IMPACT OF BANK WITHDRAWALS ON CASH HOLDINGS, INTEREST RATES, INFLATION AND BANK DEPOSITS: AN EMPIRICAL EVIDENCE FROM PAKISTAN

Aysha Noor 1 and Zulfiqar Ali 2

Abstract

To avoid debt burdens and to meet budgetary expenditure within internal resources leads to the introduction of bank withdrawal taxation in Pakistan. The research has been carried out to empirically investigate the impact of bank withdrawal taxation on cash holdings, bank deposits, inflation, borrowing and lending rates. The withdrawal taxation was imposed in 2006 therefore the study analysis period has been from 2006 to 2014. The complex relationship among variables leads to analyze the data through VAR. The empirical findings through Vector auto regression (VAR) and impulse response suggest the presence of disintermediation in Pakistani economy. The disintermediation in the economy is captured through the study findings that there is an increase in the cash holdings during the study period and reduction in bank deposits. The monetary variables such as inflation increased while borrowing and lending rates are reduced due to the imposition of bank withdrawal taxation.

Keywords: Bank Withdrawal Taxation, Cash Holdings, Deposits, Inflation, Deposit Rates Lending Rates

JEL Classification: G 210

Introduction

The government revenue collection become the compulsion of the current economic system to meet the annual budgetary requirements, to start new development projects and to keep in operations the existing and ongoing projects (Abida & Asiweh, 2012) 3. To run an economy on the

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3 Odusola (2006) suggests that the tax authorities are not just responsible for collection of tax but there are other challenges which needs to be properly address to collect the targeted level of revenue that includes the institutional and human capacity of tax collecting department, address to the moral hazards while collecting Government revenue, evasion of taxation and transparency in collection procedure.
parallel footing with the rest of the world and to be competitive in the international markets in the long
run the government has to enhance the pace of economic development which is not possible without
the generation of the revenue. The taxation structure does not permit the government to enhance the
government taxation rate above the desired level within the same fiscal year (Johanson & Brys, 1996) ⁴.
Therefore there is the need of evolving new ways of tax collection sources. The tax collection sources
are broaden day by day with the invention of new technology, development of financial institutions
and financial markets. The new sources of taxes includes sales tax on prepaid and postpaid bills of
mobile phones, taxation on equity gains, taxation on bank profits, taxation on dividend payout and
taxation on withdrawal from bank deposits etc. (Coelho et al., 2001). The focus of this study is on the
bank withdrawals taxation and the other sources are not within the scope of this study.

The Bank debit transaction tax was introduced by Australia in April 1983 to enhance the
government revenue ⁵. The taxation on bank cash withdrawals are found in six Latin American
countries to enhance the pace of Government revenue collection includes Colombia, Argentina, Ecuador,
Brazil, Venezuela and Peru (Manus & Warren, 2006). The objective of the imposition of the tax was
to alleviate the government debt burden but this tax was still applicable in Colombia. Pakistan enter
into tax presumptive regime in 2006 by introducing tax on cash withdrawal from bank for amount
above rupee 25,000 at 0.1 percent. The tax was imposed by the Government of Pakistan to reduce cash
transaction and to convert the economy to use banking instruments for receipts and payments. But in
2007, the rate increased from 0.1 percent to 0.2 percent and later on 0.3 percent in 2013. The
minimum amount above which tax has been imposed revised from 25,000 to 50,000 in 2013 (FBR,
2014). The revision of rate of taxation continue till now it was 0.5 percent in 2014 but later on in 2015
it increased to 0.6 percent. The fiscal budget applicable from 1st July 2015 has enhanced the pace of
taxation on bank withdrawal by introducing tax on transfer transaction of non-tax fillers (Finance
Division, 2015). This method of taxation has been considered as the stress-free way of collecting
government revenue.

All the banking companies are required to deduct the rate of tax specified in the division VI
of part IV of the first schedule under the income tax ordinance 2001 (Section: 231A). However
exemption is applicable on the withdrawals of Federal Government, Provincial Government, foreign
diplomats, diplomatic mission in Pakistan and the person providing income tax exemption certificate
from the commissioner of income tax (SBP, 2015). The objective behind the implementation of
withdrawal taxation has been to enhance the liquidity with the banking sector, to have less reliance on
the foreign or international institutional debts, to enhance the pace of government revenue generation,
documentation of the economy and to maintain sovereignty etc. Coelho et al. (2001) argued that
although the tax on bank debit transactions enhances government revenue in the short run, in the

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⁴ Abiola and Asiweh (2012) suggests that the only tool to enhance the Government tax revenue may
found to be through the implementation of the effective enforcement strategy at the responsibility of
tax administration authority.
⁵ The abolition of the tax taken place between 1st July 2002 and 1st July 2005 (National Australia
Bank, 2012).
long run it contributes to domestic disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks where such taxations are not applicable. Secondly once the disintermediation started then even the decision to revoke the tax policy may not reverse the disintermediation. The savers try to keep their savings in bank lockers instead of in the checking accounts and saving deposits.  

Coelho et al. (2001) study lack the empirical investigation on the subject, the research only provides the insight for the impacts of taxes on bank debit transactions on economy. Giraldo and Buckles (2011) empirically investigated on the impact of taxation on debit transactions argued that it reduces balances in the checking accounts, shifts balances in saving accounts and no effect on the cash holdings. The one reason for the gap in this area of research is that Pakistan (after Australia and six Latin countries) is the first to implement this type of taxation. The study has been carried out with objectives to:

- Empirically investigate how the Withdrawal taxation effects on currency in circulation.
- To investigate how the bank debit transaction taxation effects on bank deposits.
- To investigate the effect on the borrowing and lending rates.
- To investigate the effect on the inflation.
- To investigate the presence of disintermediation.

The research is up to the best of my knowledge has been the first one that empirically investigate the impact of bank withdrawal taxation on currency in circulation, bank saving deposits, inflation, borrowing and lending rates in Pakistan. Secondly the single empirical investigation in this area of research has not account for the impact of withdrawal taxation on monetary indicators like deposit rates, lending rates and inflation. It is an addition towards the existing literature and filling the gap in this area. The study has been beneficial from the policy makers’ point of view that the tax on debit transactions which they considered as beneficial from revenue collection point of view. How it will effect currency in circulations and on bank deposits or may lead to disintermediation. The study has the limitation that it cover the short span of time from 2006 to 2014. As the tax was levied on the banking debit cash transaction in 2006.

**Review of Literature**

The determination of interest rates leads to controversy in the literature such as the classical school of thoughts suggests the marginal productivity of the physical capital is to determine real interest rate while Fisher (1977) contributes it as the outcome of inflation. Olokoyo (2011) investigated the adoption of different lending and borrowing rates across the banks due to broad macroeconomic factor, bank specific factors and factors belongs to the banking industry. However Siddique (2012) contradicts by arguing that the difference in the borrowing and lending rates across the banks are because of cost of operation, loan loss provisioning, higher rate of inflation and corporate taxation.

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6 The study has been considered to be the first study which develops the theoretical framework for the further empirical investigation in this area of research.
The research carried out by Khaskheli et al. (2013) provides the insight for the determinants of deposits ratios. It is argued that besides other factors (government borrowings, investment in government saving schemes inflow of remittance) 7.

The study of Estrella and Mishkin (1995) suggests that the banking sector interest rates are not only determined by the monetary policy of the central bank but the real sector also contributes towards the interest rates spread 8. The interest rates are the most important tools of the monetary policy therefore their main determinant is the monetary policy followed by the central bank. However the research carried out by Amonoo et al. (2003) contradicting the views that the formulators of the monetary policy needs to take into account that the interest rates and the loan repayments has the negative relationship. The higher the interest rates the higher will be the ratio of default however to reduce the ratio of default there is the need to set interest rates at lower level. The lower interest rates enhances the loan repayment capacity of poor’s, demand of bank credit and flourishing the SME’s business 9.

The descriptive research of Coelho et al. (2001) suggest that one of the adverse effect of the debit transaction tax is that the banks needs to enhance borrowing rates due to which bank lending rates are automatically enhanced. Therefore in further review of literature on higher rate of interest contributes to what situation has been answered by the research of Eriemo (2014). The study suggests that the determinants of the bank deposits are higher interest rates, inflation, number of bank branches, and bank current and future decisions of investments. Mbao et al. (2014) suggests that the higher lending rates are the outcome of costly deposit mobilization and the higher cost of bank operations. The early researches on the effects of inflation on the commercial banks’ lending and borrowings includes study of Santoni (1986). The study suggests that the higher inflation contributes towards increase in general level of interest rates. Therefore it contributes to enhance saving deposits but reduction in the bank lending. Therefore the bank income reduces to costly borrowings and low level of lending during higher inflation period.

The research carried out by Patoli et al. (2012) suggeststhat the higher level of inflation in the economy enhances the tax revenue but the change in the tax revenue is less than one. The study of Feldstein (1981) suggests that the inflation and taxation are positively correlated. The expansionary monetary policy enhances inflation in the economy and therefore causes enhancement in the tax revenue but it causes reduction in the real investment return.

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7 While the study of Were and Wambua (2014) suggests that the interest rates spread found to be the sum total of the size of the bank, bank credit risk and return from operational activities. However higher deposit rates contribute towards higher deposit mobilization.

8 However the study of Nampewo (2013) suggests negative association between real GDP while positive association with bank rates, treasury bills rates and ratio of nonperforming loans.

9 The study of Fisher and Guimaraes (2012) suggests that due to dominating role of other variables the overall relationship between the US interest rates and default risk in emerging economies found to be negative.
The reduction in real investment return causes down turn in stock prices. Therefore to flourish the investment in the economy a tight monetary policy is suggested although it causes reduction in tax revenue but leads to growth in investments in the economy.

The only one empirical investigation on the impact of debit transaction tax on currency holdings and bank deposits is of Giraldolo and Buckles (2011). The study suggests that the tax on bank debit transaction represents the cost of holding a checking account with the bank. Therefore this cost contributes towards reduction in the balances of checking deposits. But there is no enhancement in the cash holdings and no reduction saving deposits and contributes towards no disintermediation found in Colombia. The review of literature suggests the complex relationship among the variables. Therefore the research has been carried out to investigate the following research question.

**Research Question**

The study has been carried out to investigate how far the implementation of withdrawal taxation effects cash holdings, bank deposits, banks borrowing and lending rates and inflation.

**Research Methodology**

The study adopts the research methodology of Giraldolo and Buckles (2011)\(^\text{10}\) and the additional variables added in the light of the review of literature are the bank deposits and lending rates. Secondly the disintermediation has been measured through any reduction in bank deposits and no reduction means none presence of disintermediation\(^\text{11}\). The research methodology is further divided into the data collection for empirical investigation and the empirical model for data analysis.

**Data collection**

The data on deposits and currency in circulation, inflation, interest rates on borrowings and lending has been gathered from the World Bank development indicators. The withdrawal taxation data has been collected from the federal Board of Revenue. The data has been collected from 2006 to 2014. Therefore the study faces the limitation of small sample as the bank withdrawal taxation was imposed in Pakistan in 2006. The data is collected on annual basis. The currency in circulation is taken as cash holdings and balances in M2 minus M1 has been taken as value of deposits as suggested by Giraldolo and Buckles (2011). The tax on bank withdrawals has been considered as the cost of holding current or saving account with the bank and therefore it contributes towards the reduction in the bank returns.

\(^\text{10}\) The study of Coelho and et al. (2001) has not suggested any empirical methodology.

\(^\text{11}\) As suggested by Giraldolo and Buckles (2001).
The Vector auto regression model is employed due to complex relationship among variables. The VAR is the best solution for the complex relationship among the variables as suggested by (Johansen, 1995). The VAR in this study determines how the withdrawal taxation effects the cash holdings, bank deposits, inflation bank borrowing and lending rates. The VAR has been considered as the solution to the dynamic economic system where there are a number of endogenous variables (Brooks, 2008). To employ the impulse response on the data the VAR calculation is the basic requirement as suggested by Brooks (2008).

**Empirical Model**

The withholding tax on the debit transaction has been represented by the Etax. The equation 1 represents the empirical model for data analysis.

\[
\bar{y}_t = A + \sum_{s=1}^{p} B_s \bar{y}_{t-s} + Etax_t + \bar{\epsilon}_t
\]

The above equation represents the \( y \_t \) vector determines the five variables includes cash holdings, bank deposits, deposit rates, lending rates and inflation. The variables are lagged for s years to reach the appropriate value of p has been represented by vector( \( y \) ) \((t-s)\). The tax on debit transactions was implemented in 2006 therefore the value of tax is determined by \( E \) \( (tax) \_t \). The justification behind introduction of interaction term with the tax value is that it started implementation in 2006 with the objective to reduce transactions in cash but later on it has been applicable on all the debit transactions and become the permanent source of government revenue.

**Measurement of variables**

The variables are constructed as follows.

**Currency in Circulation**

The value of current year currency is circulation is deducted from the previous year value and then divided by the previous year currency in circulation.

\[
\text{change in currency in circulation} = \frac{\text{Currency in circulation}_t - \text{Currency in circulation}_{t-1}}{\text{Currency in circulation}_{t-1}}
\]

**Bank checking deposits**

The deposits are measured as suggested by the Giraldo and Buckles (2011) by taking the difference of M2-M1. Then the difference between current year checking deposits and previous year checking deposit and further is divided by previous year checking deposit figure.

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12 The review of literature suggests the complex relationship among the variables.
13 As determined by Giraldo and Buckles (2011).
Construction of other variables

The inflation is determined by the consumer price index (CPI), interest rate of deposit are measured through the average deposits rate during the year and lending rates are also determined by taking the average lending rates of the year. The rate of tax on bank withdrawals has been taken from federal board of revenue on yearly basis.

Data analysis

The data analysis is further divided into two types of testing. The data has been analysed through Vector Auto regression (VAR) as it indicates the effect of one variable on the other. Secondly, through this test further impulse response testing is possible which indicates the direction of relationship and forecasting of their relationship in future. Before analysing data through VAR the data goes into the preliminary data. The data is stationary at 0.0014 level of significance with statistics value of 2.98297 while performing Levin, Lin and Chu test on the group data.

Table 1

<table>
<thead>
<tr>
<th>Method</th>
<th>Statistic</th>
<th>Prob.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levin, Lin &amp; Chu t*</td>
<td>-2.98297</td>
<td>0.0014</td>
</tr>
</tbody>
</table>

The normal distribution of the data and its residuals are tested through the descriptive statistics to fulfil the basic assumption of Vector Auto regression. The value of the Skewness and Kurtosis is less than zero proves the normal distribution of data and the residuals are normally distributed has been proven through Jarque-Bera test as its probability distribution is greater than 0.05 level of significance. The table 2 represents the descriptive statistics.

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14 As suggested by Patoli and et al. (2010).
15 As suggested by Giraldo and Bukles (2011).
16 Brooks (2008) suggests that the data must fulfill the preliminary assumptions before testing through VAR.
Abstract

The Bank debit transaction tax was introduced by Australia in April 1983 to enhance the tax administration authority. However to enhance deposits there is the need of reduction withholding tax. The second portion effect of withholding tax is tested on each variable individually as suggested by Brooks (2008). Secondly the two lags are employed while performing the testing of data through VAR. The table 3 presents that how the rate of taxation effects the deposits. The below table shows that every 0.1% increase in taxation will reduce deposit by 9.9% with one lag value and 6.4% with second lag value. However to enhance deposits there is the need of reduction withholding tax. The second portion represents that to reduce the money in circulation there is the need of reduction in the reduction in the withholding taxation otherwise the cash holdings increase in the economy by increase in withholding tax on bank withdrawals.

Table 2

Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Deposit Rates</th>
<th>Inflation</th>
<th>Lending Rates</th>
<th>Money in Circulation</th>
<th>Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>7.096481</td>
<td>11.09087</td>
<td>12.88065</td>
<td>0.141455</td>
<td>0.132319</td>
</tr>
<tr>
<td>Median</td>
<td>7.265000</td>
<td>9.685053</td>
<td>12.93583</td>
<td>0.162556</td>
<td>0.109750</td>
</tr>
<tr>
<td>Maximum</td>
<td>8.680833</td>
<td>20.28612</td>
<td>14.53750</td>
<td>0.193745</td>
<td>0.333729</td>
</tr>
<tr>
<td>Minimum</td>
<td>4.174167</td>
<td>7.191671</td>
<td>10.98750</td>
<td>-0.023215</td>
<td>0.033586</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>1.477638</td>
<td>4.338063</td>
<td>1.314286</td>
<td>0.067464</td>
<td>0.090929</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.962285</td>
<td>0.040428</td>
<td>-0.022324</td>
<td>-1.777570</td>
<td>-1.279133</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.040331</td>
<td>0.005651</td>
<td>0.043333</td>
<td>0.023886</td>
<td>0.332500</td>
</tr>
</tbody>
</table>

The data analysed through Vector Auto regression after preliminary testing of data. The study carries the limitation of availability of the data as the withholding taxation was employed for the first time Pakistan in 2006. Therefore there are 54 observations entered for 6 six variables over the period of nine years. Therefore due to limitation of the data set the VAR is run in such a manners that the effect of withholding tax is tested on each variable individually as suggested by Brooks (2008). Secondly the two lags are employed while performing the testing of data through VAR. The table 3 presents that how the rate of taxation effects the deposits. The below table shows that every 0.1% increase in taxation will reduce deposit by 9.9% with one lag value and 6.4% with second lag value. However to enhance deposits there is the need of reduction withholding tax. The second portion represents that to reduce the money in circulation there is the need of reduction in the reduction in the withholding taxation otherwise the cash holdings increase in the economy by increase in withholding tax on bank withdrawals.
The government revenue collection became the compulsion of the current economic system during the study period and reduction in bank deposits. The monetary variables such as inflation in the economy is captured through the study findings that there is an increase in the cash holdings. To avoid debt burdens and to meet budgetary expenditure within internal resources leads to the tax administration authority.

The objective behind the implementation of the foreign or international institutional debts, to enhance the pace of government revenue generation, includes the institutional and human capacity of tax collecting department, address to the moral and deportment of the tax payers.

To investigate the effect on the borrowing and lending rates.

The descriptive research of Coelho et al. (2001) suggest that one of the adverse effect of the withdrawal taxation on monetary indicators like inflation, borrowing and lending rates in Pakistan. Secondly the single empirical investigation in this area of research has not account for the impact of withdrawal taxation on monetary indicators like inflation, borrowing and lending rates. The research carried out by Patoli et al. (2012) suggested that the higher level of inflation in increase in general level of interest rates. Therefore it contributes to enhance saving deposits but lending rates are the outcome of costly deposit mobilization and the higher cost of bank operations.

The only one empirical investigation on the impact of debit transaction tax on currency bank debit transaction represents the cost of holding a checking account with the bank. Therefore this further empirical investigation in this area of research.

The data analysis is further divided into two types of testing. The data has been analysed effect of withholding tax is tested on each variable individually as suggested by Brooks (2008).

The research further enhances its scope by taking into account the forecasting technique for additional variables added in the light of the review of literature are the bank deposits and lending areas of research has not account for the impact of withdrawal taxation on monetary indicators like inflation, borrowing and lending rates in Pakistan. Secondly the single empirical investigation in this area of research.

The increase in withholding tax reduces bank lending rates and increases inflation.

Table 3

Vector Auto regression

<table>
<thead>
<tr>
<th>Lags</th>
<th>Variables</th>
<th>Rate of Taxation</th>
<th>Variables</th>
<th>Money in circulation</th>
<th>Rate of Taxation</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>Deposits</td>
<td>0.059067</td>
<td>Rate of Taxation</td>
<td>Money in circulation</td>
<td>-0.120074*</td>
</tr>
<tr>
<td>L2</td>
<td>Deposits</td>
<td>-0.1348*</td>
<td>Rate of Taxation</td>
<td>Money in circulation</td>
<td>-0.144082*</td>
</tr>
<tr>
<td></td>
<td>Rate of Taxation</td>
<td>-0.6980*</td>
<td>Rate of Taxation</td>
<td>-0.21496*</td>
<td>2.609631</td>
</tr>
<tr>
<td>L2</td>
<td>Rate of Taxation</td>
<td>-2.2319*</td>
<td>Rate of Taxation</td>
<td>1.755087</td>
<td>0.404107</td>
</tr>
</tbody>
</table>

The increase in withholding tax reduces bank lending rates and increases inflation.

Table 4

Vector Auto Regression

<table>
<thead>
<tr>
<th>Lags</th>
<th>Variables</th>
<th>Rate of Taxation</th>
<th>Variables</th>
<th>Inflation</th>
<th>Rate of Taxation</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>Lending Rates</td>
<td>0.50691</td>
<td>Inflation</td>
<td>0.739166</td>
<td>0.009811*</td>
</tr>
<tr>
<td>L2</td>
<td>Lending Rates</td>
<td>-0.5931*</td>
<td>Inflation</td>
<td>0.402368</td>
<td>0.005787*</td>
</tr>
<tr>
<td></td>
<td>Rate of Taxation</td>
<td>0.026418</td>
<td>Rate of Taxation</td>
<td>19.27292</td>
<td>1.973521</td>
</tr>
<tr>
<td>L1</td>
<td>Taxation Rate of Taxation</td>
<td>-10.179*</td>
<td>Rate of Taxation</td>
<td>19.27292</td>
<td>1.973521</td>
</tr>
<tr>
<td>L2</td>
<td>Taxation Rate of Taxation</td>
<td>12.03387</td>
<td>Rate of Taxation</td>
<td>-157.9864*</td>
<td>1.137468</td>
</tr>
</tbody>
</table>

* significant 1% level of significance

Table 5 clearly indicates the significant results that the increase in withdrawal taxation reduces bank deposit rates. The reduction in bank deposits, reduction in borrowing and lending rates indicates the presence of disintermediation in the Pakistan economy. Secondly the same disintermediation has been indicated by increase in inflation and cash holdings.
The government’s compulsion to enhance revenue has been a critical factor in the current economic system. The period under study, from 2006 to 2014, exhibited a complex relationship among variables, necessitating a thorough analysis.

Financial institutions and markets have evolved significantly, with new sources of taxation on prepaid and post-paid bills of trade being introduced. The development of financial institutions and technology has broadened the scope of taxation, with countries like Colombia, Argentina, Ecuador, Brazil, Venezuela, and Peru (Manus & Warren, 2006) implementing new tax frameworks. The abolition of the tax took place between 1st July 2002 and 1st July 2005 (National Australia Government Taxation Rate above the desired level within the same fiscal year (Johanson & Brys, 1996).

To avoid the burden of debt and meet budgetary expenditure through internal resources, the imposition of taxation in Latin countries became necessary. The study found empirical evidence of disintermediation due to bank withdrawal taxation in Latin American countries. The findings align with the theory of Eriemo (2014) that the study suggests a positive effect of withdrawal taxation on cash holdings and inflation. The research carried out by Patoli et al. (2012) suggested that the higher level of inflation in the economy contributes to domestic disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation.

The research further enhances its scope by taking into account the forecasting technique that is the impulse response graphs. The impulse response indicates that how the rate of taxation affects the variables. The impulse response indicates the reactions of the variables as a result of the movements in the withdrawal taxation. The impulse response graph indicates that the increase in bank withdrawal taxation reduces bank deposits, borrowing, and lending in the economy. The impulse response indicates a positive effect of withdrawal taxation on cash holdings and inflation. As the rate increases, cash holdings and inflation increase. The impulse response graphs clearly indicate the presence of disintermediation in Pakistan economy.

**Graph 1**

**Impulse response**

![Impulse response graphs](image)

*significant 1% level of significance*

**Table 5**

*Vector Auto Regression*

<table>
<thead>
<tr>
<th>Lags</th>
<th>Variables</th>
<th>Deposit Rates</th>
<th>Rate of Taxation</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>Deposit Rates</td>
<td>-0.00704*</td>
<td>-0.0242*</td>
</tr>
<tr>
<td>L2</td>
<td>Deposit Rates</td>
<td>-2.54314*</td>
<td>0.017679</td>
</tr>
<tr>
<td>L1</td>
<td>Rate of Taxation</td>
<td>-6.48129*</td>
<td>2.509453</td>
</tr>
<tr>
<td>L2</td>
<td>Rate of Taxation</td>
<td>19.75583</td>
<td>0.268767</td>
</tr>
</tbody>
</table>

The study of Estrella and Mishkin (1995) suggests that the banking sector interest rates are progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation.

As suggested by Giraldo and Buklles (2011), the tax on bank withdrawals has been considered as the cost of holding current assets. However, to enhance deposits, there is a need for reduction in withholding tax. The second portion of the research calculates the difference of M2-M1. Then the difference between current year checking deposits and previous year checking deposits is calculated. The future researchers are suggested to explore how the bank withdrawal taxation effects investment, saving, and disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation. These types of taxes may not be considered as progressive on the grounds that the larger corporations can shift their balances in the foreign banks in the long run, contributing to domestic disintermediation.

*Further empirical investigation in this area of research is suggested.**

**Note:** Table Continued...
Conclusion

The research has been carried out to investigate the impact of withdrawal taxation on the variables typically related to financial intermediation. The tax has been levied for the first time through the federal budget to be applicable from 1st July 2006 to enhance the pace of the government revenue, to reduce the transactions in cash and to enhance the use of banking channel. The tax on bank debit transactions become the hot debate among the economist when its implication scope enhanced from cash to transfer transactions of the economy.

The study found the empirical evidence of disintermediation due to bank withdrawal taxation as the study findings suggests the increase in cash holdings and inflation. While reduction in bank deposits, borrowing and lending rates of the bank. The future forecasting through impulse response suggests that any enhancement in bank withdrawal taxation leads to increase in inflation and cash holdings while reducing bank deposits, borrowing and lending rates. Therefore it may be concluded that bank withdrawal taxation may leads to disintermediation in the Pakistan economy. The future researchers are suggested to explore how the bank withdrawal taxation effects investment, bank lending and disintermediation leads to shifting of savers towards capital markets.

17 The findings are aligned with the study of Coelho et al. (2001) suggests disintermediation due to bank withdrawal taxation in Latin American countries. Secondly the findings are aligned with the Giraldo and Buckless (2001) suggests disintermediation in Colombia.
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