 3467) of 2006. Here, the case was filed on the charges that even after paying INR 10,500 and undergoing the treatment, the consumer did not lose weight. It was only after this that the National Consumer Disputes Redressal Commission brought about the need to control misleading advertisements promising weight reduction (Girimaji).

Current Regulations

1. The first phase of the National Program for Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS) was launched by Government of India in 100 districts in 2010 with strong screening and monitoring components and was subsequently strengthened in 2013–2014. Further, a programme for adolescent health named *Rashtriya Kishor Swasthya Karyakram* (RKSK) was launched by Government of India in January, 2014 with focus on improving nutrition, mental health, and prevention of non-communicable diseases. Impact of these programs remains to be researched.
2. National Health Policy 2017 which was cleared in May 2017 plans to increase public health spending to 2.5% of the GDP from the current 1.4% in a time bound manner and guarantees health care services to all Indian citizens. The comprehensive plan includes care for non-communicable diseases majorly caused by obesity. It advocates many other things such as providing free drugs, emergency services etc.

However, a major issue with both of these policies including several

others is that the focus remains on curative care rather than preventive care. All technology is being directed at early detection of these diseases. No efforts have been directed at countering the issue of obesity which remains the root cause of all non-communicable diseases. Only one state of India i.e. Maharashtra has passed a directive to ban junk food in school canteens till now.

There have been many laws and regulations to prevent misleading advertisements as well. Drugs and Magic Remedies (Objectionable) Act prohibits advertisements perpetrating magical cures for chronic diseases. The Food Safety and Standards Act, 2006 prevents false and misleading advertisements with respect to food etc.

However, no law prevents the advertisements of unhealthy junk food rich in processed sugars and carbohydrates as they are not considered an immediate threat to public health. Moreover, there is no provision of corrective advertisement in case some misleading advertisements had been airing earlier.

Recommendations

1. First of all, the view that low income groups and teenagers with small budgets assigned to them have consistently made wrong food choices and therefore need to be educated and motivated to make healthier choices needs to change. This is because their food choices simply reflect the most cost minimizing way to purchase calories which many times overshoots the normal level of calorie intake needed to maintain ideal weight. Therefore, what is important is to devise methods to reduce the cost of low fat, protein and nutrient rich food products. This could be through Government subsidies on healthy food products or through imposition of a low maximum retail price at which they can be sold. Another way could be to increase the cost of unhealthy food products through a higher minimum price and through rationing, the exact specifics of which are beyond the scope of this research. While reduction in cost does not guarantee reduced consumption in the short run but will definitely change eating habits in the long run.
2. In the workplace, both exercise and diet should be internalised as a

part of the job especially in firms involving desk jobs. This could be done through providing facilities such as gymnasiums, table tennis etc. in the workplace instead of play-station centres and through changing the food menu of office canteens so that they only include healthy food items. In fact, this investment by firms may actually make insurance companies reduce their premiums as a reward to the investment. The break-even results could occur almost immediately with firms having to pay lesser premiums on one hand and insurance companies having to cover lesser expenses because of reduced health risks. As workplace decisions change, the costs facing the public health systems will also reduce thus lessening the burden on Government's current consumption and consequently on the taxpayers.

In fact, as per the Oxford Health Alliance⁵, an average return of \$3 could be expected for every \$1 invested in such programmes by firms. Here, the Government could play a major role by beginning with these programmes which encourage exercise and healthy diet at public sector offices so as to encourage the private sector to take up these programmes. In addition, if regulations can't be passed to make these programmes mandatory, recommendations could at least be issued to all firms from the Government.

3. However since a large proportion of obese people involve teenagers and young adults, stringent government regulations need to be passed which instead of prohibiting the sale of junk food in educational institutes, makes healthier food a more attractive option for teenagers and young adults through lesser cost. In addition, all schools, colleges etc. must compulsorily have a time dedicated to some form of exercise to inculcate a habit of regular exercise among the youth.
4. While policies to prevent misleading advertisements are crucial, efforts should be to educate and develop more critical judgement among media consumers. People must be taught to judge advertisements correctly. Moreover, a provision for corrective advertisement must be included in all laws and policies enacted to

⁵*Economic Consequences of Chronic Diseases and the Economic Rationale for Public and Private Intervention*. London: Oxford Health Alliance Working Group, 2015

prohibit misleading information from being propagated.

Conclusion

The damage and costs associated with obesity consists of increased healthcare costs, decreased productivity and premature deaths. One of the main causes of all major non-communicable diseases including diabetes, cardio-vascular diseases etc. is obesity. As a preventable health concern, reforms must be made to address obesity through education, media, employers etc. The research has demonstrated the various costs associated with obesity faced by individuals, employers and the economy. Before the costs of obesity become insurmountable, the issue must be confronted through government intervention for regulating the sale of unhealthy food products in ways which does not disrupt the effects of free markets but only corrects the market failure. To make real advances in terms of both better healthcare and increased economic growth, investments in preventive care rather than curative care is crucial. More research is needed on the efficacy of the recommendations provided and other effective methods to prevent obesity from becoming a matter of grave threat to public health and consequently the economy at large.

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Is it the Time to Rethink the Corporate Tax System of India?

Garima Tyagi

Objective

The objective of the paper is to find the answer to the question if some changes are required in the present corporate tax system of India by comparing it with that of other economies and to determine if the current corporate tax rate of India is too high or low. As many developed countries are opening up their economies to become the ideal business destination, it has become necessary for the developing countries to fix a competitive tax rate to expand their economy.

Abstract

Tax rate being the major source of income for most of the governments, the tax system of a country decides the economic position of the country to a great extent. If the tax system is not up to global standards, it might result in making the country financially weak and facing fiscal deficits. The tax system should be neutral and have the ability to deal with the corporate demand and the economic efficiency of the country. The paper discusses the trends in corporate tax system of India, the comparison with developed and developing countries and the indicator Tax to GDP ratio of some developing and developed countries to find out where India stands and if it is following the global trend to be competitive enough. As the countries are opening up their economies and making their country easy to do business in, it has become necessary for the developing countries to fix a competitive tax rate to expand their economy. The paper tries to analyze the current tax rate of India in comparison to other developing and developed countries.

Introduction

A corporate tax system is a tax levied on the profit of the firm, and different tax rates used for different levels of profit. Tax is the major source of income for the government and the taxation system decides to an extent how the country is doing financially. Indian taxation system has gone through many reforms and still stands far from the 'ideal tax system'. Critics argue that the losses incurred because of the current tax system far exceed the revenue raised. A taxation system which does not encourage the ease of doing business might slow down the growth of the economy. The burden of the tax falls not only on a corporation but on a common man too, who tries to maximize his profits by investing in shares, as a corporation is made up of individual investors. An unfit tax system makes the country lag behind in global competitiveness.

Types of Corporate Tax Rate

The corporate tax consists of three different rates,

1. National statutory rate: The amount of taxes imposed by the government that is within its statutory authority to regulate on the income, sales, capital gains etc is known as the National statutory rate.
2. Statutory combined rate: At the starting point for the tax collection, some companies combine the federal and provincial state rates.
3. Effective tax rate: It is the percentage of income actually paid by an individual or a company by taking in account all the loopholes, deductions, credits, preferential rates etc.

Data collection

The study is based on secondary data. The following sites have been used for collecting tax rates and the graphs are derived later from that data.

1. www.tradingeconomics.com
2. <https://www.oecd.org>

Trends in corporate tax system of India

Corporate tax rates of India are expected to come down in the coming 5 to 8 years. Besides strengthening the tax monitoring system, India also initiated indirect tax reform in 2017. The launch of the Goods and Services Tax (GST) in July, last year, replaced multiple indirect taxes. GST establishes a single and uniform market across India. It facilitates transparent business transactions. The tax is collected through value-added goods and services and on each step through the input credit mechanism (Tax credit mechanism).

According to a report by World bank in 2018, India has improved its rank in the metric of paying taxes to 119 from its previous rank 172, out of 190 countries. The tax rates for foreign companies are different from that of the domestic firms. Many facts come into consideration while deciding, like the agreement with the country to which the foreign company belongs.

India presently has a very complex tax structure with a lot of inequities, ambiguities, and distortions. While India has a statutory tax rate of 34.6%, the effective tax rates that Indian companies actually pay is 28%. The huge difference in the statutory and effective tax rate can't go unnoticed. The reason behind such a gulf is seen as the complex system that has a lot of exemptions which at the end is beneficial for the big firms and a loss for small firms. The big firms are able to make use of the loopholes and have a lower effective tax rate as compared to the small firms who can't afford to spend money in huge amounts to save taxes, and they end up paying a larger share of their income.

The burden of the tax is shared by the shareholders altogether, the corporate is like an invisible body paying the taxes. It actually affects the shareholders who aim to maximize their profit by investing money. The tax indirectly affects the life of an individual too. High tax rates increase unemployment too which weakens the economy as it's not able to perform to its efficiency and the lowers the living standard.

Comparison with developing and developed economies

Corporate tax rate of developing countries and India

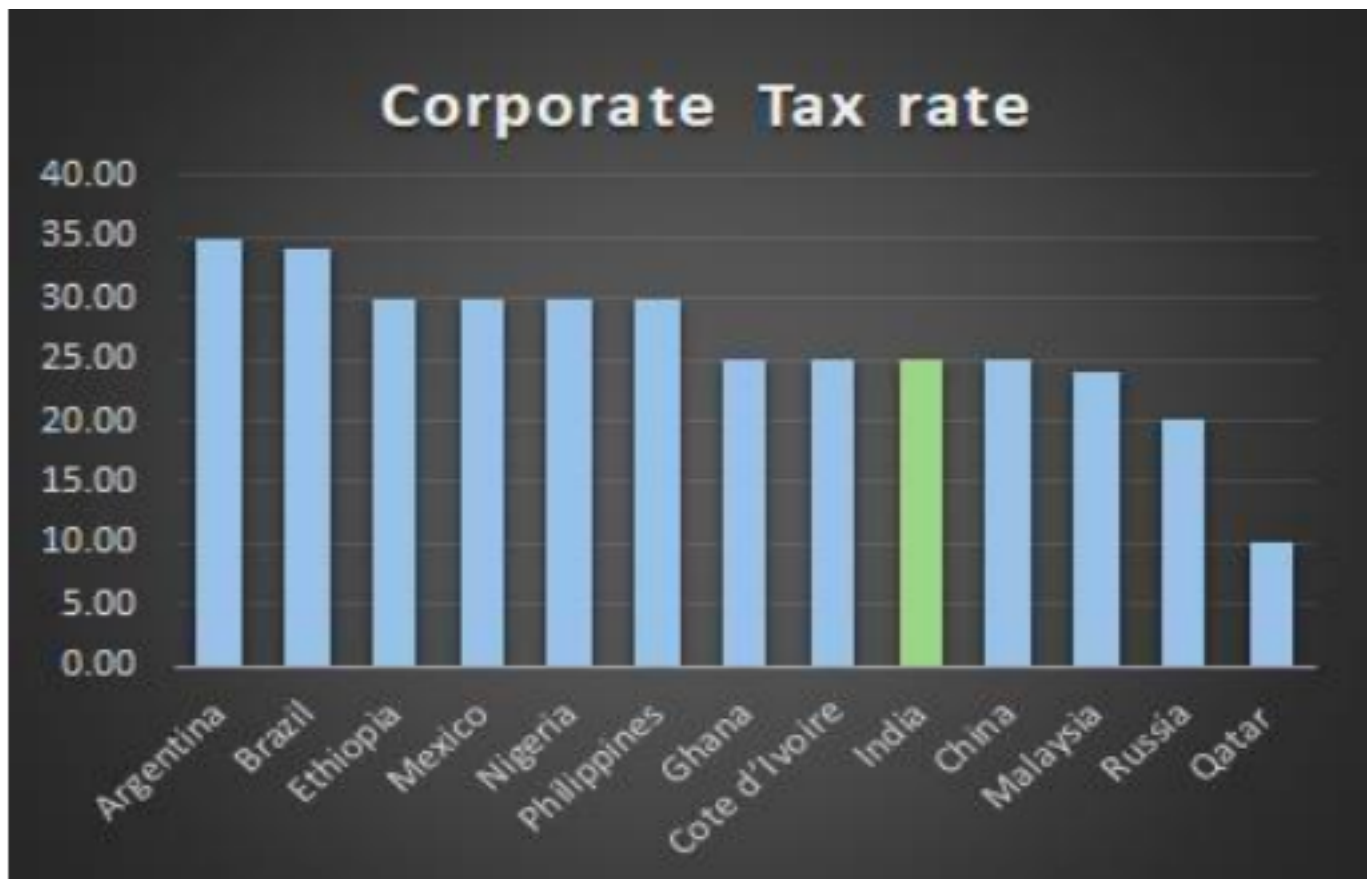


Figure 11: Data source: www.tradingeconomics.com

Argentina has the highest corporate tax rate followed by Brazil among the developing countries which we have taken for analysis. Qatar has the lowest corporate tax rate out of these countries at only 10%. This could be seen as an initiative to encourage business in the country. There is no corporate tax on the domestic companies in Qatar. Russia has the second lowest at 20%. India is among the countries with lower tax rate among these with a tax rate of 25 along with Ghana, Cote d'Ivoire, and China having the same tax rate. The average tax rate is of 26.37 of these countries. India has a lower tax rate than the average of these countries.

Post Soviet Russia changed the system and made it easier to pay tax then to try and

dodge it. Their revenue rose. It was not because of the Laffer Curve argument which says that faster economic growth leads to more tax revenue. Rather, it was that fewer people bothered to cheat. This successful example of tax reduction can be considered for the Indian tax system, as in India there is a huge difference between the statutory and effective tax rate,

Corporate tax rate of developed countries and India

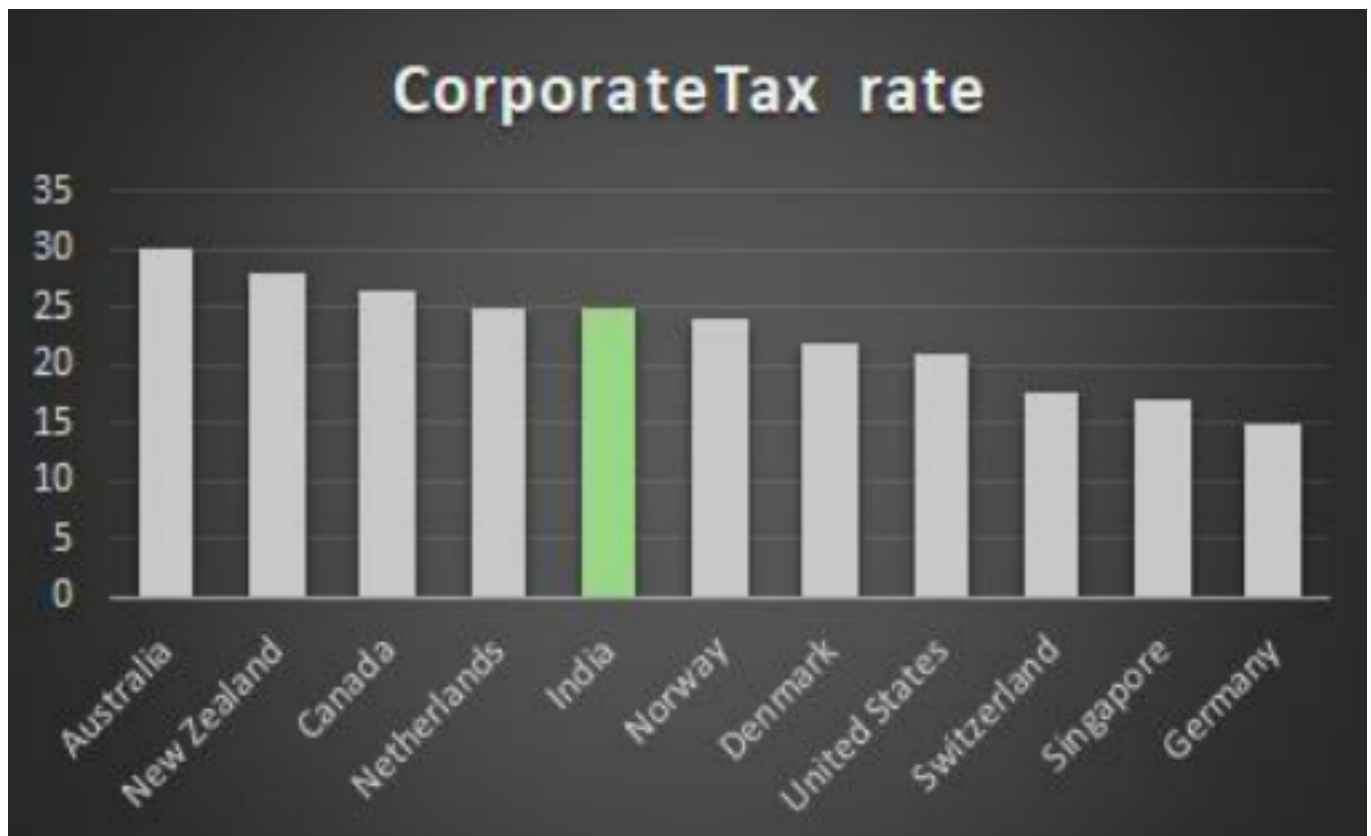


Figure 12: Data source: www.tradingeconomics.com

Among developed countries, Australia has the highest corporate tax at 30 and Germany has the lowest at 15. India lies somewhere in the middle of sharing the same tax rate as Canada. As it can be seen developed countries have comparatively fewer tax rates (Just according to the graph and not a conclusion). India has the 5th largest tax rate among these countries. An average tax rate is around 22.8 of these countries.

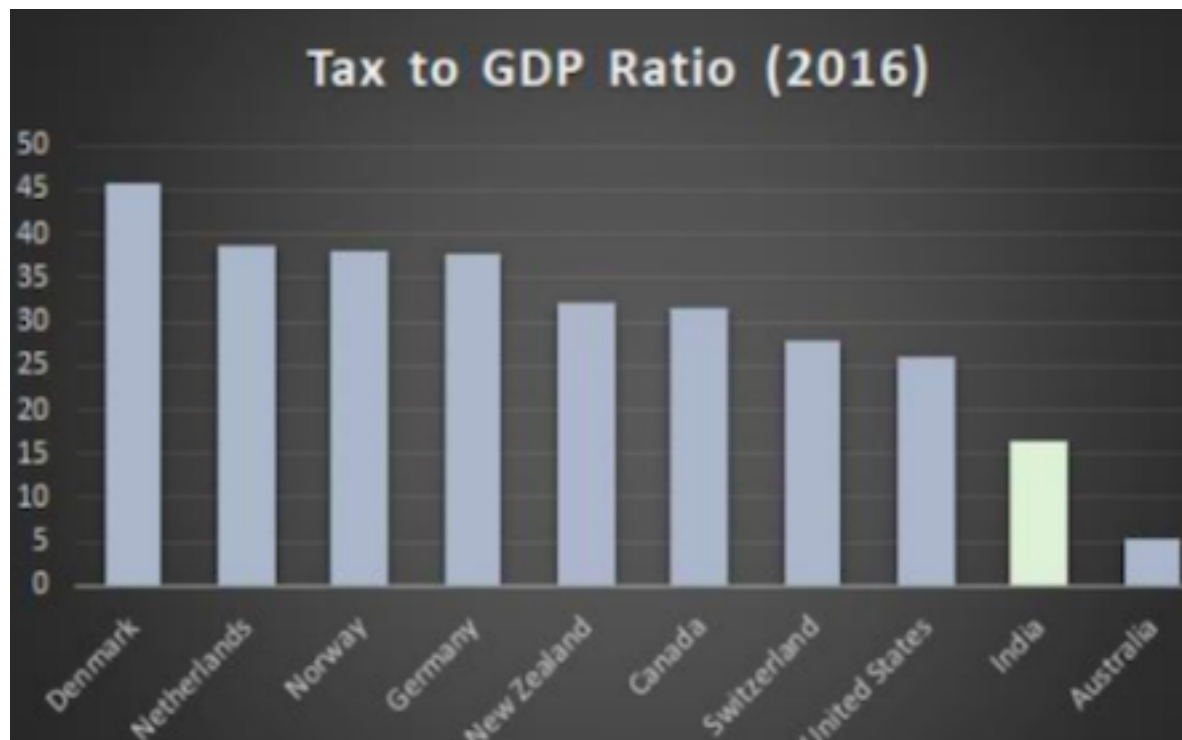
The idea behind the GOP tax plan of the US, which led to the fall in taxes from 35% to 21%, was that to increase employment, investment in the US and the growth of the economy. The step has been praised worldwide and is expected to bring a positive outcome. There has been a decline in Corporate Tax Rates worldwide in most of the developed countries. India is required to keep the pace and build a competitive tax system.

Tax to GDP Ratio

A tax to GDP Ratio can be understood as the contribution of the tax towards the GDP in simple terms. It is the ratio of tax collected to the gross domestic product(GDP). Some of the reasons behind low Tax to GDP ratio can be

- High tax evasions
- Unorganized Sector
- Loopholes in double tax avoidance treaties
- Tax exemption and subsidy policies

A low TGR implies that the proportion of tax is low in the GDP which is an issue of concern.



The tax to GDP Ratio of India is comparatively very less as compared to other developed nations. The average Tax to GDP Ratio of OECD countries has been 34.3%. Denmark has the highest proportion of tax on its GDP and Australia has the lowest proportion. From the above analysis, we know that Australia had a very high tax rate and Denmark had comparatively very low tax rate. India has the second lowest Tax to GDP Ratio among these countries. The tax rate in India was not an outlier, the countries having an almost same tax rate as that of India have much better Tax to GDP Ratio.

Conclusion

India has mixed tax competitiveness records in spite of a developing country trying to expand its economy. A tax reform will not only require a change in the current tax rates but also to fix the current loopholes and make tax laws easy. It will give a message in the corporate world that India is a good investment destination. All this will lead to the boost of the economy and will provide employment to the citizens. The United States has lowered its tax rates from 35% to 20%, introducing the idea to India. However India being a populated country, a very low tax rate might bring hindrances in the working of government as the tax is a major part of the income of the government. Not only this, it will start a race with other countries with them dropping their taxes and ending up to a 'Sad race to zero'. The country might lose jobs to the lower tax

economies in the case of high tax and the investment might decline as companies will choose other overseas destinations with the lower tax rate.

Developed countries are reducing and restructuring their tax rates to expand their economy and increase employment. Over the years there has been a fall in the tax rates of the developed countries to stand in the race of becoming the investment destination in the global economy. India is a developing country and is in urgency to expand its economy with unemployment being a major social issue in India and the number of job seekers constantly rising with time, it's necessary for the Indian government to not take any step which just adds to the problem. However, rolling out a completely new corporate tax system will not be feasible and will take our time and resources which makes it a tough decision to make. In a speech, the finance minister of India himself showed the concern regarding the tax rates of India and the need to make them corporate friendly. India holds a very low Tax to GDP Ratio and this gives rise to a major concern. The tax rate in India is neither too high, nor too low at present, despite this the low Tax to GDP Ratio flames the debate regarding the restructuring of the Corporate Tax System of India.

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Is Economic Singularity near?

Impact of Automation on Labour Markets

Shraddha Nayak

Abstract

With the rise in automation and artificial intelligence there has been a growing concern about distribution of income between labour and capital. Rapid growth in technological innovation has brought automation to different aspects of production processes and is soon expected to reach a point, termed as ‘singularity’ where labor will become economically superfluous in the sense that it will contribute nothing to global economic growth. This paper widely discusses the prospects of such a situation on the labor market.

Keywords: automation, income distribution, economic singularity, economic growth

JEL Classification: D33

Introduction

Singularity originally is a mathematical term defining a point where certain values of an equation tend to infinity, causing the equation to have no solution and reach infinitesimal. The concept of ‘economic singularity’ describes a situation where the labour time required to produce commodities will rapidly tend towards zero, due to full automation. It also introduces a situation where machines not just automate existing tasks performed by the workers but also start creating new tasks which were previously the job of humans as they require cognitive abilities and intelligence.

Artificial intelligence (A.I.) is an ideal example of such labour replacing technological change, as when deployed in the ordinary production of goods and services, it will potentially impact economic growth and income shares. A.I. may also help in solving more complex problems which require scaling creative effort and change the process by which we create new ideas and technologies. In extreme cases, some researchers have argued that A.I. can become rapidly self-improving, leading to “singularities” that feature unbounded machine intelligence and/or unbounded economic growth in finite time. Mathematician Irving Good (1965) described this situation as follows:

“Let an ultraintelligent machine be defined as a machine that can far surpass all the intellectual activities of any man however clever. Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an “intelligence explosion,” and the intelligence of man would be left far behind. Thus the first ultraintelligent machine is the last invention that man need ever make.”

In this brief passage the idea is centered on ever accelerating progress of technology which will cross a point ‘singularity’ after which productivity develops at a pace too rapid for the labor to keep up and therefore requires zero human intervention.

Historical perspective on Automation and Employment

The concern of unemployment due to technological change is not a recent phenomena. Economist Joseph Schumpeter in his book *Capitalism, Socialism and Democracy* (1942), introduced the idea of ‘creative destruction’, how technological innovation creates enormous wealth, but also undesired labour market disruptions. History confirms Schumpeter’s thesis that there will always be winners and losers from technological advancements in the market. This idea can be ideally illustrated by the example of ‘Luddites’ in England. Skilled knitters in England saw their jobs were threatened by the spread of machines that could produce textiles at a lower cost and therefore started responding with violent revolts. The British parliament unrelentingly sent troops to suppress the Luddite riots and stationed 12,000 men against the rioters (Mantoux, 2006, p. 403-8).

It has been argued that despite the concerns over the mechanisation of employment, unskilled workers have hugely benefited from the Industrial Revolution. Clark (2008) finds that real wages over the period 1760 to 1860 rose faster than GDP per capita. Real wages nearly doubled between 1820 and 1850, according to the evidence provided by Lindert and Williamson (1983). On the other hand, Feinstein (1998) finds a much more moderate increase, with average working-class living standards improving by less than 15 percent between 1770 and 1870. Finally, Allen (2009) finds that over the first half of the nineteenth century, the real wage stagnated while output per worker expanded. After the mid nineteenth century, however, real wages began to grow in line with productivity. These theories may deduce that not only were capital owners were gainers of the Industrial Revolution but at the the same time the average living standards of unskilled workers largely improved.

Manufacturing technologies of nineteenth century were mainly “deskilling” – i.e. they substituted for skills through the simplification of tasks. Work that had previously been performed by artisans was now decomposed into smaller, highly specialised sequences, requiring less skill, but more workers, to perform (Braverman, 1974). Key innovations in manufacturing sector emerged, in particular the adoption of the assembly line created vast employment opportunities for low-skilled workers and enabled corporations such as the Ford Motor Company to manufacture the Model-T at a sufficiently low price for it to become the people’s vehicle. In the past, workers adapted by making their skills complementary to the arrival of new technologies. Despite an increasing amount of automation being added humans were still required to work, and there was little or no substitution of labor with capital. Therefore, innovations benefitted ordinary people both as producers and consumers.

Automation in the 21st Century

How automation is different this time? In the 21st century, automation has brought undeniable benefits to consumers, but its impact on the employment has arguably been more troublesome than anything seen in the past. The substitution properties between technologically advanced capital input and conventional input such as labor depends upon the following insight: If technological inputs and conventional inputs like labor are elastic substitutes in production, then growth in automation will displace workers and lead to technological unemployment while if they are inelastic substitutes, then rapid improvements in automation will be irrelevant to the economy. The nature of innovation or technological advancement in this age has changed and is causing more disruptions in labour market than previous technological revolutions as it is fundamentally changing the substitutional properties between labor and technologically advanced capital input from inelastic to elastic.

Technology in this age is enabling the automation of tasks that once quintessentially belonged to humans, like cognitive tasks and non-routine judgments, through technologies like artificial intelligence and superintelligent computers. These advancements in technology have helped the consumers, as the general value of commodities has fallen but have adversely affected workers. Many countries have witnessed significant declines in labour's share of GDP caused by the decrease in the relative price of investment goods, which in turn is driven by advances in computer-driven technologies, leading companies to substitute labour for capital in production

In his book *Capital in the Twenty-first Century*, Thomas Piketty argues that labour's share of GDP tends to fall when the rate of return on capital is greater than the rate of economic growth. As a result, a wealth gap will emerge between owners of capital and those who rely on their labour. As we saw in the above section in the past, technological enhancements brought a rise in productivity and real wages but the nature of innovation has changed now. Although technology can raise productivity and boost wages, it can also take the form of capital that substitutes for labour. In that case, productivity growth will simply enhance capital's share of income, and thus lead to concentration of wealth with the capital owners which is precisely the current situation. The view that a widening gap between productivity and pay is due to increased usage of labour-substituting capital is favoured by Erik Brynjolfsson and Andrew McAfee(2014), arguing that the reason why wages have failed to keep pace with productivity is that ordinary workers are unable to adapt to an ever increasing pace of technological change and therefore as their skills are getting obsolete they are being replaced.

This macroeconomic concern of rise in automation and artificial intelligence displacing labour and therefore creating a situation of mass unemployment leading to abundance of leisure has been far realised by J.M. Keynes in his essay, "The Economic Prospects for Our Grandchildren" (1930). He wrote:

"Suppose that a hundred years hence we are eight times better off than today. Assuming no important wars and no important increase in population, the economic problem may be solved. This means that the economic problem is not—if we look into the future—the permanent

problem of the human race. . . .Must we not expect a general “nervous breakdown”? Thus for the first time since his creation man will be faced with his real, his permanent problem—how to use his freedom from pressing economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably and well.”

In his essay, Keynes predicted widespread technological unemployment as a result of mankind failing to find sufficient new uses for its labour as machines replace workers in old occupations and industries.

Macroeconomic Concerns

As different occupational classifications exist across countries it is difficult to conduct meaningful direct comparisons. Nevertheless, several studies have estimated the proportion of jobs at risk to automation in next two decades. These studies follow two different methodologies, one task based approach and another occupation based approach. This paper focuses on occupation based approach. The occupation based approach was first applied by Frey and Osborne (2013), where they classified 702 occupations by how susceptible they are to automation. They examined, 47% of the US workforce is at risk of automation over the next 10 to 20 years. Recent data from the World Bank suggests the risks are higher in many other countries for instance, China 77% and India 69%. Adopting similar methodologies, Bowles (2014), Chang and Huynh (2016), World Bank (2016), and Ng (2017) find that in the European Union, and particularly in developing countries, an even higher share of jobs is at high risk of automation in the next decades. Bowles (2014) estimates that 54 per cent of all jobs are at risk; for the five ASEAN countries, Chang and Huynh (2016) find that 56 per cent of total employment is at risk; and for Malaysia, Ng (2017) estimates that 54 per cent of all jobs are at risk. International Labor Organization (ILO) provides unwavering data on the responsiveness of automation in different countries they find that 54% of EU jobs are at risk of automation, spanning 35% in UK, 37% of jobs in Finland, 51% in Germany 47% in Sweden and 62% in Romania.

It is clear from the above data that differences across countries exist but there is unison on the sectors and types of workers that are most at risk. The employment share risk varies substantially across a wide range of sectors. The U.S. Bureau of Labor Statistics (BLS) compiles future employment projections. The agency in its most recent analysis forecasts that the information sector is anticipated to shrink in jobs. Manufacturing is another sector expected to lose jobs. Sectors exposed to low automation risk are education and training; human health and social work; and agriculture, forestry and fishing. Although, we know that fields such as health care and education have been slow to embrace the technology revolution, they are now starting to embrace new models.

Analysing the types of workers getting affected by automation suggests that in both developed and developing countries, workers with low and medium levels of education face greater risks of job automation (McKinsey Global Institute 2017), given that they make up the bulk of the workforce in the sectors that are potentially most affected. Skills and competencies like creative and social intelligence are developed through higher education, and these skills then help to perform complex level of cognitive tasks which are difficult to automate. Empirical evidence also support this claim, in a study of the speed of automation and its effects on manufacturing employment in OECD countries, Graetz and Michaels (2015) find that the increasing use of robots between 1993 and 2007 was analogous with a scaling down in the

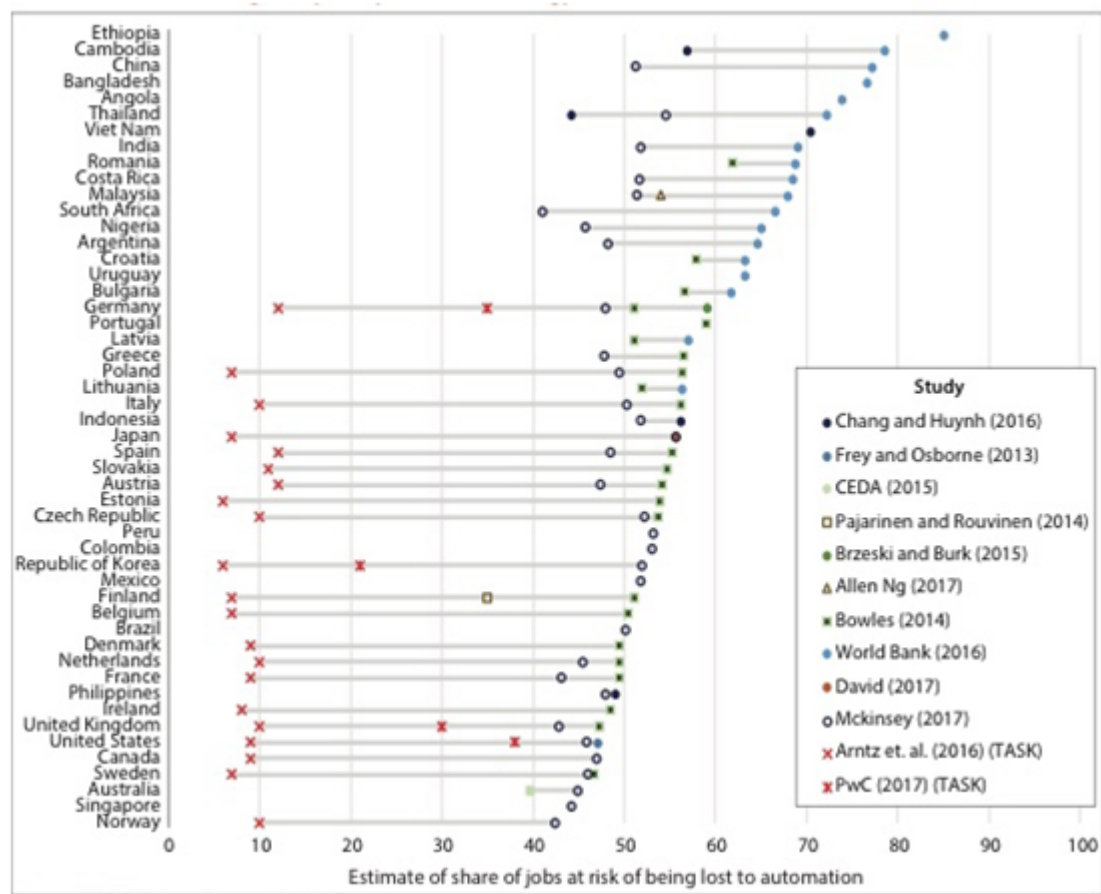


Figure 13: Range of estimates of the share of jobs at risk being lost due to automation, study and methodology
Source: UN/DESA, based on various studies

numbers of hours worked by low and middle-skilled workers, whereas high-skilled workers were not affected. A study conducted by Bruegel examined a strong negative correlation between a country's GDP per capita and the share of their workforce at risk of automation. Suggesting that, developing countries are likely to find a larger share of their jobs at risk, as lower wages keep many jobs that are possible to automate from being displaced.

Technological progress has two opposing effects on employment, one destruction effect as it substitutes for labour, requiring workers to reallocate their labour, while another the capitalisation effect, where new occupations and industries are created as the demand for other goods and services increase. This demand for goods and services was created by increase in the real income which in turn was a result of an increase in efficiency of production and lowering of prices, brought on due to automation. However this is a superficial or simplistic way of looking at the influence of automation on labor market today. Hod Lipson an engineer from Cornell University claims that “for a long time the common understanding was that technology was destroying jobs but also creating new and better ones. Now the evidence is that technology is destroying jobs and indeed creating new and better ones but also fewer ones”. According to studies, the number of new jobs created from the arrival of new technologies throughout the 2000s has been distinctively minor. These have largely been limited to skilled workers. Cities and nations with a large pool of skilled workers have thus benefited disproportionately from recent technological change. In his book, “The Lights in the Tunnel”, Martin Ford publishes a hefty warning “as technology accelerates, machine automation may ultimately penetrate the economy to the extent that wages no longer provide the bulk of consumers with adequate discretionary income and confidence in the future. If this issue is not addressed, the result will be a downward economic spiral”.

Conclusion and the way forward

So, the conclusion as of today is that ‘the economic singularity is not near for another century or so’ given that technological progress encompasses just routine tasks that are easy to automate but not non routine tasks like cognitive or manual skills that are less or not easily programmed. Keynes prediction of a world of leisure may prove correct if consequences of technological advancements on labor market are left unchecked.

Government and International organisations like United Nations should not adopt passive policy stance as public policy. Proactive policies are needed to better address the consequences of technological advancements, by playing a crucial role in determining the degree of diffusion of automation in the market and controlling the effects of it. Policies are needed to redistribute income, as technological changes distort income distribution. It is important to recognise the bottlenecks to automation, like perception and manipulation, creative intelligence, social intelligence and work on developing skills associated to them in order to protect against jobs being eliminated due to automation. Policymakers need to leverage education as a very important tool in preparation for the effects of accelerated technological change.

Famous author Elbert Hubbard said “One machine can do the work of fifty ordinary men, No machine can do the work of one extraordinary man.” With technology accelerating at an exponential rate Hubbard may be wrong. We need to be exceptional for technology to not cease our livelihood.

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Recent Developments in Indian Telecom Sector

Avleen Kaur

Abstract

Developing economies like India, which tend to offer comparatively higher growth than the developed economies, have gained popularity among investors as lucrative investment destinations for foreign institutional investors (FIIs). Investors are positive on India and sentiments are promising, following the current government's announcement of a series of reform measures in recent months which transformed its face, especially demonetisation. It has been observed that FIIs took their money out under the conditions of volatility in the Indian stock market, while on the other hand, it impacts the behavior of the DIIs in India. So this paper focuses on the behavioral aspects of FIIs and DIIs in order to study the relationship between the two.

The aim of this study is to find out whether there exists any significant relation between the Indian stock market (NSE-CNX NIFTY) and FII. We have used correlation to find out the extent of relationship between the two variables and to validate the impact of FIIs on Indian Stock Market.

Introduction

Institutional Investors are those organizations which collect large funds and then invest those in securities, financial, real estate & other investment assets. Institutional Investors are the most influential players in the stock market of any country because of their money power and the crucial role they play in the movement of stock indexes. Generally it has been observed that when institutional investors buy heavily the stock market goes up and when they sell it goes down. Mutual Funds, Pension Funds, Hedge Funds, Banks, Insurance Companies, Investment Banks etc. are referred to as Institutional Investors. These are further divided into two parts a) Domestic Institutional Investors (DIIs) and b) Foreign Institutional Investors (FIIs). DIIs invest in their home country where they are based while FIIs invest in countries other than their base country.

Rationale of the study

Telecommunication has always been a dynamic sector exposed to a vast variety of changes in terms of entry and exit of firms, innovations in technology, mergers and acquisitions, government policy changes, fluctuation in tariffs etc. This sector is of strategic importance to the Indian economy as new technologies create new communication options and telecommunications can reduce the information and transaction costs in the economy. Also, inadequate regulations could dampen the investment and innovation in the sector.

Presence of this dynamic component in the nature of the telecom sector makes the study of various ongoing processes vital for realizing the overall growth of this sector and hence its

impact on the economy. Price wars, mergers, sell offs, corporate acquisitions, regulator-operator tiffs, law suits and job cuts- these are some of the major developments that roiled the telecom sector in the past financial year. The turmoil in the telecom sector has offered a number of examples to cover everything from human resources and industrial relations to strategy, marketing and business models.

Objectives of the study

- The main aim of this study is to analyse the wide variety of factors influencing the state of affairs in the Indian telecom sector in 2016-17. A close observation is made for each and every activity resulting in fluctuation of revenues as well as valuation of major telecommunication giants such as Airtel, Vodafone and Idea.
- The story of Indian Telecom Sector during this period is one where companies concentrated on premium subscribers and then, when a new entrant with freebies entered, scrambled to sign up everyone, is being detailed and explained.
- Jio, since its launch in September, managed to get 100 million-plus users and more than 72 million of them have signed up for its paid services. Our motive here is to infer how to cope in a sector where the dynamics are constantly changing with advancement in technology and new offerings by companies.

Tracing the developments of the past

- With the announcement of the New Economic Policy in July 1991, the telecom sector was declared open to the private sector.
- The National Telecom Policy, 1994 adopted by the Government aims at improving India's competitiveness in the global market and rapid growth of exports coupled with its focus on attracting foreign direct investment and stimulating domestic investment. Telecommunication services of world class quality were necessary for the success of this policy. It defined certain important objectives, including availability of telephone on demand, provision of world class services at reasonable prices, ensuring India's emergence as major manufacturing/export base of telecom equipment and universal availability of basic telecom services to all villages.
- The entry of private players in the sector necessitated the need for regulation. As a result, the Telecom Regulatory Authority of India (TRAI) was established in 1997 to regulate telecom services. TRAI has been instrumental in issuing a large number of regulations from time to time thus, transforming the age old, government owned monopolistic telecom market into a multi-operator, open and competitive market.
- Thereafter, the New Telecom Policy was declared in the year 1999 which laid down a clear road map for future reforms by opening up all the sectors in telecommunications to private players.
- In recent years, various policy initiatives and developments have given a boost to the telecom sector. The announcement of 'Digital India' program in the first 100 days of the government in 2014 came as a breath of fresh air for an ailing sector. Telecom companies embraced the initiative and committed in excess of INR 4 trillion to further

this growth agenda. The underlying commitment was towards strengthening network infrastructure, enhancing mobile broadband connectivity and providing next generation services and applications.

- This was followed by Government's decision to develop 100 smart cities across India that continues to draw both international and domestic interest. The following section describes some of the major changes in the recent years.

Technological developments The growth of telecom sector has also been fuelled by the launch of newer telecom technologies like 4G, and emergence of cloud technologies. Efforts are continuously being made to develop affordable technology for masses and reinvigorate the maturing urban markets and help in bringing balanced growth of economy.

Declining tariff A large number of options have been made available to the subscribers to choose from the market depending upon their usage profile. The telephone tariffs have declined dramatically over the years making the mobile telephone affordable to the common man. All this has resulted in increased competition among the various market players. The stiff competition amongst players has further reduced the tariffs.

Changing customer demands Mobile telecommunication technology is rapidly evolving with people demanding mobile services with longer bandwidth and new innovative services like seamless connectivity, 3G and 4G.

Telecom equipment manufacturing The astounding growth of the telecom sector has led to the development of the telecom equipment manufacturing and other supporting industries.

Mobile Number Portability (MNP) MNP services were launched in the year 2011 which allowed subscribers to retain their existing mobile telephone number even they switch from one service provider to another, irrespective of mobile technology. Implementation of this technology has not only benefitted the subscribers by offering them a wide range of choices but has also prompted service providers to offer innovative, affordable, and competitive tariff plans for the benefit of the subscribers (TRAI).

Competition Deregulation, declining tariff, opening up of the sector to foreign investments, lowering of prices, increased efficiency, greater innovation, better quality services, changing customer demands and last but not the least technological developments has led to increased competition among the telecom service providers.

Review of Literature

Article 1- Singhal, Prashant. "An Overview of Indian Telecom Industry in 2016 and Outlook for 2017" The Economic Times (2016)

Review: This article presents an overview of the timeline of growth of data usage and its significance over time. The author begins with highlighting the relevance of 2016 in terms of profitability, pressure, hyper competition, spectrum trading and price war in the telecom sector. Right from the auction of spectrum in August 2016, the article draws attention to every single landmark achieved in the telecom sector. 2016 saw a new player in the market with aggressive tariff policies involving free voice calls and free/low cost data due to which, all the rivals too engaged themselves in price war involving 4G data and because of further competition, companies are reducing price and benefitting consumers. Thus, the once

traditional, voice driven Indian telecom market's focal point shifted to data. India is highlighted as the second largest smartphone market in terms of volume and with average cost of handset declining, we can expect further increase in data usage. Also, in accordance with same, average data consumption per consumer is rising. This also gives rise to mobile banking, digital payments and growth of other parallel industries.

Article 2- "Indian Telecommunications Industry Report" India Brand Equity Foundation (December, 2018)

Review: this article analyses the impact and influence of mobile tariffs on the telecom sector. 2016 witnessed innovative tariffs due to entry of new players. The standard pattern being unlimited voice calls and tiered data for fixed plans, the entry level plans are as low as INR 145, providing services close to Average Revenue per User (ARPU). Also, we could effectively observe the price per GB of data declining. This is going to affect mobile data revenue growth in short term. This lower tariffs are however not sustainable in long run due to high spectrum fees and infrastructural requirements. It is going to affect the profitability and stability and lead to consolidation. With potentially zero revenue from voice which was approximately 65% of total circle revenue in FY16, it is likely to be the worst hit for Telecom. Other costs like customer acquisition costs could increase due to hyper competition. The profitability is going to remain subdued and telecom will be relying on data volume growth.

Article 3- "Telecom Sector set for an Action Packed 2017". The Economic Times (2016)

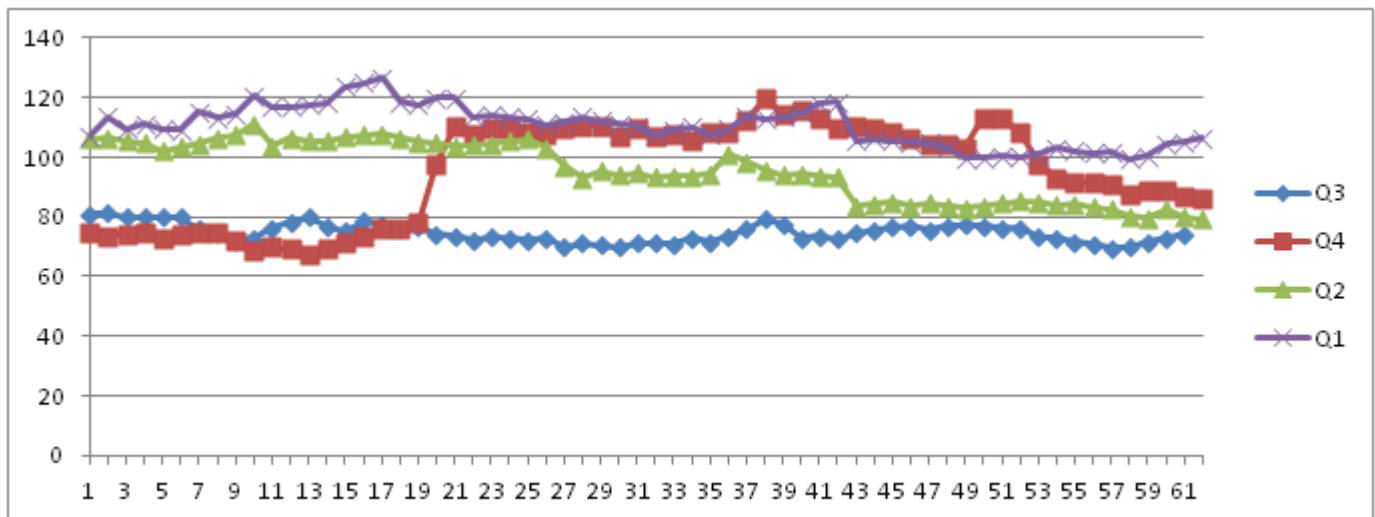
Review: The article talks about various highlights expected in 2017 due to developments like lowered data tariffs, free voice calls and entry of Reliance Jio in the market in FY16. Revenues have also taken a hit due to TRAI's decision on freebies and differential price policy of Facebook free basics and telecom sector. However it has actually had a positive impact in making data affordable and accessible for all. This year also witnessed Department of Telecom's attempt to check call drops and service quality through review meetings and drive tests. The year also saw improved affordability of handsets and data with improved network coverage pushing India to become the second largest smartphone market overtaking US. Demonetisation and digital India have also added to adoption of mobile wallets as a parallel sector. Improved telecom infrastructure is also a catalyst to overall growth and efficiency.

Article 4- <https://www.ibef.org/sector/telecommunications.aspx>

Review: In this article, author wants to show the clear picture of wireless and wireline network in urban and rural India. Where clearly wireless segment has approximately 97.62 per cent of total telephone subscription, 2.4 per cent is the share of wireline segment. Urban area dominated with 57.6 per cent share in overall subscription and rural accounted to 43.4 per cent. India's teledensity was at 83.36 per cent. Even Foreign Direct Investment in Telecommunication Sector has been increased to 100 per cent from 74 per cent.

Research Methodology

A fixed set of data has been used for the purpose of studying the impacts of actions of rival firms and the disruptive new entrant. The share prices of three major players namely Airtel, Idea and Vodafone have been taken into consideration and a detailed analysis has been carried out with reference to their quarterly closing prices. This particular data set was chosen keeping in mind that stock prices reflect the market's perception of the company in terms of its performance, management, profits and/or losses. The time period of study is financial year



2016-17 which is the prime matter of study because of the dynamic and hyper-competitive character that this sector adopted during this time.

Analysis

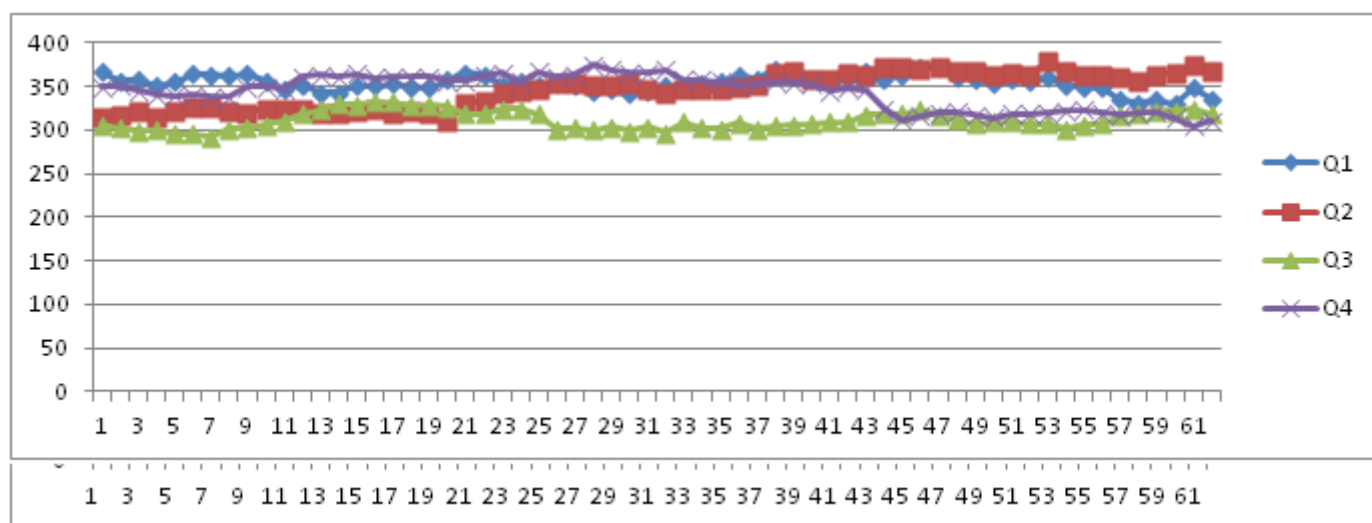
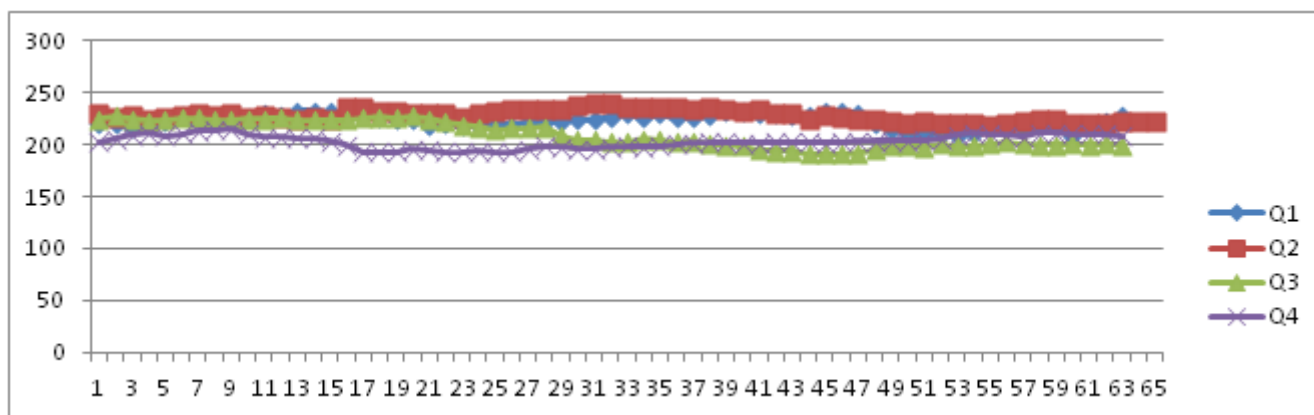
Idea

X axis- Week no. Y axis- Share Price (in Rs.)

There has been a drastic change in the last four quarters in the telecom market. Idea Cellular, a major player, witnessed a roller-coaster ride after the launch of Reliance group's largest investment in the telecom market, named as Reliance JIO. As we are aware that the share market functions on predictions, assumptions and mostly rumors, straight after the announcement of Jio's freebie offer to be extended from LYF to LG phones and finally to all 4G volte enabled phones, the share prices of idea cellular have seen a catastrophic fall as can be observed in the diagrammatical representation. Aditya Birla Group's telecom major faced a severe price crisis during quarter III when JIO was launched and maintained almost the same spot for a long time. In the beginning of quarter IV, the company managed to grow at the same pace. Even after providing huge discounts and benefits to the customers in the era of cut-throat competition, the sales were now growing until the magic of rumors raised in the share market. Rumors were heard of country's biggest telecom collaboration between Idea and Vodafone. After this announcement, company's shares soared a little but ended the year in dismay.

Vodafone

X axis- Week no. Y axis- Share Price (in Rs.) 2016 was a turbulent year for one of the most vibrant sectors of the country, the telecom sector which saw a great deal of shock and emergence of a new theory in oligopoly market. Where most of the companies saw huge ups and downs, Vodafone was able to stabilize their functionalities. As we can clearly see that all the four quarters haven't seen much of fluctuations, with price of the shares remaining between 200 and 250. One of the major reasons for this is that Vodafone India is not a listed

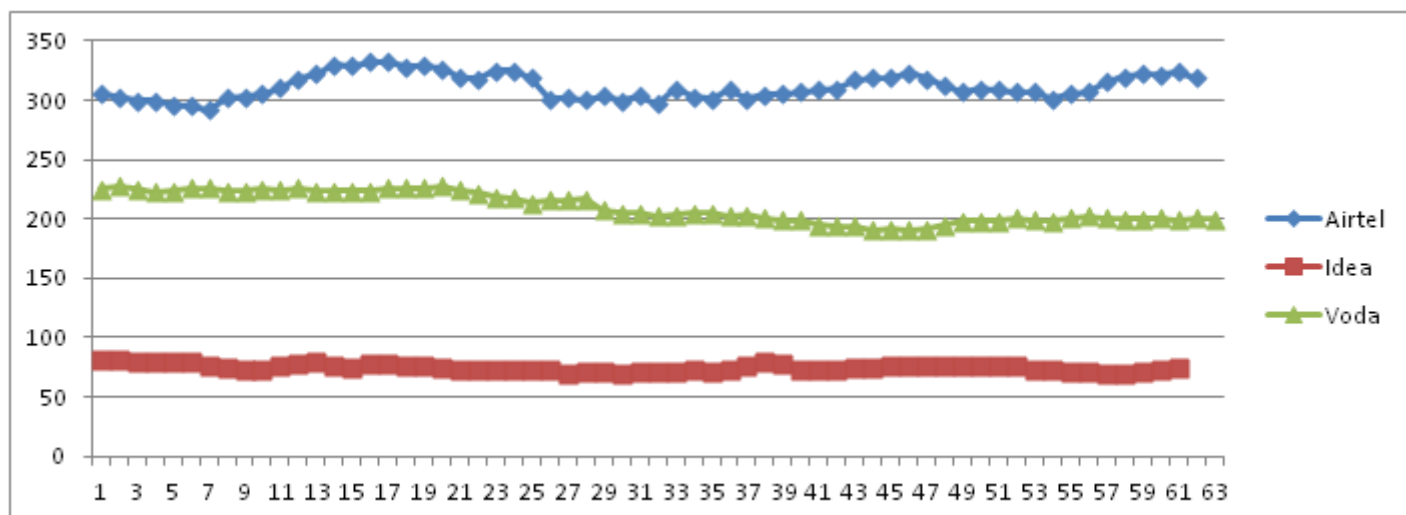


company and only the Vodafone group's shares are traded in India. Vodafone is a global company with a number of subsidiaries under it. That's why one can see more or less stable graph of Vodafone's shares in FY17.

Airtel

X axis- Week no. Y axis-Share Price (in Rs.) India's biggest telecom giant since last many years has been facing serious crunches during this period. Bharti Airtel is known for providing quality communication to their customers. They have been ruling the market by the virtue of consumer centric services. In quarter one itself Airtel's shares started dwindling with fluctuation from 360 per share to ending at approximately 330 per share. The prime reason for the same could be that Airtel's net profit was reported at INR 7,546.50cr for FY16 as opposed to 13,200.50cr at the end of FY15. Earnings per share also slipped to 18.88 from 33.02 in the last financial. Little uptrend could be observed in quarter two as the market stabilized.

But as soon as Reliance Jio hit the market, Airtel's prices fell by up to 50 points. Soon thereafter, Airtel indulged itself into price war and concessional benefits instead of quality centered approach, with sole motive to capture the entire consumer base possible in the crisis period of freebies by Jio. Again by the fourth quarter, Airtel saw its prices falling from 350 to about 310 due to the air of competition, price war and rumored merger of Idea cellular and Vodafone India to form the country's biggest operator.



Quarter 3 Comparison

Quarter 3 of financial year 2016-17 could be called a historic quarter as it has seen a huge transformation, schemes, offers, disturbances and interventions, including that of government in the economy. We saw launching of revolutionary Jio to enter the telecom market; Telecom Regulatory Authority of India took some big and efficient decisions with regard to spectrum bonds and policies related to oligopoly. International disturbances and results of most awaited polls of elected president of the United States and most importantly the government of India's banning INR 500 and 1000 as legal tender. This quarter must have been the most vibrant one in the history. Hence, telecom market was affected as well. In this quarter telecom giant Airtel saw huge fluctuations but still at the end Airtel topped the charts as compared to other giants of the market. The three majors also saw a steep fall in the subscriber base and market share.

Results and Conclusions

Price war is the main strategy adopted by the major giants in order to resolve the competition pressure in the sector. But we also need to look at the fact that price war is only a short term solution for the problem and is actually disguised long term damage to the entire sector. The flourishing telecom market is extremely competitive. Operators are constantly offering new promotions, offers, freebies, enticements, and other marketing "hooks" to attract new customers and capture share from competitors. Advertisements across media are being used to target each other. As the major differences between the various products and services available on the market decrease, operators unavoidably start to reduce their prices. This is precisely how a price war begins. While these wars can initially alleviate the pressure on targets and quotas, ultimately, they leave both the aggressor operator and the market considerably worse off. Operators should hence, try to prevent a price war.

In its initial phase, price wars appear to offer positive results. The ramifications, however, run much deeper. "Price wars promise much at the outset, but yield little in the end: at first, gross additions strongly jump as customers shift to another operator. Soon after, the 'winner's' network capacity is tested as traffic rises and the quality level decreases. In consequence, 'losers' have to redouble media expenditure and offer incentives to lure their customers back. This, in turn, forces the 'winner' to follow suit and spend more to survive," said David Tusa.

A study of six developed and emerging markets during price wars – spanning Asia, the Middle East, and Europe – demonstrates that the net effect is a substantial loss in market value.

Low tariffs could lead to unsavoury consequences for companies but benefits for consumers. Sectors like banking and insurance, too, could benefit as lower tariffs mean higher profits for those who heavily depend on the service to market and deliver their own products and services. The entry of Reliance Jio Infocomm has shaken up the telecom sector that had three dominant players — Bharti Airtel, Idea Cellular and Vodafone India. Jio's free offers that lasted for six months led to the sector's worst price wars. The aftermath was falling revenues and profits for the companies, debt upwards of 4.80 lakh crore and a wave of consolidation.

For a sector seeing double-digit revenue growth over recent years, FY16 marked a reversal. At Rs 2 lakh crore, the sector grew by 6%; it was nearly double this in FY11-15. Revenue growth for September was only 4.30% over the year-ago period.

What is hurting the sector, riding high on strong voice growth and robust subscriber addition, is intense competition over the past 18 months. What has aggravated this is the entry of Reliance Jio (RJio), offering free voice and data services, from September. Despite reduction in the number of operators in the recent mergers of Reliance Communications-Airtel and Airtel acquiring spectrum from Videocon, competitive intensity remains high.

Amid all this, the top three have consolidated their market shares and now account for 75% of the overall revenue pie. The September quarter number is up 200 basis points (bps) over the year-before period.

As the fluctuations in the sector are assessed, we arrive at the question “How to retain existing customers and acquire new ones aggressively and how to respond to specific strategies used to counter the latest entrant?” The unruly new entrant in the FY17 hit the market with a variety of innovative tariffs especially focusing in rock bottom data prices and free voice calls for lifetime. Due to this aggressive pricing policy, the consumer base of rival firms was massively disturbed and they gradually began losing numbers. In order to retain the existing customers and compete for acquiring the new ones, the firms engaged themselves in price war involving lowering of tariffs to the competitive market prices and specific strategies similar to those of the newbie. For example, the minimum packaged 4G data plan was kept as low as averagely INR 145 including free voice calls.

The RJio launch has had a twin impact. It has forced incumbent operators to price their products aggressively to retain subscribers. Bharti, Vodafone and Idea recently launched unlimited voice plans, bundled with data. Bharti's move, according to HSBC analysts, highlights that it is willing to re-adjust to a lower Arpu (average revenue per user) to retain subscribers. Also, with this move, it is attempting to drive utilisation of fourth-generation technology (4G) services. However, the aggressive pricing has not led to a significant uptick in volumes. The key risk for the top three (Bharti, Idea and Vodafone), feel analysts, is further deceleration of data volumes. RJio alone accounts for 80% of sector data volume.

The big question is, whether the past six months would have shaped differently if, instead of price wars, telcos waged a battle on better product offerings.

COMPETITIVE PRESSURES WEIGH ON GROWTH



A FRAMEWORK FOR RESPONDING TO LOW-COST RIVALS

When a low-cost player enters your industry:



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In conversation with :

INDIRA RAJARAMAN



In Conversation With:

Indira Rajaraman

Q1. In a keynote lecture, you mentioned that democracy is one of the major strengths of any country's economy and especially for India. Why do you think so?

Ans. India is an incredibly diverse country in all conceivable aspects. It is a collection of different types of people. In the electoral sense, it is extremely important that people have a chance to change their representation in Parliament. They don't have a right to do anything else, so it is important that they have this basic freedom. For if there were no democracy, a part of the country would feel misrepresented and would have no way to express its displeasure against the government other than by being violent. Most of all, the government would have absolute power over everything including media. So, it is impossible for a country as diverse as India to have any other form of government.

Q2. Considering the present scenario where we have a great dependence on imports, do you think we should take more steps forward for increasing domestic oil exploration?

Ans. Yes, there is a huge controversy raging on this issue and this is a pertinent question. The big oil exploring companies are complaining about the fact that the regime that has been brought in, is what's called the revenue-sharing model. So whatever revenue they earn has to be shared with the government. As students of economics, you know that if revenue-sharing is done, it immediately changes the point on which production will be done, by changing marginal revenue to the producer. The opposing school of thought, which is correct from the production point of view, is that there should not be a revenue-sharing model but instead, a profit-sharing model. In a profit-sharing model, the parameters determining where production stops (where $MR=MC$) are not affected. The generated total profit is shared, which is similar to imposing a tax. This model is as lacking in distortionary aspects as a tax is. Domestic producers complain that they don't have the incentives to go up to the $MR=MC$ point and also about the fact that they are given no incentives to explore. Also, a profit-sharing model somehow gives companies an incentive to falsify their costs and declare a much lower profit so that the government gets part of the under-declared profit. In their defense, supporters of the revenue-sharing model say that they are protecting the people from being cheated on costs. So, I have presented to you both sides of the issue.

Q3. In the current context, India is facing a lot of macroeconomic vulnerabilities. Do you think a higher level of international cooperation could help address that?

Ans. The answer is certainly yes. It is not forthcoming though. The reason being that after the 2008 crash, there was an appearance of immediate global unity under the framework of the G20 and all countries were asked to loosen up fiscally and monetarily, which is actually appealing for the government. But in normal circumstances, fiscal and monetary laxity are considered sins because governments are supposed to tighten them. In this situation, globally governments were encouraged to loosen up and they went ahead with it. But soon after, countries ran into state problems like rising public debt etc. Greece and Italy were worse off than the others. I have sensed that the punishment of loosening up was different among

different countries, with some being punished more sharply than the others. So there is a sense that global unity has not treated the world uniformly because all countries have not been wholly true to the cause of global unity.

Q4. Considering the steps taken by RBI and the central government to tackle the problem of bad loans, how successful do you think these policies have been?

Ans. The fundamental problem is that in India we have a bank-driven financial system, whereas, in other countries, there is more of a corporate bond market. A corporate bond in financial terms is known as a disintermediated market. So, there are no banks. In a corporate bond market, I am the lender. I have the money and I engage directly with the borrower who is the corporate entity. There is no intermediary, I am not putting my money in the bank and making the bank do the lending. Now, I am the ordinary public unaware of the health of the corporate and the project that they wish to undertake. This is where the credit rating agencies come in- they rate the projects 'AAA' or 'BB+', etc. A 'BB+' is going to have a higher return because there exists a risk-return trade off. So a 'AAA' will have lower returns because it's more certain. With more risk, I get a higher return but there is also a higher probability of default. Depending on my risk appetite, I choose whichever bond appeals to me. These agencies are supposed to guide people and tell them about the risk attached to a particular project. But in our country, we have a bank driven financial market and therefore banks have been thrust with this task of doing the due diligence of assessing and basically doing the credit rating agencies' job. Unfortunately, while credit rating agencies are transparent, in banks everything happens internally and non-transparently. This makes way for corrupt politicians to use these policies in a way that is beneficial for them. Moreover, credit rating agencies are by no means perfect but at least they are firm in their convictions.

Q5. Much has been said about demonetisation, whether it was good or bad. A lot of money came back into the system. But how do we effectively chase black money? Is it even possible?

Ans. If you're interested in the economic impact of demonetisation, the Annual Report of RBI could give you a more analytically justified answer. But the other question about how to chase black money? I can respond to that. The big mistake that was made in demonetisation was that it was actually a political decision. But economically, black money is tax avoided income that has accumulated as assets. People think that black money is held as currency but that is not true. A very small portion of black money is kept as held currency because currency generates no income and due to domestic inflation, it steadily loses its value. Most of it is loaned out as currency loans to small businesses. The lender is a tax evader and knows the borrower personally. So there's zero default because if you don't pay the money, he will come after you. It is his enforcement mechanism. Small business owners depend on this kind of money to ensure availability of working capital because they don't have the documentation or collateral to take loans from banks. This is why the main impact that demonetisation had, was on small entrepreneurs who were dependent on such loans of tax evaded income.

Q6. What is your favourite economic theory or model? A theory or model that impressed you?

Ans. I would put a negative sign on that and tell you about the economic policy that I very much dislike. This is something that has had a really negative impact on the economy globally. There is a book by Thomas Piketty on inequality which was a reflection of a larger condition in the world about growing inequality. Inequality throughout the globe has reached monstrous proportions. This has happened because we have failed to use taxation as a

method to reduce post-tax inequalities, which is actually all that matters because, at the end of the day, it is disposable income in the hands of people. Post-tax inequality has gone up since the 1980s for sure. An economist named James A Mirrlees wrote a paper on the optimal rate of taxation on income. His analysis was on the measurement of productive efficiency and argues that a high tax rate would discourage highly skilled labour from doing work. He believed that the whole world would suffer if these highly skilled people were discouraged from work. This is what led to the huge telescoping of rate structure and income taxation after the 1980s. He was very influential in telescoping the income tax schedule resulting in a very high post-tax inequality. This is the only thing that I don't like much. I like everything else.



The Editorial Team with Indira Ma'am (Centre)

Black Economy: Quiz

Pragati Nautiyal

Q1. A term used for government ruled by corrupt politicians who use their political power to receive kickbacks, bribes, and special favours at the expense of the populace.

Q2. After a series of ongoing demonstrations and protests across India, the government appointed a high-level committee headed by in June 2011 to study the generation and curbing of black money.

Q3. They are the North Korean farmers' markets, local markets and black markets that have formed a large informal economy since the North Korean famine. Currently a majority of North Koreans are dependent on these markets for their survival. Name them.

Q4. This is a term originally used by libertarian activists and theorists Samuel Edward Konkin III and J. Neil Schulman. The former defined it as "the study or practice of all peaceful human action which is forbidden by the State" and thus take place in the underground economy.

Q5. Data from WHO indicates that people involved in this illegal trade practice are predominantly impoverished people in developing nations. Despite the belief that people who engage in this market benefit from the often huge sums of money they receive, reports from WHO show decreased health and economic well-being for those who engaged in this trade. Identify this trade practice which is known to generate profits between \$600 million and \$1.2 billion per annum. What trade?

Q6. While exists in every country, studies show that it tends to flourish more in poorer countries, and in areas with large numbers of unattached men, such as around military bases. For instance, an empirical study showed that the supply of rose abruptly in Denver and Minneapolis in 2008 when the Democratic and Republican National Conventions took place there. FITB.

Q7. In a May 6, 2016 statement, John Doe (anonymous) cited income inequality as the reason for his action, and said he did what he did "simply because I understood enough about their contents to realize the scale of the injustices they described". What did he do?

Q8. The Household Approach is a unique method to measure the size of the underground economy or black market of a country which exploits the presumed relationship between householdconsumption and a country's GDP. It assumes that undeclared economic activity still needs to use resources to function. Since the consumption of this resource is generally well known it can be used as an indicator of economic activity that is not otherwise declared. Fill in the blanks.

Q9. It has been reported that smuggling one truckload of this product from a low-tax US state to a high-tax state can lead to a profit of up to \$2 million. The low-tax states are generally the major producers of it, and have come under enormous criticism for their reluctance to increase taxes. What is the product?

Q10. is the illegal business of transporting (smuggling) alcoholic beverages where such transportation is forbidden by law. Smuggling is usually done to circumvent taxation or prohibition laws within a particular jurisdiction. The term most likely originated at the start of Prohibition in the United States, when ships from Western Bahamas transported cheap Caribbean rum to Florida. FITB.

Q11. Conspiracy theorists suggest that Samsung, Toshiba, Nakamichi, and Motorola together created, a crucial aspect of the modern day black market. The belief is stemmed from the fact that the anonymous developer of is named after combining the initial letters of these companies. Name the developer and what he/she developed.

Answers

1. Kleptocracy
 2. MC Joshi
 3. Jangmadang
 4. Counter-economics
 5. Illegal Organ Trade/Transplant Tourism
 6. Prostitution/Prostitutes
 7. He was the source behind the *Panama Paper*
Leaks
 8. Electricity
 9. Cigarettes
 10. Rum-running
 11. Satoshi Nakamoto, Bitcoin.
- "Satoshi Nakamoto" ...
- Satoshi**
Samsung and Toshiba together makes —
- Nakamichi and Motorola** together makes —
- Nakamoto**
12. Inspector Sands

Book Review

Azim Premji University, State of Working Indian 2018, Pp.165.
Unpriced

The Azim Premji University (APU) is unique. It is a social enterprise—a not-for-profit, private university with a clear social purpose working towards a just, equitable, humane and sustainable society. And this explains why such a report as above has come out of it as a public good. The report can be freely downloaded from the website of its Centre for Sustainable Employment—cse.azimpremjiuniversity.edu.in/stateof-working-india/

This report has presented a well researched and analytically useful data on India's labour market by bringing together researchers, journalists, civil society activists and policy makers. It has compiled evidence, perhaps for the first time, from many different official surveys as well as field studies to shed light on the quantity of employment and unemployment, the sectors and industries that are creating jobs, the states that are performing better, the quality of jobs, and the effect of ascriptive factors like caste and gender disparities. The report is very useful to undergrad and postgrad econ students to get an aggregative as also disaggregated picture of the Indian labour market. It is also a befitting embarrassment for the ruling political elites who, supported by certain media and academic elites, have in very recent times denied the existence of a serious multifaceted employment problem in India, and thereby exhibited escapism from designing a suitable employment policy.

The truth is that there is increasing unemployment and there is also politics of unemployment based on the structural imbalance between supply and demand forces in the Indian labour market (see Basole and Jayadev, 2019). Take the demand side. The demand for labour has been shrinking since long for two reasons. First, there has been a collapse of public sector employment in terms of good jobs—formal or regular salaried jobs—even as the “intense hunger for government jobs is visible in the vast over-subscription to even the lowest paid forms of public employment, as well as the large protests all over the country over extending the benefits of job reservations to communities such as the Gujjars, Marathas, Kapus, Patels, Jats, and so on, that have been left out of the system till now. The logical, if also somewhat illogical, culmination of this process is the 10% job quota for all households whose income is less than Rs. 8 lakhs per year, covering the vast majority of Indian households.” Secondly, forced by globalization pressures, manufacturing firms have been adopting latest techniques that are capital intensive and labour displacing. On the supply side, excess supply has been building up due to a host of factors. There is the all too familiar youth bulge of Indian population and for most of these youth, traditional occupations as well as petty informal works are less and less acceptable in the milieu of high growth rates since around 2000 and the attendant creation of a culturally ascendant middle class. The youth today are much better educated than their parents, and these educated youth are spread across smaller towns and villages, and no longer concentrated only in the large cities. Most graduates are educated in general streams and are not adequately prepared for work in the modern economy. There is employability crisis in that the quality of educated in both general and professional streams is substandard. Further, lower castes

are moving away from traditional occupations to ensure dignity and respect in society even as the upper castes are shunning any occupations that have a manual component. As such, there is a huge supply of labour to white-collar and desk oriented jobs. On top of this, the number of educated women who are not employed and not seeking employment but would like to work if work is available, is also on the rise.

In light of this, little wonder that, India is witnessing a high rate of overall open unemployment (5% and above) and up to 16% among youth and the higher educated. The increase in unemployment is clearly visible all across India, particularly in the northern states. Growth creates fewer jobs than it used to. GDP growth of 7 to 10% creates less than 1% additional employment. This is what is meant by jobless growth. Jobs that have been rapidly created in the organized manufacturing over the last decade are “garbage jobs”—temp workers of various types are increasingly employed. While employment has grown in IT and modern retail, more than half of it continues to be petty trade, domestic services and other informal employment.

The employment problem in India also manifests as India's low earnings problem despite reported real wage growth. Nationally 67% of households reported monthly earnings of up to Rs. 10,000 in 2015. 82% males and 92% female workers earn less than Rs. 10,000 per month in contrast to the Rs. 18,000 per month minimum salary recommended by the 7th Central Pay Commission. Labour productivity and managerial compensation have risen much faster than workers' wages in organized manufacturing. Wages have not grown in tandem with labour productivity growth in the organized as well as the unorganized sector, quite contrary to the theorization of the neoclassical economics. Consequently, the labour share of income in organized manufacturing is compressed to around 10%.

As regards the ascriptive aspects of the employment problem, we notice that fewer women are in paid employment for every 100 men, and it ranges from the lowest in UP to the highest in north-east. SC/ST groups mostly work in low-paid occupations while upper castes are in well-paid ones.

The above are some of the salient findings that the report highlights. What is the way out of the above mess? Here the economics faculty behind the report has suggested the following solutions that constitute an optimistic view for the perilous economic times that we are going through. We need an employment oriented fiscal policy. We also need a strategic industrial policy as a way out of the current trap of ‘premature deindustrialisation’ due to globalization. We need a firm public commitment to overinvestment in universal basic services in the fields of education, health, transportation and other public services as also hospitality. These areas have significant potential for job creation as well as the capacity to deliver equitable and green growth. This is not all. We very badly need a national urban employment guarantee (analogous to the MGNREGA) whereby a variety of works can be undertaken in the categories of ‘public works’, ‘green jobs’, ‘monitoring and surveys jobs’, ‘administrative assistance’, and ‘care work’, so that jobs can be provided for people with a range of skills and education levels while at the same time addressing a wide variety of urban needs.

If we are carried away by neoliberal politics and economics, and ignore the timely

requirement of public investment and public policy in order to overcome the distressing employment problem in the country, then we will have to blame ourselves for being in denial about the current realities and missing the window of opportunity open to us that this report has highlighted. I salute the entire team of people involved in bringing out this socially useful report. After all, of what use is economics, if it is socially useless? APU, in my opinion, is now the best place to study real world economics in India.

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Annavajhula J C Bose
Associate Professor, Department of Economics
Shri Ram College of Commerce, Delhi (ajc.bose@srcc.du.ac.in)

RESEARCH PAPERS

Philanthropy in India

A Comparative Analysis of Corporate Social Responsibility and Social Impact Bonds

Arushi Dixit, Navya Sureka, Ritika Agarwal

Abstract

Given the context of Indian philanthropy, there is a need to introduce or revamp the tools towards effective donations. Through a comparative analysis between two tools i.e. CSR, a tried policy reform by the Indian government since 2014 and SIB, an outcome based payment tool which is a prevalent philanthropic policy in many developed countries, we explore solutions to increase the effectiveness of donations in India.

Introduction

Adding 100 million donors since 2009, India has a higher population contributing towards philanthropic activities as compared to similar countries. On the other hand, income inequality has been at its highest level since 1922. With such inequality on the rise, the above data is a relief as well as a reflection of the dire need for philanthropy in India, which in today's day and time cannot be overstated.

Philanthropy can roughly be defined as a charitable giving towards a social cause on a large scale. It differs from the act of donating by being a **long-term and strategic effort to increase social welfare** by providing aid through personal will. Focus of Indian philanthropy has been the '**quantum of money donated**' and '**measurement of impact**', both lacking potentially. However, The Companies Act, 2014 has added to the magnitude of donations in India.

The Indian Companies Act 2013 was amended to mandate **spending at least 2% of the average net profits under CSR** (Corporate Social Responsibility) every year by companies that earn net worth of INR 500 Cr or more. While the CSR policy in India has been widely implemented, Social Impact Bonds (or SIBs) remain nascent worldwide. An impact bond is a form of an outcome-based contract between the **public**, or a **non-profit service provider**, and **private investors** in which private individuals or firms provide upfront funding for interventions to improve specified and targeted social outcomes. Investors in SIBs can expect to receive a return on their investment once service providers meet **predetermined outcome targets**.

Both these philanthropic policies have their own structures of working. However, they primarily aim to **increase philanthropic activity in an economy**. When it comes to implementing either of the policies in the Indian economy, what works and what doesn't in the context of philanthropic trends in the nation remains a complex problem.

Literature Review

There has been extensive research on the philanthropic trends in India. While Thomas Piketty and Lucas Chance state that inequality in India has been at its highest level since 1922, in a report by Oxfam we find that India's richest 1% now hold 58% of the country's total wealth, higher than the global average of 50%.

The CAF World Giving Index Report 2016 states that **individual giving in India amounts to 0.37% of the GDP while the same in the USA is 1.44%**. India ranked 81st out of 139 in the 2017 CAF World Giving Index. However, the population donating relative to per capita GDP is high in India **compared to similar countries**.

Out of the 9,000 individuals they surveyed in 2012, 84% of the people donated money to an individual or an organisation, 70% of donors preferred to donate direct to beneficiaries and 52% of donors believed that a 'lack of transparency hinders donations to NGOs. There is an **increase in the number of donors** in India, with an addition of up to 10 Cr. donors since 2009.

Out of the donors **43% made religious donations**. The **bulk of philanthropy in India is still religious** and goes to locals and ethnic groups, **creating a paucity of resources for large scale and long-term projects**.

Previous research has thus been dominated by an **individualistic approach** wherein the reasons behind making a donation and the magnitude of the same have been determined. They have dealt with the **behavioural aspects of philanthropy** in India. This paper adds to the research by **viewing philanthropy in the light of the policies** in place to encourage, supervise and sustain philanthropy in India. The paper **incorporates these philanthropic trends in the policies of India** and studies their **influence on the implementation** of these policies, adding a new dimension to the current literature on philanthropy in India. The paper hopes to provoke **further research on whether these influences, if found negative, can be diminished**.

The study by **Samhita Foundation** is a pioneering study where CSR has been critically examined while making a **direct linkage between CSR and Philanthropy**. The report highlighted the trend of strategic CSR and examined the possible reasons behind the **popularity of education as a sector for CSR expenditure**. The study emphasised on the increasing imbalance within the funding in education, and concluded that **infrastructure on the supply side and scholarships on the demand side were the most popular CSR projects** under education.

Extending this further, this paper analyses CSR **under a broader framework**, adding to the literature by analysing CSR with respect to **parameters of efficiency** such as **participation, accountability, and incentives which are critical areas of the structure of the policy**. The drawbacks of CSR highlighted in the paper bring out the **inherent flaws in the structure of the policy**. The paper uses **CSR as a reference point to study a new policy of SIBs**. The only trace of the concept of SIBs in India is the Educate Girls DIB which concluded in July 2018 (Appendix A). The analysis on SIBs is primarily based on the worldwide literature on the models and implementation of SIBs.

This paper contributes to the literature by examining the influences of philanthropic trends in India on the efficiencies of the two policies, namely CSR and SIB. It further suggests possible models of implementation purely based on conclusions regarding the more efficient policy.

Research Methodology

This paper is purely based on **secondary data** collected from **government websites, research papers, trusted reports from organisations and news articles**, accompanied with original analyses. Keeping in mind the lack of primary data, the sources of data collected in this study are **verifiable, authentic and legitimate**. The data so collected has been **analysed through a comparative analysis exercise** to compare the efficiencies of the two policies on the basis of **5 parameters**.

Research Question: **Comparative analysis of philanthropic policies of corporate social responsibility and social impact bond in the context of Indian philanthropy.**

The relevance of the research question lies in the **dire state of philanthropy in India**. **We question the sufficiency of CSR for Indian philanthropy** and state the need for a reformed philanthropic policy.

Shortcomings of the study:

The study runs on the **assumption that a SIB will be successful in India** by virtue of the fact that the only Indian DIB, which concluded in 2018 (Appendix A) was a success in the field of education. Whether the **Indian government would be willing to take up the initial investment or set up the statutory bodies required for the implementation is highly questionable, and is beyond the ambit of this paper**.

The study **fails to provide a correlation analysis of the 5 parameters, which we aim to derive next** and analyses the efficiency of both policies through each parameter in isolation. This could lead to biased interpretations. However, due to the **lack of any documented data on SIBs in India, this remains an area for potential research in the future**. The study, while **suggesting possible models of implementation in terms of highest efficiency, does not examine the feasibility of the same**.

Theoretical Framework

Philanthropic Trends in India

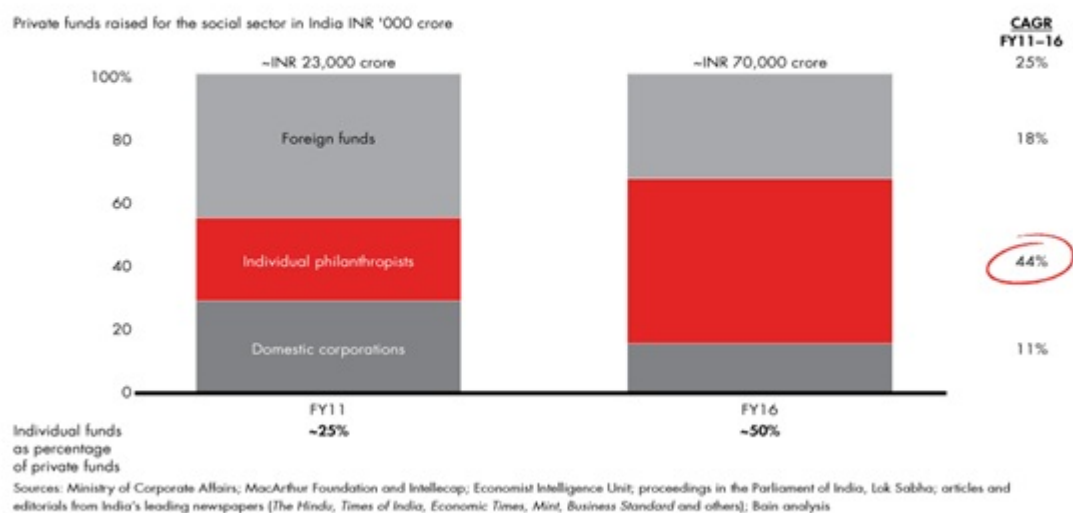
Inequality in India has been at its highest level since 1922. **Such inequality necessitates the need for philanthropic activities in India**. Religious donations constitute a huge part of philanthropic donations in India. Few donations in India support philanthropic action aimed at bringing about social transformation as only

‘gap filling’ remains their primary focus . The donors in India tend to adopt a “today forward” approach rather than the “future back” approach.

The share of corporate philanthropy in the development sector has declined [Bain & Company 2017]. On the other hand, funding from private individuals showed a six-fold increase in 2016, a large portion of this funding coming from a few givers only. Philanthropy has become more efficacious due to application of innovative approaches of the business sector, with focus on scale, efficiency and impact measurement [CAF REPORT 2012].

“Today forward” is a strategy where the individual acts according to the needs of status quo and builds into the future through current actions. The “future back” strategy involves envisioning the end goal and working backwards from it.

Figure 3: The 44% growth in individual funds is the major reason for the 50% share increase in private funds



The efficiency for a centralized governmental involvement in philanthropic activities is contentious. ‘The government has the most dominant presence in terms of service delivery and the biggest pocket of resources in India’. The private sector in India, has improved philanthropic connectivity and distribution but lacks collaboration amongst sectors, which is a weak problem if the government, private sector and non-profit bodies work inclusively in tandem.[Gates Foundation]

Corporate Social Responsibility (CSR)

The Indian Companies Act 2013 was amended to mandate **spending at least 2% of the average net profits under CSR** every year by companies that earn a net worth of INR500 cr. or more, or a turnover of INR1000 cr. or more, or a net profit of INR5 cr. or more in a given financial year.

Companies need to form a **CSR committee**, which formulates a CSR policy, according to Schedule VII of the Act and monitors the policy from time to time. The final policy

has to be approved by the Board of every company. Schedule 7 of the CSR Policy mentions activities which may be undertaken under CSR, with the list being **non-exhaustive. CSR related disclosures have to be published** in an annual report.

2015 was the first year of mandatory CSR reporting, with many CSR projects being conceptualised. In 2016, it was observed that the availability of information and governance mechanisms of CSR projects improved. **Increased spending was witnessed in the second year.**

In March, 2018, the Government has accorded permission for **initiating penal action against 199 companies for non-compliance of provisions** of the policy, although there is no proposal to review the state of implementation of the provisions of the existing Act related to Corporate Social Responsibility.

Social Impact Bonds

SIBs form an **outcome-based contract** between the public or a non-profit service provider and private investors, operating over a fixed period of time and guaranteeing a fixed rate of return only if service providers meet the predetermined outcome targets.

Social impact bonds are non-tradable variants of social policy bonds invented by Ronnie Horesh in 1988, an economist from New Zealand. The first SIB was announced in the UK in March, 2010 by the then Justice Secretary Jack Straw to finance a **prisoner rehabilitation program**.

SIBs aim to **attract private investors to invest in social service interventions that have a positive payoff, especially in cases that lack visibility in the political system**, while making integration of **philanthropy, venture capitalism, performance management and social program financing into an innovative mix** possible.

SIBs include assessing a **measurable outcome** that can benefit the target group (e.g. reducing criminal recidivism by 30%) by connecting a private investor (corporate, foundational or individual) to the service provider (NGOs etc) through the following steps:

1. Selecting a **target group** and determining the evaluation standards for projects.
2. Determining the **recipients** of funds by the government.
3. Hiring **an intermediary** by the government to identify potential private investors, negotiate the terms of the SIB amongst stakeholders, determine all objectives and returns and give legality to the contract.
4. Determining the success of the initiative through **independent evaluators** (ensuring unbiased evaluation).

If the evaluators determine that the service provider has failed to meet the previously established goals of the SIB initiative, the government will neither reimburse the investors for their prior sponsorship nor pay

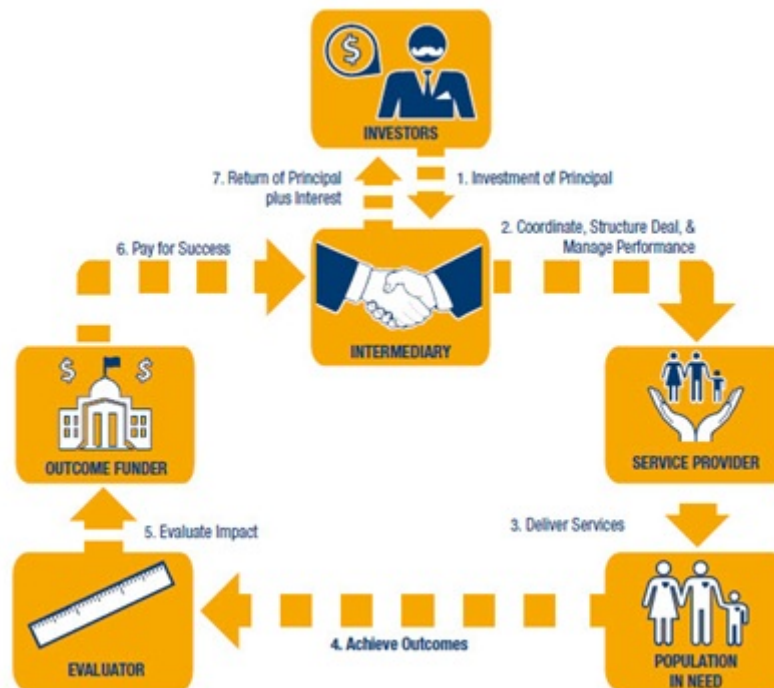


Figure 14: Source: <https://financematters.co/social-impact-bonds-five-years-on/>

any interest on the same, providing a strong incentive to the investors to ensure success of the project. If the project succeeds, the private investors are repaid by the government. The evaluators are funded directly by the government too.

There is an enormous variation possible in the structure, mechanics, and stakeholders of SIBs:

- (a) It can either be an **individual transaction focusing on a given intervention** or a **fund aiming to achieve outcomes across multiple service providers**.
- (b) Role designation in **managing the contract and performance** is flexible.
- (c) Depending on government participation, **impact bonds can take the form of a SIB, where the government is the outcome funder, or a DIB where a third party is an outcome funder**. This variation in the structure allows the introduction of SIBs into systems **not ready for large contracts between government and private partners**.

One DIB project around girl child education was underway in Rajasthan, India since 2015. Only recently in July, 2018 did the final reports of the project confirm its success. Conclusively, **we assume the feasibility of implementing SIBs in India**.

Comparative Analysis

We compare two philanthropic policies- CSR and SIB- as two alternatives by drawing a comparison between them on 5 parameters. The reasons behind selecting the parameters are:

- They comprehensively cover the involvement and impact of all stakeholders- the donors, the government, the underprivileged and the institutional arrangements through which they interact.
- All parameters hold relevance in both policies and thus become fair grounds for comparison.
- The parameters give enough flexibility of examining possible models and outcomes.
- These parameters help us to use CSR as a reference point for characterising an efficient policy and thus analyse the efficiency of SIBs in the Indian context.

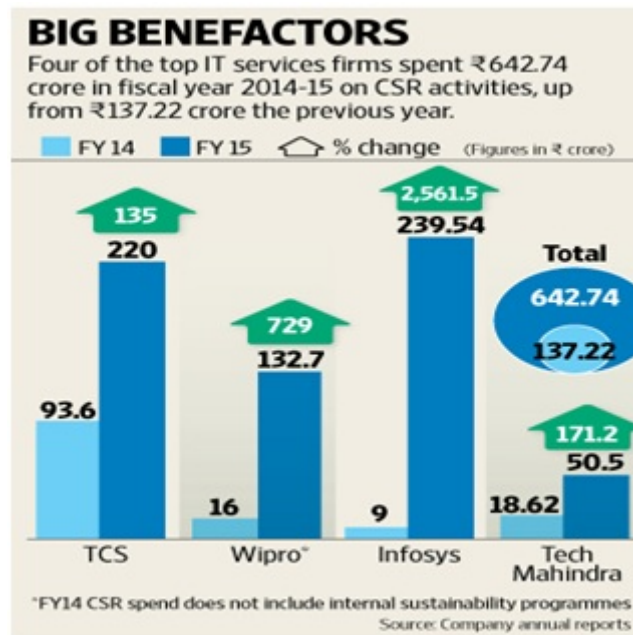
PARAMETER 1: IMPACT OF MANDATORY COMPLIANCE

- CSR:
 1. **The money spent on CSR increased by almost 5 times by the top 10 MNCs after the mandatory implementation of donation [3].**

Certain companies have spent more than the prescribed CSR budget, like Reliance, ITC, Oil India etc. Referring to Appendix B on the expenditure incurred by Reliance Industries Limited before and after the CSR mandate and also analyse the effect of policy in subsequent years, we can state that:

CSR has increased the CSR budget allocation by companies in India by a massive amount. By prescribing the budget allocation, it **has not deterred the top companies from spending above the 2% requirement**, as seen through the performance of RIL in the last 6 years. The smaller firms which have the capacity to spend 2% of profits have to comply, **thereby increasing the overall donations under CSR.** Even if the increase has been due to any other factor/parameter, **the mandatory nature of the policy has neither decreased the donations conclusively nor has it diminished the donations to a very large extent, assuming that it does.** We believe that it is too soon to draw conclusions as to whether this mandatory rule is a disincentive to these companies from spending more or less.
 2. The necessary compliance required towards donation creates a **negative outlook towards philanthropy** as an inescapable phenomenon, possibly acting as a **psychological disincentive** to donate past the dictated limit.

With no available data on the previous possibility and the difficulty to measure this impact, **it can't be concluded that the increase in the amount of donations under CSR activities was necessarily due to the mandatory nature of the policy or that the psychological**



disincentives were absent and not weak. Thus, to include all possibilities, we conclude that any mandatory policy can possibly create disincentives to donate; however, the magnitude of impact of such a disincentive remains minute and obscure.

- SIB:
- A SIB is not mandatory as it invites willing investors to participate. Thus, philanthropic nature is more prevalent as it remains a choice. **There is no psychological disincentive.**
- The existence of a choice to donate can **possibly reduce the magnitude of participation** as individuals might opt out of donating. However, **getting a return** and **accountably measuring** social impact will curb this possibility.
- The two paradigms denote the opposite effect of SIB being non-compulsive. The comprehensive impact, without actual implementation in the context of India, **remains ambiguous.** However, SIBs have an added benefit of **not providing a standard lower, sufficient limit** to the amount of donation.
- If investing in SIBs is made mandatory by the government, SIBs will provide an added benefit of a return and accountably measuring the social impact created and increase the net donations.

PARAMETER 2: EXISTENCE OF SECTOR-WISE IMBALANCES

Sector-wise imbalances refer to the imbalance in the magnitude of donations received by various sectors of societal services due to excessive contribution towards some areas of need and negligence of others. The CAF 2012 Report concluded that **70% of people surveyed out of 9,000 stated personal experiences as the number one driver for giving.** 40% philanthropists, personal interest or experience majorly determine selection of area of donation.

Most of the contribution of the Rs.10 Cr. donation [CAF report 2015-16] went to education, care of the aged and women empowerment.

- **CSR: The choice of sector is left to the discretion of private participants and the government has no role to play in any such decision. To study these imbalances in the Indian context, we study one popular and unpopular sector in India- namely, education and slum development, under the CSR policy.** On analysing data collected for these two areas under the CSR policy Appendix C), it can be stated that **both private and public units directly prefer the less politicised, more certain, and legalised area** of education over a risk-filled, unregulated and exhaustive task of working with slums. This imbalance **in the development of different sectors is a drawback of the policy** as it propagates an unequal society.
- **SIB:**
 1. An impact bond, by virtue of its model, is introduced by an authoritative body, be it the government (SIB) or any private enterprise (DIB). This implies that the **freedom to donate to the sector of an individual's or firm's choice will not necessarily exist** for one can invest/donate only in SIBs that are presently available under any sectors. Thus, if the government decides to introduce SIBs establishing projects in unpopular sectors, investors could possibly invest only in those sectors and thus personal inclination towards a specific cause will not necessarily create an imbalance. While this can gravely reduce the sector-wise imbalance, the restriction on the freedom to choose a cause to invest in can also **disincentivize people to voluntarily invest in SIBs.**
 2. By introducing SIBs in unpopular sectors, the government can **encourage donations in unpopular fields** as:
 - (a) The government **sets a** narrative to donate to those particular areas and thus provoke philanthropists.
 - (b) The establishment of SIBs addressing unpopular problems can **reduce ignorance** regarding the same.
 - (c) The involvement of the government in the project can **reduce the uncertainty and political risk associated with some sectors** as the contract assures payment on successful completion of the project.
 3. In the given pie chart, social welfare, as the largest share of all 44 SIB deals worldwide, includes a broad range of issues including adoption, and holistic support of disadvantaged young people. The likely reason that SIBs started in the area of criminal justice is that **the sector closely aligns with the SIB feasibility criteria by having clearly defined, quantifiable outcomes and a high political commitment due to large number of negative outcomes and resulting community pressure.** Thus, the sectors that can be covered under SIBs need to be restricted to those that are measurable.



PARAMETER 3: ACCOUNTABILITY AND MEASURE OF SOCIAL IMPACT

- **CSR:**
The MCA does not have a regulatory body which monitors the impact of the CSR expenditure, leaving it to the company's discretion to set up a Committee to measure and publish the results. However, a Centralised Scrutiny and Prosecution Mechanism has been set up by the MCA as of April 2018 to monitor entities' compliance with the CSR obligations. On violation of CSR provisions, under section 134 (8) of the Companies Act, 2013, the company is punishable with fine from Rs.50,000 to Rs.25,00,000; every officer of the company who is in default is punishable with imprisonment for up to 3 years or with the aforementioned fine or both. If the company fails to spend the required amount, the Board is only required to specify the reason for the same. **Comprehensively and practically, accountability is not enough.**
- **SIBs:** The primary factors that hold the investors accountable in SIBs are that
 - (a) The success of the project bears financial return to the investors if the project succeeds, incentivizing them to work more effectively.
 - (b) There is body an independent intermediary (Evaluator) evaluating impact.
- The intermediary provides the **bond facilitator /investor information from time to time** in regarding outcomes. The average period that SIBs are signed for is 3 years. However, even if the results show a lag in the initial years of the setting up the bond, the check on measuring outcomes and the **urge of the investors to meet the targets compels the organisation to keep changing tactics** to reach the target.
- The **independence of the evaluating body makes the investor and the implementing organisation more accountable.** The investors is also personally motivated to look into the execution of the project for an aspired social change through the investment, **psychologically motivating them and also allowing them to execute better management of the project under the SIB.**
- Since the outcomes need to be **'monetizable' or quantifiable, measured**

within resource constraints, they should also minimally indicate outcomes that are predictive of the life trajectory of individuals. An outcome **needs to be more specific** than a typical public policy platitude, such as ‘reduce poverty’ or ‘improve school achievement’. (Appendix D)
Therefore, we can conclude:

1. SIBs are initiated in sectors with measurable outcomes, therefore reducing the ambiguity of measurable impacts. By undertaking any of the pre defined methods of outcome measurement, it provides a fool-proof aim for investors. On the other hand, while **the government has a check and balance system for the compliance of CSR and the prevention of its misuse, it lacks in incentivising the companies to measure accurate impact of their CSR programme and expenditure.** It is difficult to introduce SIBs in most sectors of philanthropic needs because **outcomes are necessarily quantifiably and sustainably measurable.**
2. The accountability is present because of the presence of incentive **monetarily and psychologically.** The **power of the possibility of a** holds them more engaged in measuring social impact. Firms practising CSR, however, are not necessarily incentivized to measure impacts efficaciously and are under **no compliance to do so either.**
3. In SIBs the evaluators provide **unbiased evaluation.** The evaluator is **independent** and is **held responsible towards measurement of the impact of the social investment by the government and the investors.** In the CSR policy, however, the comprehensiveness of the measured impact varies from company to company, and there is no regulatory body to confirm the impact reported. The basis of measurement is by default materialistic rather than qualitative. However, although the regulatory body is independent, the possibility of corruptive practices and transactions, given the context of India, cannot be eliminated. However, this external factor exists equally in both policies in the status quo.
4. Impact bonds are said to lead to sustained impact in several ways. They provide **ademonstration effect** of the benefits of preventive services which can foster longer-term government commitment to this social challenge. The government cannot and is not willing to take risks. So, if the outcome from a SIB is achieved and the investor had used some innovative technique, the Government can rest assured of success on application of the same technique. If the government provides for a similar SIB, the investor who has previously may favourably want to invest in the project for the subsequent period. Thus the measure of social impact is more **effective and accountability exists in the long run too**, not just in ensuring short term goals. This proves to be very important in the context of India considering how short-term centric India’s philanthropic trends are. SIBs facilitate this transition.

PARAMETER 4: PRIVATE INCENTIVES

Both CSR and SIB include private enterprises as major stakeholders in their



Figure 15: Source: *Source: MCA*(<http://www.mca.gov.in/MinistryV2/csrdatasummary.html>)

structure of the policy, providing distinct incentives to them to fulfil a particular aim and behave in a particular manner. This mannerism and active involvement is directly affected by the kind of incentives each policy provides to these private players.

- CSR:

Prescribed CSR Spend in 2014-15	INR 11883 Cr
Actual Spend in 2014-15	INR 8803 Cr
Actual CSR Spend in %	74%

From the above graph and table, we see that-

1. Out of 10475 eligible companies, 7334 have reported as of 31st January 2016. Out of these reporting companies only 3139 have done some expenditure on CSR.
2. **CSR spent by the top 10 companies is 32% of the total CSR spent in FY 2014-15. (INR 2783 Crs.)**
3. **39 companies spent on CSR despite facing losses in the FY 2014-15.**

Therefore, some companies have prioritized CSR expenditure, implying the existence of incentives that push companies to go beyond the mandate. The following are the **key incentives companies receive due to the CSR Policy**:

1. **Goodwill and reputation:** Companies build an extremely strong reputation of being socially responsible due to compliance. This builds consumer bases and increases profitability through a greater market share or a loyal consumer base.

2. **Social Incentive: Companies have increasingly become sensitive** towards these causes, spending money despite the absence of any mandate, sometimes while **facing losses**.
3. **Fear of Condemnation through Prosecution:** Companies have to necessarily either spend or give proper reasons as to why they were unable to do so. Failing to meet either of the requirements or misusing the CSR funds is punishable. The public condemnation received on not meeting the CSR requirements is harmful in a public sphere, given the **increasing awareness** towards social issues in India and firms are fearful of the same
4. **CSR Awards and Allocations:** Despite lacking any mechanism to ensure impact-based outcomes of CSR expenditure other than a compulsion to report it, **many top companies have very efficient committees** working on research, evaluation, experiments and suggestions to increase the impact of the CSR expenditure. One reason for this is the **competition that now exists for the prestigious CSR Awards** that are given to companies with the best policies and the greatest impact. This serves as a huge incentive for constantly upgrading, evaluating, reviewing and increasing the CSR Spend by these companies.

A case study of RIL (Appendix E) shows how it has **spent more than the prescribed CSR budget** since April 2014 and continues to report an impact based report annually.

- SIBs: Since SIBs also include giving to the society efficiently, the first two incentives of a good reputation and social incentive that CSR activities provide are present in them too. However, the fear of condemnation can factor in only if investment in SIBs is made mandatory. Additionally, the following incentives are present in the SIB model for private players-
 1. **Return on Investment** (if the project succeeds in any SIB), providing financial incentives as a risky return is better than no return.
 2. **Measurable and Efficient Social Impact-** The social incentive becomes even stronger in SIBs for **social impact is now measurable** and the amount invested by private investors is **accounted for** by an independent body. Scale enhancement of projects can be done through pooling of investments, allowing **service providers to bring their services to a larger population**. For example, Oportunidades in Mexico and Bolsa Familia in Brazil, have catered to huge populations. In developing countries; **the fund model** may be a promising way to achieve this.
 3. **Better Methods of Innovation-** SIBs foster innovation that **governments are often unwilling or unable to do because of insufficient funding or political constraints**, which in turn incentivizes private players to participate more willingly as SIBs not only **hold other stakeholders accountable for innovation** but also provide the structural space for efficient initiatives; a bond can either adopt **an innovative approach from**

the start or provide the space to **innovate along the way**, like the **ABLE testing** carried out in the Riker's Island case in America.

PARAMETER 5: MAGNITUDE OF PARTICIPATION The magnitude of participation in a policy, assuming perfect institutional arrangements and keeping other parameters constant, is directly affected by two factors- eligibility and incentive. We have covered the latter under other parameters. Thus, **eligibility becomes the primary factor affecting the magnitude of participation under this parameter.**

- CSR:

1. **SMEs:** While micro-sized enterprises do not fall under the ambit of the CSR policy, many small and medium-sized enterprises are eligible. Classification and characteristics of Small and Medium Sized Enterprises (SMEs) (Appendix F) shows that **having greater CSR participation by SMEs is beneficial due to the monetary value, specialization in localised impediments, adaptability and access to local resources they provide.**

However, the limited use of the term CSR doesn't imply limited practise of corporate responsibility towards the society. Many SMEs have been doing things that fall under the ambit of CSR activities even if they do not know or use the specific term. In most cases, it has been found less formal and more intuitive than by larger enterprises. Due to their **large magnitude and regional spread, involving more SMEs to practise philanthropy is significant.** Indian SMEs generally resist rules and regulations around industrial development. **Due to their diversity and focus on the short term survival of the enterprise, the strict model of the CSR policy, setting financial lower limits of expenditure and establishing monitoring committees, is not suitable for SMEs.**

2. **Individuals:** CSR is set up for private enterprises and not individuals. The contribution by private individuals or group not working or registered as companies or without proper institutional arrangements is excluded and remains unmeasured. The exclusion of private individuals and micro enterprises by the CSR policy therefore limits the possibilities of larger expenditure by making the eligibility criteria to participate too strict.
- SIBs: By the virtue of the model of an impact bond, the eligibility criteria of SIBs invoke the following aspects:
 - (a) Private stakeholders within any model can **comprise of both individualistic and firm-based investors.** Thus, private investors/donors fall under the eligibility criteria, thereby increasing the reach of the philanthropic policy beyond private firms.
 - (b) There is **no required limit on the size of the firm** as well and thus SMEs are eligible to invest in SIBs too.

- (c) There is **no lower limit regarding the amount of expenditure** that is necessary in any SIB. Other than the eligibility criteria, the following factors affect the magnitude of participation in SIBs:
- (a) Although SIBs generally require large sums of money as investments and therefore might restrict the accessibility of the policy to small investors, certain models such as the Impact Bond Fund, give opportunities to smaller investors to invest. An **individualistic transaction impact bond** for one outcome payment contract means involvement of one large outcome whereas an **impact bond fund** for multiple outcome payment contracts means involvement around the same social issue with smaller claims and smaller outcomes. In the second model, a rate card is issued that establishes the payment per individual outcome. Partnerships of service providers and inter mediaries then bid for a contract at a discounted rate of the outcome payments. The outcome funder (government) selects winning bidders based on the discount on the payments and other criteria. **Through a fund, the outcome funder is able to set up many SIBs at once. This promotes participation by smaller companies and private investors, and leads to a direct rise in the magnitude of participation in the philanthropic policy.**
 - (b) One major limitation that remains in terms of the magnitude of participation in SIBs is the number and kind of SIBs that can be introduced, since being able to **quantifiably and effectively measure social impact remains a prerequisite.**

Findings and Conclusion

The **growth, potential and need for** philanthropic policies in India are vast. Individuals largely donate to causes they have a **personal inclination** towards, implying the relevance of choice of cause. Thus, the limited freedom that SIBs provide may not be conducive to philanthropic giving. However, the necessity to preserve this trend and to what extent (given the added benefits SIBs provide) is debatable. Focus lies on **short-term philanthropic goals** measurable through monetary value of donations, which is a detriment in efficient giving. SIBs focus on measuring long term impact by setting quantifiable goals and therefore can help curb this negative trend. Philanthropic connectivity and distribution has improved due to **innovative approaches of the corporate sector**. Focus on innovation can be boosted through SIBs by rightly incentivizing private enterprises along with bodies implementing the social projects. The government is a dominant apparatus in philanthropy, making collaboration with it necessary to achieve efficiency by private and non-profit bodies. Funding received by NGOs has fallen in India. SIBs can provide mass funding to NGOs by pooling and facilitating private investments. Analysis and conclusions drawn from parameters are independent of each other.

- (a) **Impact of Mandatory Compliance:**

- **CSR policy with non-compulsive SIBs** will increase the magnitude of donations necessarily as the disadvantages of voluntary participation are balanced out by a compulsory CSR policy and the advantages of return, social impact and absence of a lower limit to donations remain.
- **CSR policy with mandatory SIBs** provide incentives of SIBs while the possible disincentives in the present scenario remain. The possible net benefit is most likely positive but not as much as in the previous case.
- **CSR policy replaced by mandatory SIBs**, ceteris paribus, will have similar impacts of both mandatory policies comprehensively. However, positive incentives of SIBs will, most likely, increase the magnitude of donation.
- **CSR policy replaced by non-compulsive SIBs** will definitely provide added incentives for donating. However, the absence of any mandatory force to donate can either reduce or increase donations. If it reduces donations, whether or not this reduction outweighs the impact of added incentives remains ambiguous.

The first two models provide extended choice to the individuals/investors and probable **increase in magnitude of donations**. The other two cannot conclusively state the comprehensive impact of replacing CSR with SIBs.

- (b) **Existence of Sector-wise Imbalances: Uncertainty, lack of institutional arrangements, associated political risk and ignorance** are some primary reasons why many philanthropic sectors remain unpopular. None of these factors are largely diminished in the CSR policy; it does not prioritize inclusive growth. However, as the government is an important stakeholder in SIBs, **uncertainty and insufficient structures are diminished, awareness is created and political risk is eliminated** as the contractual return is previously determined and assured. The decision of donating to a particular sector is reserved by the government and thus **sector-wise imbalances in philanthropy can be diminished** through SIBs. However, not being able to donate to a cause one is personally inclined towards can, especially in the context of India, greatly **disincentivizes donation**. The net result remains ambiguous. Ambiguity is removed by **considering 2 possible model of SIBs**:

- **Mandatory Investment in SIBs**- If investment in the available SIBs is made mandatory, the disincentive due to lack of personal choice in selecting the sector will be removed as the choice to invest or not will be eliminated. Therefore, **sector-wise balance** will possibly be successfully achieved.
- **Non-mandatory investment in SIBs**- Voluntary investment in SIBs, where individuals and firms cannot make this choice and thus SIBs working towards projects based on these sectors do not necessarily exist, will disincentivize private donations. Therefore, enough investors will not move towards ignored sectors. However, **the added benefits** of a return, measured social impact, creation of awareness and diminished risk due to

governmental involvement will remain in this model. Therefore, **the existing CSR policy, if coupled with introduction of non-mandatory SIBs, will be better than merely having the CSR policy but less effective than coupling CSR activities with mandatory SIBs.**

(c) **Accountability and Measurement of Social Impact:**

While CSR lacks accountability and outcome-based measures, SIBs incorporate quantifiable measurement of social outcomes, thus ensuring the much needed accountability in philanthropic context of India. Measuring the impact of CSR expenditure is not incentivized while SIBs provide monetary and psychological incentives, establish an independent regulatory body to **measure outcomes and shift focus on long-term philanthropic goals**. However, SIBs are introducible only in areas where impact is measurable.

(d) **Private Incentives:**

Incentives encourage voluntary participation by the private sector, which is indisputably better than mandatory participation in a philanthropic context. **Even though CSR does not have a direct impact-based incentive, it has indirect incentives for compliance.** Incentives under CSR include social goodwill, reputation, awards and fear of condemnation, subject to influencing factors. SIBs provide, in addition to the aforementioned incentives, monetary return, efficiency and measurability of social impact and facilitation of innovation, leading to **better outcomes** for all stakeholders. **SIBs therefore provide better private incentives than CSR to private firms.**

(e) **Magnitude of Participation:**

SIBs don't require CSR restrictions, additionally including individuals, SMEs, MSMEs and smaller donations, thus pumping additional philanthropic funds by **not curbing potential donors**. However, greater inclusivity leads to **division of management** and accountability. Moreover, **the flexibility in varying possible models of an impact bond can further encourage investments** from smaller firms and individuals. Therefore, **the scope of magnitude of participation in terms of the number of participants is more in SIBs than in CSR activities, keeping other parameters constant.**

Therefore, recorded behavioural patterns of Indian philanthropists can either be incorporated into policies or be countered by them, based on policy discretion. **While CSR provides more choice, SIBs, under specific models and assumptions, theoretically trump CSR in terms of efficiency, impact-based expenditure, private incentives and magnitude of participation, along with enabling a targeted approach to reduce sector-wise imbalances. Comprehensively, a model with mandatory CSR activity and a non-mandatory SIBs is most suitable to India.**

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Policy Alternatives to Agricultural Subsidies and their impact on Farmer Suicides

Pragti Rathore, Saumya Jalan

Most things, except agriculture, can wait.

–Jawahar Lal Nehru

Introduction

India is an agrarian country with around 70% of its people depending directly or indirectly upon agriculture. But a large section of the population engaged in the field commit suicide every year. As per the Central Government, over 12,000 suicides were reported in the agricultural sector every year since 2013. Farmer suicides account for approximately 10% of all suicides in India. Suicide rates among Indian farmers were a chilling 47 per cent higher than they were for the rest of the population in 2011. In some of the State's worst hit by the agrarian crisis, they were well over 100 per cent higher. The new Census 2011 data reveal a shrinking farmer population. And it is on this reduced base that the farm suicides now occur.

The democratically-elected governments that claim to represent a country where over half the population is dependent on agriculture have tried remedies like waiving of loans to small and marginal farmers ahead of elections, subsidies which reduce the price of inputs like crops, fertilizers, etc. But such schemes are not economically sound and only provide a burden to the coffers of the State and Centre without giving long term relief to the farmers. Sops like loan waivers have been criticized after elections for disrupting credit discipline among the borrowers. The sops help in increasing inflation in the economy by increasing the price of produce. A 2013 study by the Indian Statistical institute showed increase in loan repayment default after the Central government announced farm loan waiver of Rs 60,000 crore in 2008, a year before general election. Honest farmers repaying the loan also turned defaulters after the waiver, the study said. We have to also consider that the poorest farmers in India typically rely on non-institutional sources of credit. Moreover, farm loan waivers can discourage subsequent lending by banks in districts with greater exposure to the debt waiver, harming farmers over the long run.

Subsidies, on the other hand, produce a large no. of negative externalities that far outweigh their benefits. Subsidies tend to reduce incentives for producers to boost efficiency and shift their focus from crops to farming subsidies. As a result, many end up doing less with more. They also affect prices, prices may decrease as a result of subsidies which spells more trouble for the farmers. Apart from these, the governments introduce several different kinds of schemes including: Availability of input including

credit, Land redistribution, Alternate sources of income including husbandry, Technology-Adoption of a new Technology, Debt Restructuring, Price-Based Schemes

Objective of the Study

The study aims to analyse the impact of various types of policies by the government on alleviating farmer distress, measurable through their effect on farmer suicides. We study whether policies, apart from loan waiving, have had a significant impact on reducing suicide rates and helping improve the condition of Indian farmers.

Literature Review

Agriculture in India- Problems

The history of Agriculture in India dates back to Indus Valley Civilization Era and even before that in some parts of Southern India. Today, India ranks second worldwide in farm output. Agriculture and allied sectors like forestry and fisheries accounted for 13.7% of the GDP (gross domestic product) in 2013, about 50% of the workforce. The economic contribution of agriculture to India's GDP is steadily declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India.

India exported \$38 billion worth of agricultural products in 2013, making it the seventh largest agricultural exporter worldwide and the sixth largest net exporter. Most of its agriculture exports serve developing and least developed nations. Indian Agriculture has made rapid strides in Agricultural Sector since Independence, with the Green Revolution of the 1960s ushering in manifold increase in farm production and productivity. The Indian Agriculture has rallied to become self-reliant in providing overall food security to its population of more than 1 billion. However, inadequacies of serious long-term concern are now affecting Indian Agriculture. The rising input costs and poor pricing mechanism, to be candid, have only increased the plight of majority of the farmers. The Green Revolution has not necessarily translated into benefits for the lower strata in the economic pyramid in terms of greater food security or economic opportunity and wellbeing.

The Indian farmer depends on a lot of variable factors for the successful harvest of his crop. Farmers in India are not big businessmen. They are poor people who own a very small piece of land and toil for a whole season to sometimes ruin their crop because of drought or floods. They take loans every year to buy supplies and have access to very few high grade technology and equipments. If they are not able to profit from their crop they usually don't have any other source of income. They are not able to repay loans and have to borrow more money for the next season leading to a vicious debt cycle. These debt cycles lead farmers to commit suicide.

Agricultural Policies in India

The process of formulating and implementing agricultural policies in India is very complex because several ministries, departments and institutions at both the centre and the 48 state level are involved in the process. The Union Ministry of Agriculture, under the guidance of the Planning Commission (presently NITI Aayog), provides the broad guidelines for agricultural policies. But the implementation and administration of agricultural policies remain the responsibility of respective state governments. The allocation of funds to agriculture is guided by the Planning Commission and is rooted primarily through the Ministry of Agriculture to various departments. Since this sector influences the lives of several people, attempts have been made since independence to evolve appropriate agricultural policy which creates incentives for increased production. However, India did not have a comprehensive agricultural policy until National Agricultural Policy 2000. “It is observed that India never had a formal and comprehensive policy on the agriculture in the five decades since Independence. Not that there were no pronouncements of policy on Agriculture. In fact, there were a quite few: some on land redistribution, some on 50 this or that specific input, infrastructure, on technology. Statement on food situation were plenty: but the policies, or absence thereof, they contain concern supplies for that public distribution system and only incidentally, production and productivity. A policy statement defines the role of agriculture in the overall economy and its development is conspicuously absent”. (GOI, 1990 quoted in Deshpande and Prachitha, 2006). Agriculture Sector was given importance in several Five Year Plans, but this was done with an aim to increase self sufficiency and reduce foreign dependence. When the National Agricultural Policy was introduced, even that provided just guidelines under which the respective state governments are expected to prepare their policies. Landes and Gulati (2003) observed that “India’s major domestic agricultural policy instrument include a system of minimum support prices for major crops, input subsidies on fertilizer, power and irrigation water and public investment in surface, and to a lesser extent, ground water irrigation”. Since the National Agricultural Policy, there have been several steps towards drafting policies with an aim to reduce farmer distress. The Government has attempted to increase farmer income through several policies focused on other sources of income, including husbandry, organic farming, horticulture, etc. However, the spate of subsidies and waivers have continued as well. Year after year, several loan waivers are announced by the government of each state. Farm loan waivers touched 0.32 percent of the GDP, or 4.99 lakh crore rupees, In FY18 as against estimates of 0.27 percent. The increasing burden of alleviating farmer distress has to be on drafting of suitable policies rather than announcing loans waivers. Different kinds of schemes based on input and credit subsidy, debt restructuring, other sources of income can help the farmers of India to emerge out of poverty.

Farmer Suicides

Farmer Suicides are the single most important factor analysing rural distress in India. The number of farmer suicides in India has been the only quantifiable factor used to draw attention to the depressing state of agriculture in India. Since the 1990s,

journalist P Sainath has highlighted the alarming increase in suicide rates. But why have suicides recorded a huge increase since the 90s? Research suggests that these suicides are not occurring from more organic processes such as mental health problems, but from socioeconomic and psychosocial circumstances. These circumstances are making the life of the Indian farmer much more precarious, leading many of them to such a desperate situation that they take their own lives.

The cause, according to Sainath and many researchers are the *agricultural policies*.

Post liberalisation, cutbacks in agricultural subsidies combined with the necessity to meet the international standards of quality increased the costs of input. There was also a demand for cash crops like cotton in the global market. Hence, a considerable part of the sector saw a government encouraged shift from foodgrain to cash crop cultivation. However, due to an excess of such products in the market, prices fell making cash crops uneconomical. This was the late 1990's -the time from when farmer suicides began to be recorded on a large scale. Production costs have steadily risen in the years since but market prices have not seen a corresponding increase.

Furthermore, public investment in agriculture gradually reduced - a move that has resulted in the lack of uniform modernisation, irrigation facilities, communications and information systems, and storage facilities. Credit supply to farmers diminished at the same time, forcing them to rely on moneylenders. Private companies and state-run Regional Rural Banks (RRBs) reject many applicants due to the lack of collateral or land titles. The agricultural market structure has played a major role in denying farmers their actual returns. The Agriculture Produce and Market Committee (APMC) act was introduced to ensure fair prices to farmers. But corrupt middlemen have taken advantage of the provisions in the act to exert their influence on the supply chain. They exploit farmers by buying produce at far lower prices than deserved.

The coverage of crop insurance schemes is low. Not only the area covered under the National Agricultural Insurance Scheme (NAIS), even the amount offered to farmers is dismal.

Along with policies, Farmer Suicides are a response to several other factors- the most major being indebtedness. Most studies identified indebtedness as the predominant single factor associated with farmer suicides. Dongre and Deshmukh found that farmers in the Vidarbha region of Maharashtra ranked debt as the most important reason for farmer suicides, followed by addictions, environmental problems, and price issues, amongst others. Two other studies concluded that unpaid loans are a correlate of those who die by suicide.

The increased use of cash crops (which are a higher cost and grown primarily to be exported) as opposed to food crops (low cost and designed to be sold more locally) has been identified as an issue in some studies. The suggestion is that farmers using these are more prone to becoming indebted if one of their high cost crops fails, as they have invested significantly more in their production, and that potentially, their use makes them more vulnerable to global price fluctuations.

Theoretical Framework

Our Dependent Variable is Suicide, showing the number of farmers driven to suicide in a particular year within a particular state. The data on farmer suicides is sourced from the National Crime Records Bureau, which gives the data on farmer suicides in different regions within different states. However, the data considers suicides by only farmers with land holdings, not taking into account tenants and share-croppers. There are a few other problems with the data sets, as highlighted by P Sainath. Introduction of new categories in 2014 makes the data after this period increasingly difficult to compare with the data in the earlier years. This happens simply because of the shuffling of the suicide numbers across new or revised categories in the NCRB tables. The “fall” in farmer suicides accompanies a stunning increase in suicides by “Others”. The data also records thousands of tenant farmer suicides as those committed by “agricultural labourers”. This too helps dilute the numbers in the main “farmers” column in a big way.

Study Design

We analyze the impact of several different types of policies, implemented in 3 different states, on farmers suicide. The impact of each policy is studied State-Wise. The aim of our project is to identify how the different policies affect farmer suicide, and in effect, to suggest which policies are suitable for a State or Central Government to reduce the level of agricultural morbidity. We have finalized the following different policies implemented in the different states for the regression:

State	Scheme	Type of Scheme	Time
Gujarat	Scheme for Integrated Horticulture Development Programmes	Alternate sources of income- Horticulture	2002-12
Punjab	Training Infrastructure in Dairying for Rural Dairy Farmers	Alternate sources of income-Husbandry	2006-11
Madhya Pradesh	Rashtriya Biogas Vikas Yojna	Alternate sources of income	2006-12

After this, we regress each State's suicide rates as follows:

$$SUICIDE_{st} = \alpha + \beta_1 State_s + \beta_2 POST_t + \beta_3 State_s POST_t + \epsilon_{st}$$

Where, $SUICIDE_{st}$ = Suicide in State s in time t

$State_s$ = Dummy for a particular state

$POST_t$ = Dummy for Post Policy Shock years

$State_s * POST_t$ = Interaction of MP and Post period dummies

ϵ_{st} = Random error term clustered at the state level

After finalizing a particular State, we set up the regression by introducing a dummy for the particular State. For example, if we are regressing MP, in the State Dummy, 1 stands for observation from MP and 0 stands for observation from the 3 other controlled states. The second dummy is the Policy Dummy. In the Policy Dummy, 1 is assigned to observations in the Post Policy Period, and 0 to Pre-Policy Period as mentioned above in the table. The final variable is the Interaction Term, showing the impact of a particular policy on the farmer suicides. If State Dummy=1 and Policy Dummy=1, then this interaction term is the Differential Slope Coefficient- it shows how the Policy affects Farmer Suicides in the treatment state.

Our identifying assumption is error term is uncorrelated with any of the 3 dummies. We have also included 3 other States while analysing the impact on each State, these are the group of controlled state. Group of controlled states give us a good counterfactual of what would have happened to the particular State had it not received the policy shock. However, we don't explicitly check for this identifying assumption as the time series data on various state level characteristics is not available for the period that we are analysing. Given the spatial closeness of the controlled state and the similar weather and other phenomenon affecting agriculture, we are reasonably confident that collection of neighbouring states for each treatment state gives a fairly good counterfactual for the treatment state.

Results

1. Madhya Pradesh- Rashtriya Biogas Vikas Yojna

VARIABLES	(1) Number Suicides
mp_dummy	720.3 (554.0)
post_dummy	170.8 (227.3)
1o.mp_dummy	-
1o.post_dummy	-
0b.mp_dummy#0b.post_dummy	0 (0)
0b.mp_dummy#1o.post_dummy	0 (0)
1o.mp_dummy#0b.post_dummy	0 (0)
1.mp_dummy#1.post_dummy	-668.6** (227.3)
Constant	1,191* (554.0)
Observations	105
R-squared	0.032

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

For Madhya Pradesh, the Interaction term Coefficient is -668.66, showing that MP had 667 less suicides by farmers post the policy implementation, relative to control states in the pre policy period. The Interaction Term is significant, supporting the validity of our results.

2. Gujarat

VARIABLES	(1) Number Suicides
gujarat_dummy	-145 (543.0)
post_dummy	354.6 (352.5)
1o.gujarat_dummy	-
1o.post_dummy	-
0b.gujarat_dummy#0b.post_dummy	0 (0)
0b.gujarat_dummy#1o.post_dummy	0 (0)
1o.gujarat_dummy#0b.post_dummy	0 (0)
1.gujarat_dummy#1.post_dummy	-273.6 (352.5)
Constant	724 (543.0)
Observations	105
R-squared	0.024

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

For Gujarat, the Coefficient of Interaction Term is -273.6, which is significant at 1%. This means that number of suicides by farmers in Gujarat decreased by 274 post the policy implementation, relative to control states in the pre policy period.

3. Punjab

VARIABLES	(1) Number Suicides
punjab_dummy	-120.0 (129.6)
pos_dummy	-0.552 (33.25)
1o.punjab_dummy	-
1o.post_dummy	-
0b.punjab_dummy#0b.post_dummy	0 (0)
0b.punjab_dummy#1o.post_dummy	0 (0)
1o.punjab_dummy#0b.post_dummy	0 (0)
1.punjab_dummy#1.post_dummy	10.28 (33.25)
Constant	201.2 (129.6)
Observations	105
R-squared	0.043

Robust standard errors in parentheses

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In Punjab, the Interaction Term Coefficient does not have the expected sign of negative, instead it is positive 10.28. However, this is not significant as the Robust SE is 33.25, giving us a t-statistic value of less than 2. Therefore, we cannot reach any conclusive result on whether the impact of the policy had any impact on the no. of suicides within the State. This insignificance can be due to potential endogeneity concerns as the group of neighbouring states might not give us a good counterfactual, i.e., what would have happened with the farmer suicide rates in Punjab in the absence of policy implementation.

Conclusion:

This study contributes to the already existing descriptive studies of impact of various welfare schemes for the farmers by searching for the causal nature of these policies. We use Difference-In-Difference strategy where the two difference come from temporal variation (Pre & Post policy period) and the other one comes from the cross-sectional heterogeneity in suicide rates in various states in India. We provide causal evidence that policies to give alternate sources of income to farmers leads to decline in the suicides committed by the farmers.

While not explicitly testing for the possible mechanisms we give some mechanisms that might lead to decrease in farmer suicides. As is widely accepted, Indian agriculture is

heavily dependent on monsoon. When the monsoon is poor in a particular year and the farmers are not able to recover the input cost also then given the low levels of other skills force them to take loans at exorbitant interest rates from non-institutional credit source(s). Farmers are not able to repay these loans later on and get entangled in a never-ending cycle of debt. When farmers are given other sources of income then they are able to better whether the temporary income shocks and smoothen their consumption and other necessary expenditures.

The present study suffers from some data issues as we are not able to gather the state level data on various characteristics at an annual level. Ideally, we would have liked to control for as many characteristics as possible for the states to get a more precise estimate of the treatment coefficient. This is one area that further studies can seek to improve upon.

Horizontal Inequality and the Naxalite Conflict in India

Urja Bhuyan

Introduction

India is essentially one of the best representations of cultural, religious, ethnic and linguistic heterogeneity. As one of the most diverse nations in the world, these cultures play a definitive role in the everyday lives of the people. They derive a sense of identity from these cultures that have been historically engendered along with the various civilizations. This strong sense of identity across varying cultures and ethnic groups leads to the clash of interests and often develops into conflicts and civil wars within the country. Every individual group is guided by their beliefs and demands and sets out to establish their prominence in the country with the fundamental motivation to derive the benefits of economic development.

Lately, the relationship between economic performance and civil conflicts has generated a considerable amount of interest among economists. As mentioned above, these civil conflicts are localized in nature and occur primarily due to unequal distribution of resources within a country. India as a nation has had and continues to have several localized conflicts owing to a number of reasons such as the fact that it is a young democracy. As a young democracy, that plans and acts on a national level and not on localized fronts, often tend to treat the country as being homogenous, is contentious in nature.

The Naxalbari Movement or the Naxalite conflict, like a lot of other conflicts in India started as a result of land conflicts, in the Naxalbari Village of West Bengal in the year 1967, where the peasants resorted to armed struggle to redistribute land to the landless. It was identified as the “single biggest security challenge to the Indian state” by Dr Manmohan Singh, the former Prime Minister of India. This paper aims to analyze the causes behind the Naxalbari Movement conflict. The primary cause behind this conflict is that of horizontal inequality, that is ethnic/caste element to the conflict. The absence of proper representation of the tribal population of the country, resulting in the lack of proper income distribution and economic resources has resulted in the majority of the economic unrests in the country, as it has been historically too. This inequality is one of the primary causes that this paper focuses to examine by breaking it down to various sub-parts. The subparts being some important factors like land inequality, the historical exclusion of tribal in India owing to the deep-rooted caste system etc.

In the next section, the Naxalite Conflict in India has been discussed, followed by section 3 that looks at horizontal inequality and its explanations for the Naxalite Movement and section 4 which concludes the paper.

The Naxalite Conflict in India

A Naxal or Naxalite is a member of any political organization that claims the legacy of the Communist Party of India (Marxist Leninist). The Naxalite movement engendered out of a peasant uprising in the year 1967, in Naxalbari, a small village in the Darjeeling district of West Bengal. The primary cause which turned out to be the Arab Spring for the Naxalite movement was the brutal assault on a young farmer by the local landlords and goons. This ruthless act of suppression by the landlords to subjugate the farmers in the area was met with armed retaliation by the local tribal people of the area. The tribals then reacted by forcefully recapturing their land and hence started one of the fiercest acts of rebellion in Indian history. The rebellion left nine tribals and one police personnel dead. This rebellion, however, was controlled, contained and suppressed by the government within a period of 72 days with the use of force, but not before it had gathered huge visibility from Communist Revolutionaries. The movement spread across various parts of India including Bihar, Jharkhand, Madhya Pradesh, Odisha, Chhattisgarh, Maharashtra and Karnataka. However, it was the formation of the People's War Group (PWG) in 1980 that marked the revival of the movement in Andhra Pradesh, post the Naxalbari Uprising. Statistical data shows that more than 5000 lives have been lost and more than 1200 incidents of violence have occurred, more than 4300 people were displaced in Chattisgarh alone (Sundar 2008) within a span of 6 years between 2004-2010 due to the Naxalite Conflict. "While it is difficult to put an exact figure to the number of rebels, there is an estimated 10000 to 20000 full-time fighters with countless thousands of village militias controlling particularly remote jungle areas where the state is hardly present." (The Economist) The whole Naxalbari Movement and the Naxalite Conflict stems out of horizontal inequalities. That is the unequal treatment towards the marginalized sections of the society, such as the tribals and the peasants. These are the groups that take up the lowest position in the distribution of income and other economic resources. Dr Frances Stewart reinstates the fact that horizontal inequalities occur along a number of dimensions, including:

- Economic dimension, where it is not just income, but land ownership and employment, among other aspects, that are relevant to people's wellbeing and grievances;
- Social dimensions, such as access to health and education;
- Political dimensions, encompassing participation and control in central and local government, the bureaucracy and the army, as well as other sources of power; and
- Cultural dimensions, including societal respect for a group's religious practices, languages, or dressing.

The essence of a civil war or conflict is primarily guided by subjective interests or grievances that every group demands or needs, just like the situation in the Naxalite Conflict. The ever-widening abyss of inequalities in accessing the socio-economic resources between the major groups such as the tribal people and peasants and the landlords often leads to conflict. Every party tries to improve their position. The low-income groups, like those of the peasants and the tribals, will readily unify and

mobilise to improve their privileges while the richer groups such as the landlords, will try to protect their privileges. These contradictory ideologies and interests lead to violent conflict. (See Stewart, F).

Horizontal Inequality and the Naxalite Conflict

Schedule Tribes, farmers and peasants are economically one of the worst performing groups in India, and exclusion of the tribes from the growth of the Indian mainstream is seen as one of the key driving forces of the Naxalite movement.

The key reasons for the Naxalite Conflict spring out of not just the exclusion of the tribes from the growth mainstream of the country, although that is the key driving force, it is also due to inequality of land, underdevelopment of the areas that house the majority of the tribal population of the country, unequal distribution of income and subjugation of the tribal people and ill-treatment due to an overwhelming Caste system. India is the home to a large number of cultural and ethnic groups, the Scheduled Castes and the Schedule Tribes being a part of them. However, historically the worst sufferers are the Schedule Tribes. (The Hindu) Most of the States that were a victim to the Naxalite Conflict, such as the state of Odisha, Chattisgarh, Madhya Pradesh, Bihar, Jharkhand etc, are ranked as the underdeveloped states in the country with high rates of regional imbalances. These states form the lowest strata at the receiving end of economic resources and income distribution.

Underdevelopment and Land Inequality

Underdevelopment is another key reason behind the rebellion. The movement was concentrated in some of the most impoverished regions of the country. “Even if there was no truth behind the accusations that poor tribes are being exploited and are being illegally disposed of their lands, it is fairly certain that Naxalites are feeding on the festering discontent of the impoverished and marginalized tribal communities.

According to 2001 census, for example, about three-quarter, of Dantewada’s, 1220 villages are almost wholly tribal; 1161 have no medical facilities; 214 have no primary school; the literacy rate is 29% for men and 14% for women.” (The Economist 2012)

India is an agrarian economy, with the majority of its population depending heavily on their lands and farms to maintain a livelihood for themselves. Therefore, land distribution is very crucial to maintain the overall growth and development of the rural economy, which will directly lead to poverty reductions in the rural parts of India. Post-independence, the Nehru-Mahalanobis economic planning, sought to improve the access of land to these poor households. However, the shift in focus from the agricultural sector to the heavy-goods industrial sector left the plans unimplemented, in the hands of greedy landlords. This started to create an imbalance in the growth and development of the low-income groups because the agricultural and industrial sectors are complementary in nature. So, focus on one sector and neglect of the other, slowly culminated to various conflicts and revolts within the country by the working class; Naxalbari Movement just happened to be one of them. Disadvantaged groups and levels of income

As mentioned before, the main support and recruits for the conflicts are supposed to be mostly from the lower caste and tribal populations⁶. The people from the lower castes and tribal populations have been historically disadvantaged and find themselves at the bottom of the social hierarchy⁷. In spite of the population being exposed to a lot of positive entitlement in the form of reservation of seats in educational institutions and in various governmental jobs and other services, they are still not economically and socially at par with the others.

Low per capita levels of income to specific groups within a society leads to conflict. Unjust allocation and distribution of income towards the poorer sections of the society create political and economic unrest which culminates into rebellion. The high rates of injustice in income is due to the inefficiency of the government, rampant corruption or discrimination and exploitation towards the working class or in most cases, the mixture of all the aforementioned reasons.

Conclusion

Due to methodological individualism of economic theory and analysis, economists have contributed relatively little to enhance our understanding of why horizontal inequalities are so persistent. Yet, quite often, horizontal inequalities appear to persist not because of conscious decisions by political actors or because of an unequal distribution of power, but because they are the outcome of economic forces and mechanisms. (See Graham K. Brown and Arnim Langer)

Although horizontal inequalities are more of a historically innate phenomenon in India, the lack of focus on this aspect of inequality escalates the inequality towards the marginalized sections of the society. Clearly, the salience of ethnic distinctions varies over time and from case to case, however, once group entities become salient, members of the involved groups are prone to make social comparisons that hinge on the distinction between the in-group and out-group category. (Turner 1981). Petersen explains that “resentment is the feeling of being politically dominated by a group that has no right in a superior position.” This is exactly what sparked the Naxalite Conflict in 1967. The tribes that reacted to the brutal assault of the farmer in the form of an armed retaliation had been inflicted with undue political, economic and social subjugations by the landlords. The forceful claim over their lands, low-income distribution and poor working conditions led to the beginning of a conflict which later on gained momentum influenced by the Communist Party of India (CPI). Regardless of the ideologies of the different Maoist factions, in practice land redistribution has remained one of the main goals of the movement.

This paper has primarily focused on the causes for the rise of the Naxalite Conflict in India arising out of exclusion of the tribal people, peasants, farmers and the other working class from the economic

⁶The main support for the Naxalite movement comes from the Dalits and Adivasis. (Government of India(2008))

⁷ “Historically disadvantaged groups are commonly defined as groups which have been systematically excluded from institutions and cultural practices that provide skills and resources.” Pande (2003)

mainstream that goes on to increase the ever-widening gap in the inequality quotient. We see how the Naxalite Movement originated and spread mostly in the underdeveloped belts across the country. This happened because the communities that felt left-behind in the growth process mobilised for one common cause: that is the equal redistribution of land and the proper structuring of the social hierarchy and dynamism.

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Cryptocurrency and Blockchain

*Apoorva Jishtu, Grusha Pahwa, Manasa S, Priyanka
Binnani, Shivya Singh*

Introduction

Crypto currency is a digital asset that uses strong cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets. What makes crypto-currency unique is its ability to be decentralized and the fact that it eliminates the necessity of present banking system. Once released in the market, crypto-currency has the ability to facilitate trade and create additional units of the currency with each transaction, leaving no space for a third party to act as the liaison officer.

Block-chain Technology:

Block-chain is a method of securely storing digital information, distributed through a network of participating computers that creates a verifiable record of events. The distributed record of events is called 'distributed ledger technology (DLT)'.

Block-chain is an undeniably ingenious innovation, which allows digital information to be distributed but not copied. A block-chain can be seen as a spreadsheet that is duplicated across all computers in the network, totally public and easily verifiable. Block-chain is said to leave no room for missed transactions, human or machine errors or any transaction taking place without the consent of both the parties.

Using Block-chain, in any form, is like a peer to peer transaction where the need for mutual trust is replaced by cryptography. It is the technology behind Bitcoin and other digital currencies which have exploded in growth in recent years. It has more applications, which be explored later, in form of application in existing systems of voting, transactions and contracts.

Objective

The paper elaborates the working of crypto-currency and block-chain. Though, existing since 2009, crypto-currency is, till date, not regulated nor completely accepted by the world and the financial system. Its working needs to be understood and evaluated before any conclusion can be drawn. Though the working might seem technical, the paper attempts to explain the technicalities in the simplest way possible while elaborating the economic aspect and effect of block-chain and crypto-currency.

As countries and organisations are looking into crypto-currency and block-chain technology, the question still remains, how does it work and can a decentralised currency debase the existing governance and financial institutions? Is crypto-currency just a ponzi-scheme or can it evolve into an asset? We will try to understand the

feasibility of crypto as a means of payment. We look into the possibility of making crypto-currency state owned.

Cryptocurrency and Blockchain

Working of Crypto-currency Transactions

1. Each transaction is broadcasted into the network of the crypto-currency. This broadcast contains the details such as wallet address of the sender and receiver and the amount crypto-currency transferred.
2. Every miner which is active in the network then updates this transaction in their block. This update involves verification of the digital signature and other details. Adding the transaction to a block does not make it valid. Each block needs proof of work to validate it.
3. If the miner is able to add his block to the chain, a special transaction gets added to the top of this block, which gives a certain amount of crypto-currency to the said miner for the work that he has done. This is what we call the reward. This reward increases the total number of crypto-currency in the economy.
4. The transaction looks very similar to any online transaction from a user's point of view. The difference lies in the working of confirming the transaction. Traditionally this verification was done by a bank, creating a need for a third party acting as a middle man, but in crypto-currency it's a peer to peer transaction, confirmed by miners which makes it decentralised.
5. Crypto-currency wallets are very similar to online banking. It has a digital address which is often called the public key which is similar to a bank account number.

Anyone who knows the bank account number can send money to that account, but cannot access or use the balance in that bank account to make transactions.

Similarly public keys allows any individual to send cryptocurrency to the address represented by the public key, but they cannot use the wallet itself.

To access the bank account and make transactions from it's balance you need the password, which each individual keeps confidential.

Proof Of Work and Mining

Crypto-currency mining or crypto-mining is a process in which transactions for various forms of crypto-currencies are verified and added to the block-chain/ digital ledger. Block-chains contain details about every transaction in crypto-currency history which helps the users to validate the new blocks added to the block-chain.

When a block-chain transaction takes place a transaction slip is broadcasted in the block-chain network but in order for miners to attach the transaction in the existing valid ledger/ block-chain, the signature of the sender needs to be confirmed first. So who exactly does this?

Surprisingly anyone who is willing to and is a participant of block-chain network and using cryptography the signature is decrypted and verified.

All miners have a private copy of the ledger with themselves and each time a transaction takes place with a valid signature, they update the ledger.

With ledger spread across all over the network, due to traffic delays and occasional fraud there are different versions of ledger. In order to decide which version to use, like other democratic systems there is a vote but it is a different kind of vote involving mathematical puzzle.

Miners vote by trying to solve a special puzzle based on their version of ledger. The person to first solve the problem announces the solution and everyone else updates his version of ledger and in the process adds a “block” of transaction to the ledger.

In simple terms it is a kind of mathematical race designed to favour the majority. This is because as more number of people work on the problem based on a particular version of ledger the faster they will solve it.

The verification process is automatic, that is, the software mines, validates, verifies and propagates the transactions. Secondly, after the process of solving the puzzle and verifying the transactions end, it releases new currency through the reward system . Each time a crypto-currency transaction is made, a crypto-currency miner is responsible for ensuring the authenticity of information and updating the block-chain with the transaction.

How is the Block-chain Secured?

With a decentralized system, the foremost question is how to ensure that all transactions are recorded? Well the system is designed to ensures its own security. For example: Let us assume that everyone is working on Block 91. A miner wanted to alter a transaction in block 74. To do so he has to make changes in block 74 and redo all blocks from 74 upto 91. This is because each block contains the hash of the previous block, and hence any change in the chain leads to a domino effect.

This is not only expensive but also impossible because as said earlier everyone else in the mining network are working at block 91. So to be successful he has to not only redo all 18 blocks but has do it before everyone else works on just one block, that is block 91, and move further in the chain. But what stops him from altering the 91st block?

Well here, if he wants to trick the system he has to create a new block faster than the combined speed of the entire network. While trying to create this new block without his transaction in the chain, he creates a fork. For his block to be accepted his chain must grow faster than the other one. This is because as per rules the longer chain in the network is accepted. It is basically one hacker’s computer v.s the world’s computing power. As obvious as it seems, this is unfeasible.

Now one might go further and ask, what if hacker’s pool together in a mining network?

This will lead to what is called a 51% attack.

For a 51% attack to occur, the attackers will have to gain enough power to control

events in the network. They will then have a monopoly over generation of new blocks and can leave out or reverse any transaction they want. When a fork happens in the chain because of the other 49% miners, the attackers will work on their chain, which will last longer in the network as they have majority computational power. The longer chain gets accepted in the network and hence the attackers will have a monopoly or full control over all transactions.

Even though 51% attack might give them monopoly, it is not a profitable option. It will require a lot of mining power which is not only expensive but nearly impossible to achieve.

Blockchain Transformations

Alternative to SWIFT

Block-chain can work as it has been explained for crypto-currency, with a public ledger being used and updated for transactions, instead of using SWIFT to send just messages of said transactions. While SWIFT is capable of just sending messages, the block-chain can be used for the actual transaction, like in the case of crypto-currency.

If block-chain instead of SWIFT is used for international payments it eliminates:

1. Transaction fees at multiple levels.
2. The time lag of 2-3 days that often occurs with transactions through SWIFT.
3. Reduce the bank's cost of processing payments.
4. Reduce the paperwork.
5. Block-chain can not only be used for the money transfers but also for the transfer of documents which often occur during international trade. This further adds to cutting down the costs of overseas trade.

Smart contracts:

In global finance, forward rates are rates at which future exchanges of currencies take place. The rate, though is decided today, the actual exchange will take place at a predetermined date in the future.

Something similar to this is the concept of Smart Contracts. It essentially is a program, to fulfil a certain exchange of digital asset(s), if and only if conditions which we decide on today are met thereby acting as trigger to the completion of the the transaction.

An example: French Airline AXA is using block-chain technology to offer to its customers insurance against delayed flights with Fizzy, the platform being used for the same. One simply has to buy the flight delay insurance on Fizzy, the purchase is recorded on the blockchain and the contract (connected to global air traffic databases) is now rendered immutable. In case the flight does get delayed, your compensation reaches

you automatically without any cumbersome procedures to procure the same hence increasing efficiency and trust in operations.

Here is how smart contracts work:

1. The involved assets and the terms are made into a contract (cryptographic code) and put up on the block-chain.
2. Multiple copies of the same contract are distributed on the block-chain ,making it immutable. The outcome is also verified/validated by everybody on the network.
3. When the terms of the contract are met, the release of funds take place automatically through the smart contract. Or simply, if X happens(conditions are met), then Y happens(execution of the contract).

Smart contracts have potential use in many practical spheres, besides Insurance-

1. Voting- Doing away with red tapism, smart contracts can essentially make votes immutable after they are recorded, hence increasing efficiency and minimising the risk of any tampering of results.
2. Copyrights- They can keep track of ownership rights ensuring that royalty payments are made real time to the true owner.
3. Supply Chain- They can induce transparency and greater degree of coordination in the supply chains.
4. Trade Finance- They can be used to ease the transfer of credit between buyers and sellers reducing cumbersome payment making and receiving procedures otherwise involved.

Health care, mortgages and IOT are also areas where smart contracts have a future. Smart contracts are fast leading to considerable time saving and precise since all details are already incorporated into the contract. Transparent as they are, they do away with intermediaries in transactions and are hence cost efficient as well.

While smart contracts essentially make use of the blockchain, they ensure more efficiency, less paperwork, more transparency and less scope of corruption and red tapism. They can replace all forms of paper contracts that exist today, from government work such as construction contracts to private builders, retirement pension to employees, to private forms of contracts such as annuity payments and fundraisers.

Block-Chain A Case Study of Estonia

Using Estonia's example let's look at how we can incorporate block-chain technology into various sectors:

1. E Residency: Block-chain technology can be used to generate E residency. E residency program allows us to receive a government issued smart ID card that provides digital identification and authorisation which can be used to assess a number of services like establishing a company online, e-banking, sign documents online that have legal validity, etc. All this can be done while sitting at home. We

don't even need to be a citizen of any particular country to have an access to E residency. E - ID system is based on advanced encryption technology . This works by tying digital identity through block-chain .

And the proper working of E Residency in Estonia makes perfect sense to expand this digital service to the rest of the world.

2. E Health: Block-chain technology can also be used in healthcare sector to save people's medical records. Estonia became the first country in the world to incorporate the Block-chain into their healthcare system. Every Estonian has their health record digitized and stored on a Block-chain. It has established the block-chain technology in their healthcare system so that people can also log into their own records using their digital identities. This is especially critical in emergency situations where the doctors can simply use the patient's ID to get information such as blood type and allergies without losing any time.

Future of Cryptocurrency

Case study of Japan:

While the world is still a bit wary about the whole matter of crypto-currency and its relevance in today's economy, Japan does not seem to be slowing down it's accepting approach towards Crypto-currency and as of April 2017, recognizes Bitcoin and other digital currencies as legal tender under the Payment services act.

Crypto-currencies contribution towards Japan's GDP has been recognised as a result of which in December 2017, the National tax Agency ruled that gains on crypto-currencies should be categorized as 'miscellaneous income' and investors taxed at rates of 15%-55%.

Japan has a relatively high number of "smart" automatic teller machines (ATMs) capable of handing crypto-currency trading.

Japan: Heart of bitcoin, did not become the centre of emergence of crypto-currency because of the collaboration of prominent investment giants of the country but started out of the collaboration of Jed McCaleb , a programmer who in the late 2006 thought of building a website for its users of the card game 'Magic : the gathering online" where they can exchange their game cards just as stocks.

Jed purchased the domain name "mtgox.com" and later he felt that there was not enough potential in this and thus moved on to his other projects. With the slow emergence of crypto-currency around the world Jed felt the need to provide an exchange to trade bitcoin and other currencies. He handed over his site to french developer Mark Karpeles , in March 2011 saying "to really make mtgox what it has the potential to be would require more time than I have right now. So I've decided to pass the torch to someone better able to take the site to the next level."

The event of the great Mt Gox's 460 million dollars (33,79,85,00,000 Indian rupees) disaster has far been etched in the crypto-currency history as the biggest hacks of all

times and might as well be for the coming time but Japan did something completely opposite to what the world thought it would. Japan maintained a supportive regulatory environment and moved to regulate new exchanges and allowed retail payments. Exchanges are legal in Japan, but after a series of high profile hacks crypto regulations have become an urgent national concern. Japan's Financial Services Agency (FSA) has stepped up efforts to regulate trading and exchanges: amendments to the Payment Services Act now require crypto-currency exchanges to be registered with the FSA in order to operate – a process which can take up to six months, and which imposes stricter requirements.

Japan also has its own indigenous crypto-currency: Monacoin(MONA) which is a decentralized open source crypto-currency forked from Litecoin and launched in January,2014. New coins are issued as payment for mining activities, which allow the ownerships of tokens to be recorded into the MonaCoin block-chain.

The cap is 105,120,000, and no coins were 'pre-mined' before becoming available to the public. It is particularly successful in Japan community such that there are now shops in the country where bitcoin and Monacoin are accepted. 90% of users of monacoin are based in Japan and although it has little relevance outside Japan but is quite famous in Japan.

Currently there are five exchanges which facilitate the transactions of monacoin , 3 of which are situated in Japan. It is believed that Mona was formed more out of culture desire of japan to have its own indigenous crypto-currency rather than for profit purpose. The Crypto-currency was founded by- Mr Watanabe- who just like the founder of bitcoin - Satoshi Nakamoto- remains to be unknown.

Why is Japan so persistent in its commitment for the growth of crypto-currency?

Japan has witnessed ultra low interest rates for many years , that means the returns from the traditional assets have been low for many many years which has gone as far as having negative interest rate meaning now there is a cost attached to saving.

With the emergence of Crypto-currency, it provides a new source of investments with much higher returns than the traditional ways.

In such a situation investing into alternatives such as crypto-currency with higher yield seems to be more attractive to the investors. However, crypto-currency is still not not as stable in the rest of the world as it is in countries like Japan and China.

Also the worldwide crack down of use of Crypto-currency will attract more investors in Tokyo , which encourages Japan to continue its quest to explore the field of Crypto-currency and hopes to use it in their favor to boom it's economy.

The case study of Japan puts forth one possible route to take with crypto-currency, that is trade in crypto-currency in a country as an alternative source of transaction or investment.

The block-chain will eventually grow, can also stabilize once it is government approved and the security related to crypto-currency is improved, and will grow in sync with the algorithm.

The only roadblock here is the possibility of everyone just trading in crypto-currency, elimination of the demand for high powered money and the central bank losing control over the supply of money. The possible solution to this would be for the central bank to mint the crypto-currency chain.

It can then control the reward rate, which will give them control over crypto-currency supply just as they have control over high powered money.

This will then require two assumptions.

1. **Fixed money base but no fixed supply:** While talking about the present crypto-currency we have a fixed supply of these coins(for bitcoins it's 21 million). This was done because in a decentralized system there is no body/institution regulating the monetary base.

Crypto-currency makes up for this lack of centralized system controlling the monetary base, by controlling it through algorithms which work with a cap on maximum amount of crypto-currency that can be created. This fixed cap does solve the problem of control over monetary base but creates a new problem of its own.

With fixed supply, the value of bitcoins is ever increasing. This means that with the same amount of bitcoins you can buy more and more goods which implies that the price of goods is decreasing.

If we look at a fixed money supply model with growing GDP, deflation takes place.

$$MV = PY$$

If M(money supply) is fixed and GDP is growing, the value of Y will increase. To maintain equity P will decrease (deflation). The general idea is that deflation is a decrease in the price of goods and services.

If we talk of crypto-currency particularly, an increasing value of a crypto-currency means the cost of paying for things using that crypto-currency is decreasing, i.e the price of that good is decreasing. Also in deflation people hoard money, unwilling to buy things presently, assuming that later it will be cheaper and hence more profitable. Investment will tend to be low in the economy which is not desirable.

Clearly deflation is not a desirable characteristic in an economy and hence under our model, crypto-currency will not have a cap on maximum amount of coins that can be produced.

We will still have a fixed money base. This means that the amount of coins produced by the central bank or any central authority will be fixed. The initial release of crypto-currency will be made by the central bank, the amount of coins released equal to the money base.

The control of central bank over money supply will not be established through minting new coins but through the reward rates.

2. Reward rate is the new interest rate:

With a fixed money base, we take away the control of central bank over the money supply, which is what the original system of crypto-currency demanded. This loss of control is in terms of not being able to print new currencies themselves. The need and importance of central bank having some control over money supply is undeniable and hence we need to make some alterations in the present system to incorporate the central bank.

The work which is presently done by the interest rate can be performed by the reward rate. Presently reward rate is determined in the crypto-currency using algorithms and alters with the idea what there is a maximum cap for the amount of coins that can be generated. Since we have removed the cap for reasons explained earlier we have to now find a new way for determination of reward rate. By substituting interest rate with reward rate, we solve both these problems.

If the economy requires higher money supply, that is higher money demand, the central bank can increase the reward rate. With higher rewards rate with each transaction more crypto-currency will be introduced in the system, hence the supply will increase without the government actually minting new coins.

Volatile market:

The crypto-currency exchange rates are highly volatile, which makes it less attractive to investors and general public as the risk increases.

The main theories behind this high volatility is:

1. The public perception of crypto-currencies is quite dichotomous. Various factors like increased interest in Asia, the Japanese stand on it, many enterprises showing interest in it etc have had a positive impact on the outlook towards crypto increasing its demand, but on the flip side a hard-fork, negative changes in the legality of crypto-currencies, and hacks could very easily destroy their public interest. Like any other commodity crypto-currency price is highly determined by its demand, which seems to change a lot because of various factors and hence its price is quite volatile.
2. No intrinsic value: This again makes crypto-currency highly dependent on market sentiments, which are highly volatile.
3. Lack of regulations: this makes the crypto-currency more risky as market manipulation is easy and discourages institutional investment or large funds.

How can this volatility decrease?

With some more regulations and legal assurance a more mature outlook and a diverse set of investors will be invited into the crypto-currency market. This can ensure less fluctuations in the market prices.

Backing crypto-currency:

In our model, the supply of crypto-currency isn't fixed and only the monetary base is fixed. It is accepted as legal tender and people use these tokens for their transactions. Backing it up by the central government brings about the requirement of anchor reserves of that resource. It will work just like the currency that we have in the present. The Indian Rupee is backed by foreign exchange (95%) reserves and gold (5%). Rupee isn't actually backed by any real thing like gold or other precious metals. There are promissory notes where the RBI "promises" to pay a value of Rs 100 against a 100 Rs note. Indian Rupee has backing only in theory and it will be worthless if every Indian stops accepting it for some reason. The RBI or the Government of India does not promise back the INR with gold.

Many countries have backed the crypto-currencies they have created to world's most stable asset : gold . Gold stays relatively stable, while bitcoin's price fluctuates widely day to day. It's a safeguard against economic unrest or the inflation of a fiat currency and even if the stock market crashes, we have still got some physical assets sitting in a safe. So , backing crypto-currencies using gold is not a bad option . Many countries of Middle East , Dubai , Singapore have backed their crypto-currencies using physical gram of gold .

But the gold backing is not a viable option either, as India doesn't have much gold reserves . And also it creates the concern of storing a large supply of physical gold reserves.

Therefore the backing of crypto-currency in the model is done through the traditional way of the preferred backing option as 95% foreign reserves and 5% gold .Our model which has crypto-currency as the legal tender performs the same function as Indian Rupee and is built around the same framework(fiat currency and has no intrinsic value).

Conclusion

This paper sets out to provide a general exploration of block-chain and crypto-currency. Block-chain technology allows data to be decentralized yet never duplicated providing complete integrity over it since no third party can make any changes to it while the data is in transit. This technology can be used in several government services because it helps in connecting different authorities to one another and even different countries to one another while keeping all the data confidential. The uses so suggested work in different spheres but lead to the common goal of effective and transparent sharing of information. Block-chain can be exploited in any field which deals with or needs to share and spread data.

The issues which have to be addressed if crypto-currency gets accepted as fiat currency is the fear of Central bank losing control over money supply and the elimination of high powered money. If we assume a cap on the money supply, the problem of control over monetary supply will be solved but it will lead to something undesirable-deflation. Instead, if reward rates replace interest rates and can be adjusted by the central bank according to the requirement of money supply in the economy the government will not

have to mint more coins or reduce it preventing inflation or deflation from taking place. Hence, we can still have a fixed monetary base which equals the initial release of coins by the Central Bank and the money supply in the economy can be kept in check through reward rates. This also solves the problem of volatile market and extreme exchange rates.

While it may be too early to comment on whether and when a full scale adoption and legalization of crypto-currency takes place, we can definitely see it as possibility and also acknowledge that there will be need for even further advancements in technology to ensure higher standards of safety and acceptance of crypto-currency.

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In conversation with :

JAYATI GHOSH



In Conversation With

Jayati Ghosh

Q1. Even with relatively low credit disbursal, a lot of the lending in India has turned non-performing and the extent of actual/possible default has been enough to suppress lending in the recent past. What is the reason for such mismanagement of the financial sector?

Ans. Well, this actually reflects a combination of forces. First is in terms of an overall broader strategy for banking. So, most developing countries have development banks which are doing long term financing for infrastructure and for strategic sectors. We had developmental banks but we got rid of them as a part of the neoliberal reforms of the 1990s. The trouble is that the jobs they performed still need to be done because we still need to fund infrastructure and LIC and these long term bonds can do only so much. So ultimately, what happened is that our commercial banks, which are in the public sector now, were more or less told to take on this. That's a fundamental problem, there's a maturity mismatch because commercial banks are not meant to do long term financing, high risk, high gestation periods and all of that. So you would expect a mess. In other words, especially in the boom period of the 2000s, a lot of the financing was through commercial banks, in infrastructure, in aviation, in all of these sectors that were seen to be growing but would take a long time to repay. And you would expect that inevitably, commercial banks would have a problem as a result. So that's one that's a structural problem. Associated with that is the whole crony stuff, which again, has two aspects. One is, of course, the straight corruption, the Nirav Modis, and that's the easy one to highlight that there are the people who are getting away with gaming the system and the other is that certain industrialists benefited much more than others, even for these aviation, coal, energy and all of these things. So, that's the second element. The third is that many of our infrastructure sectors themselves got bogged up in problems because they had been done hastily without taking into consideration all the requirements. So coal, there was this scandal over coal and a lot of coal investments simply got stalled. In fact, many mineral investments were stalled because they had not done proper environmental proceedings. A lot of the sectors in which commercial banks had lent, in which commercial banks should not have been lending anyway, had more problems because of the way in which they had been encouraged. Now the funny thing is that all this was happening during the boom period, because of which everyone was happy about it. We were the darlings of international investors but the reason we had high growth rate at the time was because we were doing all these things shoddily, we are not doing the proper procedures and so on and so forth. That's the third element of it. The fourth element is that the government didn't deal with it adequately. Default is part of the game. All credit systems have periodic defaults, it's not a big deal. What happened is that government especially UPA and the NDA(the current Modi regime) tried to shove it under the carpet until it could not catch up anymore. So, it was only when Raghuram Rajan announced that a lot of it has been misclassified as NPAs and

when he insisted that it needs to be classified correctly, there was hell to pay. So it's like you don't clean your room for weeks and when you finally clean it, you discover the dirty omelette lying under the bed.

So it was a delay. And then when they said that they would recapitalize, they gave such tiny amounts that it was meaningless. So if you're going to recapitalize, which is not the end of the world, it happens to all banking systems everywhere, China's recapitalized its bank four or five times in the last 10 years, nobody would notice, as it happens in the normal process. But if you are going to recapitalize and you need one lakh crore and if you give ten thousand crores, it doesn't work, and it actually then only intensified the problem.

So I would say it's all of those things now coming home to roost. So what happened is that because the banks had high NPL and banks anyway ration their credit, they got even more and more careful with whom they were lending to. The small and medium enterprises were just excluded completely. Among the large ones the cronies continued to get, and they still are getting, in fact, large loans. But there was a bit more wariness about who and even among borrowers, banks were increasing resiliency. The large investment rates have been falling continuously for the last six years. So where is the demand for that credit, the demand is with the medium and small, but you're not giving them because you want to give it to the big guys, they are not interested, anyway they took a lot of your money to go and buy internationally, like the TATAs and the Birlas and Mahindras and everybody but they didn't really want to do the same kind of investment.

so there is less demand for it, then you did Demonetization, which destroyed faith in the banking system for Indian people. So after that, less and less people are willing to put money in banks because they have this fear that something again will happen. And the perception is that the public banks don't allow you to withdraw money, which is the opposite of what it should be. So you now had even a stagnation in deposits. So I would say what we've ended up with is a completely unnecessary man made mess in the banking system and I say man made because they were men.

Q2. The share of direct taxes in the total tax revenue has continuously fallen from 38% in 2009-10 to only 32% today. Why do you think we have been unable to tax high net worth individuals and private companies which are earning a lot and due to this, we have to raise taxes through indirect taxation, which is considered much more regressive?

Ans. Well, I guess the simple answer to this is the lack of political will. It basically means that you don't want to tax the rich because you want them to fund your election campaigns and the rest of them are your cronies or your children. So basically you are not interested in taxing the rich is the first part.

The second part is the shared politics of it and the whole growth strategy, you know what we call the neoliberal growth strategy based on a particular growth model of how economy is going to work and how the development is going to happen which is that its large capital which is going to deliver for you, large capital, you have to encourage it and you have to incentivize it and you have to give them lots of goodies, so that they

will go out and invest and that Investment will give you growth and formal sector expansion and employment, it will deliver and it will trickle down, that's the philosophy. Now when you are incentivizing, that really means all kinds of things. It means that you can't tax them too much and have to effectively subsidize them in all kinds of ways, in cheap land, cheap electricity, cheap access to resources and cheap water, a cheap spectrum, you have to keep giving them things to incentivise them. It means that any attempt to tax will be seen as anti-reform and it should be the other way. So there is a systemic problem, just like in banking there was an approach, a problem of economic strategy. Similarly, with taxation, there is a problem of economy strategy. You are convinced that if you tax, capital will leave or they will not invest and then you won't get growth. Now, that is something I believe is a false idea. I believe that if you look at the successful economies in the world, even in the period when they were growing rapidly, they did tax and they used the tax revenues to fund things like infrastructure and to enable wages to increase and in other words to expand public demand. Now, that is crucial because if you don't get demand, you don't get the growth. That is why we have falling interest rates, there is no demand. If the private sector is not going to do it, that is the corporate private sector, if the ordinary people are too poor and don't have jobs then they are not going to do it either. So the public sector has to do it, it has to spend-not just for general infrastructure and services but just to generate demand. Now, if you don't have the resources for a public sector to spend, then this is not going to happen so you have to raise those revenues. Our Tax-GDP ratio, for center and state combined, is under 20% which even by Asian standards is really, really low. Forget the developed countries their tax-GDP ratio is in 50% range, most of Europe is 50% plus but even the so called "Asian Tigers" in their periods of growth are all 30% plus and it has to be, because that is how you generate all the infrastructure, all the expansion, all the growth and that brings your private investment. So I would say it is a problem of strategy, you have to undo that strategy and then it is a problem of the politics.

What about tax evasion? Why are they able to get away with it?

Tax evasion happens because we allow it. Its political will. This is the whole Laffer Curve thing, you lower the tax rate and the compliance goes up and honestly, I have always found that very foolish because paying zero tax is always preferable than paying a low tax. So if you can avoid, you will. The notion that people don't pay just because it is high and if it goes down by 2% suddenly they will start paying-no. They pay their taxes because there are consequences if you don't. That is how all societies function. In India, we have a very oppressive tax administration for all kinds of irrelevant people but the people who are actually cronies can get away with the matter. Precisely because there are several ways in which you can get away with it. One way is straight forward tax evasion-you don't report your income and the other is tax avoidance or what is called tax planning strategies by the corporates, you utilise every loophole. We have given away 6.5% GDP in tax breaks in the budget every year. So you can utilise all of those to avoid taxes. The evasion, is basically a reflection of our poor tax administration. In demonetisation, the final last straw they clutched at was the now there are all these people who are in the loop because they put money in 2.5 lakhs or whatever the limit was so we are going to trace them. So I was talking to this guy who is a tax officer and he said that it will take 150 years, if all of our available manpower is

working only on this, full time i.e. on tracking all those people. But are they doing that? No. What are they doing, for example, I have been audited six times in a row, it is absolutely crazy and they can do it for up to ten years before and when they audit, you have to find every single receipt so I have four different files from the last ten years because they can ask anything. And the purpose is always to harass you till you say okay, I will give you 10,000 but please now, leave.

Q3. According to the Swaminathan Commission, the MSP should be calculated by C2 (ie including the imputed cost of rent and interest on capital owned along with labour and paid out cost). The governments since 2006 have repeatedly ignored this recommendation and key demand by farmers, calling it unfeasible. What is your opinion on it? Also, keeping in mind various problems such as long delays in payments to farmers and the large transaction costs that farmers incur due to multiple registrations, how, according to you, can the government ensure MSPs to farmers?

Ans. The problem is not about just whether it is, you know, A2+FL or C2, the actual problem is how do you ensure that MSP function is the floor and there, the whole procurement system is actually the problem. First of all, we effectively grow 2 crops-wheat and rice. We are supposed to grow 32 crops and most of them are not really covered. Second, even in those, the procurement is done only in certain states because it was designed as a system to would transfer food grains from areas of surplus to areas of deficit. So it is all about the collection in surplus areas and distribution in deficit areas. The trouble is that now you want to make that the minimum support price so you should be going everywhere but you don't go to deficit areas . Even in the surplus areas, you go late, you don't go just immediately after the harvest, you stay there only for two days in a particular haat or a Mandi, you are not there enough for the farmers to get their stuff across and there are all kinds of things so there are many, many problems with the way the procurement operates. But that is just one part of the whole problem. I was involved in a farmers commission in Andhra Pradesh way back in 2004. And they all were of course, jumping up and down about this whole, procurement price. It was in fact in cotton, the official procurement price in that state, They said it was C2 plus not 50%, but some 30% or whatever, but it was still below their own cost of production. Because remember, the CACP looks at the Indian average. So it takes the Indian average across all states and they are taking one C2 and that C2 varies massively across states. Now, when you ask them why don't you have different values for different states, the most sensible response that comes is that if we did that, the state that should not be producing a certain crop will start producing it which is not efficient and you are encouraging people to do costlier things. Now Andhra Pradesh is a particular case where farmers have really went commercial very very quickly and they went commercial even on the inputs. The farmers were constantly buying new seeds, fertilisers new chemicals more this and that very very heavy use of pesticides, six times the recommended avionic rate for cotton to the point that it couldn't be sold anymore. So they were overdoing it. So is that a failure of procurement? No. That is a failure of the extension services which have not been explained properly to show the farmer that this is not the best way to cultivate the crop cotton. So it is a very complicated thing to look at the problems of farmers only through the lens of MSP is a mistake.

And it is basically a rich farmer demand So they are the only ones who really benefit from it and where is the procurement for onions and tomatoes and horticulture culture of any kind, even for the oil seeds, there is no real procurement for soybean and all of these things. So I would say that to make procurement effective - first of all you have to make that system more effective which means you need to put money in it and allow decentralized procurement which basically means giving state governments more power, and let state governments give more power to the districts, the panchayats, then you can even start procuring the traditional staples. So you can do all that If you decentralize and if you put money into the storage facilities, local procurement and enabling that to happen.

Q4. As an undergraduate student of economics, what prompted you to choose or study economics as your subject?

Ans. I actually studied sociology as an undergraduate because I was interested in society and I think we were one of the first sociology batches in Miranda House. And I did Sociology because I was always interested in society and I wanted to know how things change and social trends develop. And then the more I studied Sociology, the more I realized that it's economics that's determining it. In other words, I got more and more persuaded that I was looking at the surface of things and the things that were happening, the property relations, economic policies, the nature of employment was driving things on top. So I then switched to economics which was tough, and fortunately, in those days, JNU did not require an undergraduate degree in economics. I got in, and I have to tell you that the older I get the more I realize that every economist must be made to study Sociology. That so much of economics is determined by socio, you know, so in a way, I have kind of come in a full circle. I now think that economists need to study sociology and politics.

Q5. What do you think about this 10% reservation for the urban?

Ans. It's a joke. It's political, but do you think that the electorate is that stupid? Because look at it, it's eight lakhs, I mean my daughter qualifies. Effectively, 99% of the population is below this. But 90% of your upper castes, would qualify. That's number one. That's such a large kind of thing. Effectively, everybody qualifies, number one. And number two, 10% of 0 is still 0. Public employment is not growing. It's a constitutional amendment and you are rushing it in one day. It's done overnight, Everything is done at night and it has landed it in a mess.

Q6. What do you think are the steps the government could have taken and future governments should take to increase jobs in our country?

Ans. The first one, I would say, definitely, is a massive increase in public employment. Now there is a belief that public employment means government jobs, means Babus and everybody thinks, "Oh God, not yet another Babu picking their nose and sitting in the sun." So there is a negative approach to government jobs. But think about it, who are the people who are mostly employed in most states across the world? In education, in health, in sanitation, then basic infrastructure and they are in services to assist people, you know? Those are actually very necessary. We under-provide them, we don't provide them to our citizens. We don't provide them with any of the basic things they need.

Now, spending on these is very labor intensive, so it has high multiplier effects. So if you spend on health, then it has very high multiplier effects. You are going to generate multiplies of three or four multiples. People you hire are going to go out there and spend their wages. And that in turn, generates secondary incomes. So private activity will come up if you look at the multiplier effect. Around 2010, or maybe even earlier, so if you look at the ratio of public employees to population and you take that as a proxy for the kind of services you deliver, the global average is about just under four. Europe is 6, The United States was 5, and Sweden, Nordic countries, were about 11 to 13. And you know that they give proper services, India less than two, Africa, 1 and that figures, you know? And that means everything. That's why you have long queues, because you are under-staffed, and that's why you have poor quality service. You go to a public hospital, and you have to wait all day to see a doctor because they are under staffed. And the nursing is terrible because you are under staffed. And so on and so forth. So public employment is a huge increase in welfare, obviously, but it's a huge employment generator. It actually creates secondary jobs. Now what do we do instead? We want to do a big national health program instead with Ashrams, who have got volunteers, so they don't have to be paid the minimum wage. You get 500 a month and in some states you get 1500 a month.

Number two, I would say as an immediate measure the employment guarantee, NREGA. It was the deputy director of the ILO, I was with her in a panel in Argentina recently, and she began her presentation by saying that the NREGA is the most innovative policy, no the most significant policy innovation of the 21st century. They started well, but they let it fizzle. They're denying it funds, they aren't letting it work. But if you use it properly, it has so much potential, it can improve the quality of life, you don't have to confine it to earthwork and digging. Those are important, you can do surface inflation, you can do drainage, you can do so many things, you can link it to care. There's no care at all, if you are destitute and elderly, you are out. You can link it to so many things that would improve quality of life and you can generate multiplier effects. There is a strong case for an urban employment guarantee and an expansion of the rural one. And it will pay for itself because you will get more tax revenue from the increased economic activity. So that's number one. Second is, where are all the jobs? They are in the MSMEs. Frankly, it is a miracle that any one of them can survive. They don't get credit, they don't get proper electricity, I mean they constantly have to pay every single person that comes along. So if you just have a very basic package for MSMEs access to credit, access to basic infrastructure, providing help with marketing, the kinds of things you get in every other country. You do that, and you're home already.



What is the Colour of Money?

Mita Chaturvedi

The shop around the corner,
The malls at the other end,
The vendor right in front of you,
The people going right by you.
Everyone on their own path, and yet
The same place to get to.

The vendor avoiding taxes.
What harm could a couple bucks do?
Says not one or two, say a thousand
But no one has a clue.

The tycoon munching his pennies,
Hiding his millions
From the villains who will take it from him
Hiding his millions
For his child as she looks up to him.

A woman stares out
Before entering in
A place of delight, A place of lust
Nonetheless a place she trusts
To help support her kin.

The paths they chose,
The consequences they know
The actions they won't disclose
Some bad, some good
To do some bad and some good
To get to the same place
It's the green that they embrace

So now one must ask
What is the colour of money?
Not Black, Not White
But a million shades of grey.

In conversation with:

**BINA
AGARWAL**



In Conversation With

Bina Agarwal

Q1. In the wake of recent farmer's debt waivers announced by various State Governments, do you think that periodic debt waivers will be successful in driving away from the woes of the Indian Farmer?

Ans. Loan waivers cannot address farmers' woes. They only reach the 20-25% farmers who have access to institutional credit and not the marginal farmers who depend on moneylenders or get no credit at all. Having a bank debt is not, in itself, a sign of distress. Farming, like other businesses, needs loans, and access to formal credit signifies creditworthiness. It is the poorer farmers who depend mainly on private lenders, and whose loans don't get waived, who are in distress.

To address farmers' woes, we need a multi-pronged strategy of income support, government investment, and institutional innovations, and not a 'one size fits all' approach. The better-off farmers are deeply dissatisfied due to unfulfilled aspirations and especially a lack of formal sector jobs for themselves and their children. Poorer farmers are distressed due to poor economic returns from agriculture.

To overcome immediate distress, direct cash transfers are preferable to loan waivers, but such transfers should be made only to smallholders (those owning 2 ha or less) and pure-tenants. And the funds should go to women in the family. There is substantial evidence that it is income in a mother's hands which greatly improves child nutrition and education, and not income only in the father's hands. Just before the last state elections, Telangana gave Rs. 9900/ha/season to all landowning farmers, while pure-tenants and most women farmers got nothing.

To reduce long-term distress, however, agricultural investment is imperative, especially in irrigation, water conservation, new crop varieties, and storage for surplus produce. We also need to encourage small farmers to pool resources and cooperate in farming. Some 85% of farmers cultivate 2 ha or less, in scattered plots. This is non-viable. Pooling land and resources will help smallholders create medium-sized production units. Finally, it is essential to create jobs for farmers' children in small towns, through ancillary industries, food processing, SMEs, and so on. This would provide supplementary income for farmers in distress.

Q2. Women farmers have largely been excluded from the narrative of agricultural reform in India. Along with reorganizing land rights, are there any alternative solutions that can be adopted?

Ans. Yes, women farmers are seldom mentioned in the policy, despite the fact that an increasing proportion of women are principal cultivators, and many more are de-facto responsible for farms with male outmigration. Some 35% of all agricultural workers are female and 13.9% of operational holdings are directly farmed by women (2015-16 agricultural census). The economic distress that women farmers are facing is never

mentioned. In 2010, they constituted some 15% of farmer suicides in 5 major states (Down to Earth. 2015). Overall, gender is, in fact, a critical factor, as we look toward the future, since women are significant food producers and home food managers.

Despite being major contributors to agriculture, few women have land titles and those that do usually own very small plots. A lack of titles remains a big constraint, since it is linked not only to the security of tenure but also to access government support schemes for farmers. Women farmers also face gender biases in access to technology, training, inputs, irrigation, machinery and markets. So we need measures both to increase women's land ownership and to raise the land's productivity. For this, women farmers not only need support for essential inputs but also institutional innovations such as group farming.

In the early 2000s, Kerala began a programme of group farming in which women lease in land collectively, pool their labor and capital, and share the produce equitably. In order to understand what economic difference this makes, I did a detailed survey in 2012-13 to compare women's group farms with individual family farms (95% of which were male managed), in Thrissur and Alappuzha districts. I found that the annual average value of output was 1.8 times greater and annual average profits were 5 times higher on women's group farms. They did especially well in commercial crops such as bananas and vegetables, despite depending on leased land. Groups helped increase farm size, brought scale economies, saved on hired labour, improved credit access, and enhanced women's bargaining power in input and output markets.

Institutional reform, which has long been ignored in India's farm policy, needs to be an integral part of schemes to help poor farmers (both men and women). Groups can also reduce the likelihood of farmer suicides by reducing their isolation.

Q3. Do you think that we have enough time to avoid the warming that will bring severe and damaging effects of climate change?

Ans. We are already facing the severe effects of climate change, in terms of a rise in droughts, floods, unseasonal and erratic rainfall, melting glaciers, and so on. Most of all, India, and South Asia more generally, will be among the worst affected in terms of a decline in crop yields with temperature rise. The International Food Policy Research Institute (IFPRI) in Washington DC, for instance, estimated that by 2050, climate change (relative to the no climate change), could lower production of rice, wheat and maize in South Asia by around 14%, 49% and 9% respectively. Even without climate change, we need extraordinary efforts to meet the food security demands of the 9.7 billion people projected for 2050. With climate change, this is even more imperative.

We can still do a good deal in terms of both adaptation and mitigation. For more secure agricultural production, for instance, we need to invest in efficient irrigation and water conservation; develop and adopt more heat and drought resistant crop varieties; diversify the crops grown, so that if some crops fail others will survive; integrate trees with crop production; and, most of all, grow crops that use less water. Today, only 44% of India's irrigable area is irrigated. This must increase, but not via groundwater mining, which is unsustainable. We need rainwater harvesting and conservation. In Punjab – India's breadbasket – the water table is falling by 2.3 ft/yr or more, with no

penalties for overdrawing. In contrast, Gujarat's success in agriculture (9.6% growth rate between 1999-2009) lay particularly in rainwater harvesting. This needs replication, wherever possible, and can be done through community cooperation. Also, methods such as drip irrigation help use water more efficiently.

Technology alone, however, cannot solve the problem. The technical advances must also reach the farmers, especially women farmers, whose numbers are growing. Most of all, our politicians need to look beyond elections and invest in our country's long-term future.

Q4. You are among the pioneers of equal land rights for women, even leading a social movement to amend the Hindu inheritance law to make it gender equal. What other things are you passionate about?

Ans. I am passionate about social equality for all and not just for women, as well as environmental conservation, especially forest protection. I also feel strongly about social tolerance and intellectual freedom. And I love poetry and literature, classical music, and good cinema.

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